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## Real effective exchange rate shocks and job quality by gender in Latin America

Débora Nunes,<sup>1</sup> Diksha Arora,<sup>2</sup> and Elissa Braunstein<sup>3</sup>

**Abstract:** Despite significant improvements in women’s education, labor force participation, and health outcomes, labor market segregation by gender persists in Latin America, with negative consequences for gender equality. Our paper analyzes demand-side explanations for this phenomenon, focusing on the impact of real effective exchange rates (REER) on job quality by gender in the region. Gender segregation is central to the gender distribution of job quality, which is defined in terms of an occupation’s wage relative to the national median wage. Combining a panel of micro-level surveys with macroeconomic data from 15 Latin American countries between 1991-2018, we use a generalized difference-in-difference model to map how REER shocks impact the availability of good jobs for women and men. We argue that REER shocks change the sectoral composition of GDP, which impacts gender equality due to high vertical and horizontal segregation. Results indicate that medium appreciation shocks are associated with a decline in men’s good job share, raising gender equality but through a “race-to-the-bottom” dynamic rather than as a manifestation of women’s climb to the top. Despite the adoption of macroeconomic policies associated with appreciated real exchange rates throughout the region, larger appreciation shocks are rare and tend to increase women’s good job share. Very large depreciation shocks are associated with an increase in women’s good job share and a greater-than-proportional decrease in men’s good job share, resulting in a rise in women’s relative share of good jobs. These results point to new policy challenges and the need for gender-aware macroeconomic policy analysis.

**JEL:** J31, N36, E50

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<sup>1</sup> Débora Nunes has a Master’s degree in Development Economics from the Federal University of Rio Grande do Sul (Brazil) and is currently a PhD Candidate and Graduate Teaching Instructor at Colorado State University.

<sup>2</sup> Diksha Arora has a PhD in Economics from the University of Utah and is an Assistant Professor in the Economics Department of the same institution.

<sup>3</sup> Elissa Braunstein has a PhD in Economics from the University of Massachusetts – Amherst and is currently a Professor at the Economics Department and Research Associate Dean of the College of Liberal Arts at Colorado State University.

# Real effective exchange rate shocks and job quality by gender in Latin America

## 1 Introduction

For the past three decades, macroeconomic policy in the Latin American region has largely reflected an orthodox approach to macroeconomic management, one that emphasizes fiscal prudence, price stability, and free trade and capital flows (Braunstein and Seguino 2018). The resulting policy mix has become known as the “macroeconomic tripod,” which consists of floating exchange rates, inflation targeting, and primary budget surplus (Saad-Filho 2020, de Souza 2021). Though the region’s history with financial crisis and hyper-inflation makes inflation targeting (IT) a reassuring policy option, IT tends to appreciate the real exchange rate by decreasing domestic inflation. Appreciated real exchange rates (REERs) are associated with lower rates of economic growth, partly because of how they discourage tradeable sector expansion, especially manufacturing (Rodrik 2008).<sup>4</sup> Combined with the commodity price boom of the 2000s, policies associated with the macroeconomic tripod helped induce a particularly sharp process of premature deindustrialization that Palma (2019) refers to as “non-creative destruction,” with consequences for the sectoral composition of GDP and labor market demand. These changes have gender-specific effects. Erten and Metzger (2018) suggest that undervalued exchange rates lower gender gaps in labor force participation rates by increasing women’s employment opportunities in manufacturing and industrial sectors. Given that in developing countries industrial sector jobs tend to be of higher quality than those in agriculture or services, REER fluctuations likely have

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<sup>4</sup> The REER equals the nominal exchange rate (the amount of domestic currency needed to buy one unit of foreign currency) times the ratio of the price level of a country’s trading partners to the domestic price level, so domestic inflation raises the REER (a depreciation).

important gendered impacts on labor segregation and income distribution (Seguino and Braunstein 2019).

This paper explores that prospect in Latin America by considering the relationship between REER and women's access to "good jobs"—defined as those that offer higher wages than the national median. The calculation of women's and men's relative access to good jobs is based on the distribution of their employment across 27 non-agricultural sectors and 10 occupations, so gender segregation is a key driver of women's relative access to good jobs. We hypothesize that REER appreciation changes the sectoral composition of GDP, expanding non-tradeables and discouraging job creation in tradeable sectors like manufacturing. This not only constrains women's access to positions that offer better wages and working conditions than agriculture or traditional services, but it also increases competition with men for the higher-paying jobs that remain (Seguino and Braunstein 2019). This relationship is particularly important in a Latin American context where, despite significant improvements in women's education, labor force participation, and health outcomes since 1990, gendered labor market segmentation persists in ways that hold back progress on gender equality (Borrowman and Klasen 2020). The Covid-19 pandemic and its aftermath make these questions even more pressing, as persistent losses in women's labor force participation and incomes suggest some longer-term "scarring" in Latin American labor markets, and high inflation, increasing interest rates, and tightening fiscal space further constrain employment prospects in developing economies in general (Acevedo et al. 2022).

To conduct the study, we use a dataset that combines a set of micro-level household and labor force surveys with macroeconomic data to create a panel of 15 Latin American countries between 1991-2018 (Arora, Braunstein, and Seguino 2023). We use a generalized difference-in-difference model to map how REER shocks impact the relative availability of good jobs for women

and men. Our results indicate that medium appreciation shocks (between 1.0 and 1.5 standard deviations from a country's mean REER for the period) are associated with a 4.0 percentage point decline in the share of men's employment that can be classified as good, but the correlation with women's good job share is not statistically significant. So, although gender equality appears to increase with medium appreciation shocks because women's share of good jobs increases relative to men's, this is the result of a "race-to-the-bottom" dynamic rather than a manifestation of women's climb to the top. Large appreciation shocks (between 1.5 and 2.0 standard deviation appreciations) are associated with a 1.4 percentage point increase in women's good job share, but they are of rare occurrence (constituting less than 3.6 percent of the sample). Regarding depreciation, our results indicate that large and very large shocks are associated with a decrease in men's good job share, and very large shocks are associated with an increase in women's good job share. As a result of these effects, very large depreciation shocks are associated with a 4.3 percentage point increase in women's good job share relative to men's.

Taken together, these results indicate that real exchange rate shocks have gender-specific effects, influencing both the overall availability and gender distribution of job quality. Regardless of real exchange rate movements, men have a much higher aggregate share of good-quality jobs in their employment than women among all the countries in the sample. However, appreciated real exchange rates seem to be associated with job quality losses among men in the region, likely because of their concentration in tradeable sectors. As predicted in the literature, very large depreciation shocks promote better jobs for women (1.2 percentage point increase) through the creation of better positions in the export manufacturing sector. However, very large depreciation shocks also tend to be associated with periods of economic hardship, as reflected by their correlation with a greater-than-proportional decrease in men's good job share (2.8 percentage point

decrease). Overall, we conclude that the orthodox economic policies consolidated in the macroeconomic tripod deliver questionable outcomes in the labor market, since they are unlikely to generate large-enough appreciation shocks to positively impact women's good job share and tend to decrease men's good share.

## 2 Background

While there is some consensus among economists that industrialization and structural transformation are major drivers of growth and development, their effects on gender equality are considerably more contested (Sorgner 2021).<sup>5</sup> An early strand of the literature commonly referred to as women in development (WID) emphasized the possibility of a virtuous feedback loop between gender equality and economic development in a “win-win” relationship.<sup>6</sup> Nested in modernization theory, the WID perspective assumes that development is a linear and cumulative process of structural change in which an economy moves from a mostly subsistence, rural society to an industrialized, market-oriented one (Boserup 1970, Jaquette 1982). According to this view, industrialization is problematic because it leaves women out as their traditional sources of subsistence and economic inclusion are replaced by more capital-intensive forms of production that primarily employ men. Related empirical work underscores the economic costs of leaving women out, as the causal relationship between gender equality in health, education, or labor force participation and economic growth has become a stylized fact in economics and development

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<sup>5</sup> The rich literature in economic development defines “development” in a variety of ways. A parsimonious and popular definition comes from those who emphasize economic growth and define development as sustained increases in per capita GDP over time. a more theoretical and complex definition can be found in the Marxist dependency theory school, for example, according to whom development is the intensification of the capitalist tendencies (such as concentration and centralization of capital) over time. For the purposes of this paper, we define economic development (sometimes referred to as just “development”) as an overall commitment to the UN Sustainable Development Goals focused on economic outcomes (poverty reduction; decent work and economic growth; industry, innovation, and infrastructure; reduced inequalities; responsible production and consumption).

<sup>6</sup> The nomenclature comes from the Women in Development Office at the U.S. Agency for International Development, established in 1976.

policy circles (Seguino 2020). In line with its optimism about market mechanisms, WID proponents maintain that women's poor job outcomes are largely a supply-side issue due to gendered differences in human capital and, to a lesser extent, discrimination—either due to employer preferences or statistical discrimination (Baert 2018; D'Onofrio-Flores and Pfafflin 2019).<sup>7</sup> Thus, as development generates more opportunities for women's human capital accumulation through more schooling, better health, and access to paid work, gendered human capital differentials should narrow, decreasing statistical discrimination and increasing the cost of discriminatory practices originating from employer preferences (Shulman 2003). Therefore, WID policy prescriptions advocate supply-side interventions that increase women's human capital accumulation and market access, creating a virtuous cycle where economic development brings more gender equality, which in turn brings more development (Klasen 1999).

Despite the important contributions of this literature to advancing gender-aware analysis and the economic case for gender equality, some feminist economists and human rights advocates contend that these instrumental arguments for gender equality miss its intrinsic value. According to this view, the provision of human rights (some of which are economic) regardless of gender or other intersectional identities is a policy objective *per se* (Balakrishnan, Heintz, and Elson 2016). Further, substantial evidence challenges the notion that growth and structural change necessarily benefit women or enhance gender equality (Kabeer 2016). In contrast to WID's economic efficiency argument, the gender and development (GAD) approach emphasizes the connection between gender and the social relations of production and reproduction, exploring how gender systems assign women and men to different roles and responsibilities, and how these dynamics are

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<sup>7</sup> The embedded assumption is that women take longer to overcome their traditional (i.e., rural, authoritarian, patriarchal) values when compared to men. Development is assumed to promote the modern values of labor mobility and equality, increasing women's opportunities for human capital accumulation.

reflected in social, economic, and political theories and institutions. Women are thus not passive actors hemmed in by social norms and responding to market incentives, but rather active agents whose empowerment should be a target of development policy (Moser 1993; Razavi and Miller 1995).

According to GAD scholars, gender equality achievements can be difficult to measure, and may in fact compromise growth goals. For instance, since different dimensions of women's empowerment are often not correlated, interpreting the gendered impacts of development policies is not always straightforward (Kabeer 1999, Hanmer and Klugman 2016). Some traditional measurements of gender equality and women's empowerment can blur the real impacts of such achievements in women's lives—educational programs that keep women in school with the sole purpose of teaching them how to become better mothers and wives, for example, simultaneously censor women's professional ambitions and increase their average years of schooling (Kabeer 2005). Similarly, to the extent that women are concentrated in labor-intensive export-oriented production, gender wage gaps can in fact be part of an economy's global competitive advantage and foster high growth (Seguino 2000). In countries where development is limited by balance-of-payments constraints, gender wage discrimination can substitute for exchange rate depreciation by boosting cost advantage in export markets, leading to what has been called a “feminization of foreign exchange earnings” (Samarasinghe 1998, Seguino 2010).

When considering the case of Latin America, for the past three decades the region has shown remarkable progress in educational attainment and health care access for women, with women currently outnumbering in all educational levels in several countries (UN-ECLAC 2022). Such improvements have been combined with decreasing household income inequality and higher wages across the board since 2002, especially at the bottom of the wage distribution for most

countries, and positive GDP growth for the region as a whole since 1990 (Messina and Silva 2021, UN-ECLAC 2022).<sup>8</sup> Since women in the region are increasing their human capital through greater education and work experience (as reflected by women's rising labor force participation), combined with the decline in fertility we would expect these relative achievements to manifest in better labor market outcomes. Yet, horizontal and vertical segregation by gender has increased since the early 1990s, with women crowded into informal sector jobs with low wages, no benefits, and poor working conditions (Seguino and Braunstein 2019, Borrowman and Klasen 2020, Abramo 2021). Considering the failure of supply-side factors to explain the lack of progress for women in Latin American labor markets, this paper instead investigates demand-side factors, situating the approach and analysis in the GAD literature.

It is important to note that we acknowledge the persistence of Latin American *machismo*—a hypermasculinity that obliterates any other possible influences on men's attitudes and behavior (Hurtado and Sinha 2016)—as a possible cultural impediment to advancing gender equality. In fact, several recent studies indicate that the impact of such rigid gender stereotypes in Latin America indeed contribute to segregation. Examples include Carvalho Neto, Tanure and Andrade (2010), who used a mixed methods approach to document impacts of deep-rooted gender prejudice on women executives in Brazil; Rodríguez Garcés and Muñoz Soto (2018), who explore how conservative culture impacts women's labor force participation in Chile; and Reyes Suárez (2022), who use a small-scale survey to examine the influence of machismo and gender stereotypes on women in San Vicente, Ecuador. Without neglecting the importance of cultural factors, our analysis focuses on the demand-side of labor markets, advancing the hypothesis that

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<sup>8</sup> Most Latin American countries and LA as a region had positive GDP growth every year since 1991, except for the year of 2009 and more recently, during the COVID-19 pandemic. Some countries (like Brazil and Argentina) had longer and deeper periods of recession, but they were mostly the result of internal political issues and did not spread to other countries in the region.



macroeconomic policies and structures can disproportionately promote job creation in specific sectors, decreasing the availability of higher-paying positions for women given the highly gender segregated labor markets that characterize Latin American countries.

Arora, Braunstein and Seguino (2023) provide a starting point for this discussion. They identify the share of public social spending in GDP as the macroeconomic policy that has the largest positive correlation with women's relative access to good jobs in Latin America during the 1990-2018 period. Their results corroborate our hypothesis that macro-level structures and policies alter the prospects for achieving greater gender equality in labor markets and suggest that some macroeconomic issues associated with the impacts of globalization (such as the stagnation of minimum wages) are particularly harmful to the promotion of good jobs for women. We build on their conceptual and data work to explore the relationship between real effective exchange rates (REER) and the distribution of good jobs by gender, introducing the prospect of causal inference by adopting a difference-in-differences approach to the econometric analysis.

## 3 Data

### 3.1 The gender distribution of good jobs

Our analysis covers the period 1990-2018 for 15 countries in Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Ecuador, Guatemala, Honduras, Mexico, Peru, Paraguay, and Uruguay. We use data created by Arora, Braunstein and Seguino (2023) that combines micro-level labor market data from nationally representative labor force or household survey data to create economy-wide industry- and occupation-level measures of gendered employment. The microdata comes from a variety of

national sources (Table 1), and from the International Income Distribution Database (I2D2; World Bank 2013). Due to the infrequent nature of these surveys in many developing countries, and the fact that not all countries report disaggregated sectoral and occupational data every year, the time periods of data collection across countries vary; we use a three-year moving average to deal with the panel imbalance.<sup>9</sup>

**Table 1. Survey data sources and periods.**

<b>Country</b>	<b>Survey period</b>	<b>Household or Labor Force Survey</b>
Argentina	1996-2003	Encuesta Permanente de Hogares
Argentina	2004-2014	Encuesta Permanente de Hogares Continua
Bolivia	1992	Encuesta Integrada de Hogares
Bolivia	1997-2000	Encuesta Continua de Hogares
Bolivia	2001-2016	Encuesta de Hogares
Brazil	1993-2015	Pesquisa Nacional por Amostra de Domicílios
Chile	1994-2017	Encuesta de Caracterización Socioeconómica
Colombia	2001-2006	Encuesta Continua de Hogares
Colombia	2007-2017	Gran Encuesta Integrada de Hogares
Costa Rica	1990-2010	Encuesta de Hogares Propósitos Múltiples
Costa Rica	2011-2012	Encuesta Nacional de Hogares
Dominican Republic	1996-2015	Encuesta de Fuerza de Trabajo
El Salvador	1991-2014	Encuesta de Hogares Propósitos Múltiples
Ecuador	1991-2016	Encuesta Nacional de Empleo, Desempleo y Subempleo
Guatemala	2002-2014	Encuesta Nacional de Condiciones de Vida
Honduras	2001-2016	Encuesta Permanente de Hogares Propósitos Múltiples
Mexico	1992-2016	Encuesta Nacional de Ingresos y Gastos de Hogares
Peru	1997-2015	Encuesta Nacional de Hogares
Paraguay	1997-2010	Encuesta Permanente de Hogares
Uruguay	1992-2015	Encuesta Continua de Hogares

Source: Own elaboration based on Arora, Braunstein and Seguino (2023)

<sup>9</sup> To check if this method significantly influenced our results, we also ran the model with a 5-year moving average. The results are in Appendix B, Table 5B, and show no significant difference between the two approaches.

Estimates of women's and men's relative access to good jobs are based on an analysis of weekly incomes of both paid employees and self-employed workers across 27 non-agricultural sectors ( $j$ ) and 10 occupational categories ( $k$ ) in each sector (a table with all industries and the proportion of women in each industry is shown in Appendix A, Table A2, as well as a table with all occupations and their gender representation in Table A1). Weekly incomes are calculated based on hourly wages paid (or net income earned) and hours worked. For each occupation  $k$  within each sector  $j$ , jobs with a median weekly income ( $w_i^{jk}$ ) greater than the national median ( $\bar{w}$ ) are categorized as good-quality employment ( $E^G$ ). We calculate the sum of total good jobs (i.e., total high-quality employment groups) for each country in a given year as in Equation (1), where the subscript  $i$  refers to either women ( $W$ ) or men ( $M$ ).

$$E_i^G = \sum_{jk} E_i^{jk}, E_i^{jk} = 0 \text{ if } w_i^{jk} < \bar{w} \quad (1)$$

The three dependent variables include the share of good jobs in total employment by gender as given in equation (2), women's share of good jobs ( $ES_W^G$ ) and men's share of good jobs ( $ES_M^G$ ); and women's relative share of good jobs as given in equation (3).

$$ES_i^G = \frac{E_i^G}{E_i^T} \quad (2)$$

$$W/M \text{ good job share} = \frac{ES_W^G}{ES_M^G} \quad (3)$$

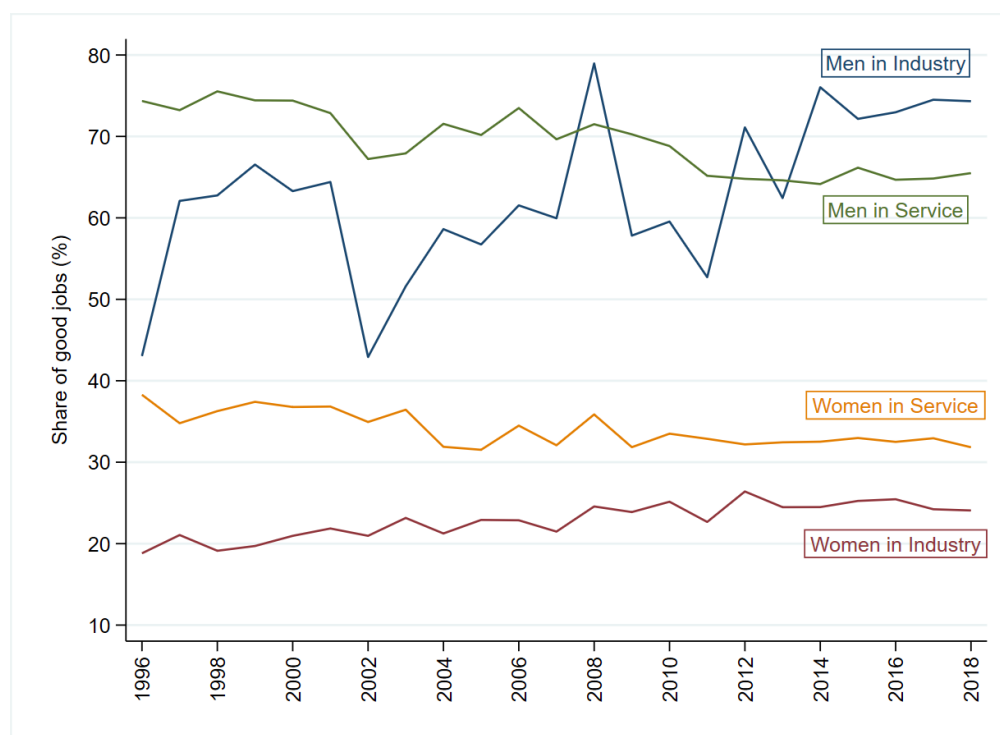
Figure 1 shows the proportion of workers in industry and services that has a good job for each gender ( $ES_i^G$ ), starting in the mid-1990s when we can include nearly all the countries in the sample. So, for instance, in 1996 about  $\frac{3}{4}$  of men's jobs in the services sector were classified as good jobs, while a little under 40 percent of women's service sector jobs are good jobs. Furthermore, the good job share in Figure 1 is a population-weighted average for Latin America, with weights corresponding to labor force size; Figures 2 and 3 use the same weighting method.

Note at the outset that men are at the top of the figure and women at the bottom, indicating that a higher share of men's jobs in industry and services are classified as good jobs relative to women. Men in services tend to occupy more highly paid positions particularly in trade activities and the FIRE sector (finance, insurance, and real estate). The share of men working in services with good jobs, however, is decreasing through time, suggesting that these sectors may be particularly vulnerable to the macroeconomic conditions that characterize the 1990-2018 period. Women are concentrated in the domestic and community service sector, characterized by low wages and less directly impacted by globalization. A detailed breakdown of sectors and positions is shown in Appendix A, Table A3. For both men and women, an increasing percentage of workers in the industrial sector have good jobs through time (in the mid-1990s, 18.9% of women in industry had good jobs; in 2018, that number increases to 24.2%). Figure 1 also shows that, regardless of the broad sector in which men work, the majority have good jobs; for women, less than 40% have good jobs. This indicates some persistence in vertical and horizontal gender segregation within each broad sector.

Figure 2 illustrates the proportion of workers within each sector that have good jobs, disaggregated by gender. Another way of reading the figure is to add the shares for women and men within a sector to get the share of good jobs in total employment for that sector. Focusing on industry, where in 1997 52.5% of industrial sector jobs could be classified as good jobs (adding up the shares for women and men), women working in industry had 9.1% of those good jobs (4.8 percentage points out of 52.5%), with men constituting the other 91.9%. In 2018, 62.9% of industrial sector jobs could be classified as good, and women's share of these jobs stayed constant (8.9%). A much higher share of good jobs goes to women in the services sector; in 2017 women occupied 16.9% of good jobs in the services sector. For men, changes over time are more

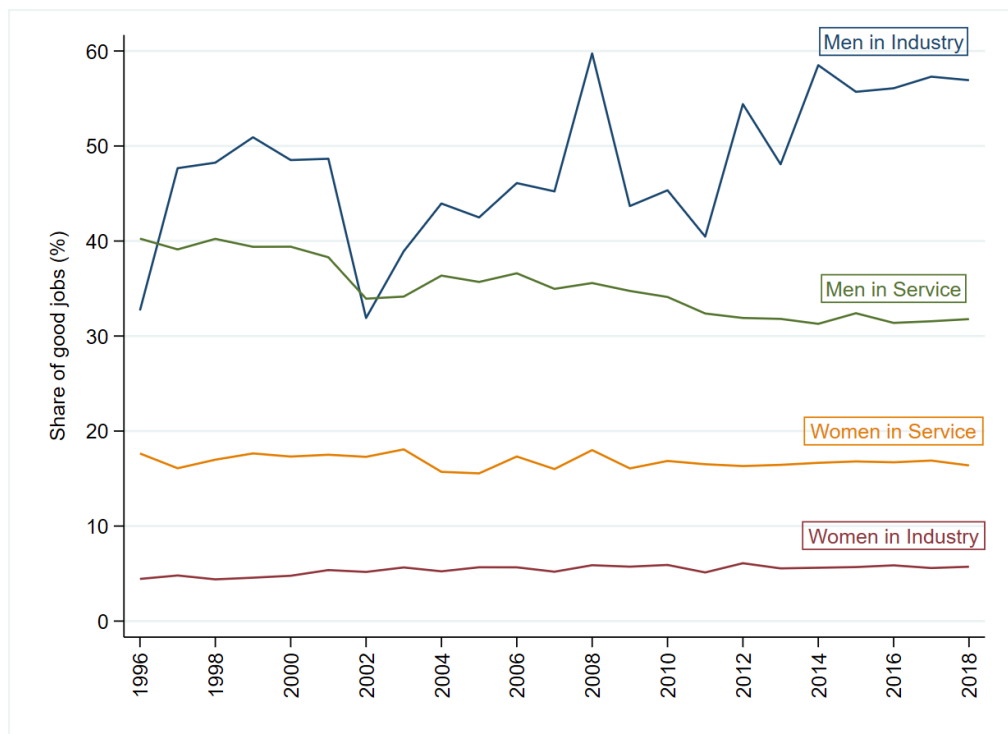
pronounced: jobs in industry are getting better, and jobs in services are getting worse. As illustrated in Figure 3, these trends indicate stagnation in good job creation for women and men overall, resulting in stagnation of achievements on gender equality in the Latin American region.

**Figure 1. Share of good jobs in total employment by gender and broad sector, all countries.**



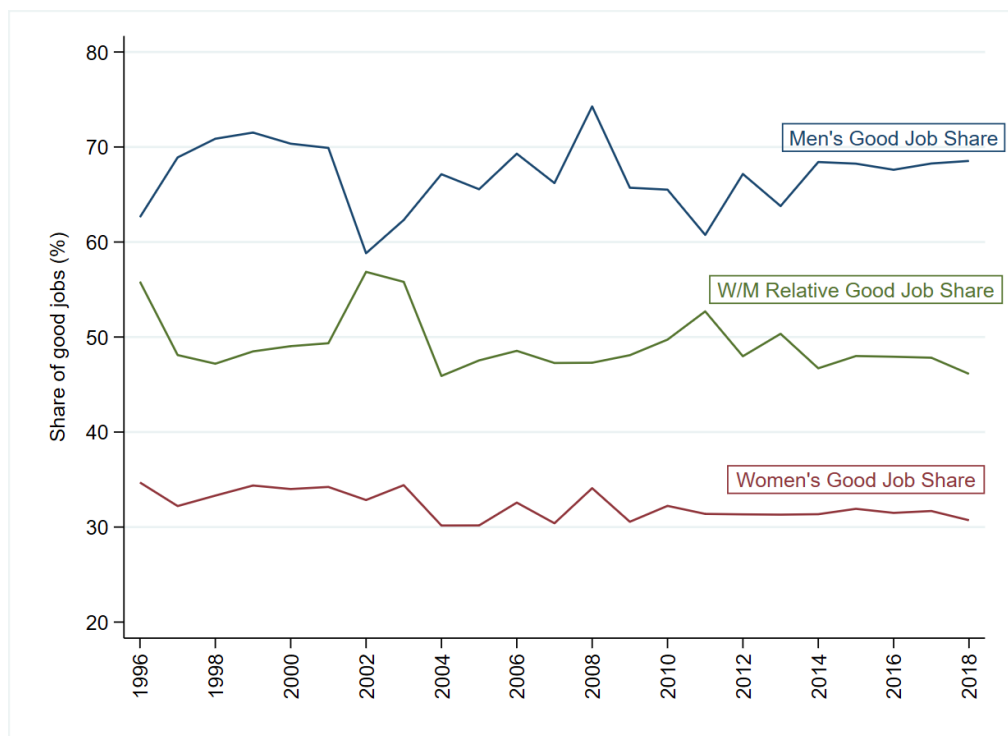
Source: Own elaboration based on Arora, Braunstein and Seguino (2023)

**Figure 2. Percentage of good jobs in industry and services, by gender. All countries.**



Source: Own elaboration based on Arora, Braunstein and Seguíno (2023)

**Figure 3. Percentage of good jobs by gender. All countries**



Source: Own elaboration based on Arora, Braunstein and Seguíno 2023

Taken together, these aggregate data trends underscore the importance of gender segregation in determining the gender distribution of better-paying jobs. Figure A3 in Appendix A shows the distribution of non-agricultural employment by sector and quality for Latin America. Lower-paying service sector jobs grew from 29.6% of total employment in 1996 to 38.0% in 2018, while the share of industrial jobs decreased from 29.8% to 26.8%. Since men are more likely to occupy these better-paying jobs, they also tend to be more negatively affected by these trends. Relatedly, women see no significant improvement in their good job prospects despite having higher levels of educational attainment than men. As a result, gender equality as measured by women's relative share of good jobs may increase in labor markets, but this may result from worsening opportunities for men, not better opportunities for women.

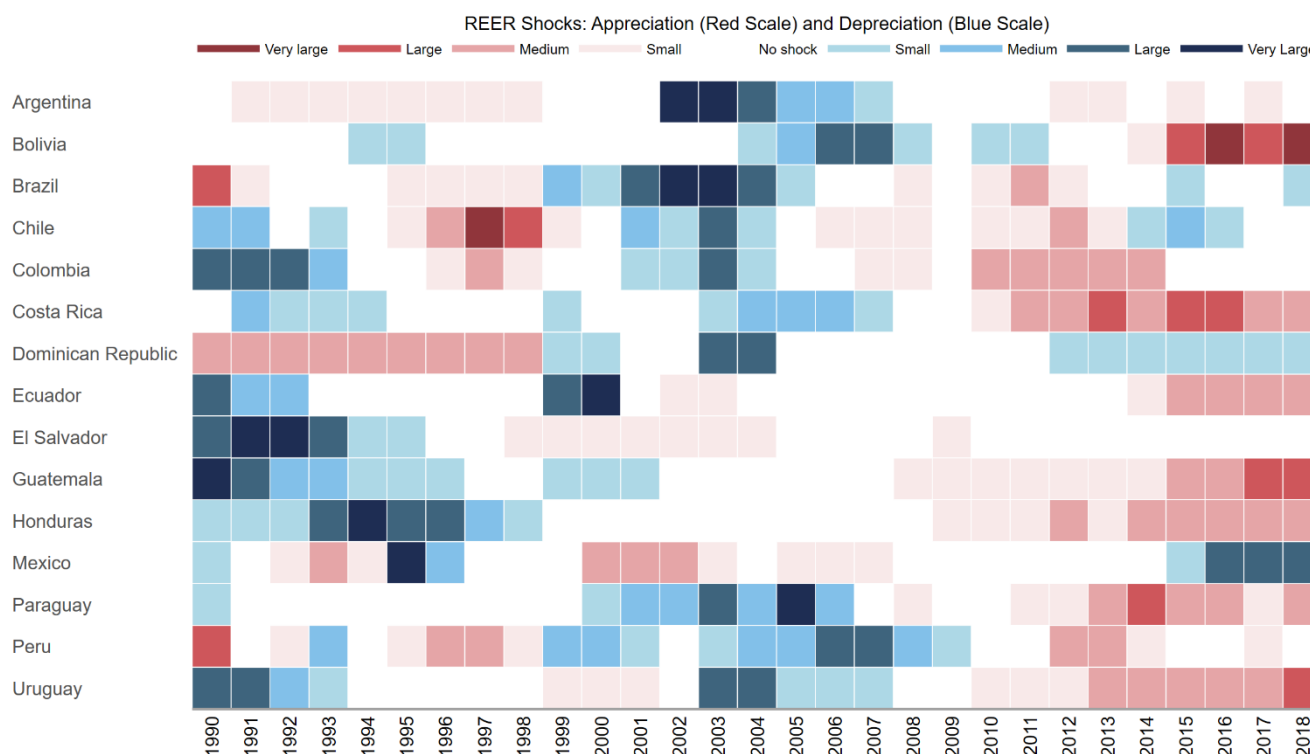
### 3.2 REER shocks

To identify the REER shocks that we hypothesize contribute to the above trends, we use the REER index provided by the ECLAC-CEPALSTAT dataset. A decrease is equivalent to an appreciation and an increase a depreciation. The series was available for all countries except for Argentina, which we calculated by multiplying Argentina's nominal exchange rate by the ratio of the US GDP deflator to that of Argentina's. We then calculate the mean REER of a country during the 1990-2018 period and observe how many standard deviations from the mean is each year's REER. Since our mechanism assumes that REER shocks will change the sectoral composition of GDP and impact the availability of jobs, we use the annual mean REER instead of a higher frequency measure (such as quarterly or monthly data) to allow enough time for these shocks to have an impact on the real side of the economy (and be consistent with the no anticipation assumption of our modeling strategy, as explained in the next section). We then divide these shocks into eight bins according to their direction (appreciation or depreciation) and size (small, if the

shock is between 0.5 and 1.0 standard deviations (SDs); medium if between 1.0 and 1.5 SDs; large if between 1.5 and 2.0 SDs; and very large if greater than 2.0 SDs).

Our sample consists of 15 countries and 29 years, so there are 435 possible shock observations. For the period analyzed, shocks did not occur 37.5% of the time (163 episodes); we observe 144 appreciation shocks (33.1%) and 125 depreciation shocks (29.4%). Despite being more frequent, appreciation shocks tend to be small (77 episodes, 17.5%) or medium (52 episodes, 11.95%). Large appreciation shocks occurred 12 times (2.76%), and very large shocks were only observed on 3 occasions—two times in Bolivia and one time in Chile. Depreciation shocks tend to be greater, with 57 small-size observations (13.1%), 30 medium (6.9%), 30 large, and 11 very large (2.53%). Figure 4 depicts how these shocks are distributed in time, by size and by country (Appendix A, Figure A2, shows the mean REER index and size of shocks for each country).

**Figure 4. REER shocks by size (standard deviations from a country's mean).**



Source: Own elaboration based on ECLAC-CEPALSTAT 2023



### 3.3 Other macroeconomic variables

Other macroeconomic structures and policies are likely to influence job quality, so we include supply-side and demand-side controls in the analysis. However, since macroeconomic variables tend to be highly correlated with one another, we also adopt a parsimonious strategy to avoid the problem of multicollinearity. We start with a basic model including four controls and explore different specifications; the full model includes eight controls in total.

In the basic model, the only supply-side control is women's mean years of education as a proportion of men's. Increases in human capital are frequently proxied by education in macroeconomic models and are also associated with better economic conditions overall—better education opportunities for women, a historically excluded group, likely mean that there are better opportunities for individuals in an economy (Cohen and Soto 2007, Barro and Lee 2013). Given the high correlation between women's educational achievement as a proportion of men's and a multitude of gender inequality dynamics in labor markets (and elsewhere), we expect women's relative education to capture most of the supply-side dynamics determining the relative availability of good jobs for women (Braunstein, Bouhia and Seguino 2019).

Additional supply-side controls include average fertility and women's labor force participation rate as a proportion of men's. In general, lower fertility is associated with fewer care responsibilities and more time in paid work for women, which increases work experience and the likelihood of maintaining a full-time, higher-paying job (Klasen 2019). Furthermore, gendered social norms that promote doubts about mothers' commitment to paid work may exact a "motherhood penalty" in the labor market. They also limit the availability of good jobs for women, both by decreasing the likelihood of promotion and opportunities for over-time, and by segregating mothers into part-time positions or the informal sector where hours tend to be more flexible (Berniell et al. 2021; Villanueva and Lin 2020). At the same time, higher fertility tends to benefit

men in the labor market, both because of facing less potential competition from women, and conservative social stereotypes that presume and support fathers as primary breadwinners and family providers leading to a “fatherhood premium” (Baranowska-Rataj and Matysiak 2022).

Regarding the relative labor force participation control, the expected correlation with women’s or men’s share of good jobs is not clear. If horizontal segregation is persistent and women’s increasing labor force participation is crowded into sectors that predominantly employ women, higher women’s LFPR will decrease the share of good jobs in women’s employment. If women compete with men for positions in a more diverse spectrum of sectors, women’s higher market participation may increase their share of good jobs and decrease men’s.

Moving on to the demand-side controls, our baseline model includes controls for investment, the volume of international trade, industrial productivity, and financial openness. Investment is measured by gross fixed capital formation (GFCF) as a share of GDP; intuitively, more investment is associated with better job opportunities for everyone, and highly correlated with economic growth.

Since we are trying to measure the impact of REER on job quality by gender through the channel of labor market segregation, controlling for the structure of international trade becomes important in our analysis. The export of labor-intensive manufactures tends to be associated with increases in the relative demand for women’s labor in industry. However, the region’s sharp deindustrialization in the past two decades effectively decreased industrial employment for women faster than for men (Seguino and Braunstein 2019). We control for the structure of international trade by including manufacturing exports as a share of imports in our regression. As countries progress up the value-added ladder in trading relations, we would expect the ratio of manufactured exports to imports to increase.

To control for financial openness, we use the financial openness index as defined by Chinn and Ito (2008), which measures the extent of capital controls based on information from the International Monetary Fund's *Annual Report on Exchange Arrangements and Exchange Restrictions* (AREAER). Liberalization of international capital flows increases international capital mobility, which facilitates the allocation of resources to financial speculation and decreases workers' bargaining power, ultimately contributing to wage stagnation (Grabel 1993; Kohler et al 2019). It is likely that greater financial openness is associated with a decrease of higher-paying jobs in the service sector, particularly tradable services, which tend to be occupied by men. Since women are concentrated in less tradable services like education, health, and care services in general, they are less prone to suffer negative impacts on job quality.

We measure industrial productivity as the ratio of real industrial output to industrial employment. Despite women's higher educational achievements, gains in industrial productivity are associated with losses in women's industrial employment as more capital- or technology-intensive jobs more typically go to men (Tejani and Milberg 2016; Seguino and Braunstein 2019). In terms of overall job quality, evidence suggests that the relationship is nonlinear: for low- and middle-income countries, increases in industrial productivity tend to be associated with women's loss of good jobs in industry. But at more advanced stages of development and higher levels of industrial productivity, higher-paying service sector opportunities appear for both women and men (Arora, Braunstein and Seguino 2023).

Our last demand-side control includes foreign direct investment inflows (FDI) as a share of gross fixed capital formation. The Chinn-Ito measure of financial openness discussed above reflects a policy decision rather than actual international capital flows and is likely to be more closely associated with short-term portfolio investment and financial speculation than FDI. Note

that FDI in Latin America is primarily invested in resource extraction, and our analysis is limited to non-agricultural sectors (though it does include mining and quarrying) (Veltmeyer 2016, UN-ECLAC 2022). However, the spillover effects of those investments into other sectors—like transportation—can be significant for the gendered distribution of good jobs in our analysis. A high share of FDI in overall investment likely signals both heavy dependence on resource extraction (a sector that does not produce much employment) and more competition for non-agricultural jobs. Although men dominate employment in extractive sectors and associated sectors that benefit from spillovers, given the limited employment effects of extractive activities overall, the net effect on the availability of good jobs by gender is not immediately clear (Veltmeyer 2016; Perks and Schulz 2020).

#### 4 Modelling strategy

To capture the impact of REER shocks in job quality by gender in a panel with 29 years and 15 countries, we chose a generalized difference-in-differences model, which is designed to explore within-country variation resulting from a REER shock (treatment) over time using country and time fixed effects; this model is adequate since there are pretreatment gaps that persist through time (Lee 2016; Wing, Simon and Bello-Gomez 2018). Given that exchange rate shocks are continuous (instead of binary), we use a continuous design so that the REER shocks are divided into bins but vary within each bin. Thus, the size of the dose matters (Callaway, Goodman-Bacon and Sant’Anna 2021). We cluster standard errors by country. The treatments are somewhat randomly distributed through countries and time as illustrated in Figure 4 but impact all jobs within

a country at the same time, and the treatment effects are heterogenous (Velentgas et al 2013; Abadie et al 2023).<sup>10</sup>

This modeling strategy assumes that changes in job quality for countries with no REER shocks are good counter-factuals for changes in job quality we would have observed for countries that suffered REER shocks, controlling for the demand-side and supply-side variables described above. The model also assumes no anticipation: agents do not adjust their creation or destruction of good jobs in year  $t$  based on how they expect REER to behave in year  $t+1$ . Since we use average annual REER this does not seem like a particularly strong assumption. When we run the model with lead REER shocks (i.e., shocks that occurred in time  $t+1$ ), results indeed indicate that the no-anticipation hypothesis is satisfied (Appendix B, Table 3B).

A REER shock (treatment) is defined as any REER change larger than 0.5 standard deviations from the country's period mean. Hence, periods without changes of this magnitude are the control periods (37.5% of total observations). The treatment equals one multiplied by the size of the shock or dose as measured by how many standard deviations from the country's mean that shock was. To test if continuous treatment presents a problem of selection bias (that is, the bias that comes from assuming different treatment groups respond similarly to a given dosage as described by Callaway, Goodman-Bacon and Sant'Anna (2021)), we also run all models with binary instead of continuous shocks. This change does not impact our results, and the outputs of these regressions are presented in Appendix B, Table 2B.

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<sup>10</sup> Our model is like the one presented by Lindo et al (2020) that measures the effects of abortion-clinic closures and on clinic access, abortions, and births using variation generated by a law that shuttered nearly half of abortion clinics in Texas. The most significant differences are that: (1) since they are interested in number of abortions (a discrete variable), they use a Poisson distribution of fixed effects, and we measure good jobs as a ratio of total jobs, so we use a conventional Gaussian distribution; (2) we have several shocks in our model.

Since we have two types of shocks (appreciations and depreciations), we run the model with three different control groups: (1) a model with only appreciation shocks, so the control group can experience either depreciation shocks or no REER shocks at all; (2) a model with only depreciation shocks, so the control group can experience either appreciation shocks or no REER shocks at all; and (3) a model with both appreciation and depreciation shocks, so the control group is not experiencing any REER shocks. The results for all three models are very similar (Appendix B, Table 1B), but the statistical significance of the third specification—including both shocks—is higher because the control group is more homogeneous. The results of the third specification are reported in the next section.

We start with a baseline model using only four controls, then add further supply-side controls (supply model), demand-side controls (demand model), and finally all controls (full model). Since the results are consistent through each specification, we only report the results with the full model in the results section (the full model with covariates is presented in Appendix A, Table A3; all results are presented in Appendix B, Table 1B).

## 5 Results

The results in Table 2 below indicate that exchange-rate shocks, both appreciations and depreciations, appear to be generally associated with an increase in women's relative share of good jobs, as evidenced in column (3). However, considering the separate effects of shocks on the share of goods jobs in men's and women's employment in columns (1) and (2) respectively gives a much more qualified picture of the relationship between REER shocks and gender equality in the labor market.

Relative to no REER shocks, medium appreciation shocks (those between 1.0 and 1.5 standard deviations below the country's period mean) are associated with a sort of “race-to-the-

bottom” dynamic on gender equality: the share of good jobs in men’s total employment decreases by 4.1 percentage points, while no improvement in women’s good job share is identified. Therefore, women’s good job share relative to men’s increases by 4.0 percentage points, but not because of women gaining employment in better-paying sectors and occupations. Large appreciation shocks are somewhat rare (12 out of 435 possible observations as described in Section 3) but are associated with a 1.4 percentage point increase in women’s good job share and a 3.5 percentage point increase in women’s relative good job share—a significant improvement in gender equality. Most of these shocks occur after 2013, and further analysis indicates that it might be a result of women leaving self-employment in the informal sector, particularly in the domestic service sector, and getting formal jobs (IMF 2019; ILO 2021).<sup>11</sup> We tested this hypothesis by running the regression excluding the domestic service sector. The impact of large REER appreciation shocks loses statistical significance, so it is plausible that the decline in women’s self-employment as domestic workers is driving the result, since women’s labor force participation increases during this period (the results of these regressions are presented in Appendix B, Table 6B). The domestic service sector employs a significant percentage of workers in Latin America (around 7 percent of total employment and 21 percent of women’s employment in our sample) and is characterized by high levels of informality and a lack of good job opportunities (see Table A2). Given that the average size of this sector slightly decreased during this period and the average age of domestic workers increased by eight years during the 2013-2018 period, it is possible that younger women found better job opportunities in the formal sector (ILO 2021).

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<sup>11</sup> The level of informality in Latin American countries is highly heterogenous, but it is overall negatively correlated with level of education: the more educated workers are, the less likely they are to have an informal job (IMF 2019).

**Table 2. Results for model with no shocks as control group, all controls.**

	(1) Men's Share	(2) Women's Share	(3) W/M Ratio
0.5 >= Depreciation < 1	-0.003 (0.015)	0.002 (0.010)	0.001 (0.025)
1 >= Depreciation < 1.5	-0.029* (0.015)	0.008 (0.008)	0.034* (0.016)
1.5 >= Depreciation < 2	-0.028** (0.010)	-0.000 (0.005)	0.016 (0.013)
Depreciation >= 2	-0.028** (0.010)	0.012*** (0.004)	0.043*** (0.012)
0.5 >= Appreciation < 1	-0.004 (0.016)	0.014 (0.011)	0.022 (0.023)
1 >= Appreciation < 1.5	-0.041** (0.018)	0.007 (0.011)	0.040* (0.021)
1.5 >= Appreciation < 2	-0.019 (0.012)	0.014** (0.006)	0.035* (0.018)
Appreciation >= 2	-0.000 (0.009)	-0.002 (0.005)	-0.005 (0.011)
N	277	277	277
Country FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Controls	Full	Full	Full

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ 

Recall that depreciation shocks are slightly less frequent than appreciation shocks, with 125 episodes compared to the 144 appreciation shock episodes. Still, depreciations over the “medium” size of 1.0 standard deviation from the country’s period mean are associated with a decrease in men’s good share, as evidenced in column (1) of Table 2. Men’s concentration in tradable sectors and their high representation among well-paid service sector jobs (such as in the finance, insurance, and real estate sector) largely explains this relationship. This period is



characterized not only by a decrease in the overall availability of industrial jobs in the region, but also by a decrease in good service sector jobs and an increase in lower-paying service sector positions. Specifically, the number of jobs offered in the FIRE sector showed little increase over time for all countries, while the retail and repair of household, office, and computer goods sector, characterized by lower-paying jobs, increased substantially.

Only very large depreciation shocks are associated with an increase in women's good job share. The positive and statistically significant relationship between women's good job share and inward FDI (shown in Table A3) might suggest that, when FDI increases, more investment is being directed to employment-intensive industries other than the extractive sector, so jobs in the export manufacturing industry are being created for women. The manufacturing sectors of food, beverage and tobacco and textile and wearing apparel are the ones that offer the largest proportion of industrial jobs for women in sample countries. After 2006, when depreciation shocks are rare, there is a decline in this type of employment for women, particularly in the textile and wearing apparel manufacturing sector. Despite these sectors not being characterized by a large share of good jobs for women, they still offer better positions on average when compared to community and domestic services, a sector that employs 21% of women in our sample (Table A2). Women's employment in high-tech manufacturing also increases when depreciation shocks occur and tends to be stagnant when no shocks or appreciation shocks are observed; however, only 2% of women are employed in this sector in our sample (Table A2).

Large depreciation shocks are associated with a 1.2 percentage point increase in women's good job share but are also associated with a 2.8 percentage point decrease in men's, resulting in a 4.3 percentage point increase in women's relative share of good jobs. A similar share of men and women are occupied in trade services and the FIRE sector, but men are significantly more likely

to occupy higher-paying positions. These sectors are also more negatively sensitive to the impacts of large currency depreciation, and both women and men lose jobs as a result, but men lose more jobs classified as good jobs. For women in these sectors, job loss is more-than-compensated by the increase in manufacturing sector positions, as discussed above. Since large depreciation shocks tend to be associated with periods of macroeconomic instability and high inflation, this result suggests that these conditions may lead to a sort of gendered competition for the higher-paying jobs that remain. Appreciation shocks are also associated with an increase in the proportion of construction jobs for men, which tend to offer a smaller share of good positions when compared to other sectors.

The covariates used in the regression confirm some results expected from the literature (the full output of these regressions is shown in Appendix A, Table A3). Fertility is positively associated with men's share of good jobs, some evidence of a fatherhood premium—or at least less competition with women for good jobs. Men's job quality seems to be more vulnerable to financial openness—likely connected to their concentration in the tradable sector. Women's average years of education as a proportion of men's is consistently positively associated with women's good job share and always highly statically significant. Our regression results also indicate that industrial productivity is negatively associated with women's good job share, aligning with the results observed by Tejani and Milberg (2016) and Seguino and Braunstein (2019).

One of the challenges of conducting causal inference analysis in macroeconomic data, particularly when evaluating the impacts of REER shocks, is the lack of reliable, long-term trends without treatment. The nature of REER shocks also prevents the utilization of common methods to avoid bias in difference-in-difference analysis, such as centering time-variant shocks to time zero to analyze pre- and post-shock parallel trends (Roth *et al* 2023). To test the robustness of the

model, we examine different specifications (as described on Section 4) and explore how much our results depend on our specific definition of the treatments and the control group (Appendix B, Tables 1B). We build models with different specifications considering only two types of shocks: depreciation shocks larger than one standard deviation and appreciation shocks larger than one standard deviation. We also analyze regressions in which the shocks are divided in bins but with six bins instead of eight, so that the control group is formed by observations in which no shock larger than one standard deviation occurred (instead of one-half of a standard deviation). Overall, the results consistently show that increases in women's relative good job share are being driven by a decrease in men's relative good job share. We also consider "contaminated" control groups in which the shocks are either appreciation or depreciation, so that the control group experiences no shock at all or a shock in the opposite direction. Even when compared with this heterogeneous control group, the results are consistent, so our model shows robustness even when the control group is purposely poorly identified.

We further test robustness by considering lead and lagged shocks, and by using discrete instead of continuous difference-in-difference approaches in various specifications (all regressions are presented in Appendix B). Lead models suggest that the no-anticipation assumption holds, and lagged models indicate that the annual average contemporaneous REER shock (i.e., the treatment specified in our analysis) is indeed more impactful and statistically significantly associated with changes in good job shares by gender when compared with lagged shocks. Interestingly, when comparing the results of the discrete model with the continuous model (i.e., when the size of the shock is not allowed to vary within each bin versus when the size of the dose matters), the statistical significance of the results is consistent across models but the magnitude of the parameters is considerably larger on the discrete specification for large and very large shocks (Table 2B.7). This

suggests that the impacts of the shocks are non-linear. Our analysis is based on the results of the continuous specification, which presents a more conservative estimate of the impacts of REER shocks on job quality.

## 6 Concluding discussion

These results points to some important policy implications. First and foremost, they imply that real exchange rate shocks have gender-specific effects, influencing both the overall availability and the gender distribution of job quality in Latin America. Despite the adoption of macroeconomic policies associated with appreciated real exchange rates throughout the region, larger appreciation shocks are rare and tend to increase women's good job share. Very large depreciation shocks are associated with an increase in women's good job share (largely in manufacturing) and a greater-than-proportional decrease in men's good job share, resulting in a rise in women's relative share of good jobs. The persistent horizontal and vertical segregation that characterizes Latin American economies is a key channel through which these REER shocks affect the gender distribution of job quality. Although this segregation affords men disproportionate access to higher-paying jobs than women overall, men are also more likely to lose these better jobs when REER shocks occur—either through appreciation or depreciation. To acknowledge the opposite impacts of REER shocks for men and women, and design gender-aware economic policies that promote good jobs for women without disproportionately decreasing the availability of good jobs for men remains a significant challenge.

## 7 References

- Abramo, L. (2021). 'Políticas para Enfrentar los Desafíos de las Antiguas y Nuevas Formas de Informalidad em América Latina' *Serie Políticas Sociales 240*. Santiago: Comisión Económica para América Latina y el Caribe (CEPAL).
- Acevedo, I., F Castellani, G Lotti, and M. Székely. (2022). Labor Market Gender Gaps in the Time of Covid-19 in Latin America and the Carribean. Inter-American Development Bank Working Paper Series No. IDB-WP-01402.
- Alves, S. A., Nascimento, A. C., & Mesquita, H. A. (2009). Movimento dos Atingidos Por Barragens (MAB): Resistência popular ea construção de um novo modelo energético para o Brasil. *Revista Estudos Amazônidas: Fronteiras e Territórios*, 1(1), 635-650.
- Arora, D., Braunstein, E., & Seguino, S. (2023). A macro analysis of gender segregation and job quality in Latin America. *World Development*, 164, 106153.
- Baert, S. (2018). Hiring Discrimination: An Overview of (Almost) All Correspondence Experiments Since 2005. In: S. M. Gaddis (Ed.). *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*. New York, NY: Springer.
- Balakrishnan, R., J. Heintz, and D. Elson. (2016). Rethinking Economic Policy for Social Justice. The Radical Potential of Human Rights. London: Routledge.
- Anna Baranowska-Rataj, Anna Anna Matysiak. (2022). "Family Size and Men's Labor Market Outcomes: Do Social Beliefs About Men's Roles in the Family Matter?" *Feminist Economics* 28(2): 93-118
- Barro, Robert and Jong-Wha Lee, 2013, "A New Data Set of Educational Attainment in the World, 1950-2010." *Journal of Development Economics*, vol 104, pp.184-198.
- Berniell, Inés, Lucila Berniell, Dolores de la Mata, María Edo, and Mariana Marchionni. (2021). "Motherhood and Flexible Jobs: Evidence from Latin American Countries", WIDER Working Paper 2021/33 Helsinki: UNU-WIDER, 2021. <https://doi.org/10.35188/UNU-WIDER/2021/971-6>.
- Borrowman, M., and S. Klasen (2020). 'Drivers of Gendered Sectoral and Occupational Segregation in Development Countries'. *Feminist Economics*, 26(2): 62–94.
- Boserup, E. (1970). *Women's Role in Economic Development*. London: George Allen and Unwin.
- Braunstein, E. and S. Seguino (2018). The impact of economic policy and structural change on gender employment outcomes in Latin America, 1990-2010. *Review of Keynesian Economics* 6(3): 307-332.
- Caglayan, M. and F. Demir (2019). 'Exchange rate movements, export sophistication and direction of trade: the development channel and North-South trade flows'. *Cambridge Journal of Economics*, 43(6): 1623-1652.
- Carvalho Neto, A. M. D., Tanure, B., & Andrade, J. (2010). Executivas: carreira, maternidade, amores e preconceitos. *RAE eletrônica*, 9(1): 0-0.
- Chinn, M., and H. Ito (2006). 'What Matters for Financial Development? Capital Controls, Institutions, and Interactions'. *Journal of Development Economics*, 81(1): 163–92.

- Chinn, M., and H. Ito (2008). 'A New Measurement of Financial Openness'. *Journal of Comparative Policy Analysis: Research and Practice*, 10(3): 309–322.
- Cohen, D., & Soto, M. (2007). Growth and human capital: good data, good results. *Journal of economic growth*, 12, 51-76.
- Cunningham, W. (2007). *Minimum Wages and Social Policy: Lessons from Developing Countries*. Washington, DC: World Bank.
- D'Onofrio-Flores, P. M. and S. M. Pfafflin (Eds.) (2018). *Scientific-Technological Change and the Role of Women in Development*. New York, NY: Routledge.
- Davies, R. B., & Vadlamannati, K. C. (2013). A race to the bottom in labor standards? An empirical investigation. *Journal of Development Economics*, 103: 1-14.
- de Souza, L. R. (2021). "Convergência universal na condução da política econômica: a utilização do tripé macroeconômico em algumas experiências latino-americanas." *Transregiones*, 1(1), 25-44.
- Erten, B., and M. Metzger (2019). 'The Real Exchange Rate, Structural Change, and Female Labor Force Participation'. *World Development*, 117: 296–312.
- Fawcett, J., S. Khoo and P. Smith (Eds.). (1984). *Women in the cities of Asia: migration and urban adaptation*. Oxfordshire: Routledge.
- Fraga, A. B., & Monticelli, T. A. (2021). "PEC das Domésticas": holofotes e bastidores. *Revista Estudos Feministas*, 29(3): e71312.
- García-Solanes, J., & Torrejón-Flores, F. (2012). 'La fijación de metas de inflación da buenos resultados en América Latina'. *Revista CEPAL*, 106.
- Gabel, I. (1993). 'Fast Money, "Noisy Growth": A Noise-Led Theory of Development'. *Review of Radical Political Economics*, 25(3), 1-8.
- Hanmer, L. and J. Klugman. (2016). "Exploring Women's Agency and Empowerment in Developing Countries: Where do We Stand?" *Feminist Economics* 22(1): 237-263.
- Hurtado, A. and M. Sinha. (2016). *Beyond Machismo: Intersectional Latino Masculinities*. Austin, TX: University of Texas Press.
- Jaquette, J. (1982). "Review: Women and Modernization Theory: A Decade of Feminist Criticism". *World Politics*, 34(2): 267-284.
- Kabeer, N. 1999. *The conditions and consequences of choice: reflections on the measurement of women's empowerment* (Vol. 108, pp. 1-58). Geneva: UNRISD.
- Kabeer, N. (2005). Gender equality and women's empowerment: A critical analysis of the third millennium development goal 1. *Gender & development*, 13(1), 13-24.
- Kabeer, N. (2016). Gender Equality, Economic Growth, and Women's Agency: the "Endless Variety" and "Monotonous Similarity" of Patriarchal Constraints. *Feminist Economics* 22(1): 295-321.
- Klasen, Stephan. (1999). "Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions". *World Bank Policy Research Report on Gender and Development*, Working Paper Series, No. 7.

- Klasen, Stephan. (2019). “What Explains Uneven Female Labor Force Participation Levels and Trends in Developing Countries?” *The World Bank Research Observer* 34(2): 161-197.
- Kohler, K., A. Guschanski, and E. Stockhammer (2019). ‘The Impact of Financialisation on the Wage Share: A Theoretical Clarification and Empirical Test’. *Cambridge Journal of Economics*, 43(4): 937–74.
- Laborde, A. (2023). “El parlamento chileno aprueba la reducción de la jornada laboral a 40 horas semanales”. *El País*. <https://elpais.com/chile/2023-04-11/el-parlamento-chileno-aprueba-la-reduccion-de-la-jornada-laboral-a-40-horas-semanales.html>
- Margarido, L. C. (2020). *Entre discursos e silêncios: a aprovação da PEC das domésticas na Câmara dos Deputados* (Doctoral dissertation, Fundação Getúlio Vargas).
- Messina, J. and J. Silva. (2021) ‘Twenty Years of Wage Inequality in Latin America’. *The World Bank Economic Review*, 35(1), 117-147.
- Mishkin, F. S. (2000) ‘What should central banks do?’ *Federal Reserve Bank of St. Louis Review*, n° 82.
- Mishkin, F. and Klaus Schmidt-Hebbel (2002). ‘One Decade of Inflation Targeting in the World: What Do We Know and What Do We Need to Know?’ In: Loayza, Norman and Raimundo Soto (eds.) *Inflation Targeting: Design, Performance, Challenges*. Santiago: Central Bank of Chile, 2002.
- Moser, C. (1993). *Gender Planning and Development: Theory, Practice and Training*. New York: Routledge.
- ILO (2021). *El Trabajo Doméstico Remunerado en América Latina y El Caribe, A 10 Años Del Convenio Núm. 189*. Lima: International Labor Organization, Oficina Regional para América Latina y el Caribe.
- IMF (2019). Labor Market Dynamics and Informality over the Business Cycle in LAC. In: IMF. *Regional Economic Outlook Western Hemisphere, Sustained by Uncertainty*. Washington, DC: International Monetary Fund.
- Palma, J. G. (2019). ‘Deindustrialization, “premature” deindustrialization, and “Dutch disease”’. *El trimestre económico*, 86(344), 901-966.
- Pearson, R. (1998). ‘Reflections on women and Third World industrialisation in the late twentieth century’. *Feminist visions of development: Gender analysis and policy*. London: Routledge.
- Perks, R., & Schulz, K. (2020). Gender in oil, gas and mining: An overview of the global state-of-play. *The Extractive Industries and Society*, 7(2): 380-388.
- Razavi, S. and C. Miller. (1995.) From WID to GAD: Conceptual Shifts in the Women and Development Discourse. United Nations Research Institute for Social Development, Occasional Paper 1, Geneva, Switzerland.
- Rebello, Aiuri. (2015). *As Novinhas e os Visitadores*. Brio Stories. Available at: <<https://medium.com/brio-stories/as-novinhas-e-os-visitadores-cb32d152060#.1ymv7ofyp>>. Accessed Nov. 8, 2023.

- Reyes Suárez, J. L. (2022). *La participación laboral femenina en la comuna San Vicente del cantón Santa Elena, 2022* (Bachelor's thesis, La Libertad: Universidad Estatal Península de Santa Elena, 2022).
- Rodríguez Garcés, C. R., & Muñoz Soto, J. A. (2018). Capital humano y factores culturales: determinantes de la inserción laboral femenina en Chile. *Perfiles Latinoamericanos*, 26(52), 0-0.
- Rodrik, Dani. (2008). The real exchange rate and economic growth. *Brookings Papers on Economic Activity* 2, 365-412.
- Rogers, B. (1979). *Domestication of women: discrimination in developing societies*. New York: St. Martin's Press.
- Roth, J., Sant'Anna, P. H., Bilinski, A., & Poe, J. (2023). What's trending in difference-in-differences? A synthesis of the recent econometrics literature. *Journal of Econometrics*, 235(2): 2218-2244.
- Saad-Filho, A. (2020). "Varieties of neoliberalism in Brazil (2003–2019)." *Latin American Perspectives*, 47(1), 9-27.
- Samarasinghe, V. (1998). The feminization of foreign currency earnings: Women's labour in Sri Lanka. *Journal of Developing Areas* 32(3): 303-326.
- Seguino, S. (2000 [1998]). "Gender inequality and economic growth: A cross-country analysis". *World Development*, 28(7), 1211-1230.
- Seguino, S. (2010). Gender, distribution and balance of payments constrained growth in developing countries. *Review of Political Economy* 22(3): 373-404.
- Seguino, S. (2020). Engendering Macroeconomic Theory and Policy. *Feminist Economics* 26(2): 27-61.
- Seguino, S., and E. Braunstein (2019). 'The Costs of Exclusion: Gender Job Segregation, Structural Change and the Labour Share of Income'. *Development and Change*, 50(4): 976–1008.
- Sehnbruch, K., González, P., Apablaza, M., Méndez, R., & Arriagada, V. (2020). 'The Quality of Employment (QoE) in nine Latin American countries: A multidimensional perspective'. *World Development*, 127, 104738.
- Sorgner, A. (2021). 'Gender and Industrialization: Developments and Trends in the Context of Developing Countries'. *Department of Policy, Research and Statistic Working Paper 1/2021*. Vienna: United Nations Industrial Development Organization (UNIDO).
- Shulman, S. (2003). 'The political economy of labor market discrimination: A classroom friendly presentation of the theory' (pp. 207-220). In E. Mutari and D. Figart (Eds.), *Women and the Economy: A Reader*. New York and London: Armonk.
- Singh, A. M. (2019). "Rural-to-urban migration of women in India: patterns and implications." In *Women in the Cities of Asia* (pp. 81-107). Oxfordshire: Routledge.
- Standing, G. (1989). 'Global Feminization through Flexible Labour'. *World Development*, 17(7), 1077-1096.



- Tejani, S., and W. Milberg (2016). ‘Global Defeminization? Industrial Upgrading, Occupational Segmentation and Manufacturing Employment in Middle-Income Countries’. *Feminist Economics*, 22(2): 24–54.
- UN-ECLAC (2022). CEPALSTAT, United Nations, Economic Commission for Latin America and the Caribbean. Available at <<http://estadisticas.cepal.org/>>, accessed May 2022.
- Veltmeyer, H. (2016). “Extractive Capital, the State and the Resistance in Latin America.” *Sociology and Anthropology*, 4(8): 774-784
- Villanueva, Aida and Ken-Hou Lin. (2020). “Motherhood Wage Penalties in Latin America: The Significance of Labor Informality”. *Social Forces*, 99(1): 59–85,
- World Bank (2013). ‘International Income Distribution Database (I2D2)’. Database. Washington, DC: World Bank.

## Appendix A. Additional tables and graphs.

**Table A1. Gender representation by occupation. All countries.**

	Women's share of employment (%)	% of Total Employment		Share of Good Jobs (%)		
		Men	Women	Men	Women	W/M
Service and market sales workers	60	14	28	57	3	5
Clerks	57	6	11	83	59	70
Elementary occupations	53	16	24	15	3	19
Professionals	51	9	12	97	95	98
Technicians	42	9	9	95	77	80
Senior officials/owners	37	6	4	95	79	84
Others	31	0	0	49	20	41
Skilled agricultural	30	1	0	46	65	142
Machine operators	22	14	4	85	8	9
Craft workers	17	26	9	54	4	8

Source: Own elaboration based on Arora, Braunstein and Seguíno (2023)

**Table A2. Employment and Good Job Share by Sector and Subsector, All Countries**

	Women's share of employment (%)	% of Total Employment		Share of Good Jobs (%)		
		Men	Women	Men	Women	W/M
<b>1. Industrial sector</b>		<b>36</b>	<b>15</b>	<b>61</b>	<b>22</b>	<b>36</b>
<u>1.1 Manufacturing Sector</u>		18	14	70	19	27
1.1.1 High-Tech Manufacturing		6	2	93	57	61
1.1.1.1 Basic chemicals & chemical products	34	1	1	87	65	74
1.1.1.2 Coke, petroleum & nuclear fuel	18	0	0	95	84	89
1.1.1.3 Metals, fabricated metal, machinery, vehicles, transport equipment	16	4	1	94	53	56
1.1.2 Other manufacturing industries		12	12	57	12	21
1.1.2.1 Textile & wearing apparel	71	2	7	49	7	14
1.1.2.2 Food, beverage, tobacco	39	4	4	68	15	21
1.1.2.3 Leather, footwear, wood, paper, rubber, plastic, furniture	27	5	2	55	18	32
1.1.2.4 Minerals & mineral products	14	1	0	42	30	72
1.1.3 Non-Manufacturing Industrial Sector		18	1	52	62	119
1.1.3.1 Utilities (gas, water, electricity, sanitation recycling)	19	1	1	72	56	78
1.1.3.2 Mining & quarrying	10	1	0	76	63	83
1.1.3.3 Construction	3	15	1	49	66	135
<b>2. Services</b>		<b>64</b>	<b>85</b>	<b>69</b>	<b>34</b>	<b>49</b>
<u>2.1 Market Services</u>		51	61	64	18	28
2.1.1 Trade activities		28	30	52	14	26
2.1.1.1 Hotels & Restaurants	58	3	8	44	8	19
2.1.1.2 Retail trade & repairs; household office & computing goods	51	15	23	39	9	24
2.1.1.3 Wholesale trade	29	3	2	81	49	61
2.1.1.4 Sale, maintenance, motor vehicle parts and repair, automotive fuel	10	5	1	71	60	85
2.1.2 Transport & travel services		9	1	79	69	87
2.1.2.1 Cargo handling & storage, transport services, travel agencies	21	1	0	51	76	148
2.1.2.2 Land, water & air transport	6	9	1	83	66	79
2.1.3 FIRE services		10	9	86	64	74
2.1.3.1 Financial intermediation, insurance	47	2	2	98	96	98
2.1.3.2 Membership & International organizations	45	1	1	73	39	52
2.1.3.3 Professional, business, administrative services, R&D	39	5	4	82	52	64
2.1.3.4 Publishing, software consultancy, database activities; post & telecom	33	2	2	91	62	68
2.1.3.5 Real estate services	30	1	0	84	65	77
2.1.4 Community & domestic services		4	21	45	3	8
2.1.4.1 Domestic services	93	1	15	15	0	1
2.1.4.2 All personal services	74	1	4	40	4	9
2.1.4.3 Entertainment & recreation activities; rental transport & other goods	35	2	1	60	38	62
<u>2.2 Non-Market Services</u>		13	24	89	73	83
2.2.1 Education & healthcare		6	18	90	72	80
2.2.1.1 Healthcare, veterinary & social services	72	2	7	90	67	75
2.2.1.2 Education	70	4	10	90	75	83
2.2.2 Public administration	36	6	4	89	83	93

Source: Own elaboration based on Arora, Braunstein and Seguino (2023)

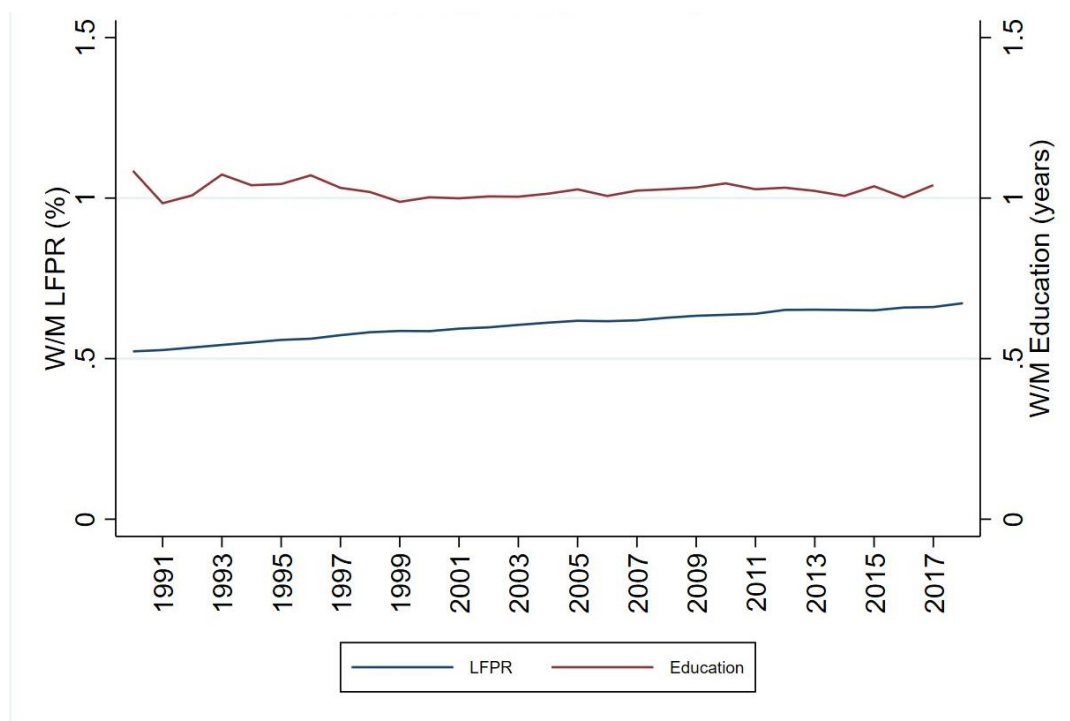
**Table A3. Full model, continuous, with covariates.**

	(1) Men's Share	(2) Women's Share	(3) W/M Ratio
0.5 >= Depreciation < 1	-0.003 (0.015)	0.002 (0.010)	0.001 (0.025)
1 >= Depreciation < 1.5	-0.029* (0.015)	0.008 (0.008)	0.034* (0.016)
1.5 >= Depreciation < 2	-0.028** (0.010)	-0.000 (0.005)	0.016 (0.013)
Depreciation >= 2	-0.028** (0.010)	0.012*** (0.004)	0.043*** (0.012)
0.5 >= Appreciation < 1	-0.004 (0.016)	0.014 (0.011)	0.022 (0.023)
1 >= Appreciation < 1.5	-0.041** (0.018)	0.007 (0.011)	0.040* (0.021)
1.5 >= Appreciation < 2	-0.019 (0.012)	0.014** (0.006)	0.035* (0.018)
Appreciation >= 2	-0.000 (0.009)	-0.002 (0.005)	-0.005 (0.011)
Manufacturing X/M	-0.079 (0.075)	-0.000 (0.024)	0.041 (0.087)
GFCF/GDP	-0.002 (0.004)	-0.001 (0.001)	-0.001 (0.005)
Industrial Productivity	0.001* (0.000)	-0.000 (0.000)	-0.001 (0.000)
Financial Openness	-0.121** (0.047)	-0.026 (0.029)	0.050 (0.066)
W/M Education	0.005 (0.454)	0.702*** (0.218)	1.079* (0.569)
Industrial Productivity 2	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Inward FDI/GFCF	0.034 (0.040)	0.021 (0.013)	0.029 (0.027)
W/M LFPR	0.138 (0.200)	0.229* (0.107)	0.312 (0.289)
Fertility	0.111** (0.045)	0.028 (0.036)	-0.020 (0.075)
N	277	277	277
Country FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Controls	Full	Full	Full

Standard errors in parentheses

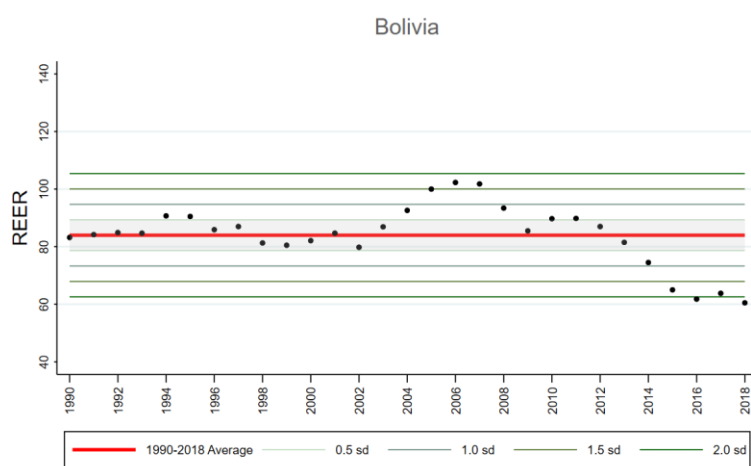
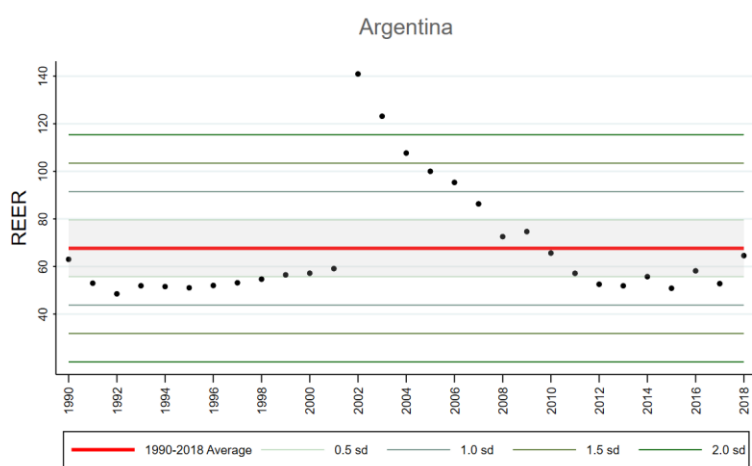
\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Figure A1.** Women's relative labor force participation rate and median years of education. All countries.

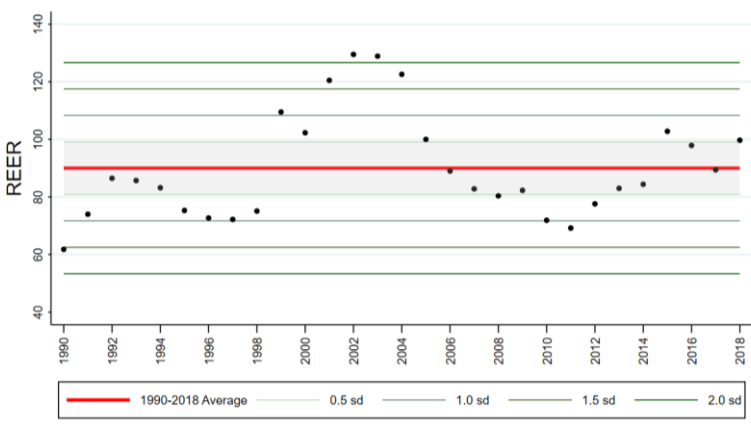


Source: UN-ECLAC 2023

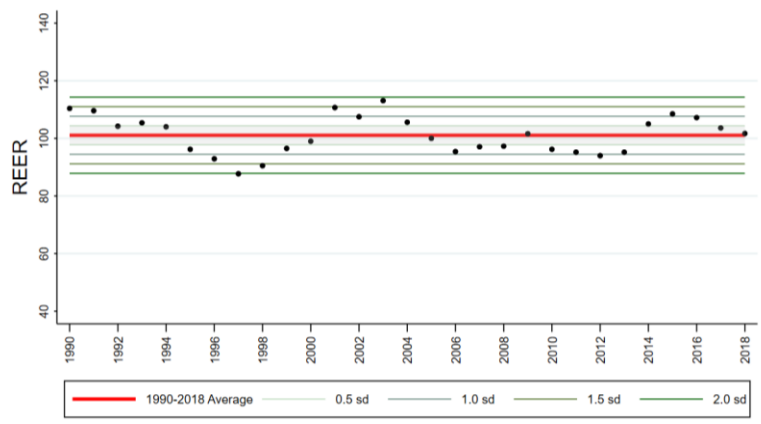
**Figure A2.** REER shocks by country.



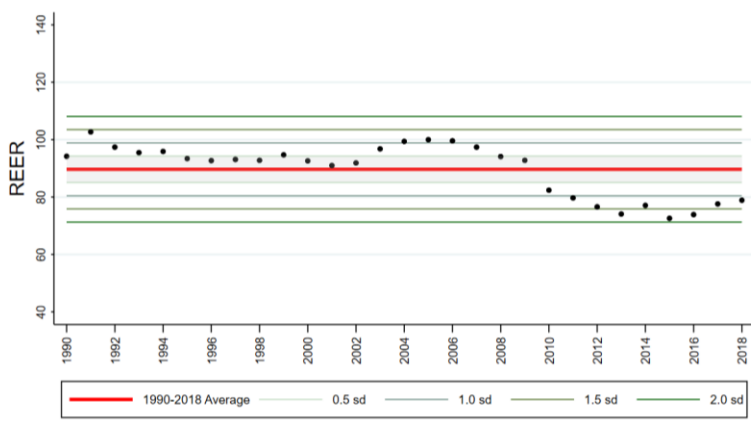
Brazil



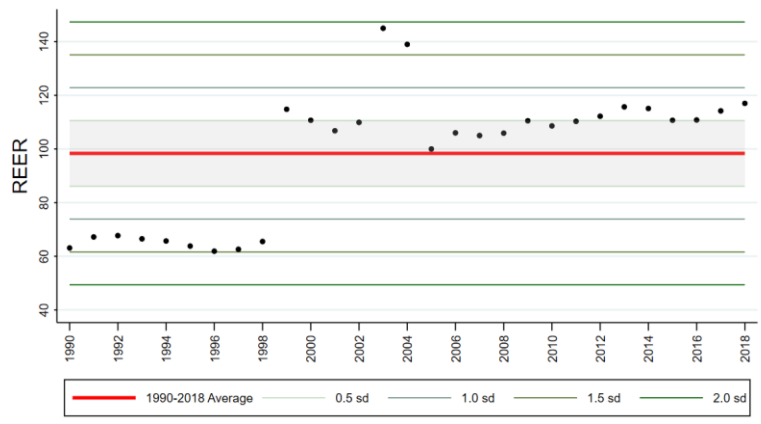
Chile



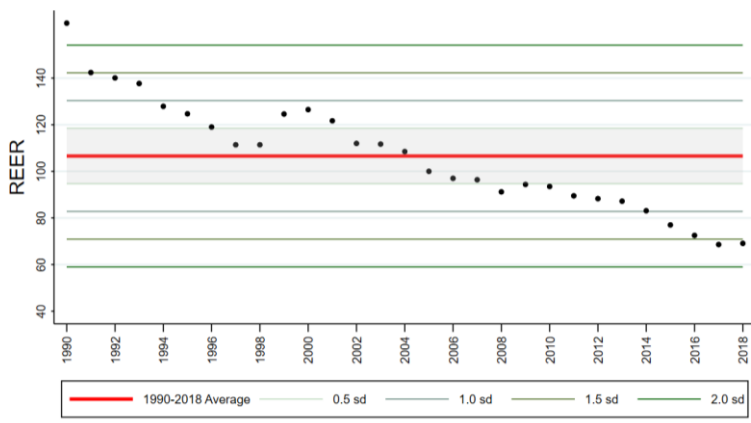
Costa Rica



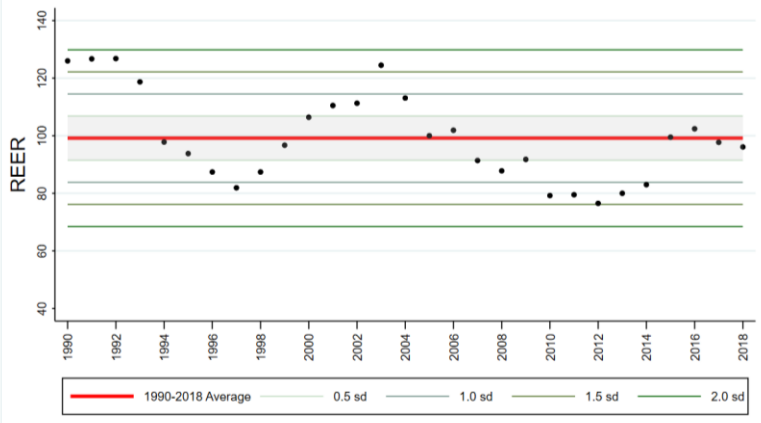
Dominican Republic



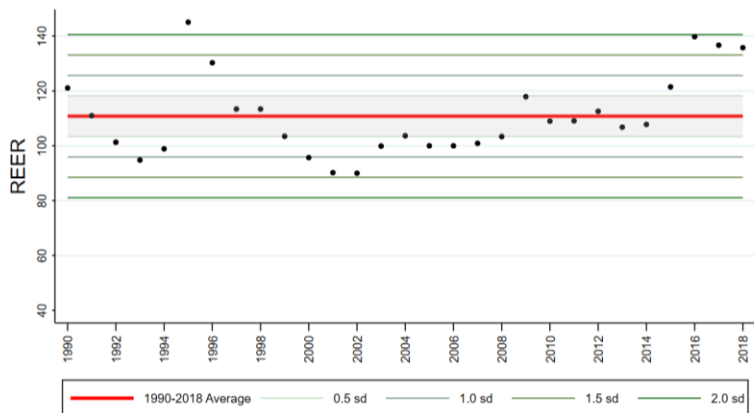
Guatemala



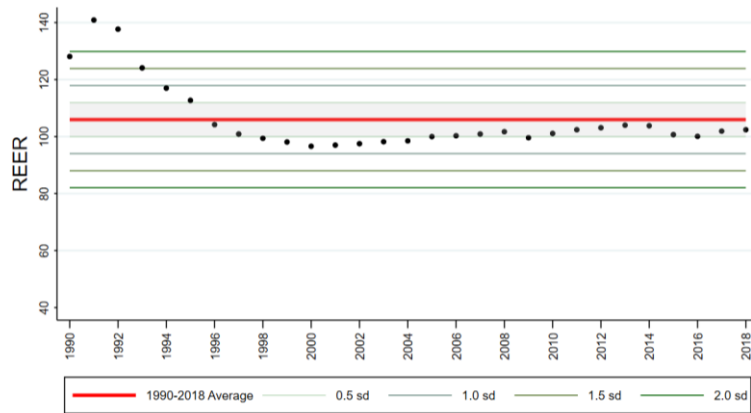
Colombia



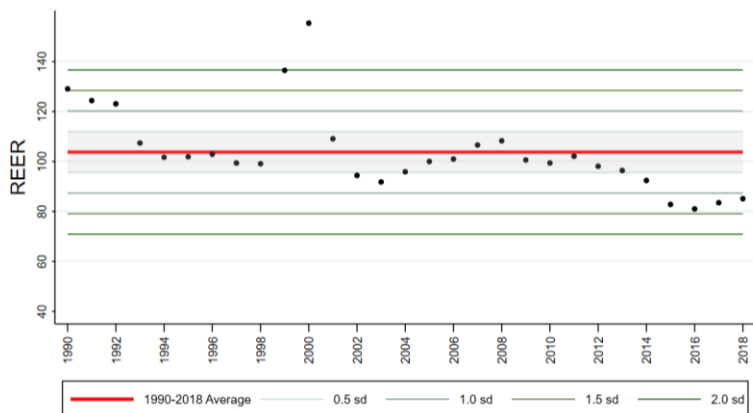
Mexico



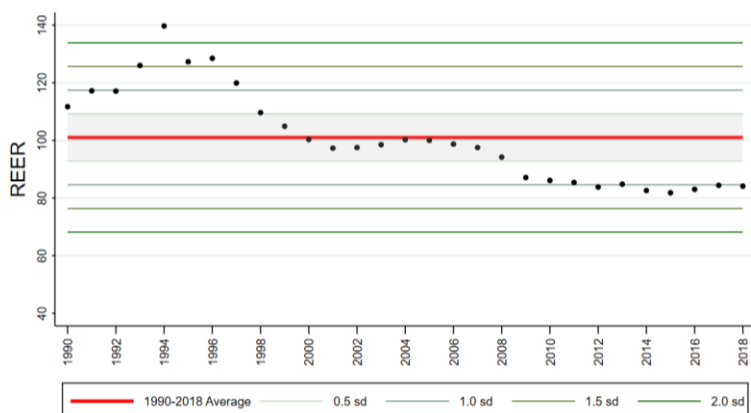
El Salvador



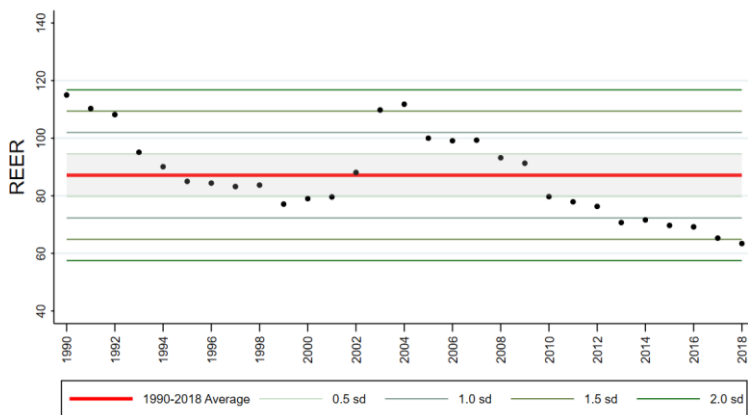
Ecuador



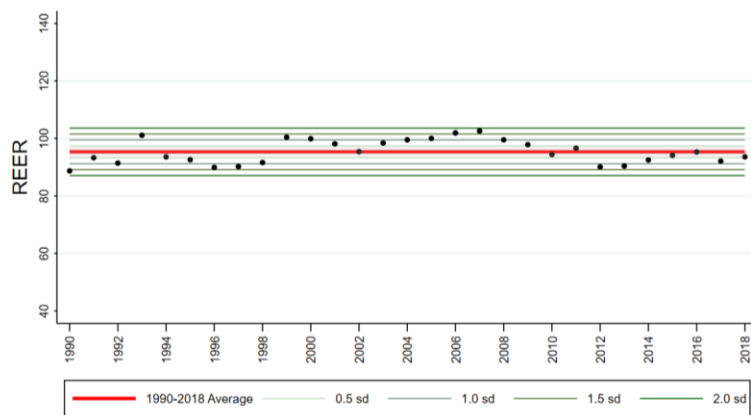
Honduras

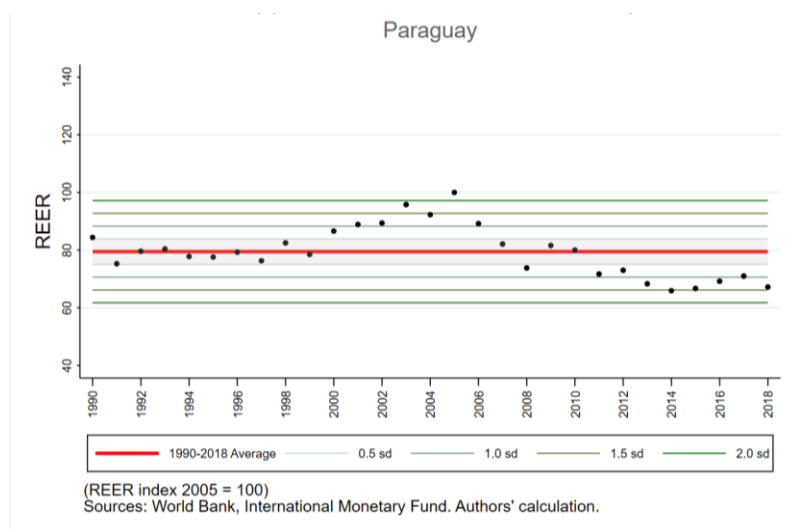


Uruguay

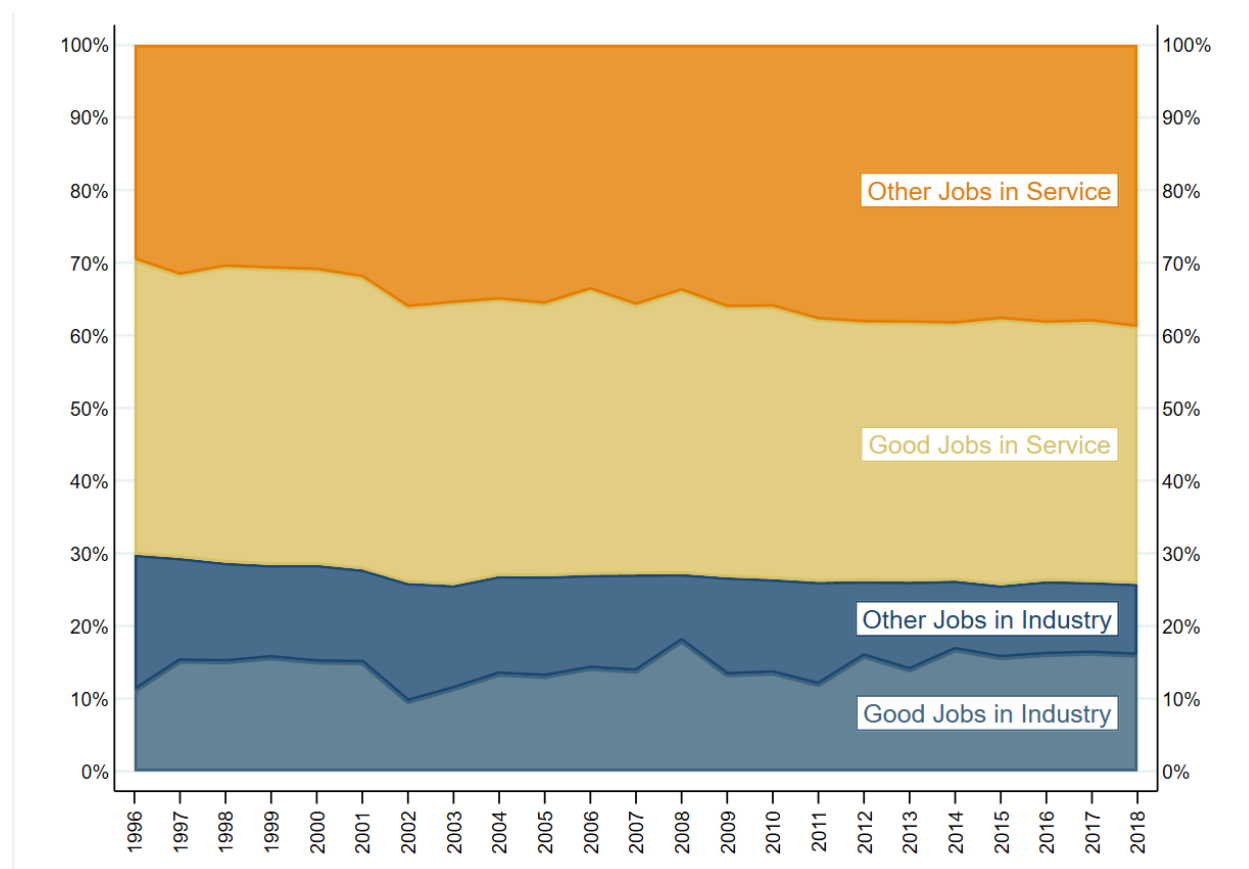


Peru





**Figure A3. Distribution of Jobs in Latin America by Broad Sector and Quality, All Countries.**



Source: Own elaboration based on Arora, Braunstein and Seguíno (2023).

Note: Weighted average for Latin America based on the size of each country's labor force. "Good Jobs" are those within each sector that pay at least the national medium wage, as defined by Equation (1); "Other Jobs" are the remaining ones.



## Appendix B. Further Regressions and Robustness Checks.

Given the length of Appendix B, this is an online Appendix available at [www.debnunes.com](http://www.debnunes.com)