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Lucía Ramírez Leira, Octavio Bertín y Leonardo Gasparini

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Minimum Wages and Skill Premiums: Evidence for Latin America.*

Lucía Ramírez Leira† Octavio Bertín‡ Leonardo Gasparini§

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Abstract

This paper analyzes the effect of the minimum wage on skill premiums in Latin America over the period 1997–2019. The canonical labor market model is extended to include the role of the minimum wage, following the approach proposed by Vogel (2023). Skill premiums are estimated through Two-Way Fixed Effects (TWFE) regressions using harmonized household survey microdata from 14 Latin American countries. Results suggest that increases in the minimum wage are associated with reductions in the skill premium between workers with and without higher education, but do not appear to have a significant effect on the gap between workers with medium and low levels of education. The largest effect of the minimum wage is observed for workers with higher levels of labor market experience. These findings contribute to recent evidence highlighting the role of labor institutions as one of the main drivers of the reduction in inequality in Latin America since the early 2000s.

JEL Classification: J22; J31; J38; K31
Keywords: minimum wage, wages, inequality, skill premium, Latin America.

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†Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS), IIE-FCE, Universidad Nacional de La Plata. E-mail: luciarleira@gmail.com.

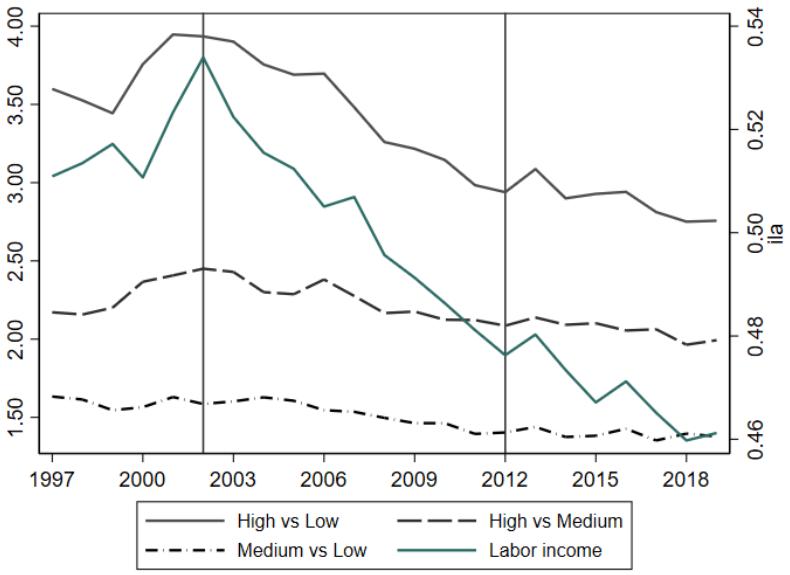
‡Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS), IIE-FCE, Universidad Nacional de La Plata. E-mail: octaviobertin2001@gmail.com.

§Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS), IIE-FCE, Universidad Nacional de La Plata and CONICET. E-mail: leonardo.gasparini@econo.unlp.edu.ar.

1 Introduction

Latin America has undergone significant changes in its distributional dynamics in recent decades. After rising in the 1990s, income inequality in the region declined substantially in the 2000s, followed by a more moderate decrease in the 2010s ((Gasparini, 2019)). Building on a body of literature developed in advanced economies (e.g., Katz and Murphy (1992); Goldin and Katz (2009); Acemoglu and Autor (2011)), numerous studies on Latin America have highlighted the importance of skill-based wage premiums in explaining the dynamics of labor income inequality and overall income inequality (Manacorda et al. (2010); Acosta et al. (2019)). Figure 1 shows that the evolution of wage gaps, especially between high and low-skilled workers, closely follows the evolution of the Gini coefficient of labor income. Trends in total per capita income inequality exhibit a similar pattern, in part due to labor income that comprises, on average, 75% of household income as reported in Latin American surveys.

Figure 1: Wage inequality and observed skill gaps.



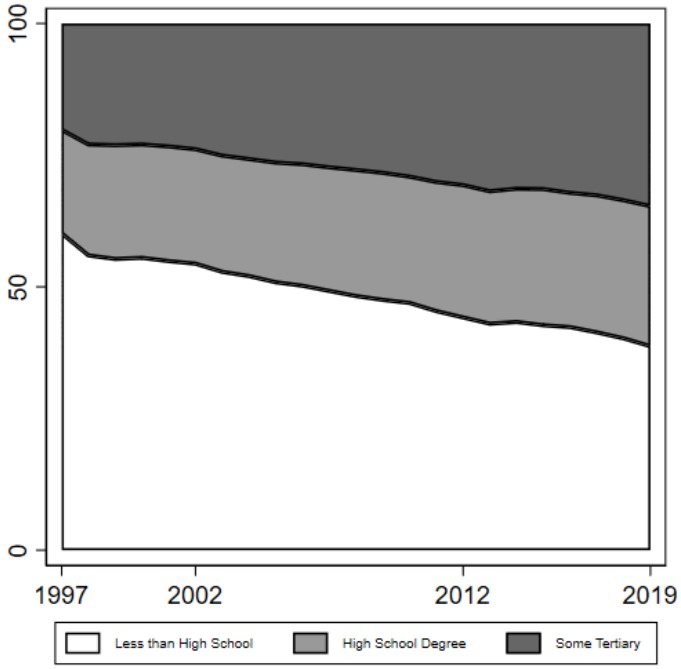
Notes: Unweighted average for Latin American countries, 1997–2019. The left vertical axis shows observed wage gaps by skill groups. "High" refers to more than 13 years of education; "Medium" refers to 9–13 years; and "Low" refers to up to 8 years. The right vertical axis shows the labor income Gini coefficient.

Source: Authors' elaboration based on SEDLAC (CEDLAS and World Bank).

The canonical labor market model explains changes in wage premiums as a function of shifts in the relative supply and demand for workers differentiated by skill levels. In Latin America, the relative supply of skilled labor has followed consistent patterns over the last few decades as the region has experienced sustained educational expansion. Figure 2 presents the educational composition of people aged 21 to 55 in the region between 1997 and 2019. The share of high-skill workers (tertiary education, complete or incomplete) rose by 15 percentage points (pp), accompanied by a 7 pp increase in the share of medium-skill workers (complete secondary education). In contrast, the share of low-skilled workers

has gradually declined. These trends are evident in all countries in the region[1]

Figure 2: Educational structure in Latin America.



Notes: Unweighted average for Latin American countries, 1997–2019. "7 countries" refers to Argentina, Brazil, Chile, Costa Rica, Honduras, Panama, and El Salvador, which have more complete data series for the 1990s. "14 countries" also includes Bolivia, Colombia, Ecuador, Mexico, Peru, Paraguay, and Uruguay.
Source: Authors' elaboration based on SEDLAC (CEDLAS and World Bank).

While the progressive expansion of education is undoubtedly a factor that may have influenced wage premiums, it is unlikely to be the sole driving force. Among other reasons, the evolution of wage premiums in Figure 1 exhibits more variation than would be expected from the steady increase in the relative supply of skilled workers documented in Figure 2.

Several studies have sought to complement explanations of wage gap dynamics with the other key factor of the canonical model: the relative demand for skilled labor. For instance, Acosta et al. (2019) suggest that the strong economic growth of the 2000s, which fueled an expansion in domestic demand, may have led to faster growth in the non-tradable sector compared to the tradable sector. If the non-tradable sector is more intensive in unskilled labor, the wage premium for skilled labor may have decreased. Gasparini (2019) argue that within the non-tradable sector, the largest increases in demand occurred in low-skill labor-intensive goods and services, such as domestic service and construction. Similarly, Messina and Silva (2017) emphasize that the decline in inequality during the 2000s was more pronounced in South American countries than in the rest of the region, coinciding with the greater increase in domestic demand driven by the commodity price boom.

Empirical research on wage gaps remains active, with recent studies incorporating new dimensions

[1] See Figure A1 in the Appendix.

into the analysis of wage premiums, such as market structure (Deb et al. (2024)) or a focus on young workers (Glitz and Wissmann (2021)), among others. These studies highlight that factors beyond relative supply and demand can directly influence wage gaps by skill. Moving away from purely competitive labor market approaches, aspects such as the matching of supply and demand that affect worker mobility, the presence of monopsonistic labor markets, and labor institutions emerge as important determinants of skill returns (Alejo and Casanova (2016)). Our study is consistent with this line of research by examining a labor institution - the minimum wage- as a potential determinant of skill-based wage premiums, complementing empirical studies on Latin America that focus exclusively on the role of relative supply and demand.

Examining the role of the minimum wage in determining wage gaps and their evolution is particularly relevant, given that Latin American countries have undergone substantial changes in national minimum wages in recent decades (Messina and Silva (2017)). Although empirical evidence on this topic remains limited, a recent body of literature suggests that the increase in minimum wages observed in most countries since the 2000s may have contributed to narrowing wage gaps and reducing income inequality (Grau and Landerretche (2011); Ferreira et al. (2014); Maurizio and Vázquez (2016); Lombardo et al. (2024); Fernández and Messina (2018); Campos-González and Balcombe (2024); Murakami (2014); Gallego (2012); and Gindling and Robbins (2001)).

Our paper contributes to this growing literature by applying the approach of Vogel (2023) to the case of Latin America, who extends the model of Katz and Murphy (1992) to incorporate the effect of the minimum wage. Vogel (2023) conducts an empirical analysis for the United States using Two-Way Fixed Effects (TWFE) regressions on a panel of wage premiums and minimum wages. His findings suggest that while relative supply and demand played a significant role in shaping returns to education, changes in the minimum wage were also highly relevant in explaining the evolution of wage premiums and, consequently, income inequality at the national and regional levels.

Our study begins by estimating wage premiums and the relative supply of workers across different skill levels, using harmonized microdata from household surveys in 14 Latin American countries. The results reveal a time-varying dynamic in the wage premium between workers with and without higher education, indicating the need for an explanation beyond a steadily increasing relative supply of skilled labor. As a second step, we estimate Two-Way Fixed Effects (TWFE) regressions of wage premiums using a country-year panel. The results suggest that increases in the minimum wage are significantly associated with reductions in the wage premium for skilled workers with and without higher education. This association is stronger among workers with greater potential experience. In contrast, the minimum wage does not appear to be significantly associated with changes in the wage premium between workers with medium and low skills. While our results do not provide a causal interpretation, we believe the conditional correlations we identify contribute valuable insights to the body of knowledge on the complex impact of one of the most relevant policy instruments—the minimum wage—on key outcomes such as wage structures and income inequality.

The remainder of the paper is organized as follows. Section 2 describes the standard canonical model of relative supply and demand, followed by the extended model underpinning our article. Section 3 outlines the data and empirical strategy employed. Section 4 presents the results of the wage premium and relative supply estimates, alongside an analysis of the role of the minimum wage in skill-based wage premiums. Finally, Section 5 concludes.

2 Theoretical Framework

2.1 Standard Canonical Model

A significant portion of the literature on the determinants of wage premiums is based on the pioneering work of Tinbergen (1975), which provides a theoretical framework for understanding the role of supply and demand factors in explaining changes in the returns to education. This framework was later formalized by Katz and Murphy (1992), among others, who proposed a simplified analysis considering two types of labor: skilled and unskilled workers. According to the model, the wage premium for education increases when the demand for skilled labor relative to unskilled labor rises and decreases when the relative supply of skilled labor grows.

Formally, the model assumes a production function with constant elasticity of substitution (CES) and two productive inputs: skilled workers (S) and unskilled workers (U):

$$Q_t = [A_t S_t^{\rho} + (1 - \lambda_t) U_t^{\rho}]^{1/\rho} \quad (1) \tag{1}$$

where λ and ρ are parameters related to the production technology. The elasticity of substitution between the two types of labor is given by $\sigma_{SU} = 1/(1-\rho)$. Under perfect competition, where wages are determined by the marginal productivity of labor, Equation 1 can be used to formally derive the wage ratio between skilled and unskilled workers, commonly referred to as the wage premium:

$$\log\left(\frac{w_{s,t}}{w_{u,t}}\right) = \log\left(\frac{\lambda_t}{1-\lambda_t}\right) - \frac{1}{\sigma_{SU}} \log\left(\frac{S_t}{U_t}\right) \tag{2}$$

This equation serves as the foundation for a substantial body of research that examines wage gap dynamics through simple regressions of wage premiums as a function of the relative supply of skilled labor, time trends, and fixed effects (e.g., Autor et al. (2020)).

In the context of Latin America, several authors have argued for the need to differentiate between not just two, but three skill levels: low, medium, and high. For instance, Acosta et al. (2019) propose dividing the group of unskilled workers (U) into two subgroups: those who completed secondary education (H) and those who dropped out (D). Formally, U can be expressed as:

$$U_t = [\theta_t H_t^{\eta} + (1 - \theta_t) D_t^{\eta}]^{1/\eta} \tag{3}$$

As in the case of skilled and unskilled workers, θ and η are technological parameters, while H and D represent the supply of medium-skilled (secondary education completed) and low-skilled (secondary education incomplete) workers, respectively. The elasticity of substitution between these two groups is given by $\sigma_{HD} = 1/(1-\eta)$.

Similarly, Equation 3 allows for the formal derivation of the wage premium between medium- and low-skilled workers:

$$\log\left(\frac{w_{H,t}}{w_{D,t}}\right) = \log\left(\frac{\theta_t}{1-\theta_t}\right) - \frac{1}{\sigma_{HD}} \log\left(\frac{H_t}{D_t}\right) \tag{4}$$

A critical limitation of this theoretical model is that it does not allow for the direct identification of changes in relative demand. Under perfect competition, wages are determined at the intersection of supply and demand curves, making it challenging to disentangle observed changes in wages and

quantities into supply shifts versus demand shifts. Katz and Murphy (1992), along with subsequent studies based on this approach, interpret observed changes in wages for skilled and unskilled workers as equilibrium price shifts, and changes in the number of workers in each group as proxies for relative supply changes. Relative demand shifts are then estimated residually, ensuring consistency with observed wage premiums and relative supply levels at each point in time, given a fixed elasticity of substitution.

In contrast to the existing empirical evidence for Latin America, this paper departs from the standard canonical model, which assumes competitive labor markets with an equilibrium between supply and demand. Instead, we acknowledge the role of labor market institutions as potential drivers of observed changes in wage premiums. Specifically, we incorporate the minimum wage into the analysis, following the framework proposed by Vogel (2023), which is discussed in the next subsection.

2.2 Minimum Wages and the Extended Canonical Model

Vogel (2023) extends the model of Katz and Murphy (1992) by incorporating the effects of the minimum wage, offering an empirical analysis for the United States over the period 1963–2017. This subsection briefly outlines the relevant aspects of Vogel (2023)'s model for our study, adapting the notation to align with this work.

The model assumes a discrete-time framework where workers live infinitely. In each period, employed workers at each skill level face exogenous probabilities of job separation and finding a new firm, while unemployed workers face an exogenous probability of finding a job. These probabilities differ across skill levels, and wages are determined through Nash bargaining. Additionally, it is assumed that firms always find it profitable to hire workers at the minimum wage (mw). In the steady state, each skill group has a wage ladder that begins at the minimum wage and progresses according to workers' marginal productivity and bargaining power.

Vogel (2023) shows that, in a static model, the average wage for each skill group is a weighted average of the minimum wage and the marginal product of labor. Assuming two skill groups, s (skilled) and u (unskilled), it can be shown that the elasticity of the wage premium between these groups concerning the minimum wage is given by:

$$\frac{d\left(\frac{\bar{w}_s}{\bar{w}_u}\right)}{d(mw)} = \sigma_s - \sigma_u \tag{5}$$

Here, σ_s and σ_u represent the incidence of the minimum wage on skilled and unskilled workers, respectively. Thus, the elasticity of changes in the minimum wage on the wage premium is equal to the difference in minimum wage incidence across skill groups, referred to as the *bite*. Formally, these incidences (σ_s and σ_u) are defined as:

$$\sigma_s = \frac{mw \cdot shr_{s(mw)}}{\bar{w}_s}; \qquad \sigma_u = \frac{mw \cdot shr_{u(mw)}}{\bar{w}_u} \tag{6}$$

where mw is the minimum wage, $shr_{s(mw)}$ and $shr_{u(mw)}$ are the shares of skilled and unskilled workers earning close to the minimum wage, and $\bar{w}_s$ and $\bar{w}_u$ are the average wages for each skill group[2][3].

[2] In this work, the share of workers considered close to the minimum wage includes those earning within the range $[0.6 \cdot mw, 1.1 \cdot mw]$, i.e., at least 60% of the minimum wage and up to 10% above it. While this threshold is somewhat arbitrary, the results remain robust to alternative cutoffs.

[3] Unlike Vogel (2023), we exclude skill-specific unemployment rates from the analysis because (i) cross-skill

Based on the above, the central result from Vogel (2023)'s model used in this paper is that the direct effect of a change in the minimum wage on the skill premium is equal to the *bite*, defined as:

$$bite = \frac{mw \cdot shr_{s(mw)}}{\bar{w_s}} - \frac{mw \cdot shr_{u(mw)}}{\bar{w_u}} \tag{7}$$

The *bite* is thus a measure of relative incidence, driven by two components: (i) the difference in the coverage of the minimum wage across skill groups, measured as the difference in the share of workers within each group earning close to the minimum wage (the "coverage" factor); and (ii) the wage gap between skill groups (the "wage gap" factor). In absolute terms, the *bite* increases with a higher $shr_{u(mw)}$ relative to $shr_{s(mw)}$ and a larger $\bar{w_s}$ relative to $\bar{w_u}$.

3 Data and Empirical Strategy

3.1 Data

The primary data for this study comes from household surveys conducted in Latin American countries. Specifically, we use harmonized microdata from household surveys following the SEDLAC project (Socioeconomic Database for Latin America and the Caribbean) protocol, a joint initiative of CEDLAS at the Universidad Nacional de La Plata and the World Bank. Our analysis covers 14 Latin American countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, and Uruguay. A total of 264 household surveys spanning the period 1997–2019 were used, providing detailed data about labor, incomes, and education. The sample is restricted to people aged 25-55 living in urban areas. The key variable of interest is the hourly wage in the primary occupation, expressed in 2017 PPP-adjusted values.

As regards minimum wage data, a comprehensive database of national minimum wages for the 14 countries mentioned above has been compiled for the same period. The database combines information from three sources: (i) national statistical offices, (ii) CEPAL and (iii) ILO. Since none of these sources covers the same range of years or countries, and since published data often refer to different measures of wages (nominal, real, index, etc.), a major contribution of this study is to harmonize these series to produce a final dataset of real minimum wages over the entire period for Latin American countries [4].

3.2 Empirical Strategy

3.2.1 Calculating the Skill Premium

Consistent with the existing literature, this study does not rely on observed (unconditional) wage gaps or labor supply. Instead, both series are estimated following established methodologies. Wage premiums are derived from Mincer equations, where wage differentials across education levels are obtained

differences in unemployment rates within each country-year are not significant, and (ii) our estimations include unemployment controls for both skill groups, ensuring that the elasticities reflect net effects independent of unemployment rate disparities.

[4] In some countries, particularly in Central America, government-defined minimum wages are sector-specific. In cases with multiple official minimum wages, we followed the same criteria as CEPAL, as detailed in Table A1 of the Appendix.

through regressions of the logarithm of hourly wages on educational attainment dummies, controlling for potential experience and regional characteristics.

Workers are classified into two groups based on their skill levels: skilled and unskilled. Skilled workers are defined as individuals with any level of tertiary education, regardless of completion status. Unskilled workers include those with primary or secondary education, whether completed or not.

The remuneration for each production factor (e.g., $\ln w_{st}$) is derived from these regressions as a weighted average of returns to education for each educational level within the respective skill group. For instance, for skilled workers (those with incomplete or complete tertiary education), $\ln w_{st}$ is obtained as a weighted average of the returns to the incomplete tertiary dummy and the complete tertiary dummy. Once the remunerations for the different skill groups are obtained, the wage premium is calculated as the difference between these remunerations.

Specifically, for each year and country, we estimate the following regression:

$$\ln(w_{it}) = \alpha + \beta_{\text{supc}} D_{\text{supc}} + \beta_{\text{supi}} D_{\text{supi}} + \beta_{\text{secc}} D_{\text{secc}} + \beta_{\text{seci}} D_{\text{seci}} + \beta_{\text{pric}} D_{\text{pric}} + \delta X_{it} + \epsilon_{it}, \tag{8}$$

where w_{it} is the wage of worker i at time t, D are dummies indicating educational attainment (complete tertiary, incomplete tertiary, complete secondary, incomplete secondary, complete primary, and incomplete primary as the omitted category), and X is a vector of covariates including potential experience and region of residence. Following Manacorda et al. (2010) and Acosta et al. (2019), the regression is restricted to a sample of men to account for potential effects of the significant increase in female labor force participation during the analyzed period.

The skilled group (S) includes individuals with complete (*supc*) and incomplete tertiary education (*supi*), while the unskilled group (U) includes individuals with complete secondary (*secc*), incomplete secondary (*seci*), complete primary (*pric*), and incomplete primary education (*prii*, omitted category). The wage premium between skilled (S) and unskilled (U) workers is defined as:

$$\ln\left(\frac{w_{s_t}}{w_{u_t}}\right) = \left[\gamma_{\text{supc}} S \beta_{\text{supct}} + \gamma_{\text{supi}} S \beta_{\text{supit}}\right] - \left[\gamma_{\text{secc}} U \beta_{\text{secct}} + \gamma_{\text{seci}} U \beta_{\text{secit}} + \gamma_{\text{pric}} U \beta_{\text{prict}}\right], \tag{9}$$

where β_{it} represents the coefficient for education level i in the Mincer equation for year t, and γ_{iS} and γ_{iU} are weights representing the share of individuals with education level i within the skilled (S) and unskilled (U) groups, respectively. For instance, $\gamma_{\text{supcS}} = \frac{E_{\text{supc}}}{E_S}$, i.e., the share of individuals with complete tertiary education within the total skilled workforce (S); similarly, $\gamma_{\text{seciU}} = \frac{E_{\text{seci}}}{E_U}$ represents the share of individuals with incomplete secondary education within the total unskilled workforce (U). Unlike the coefficients β_{it}, these weights γ_i are time-invariant and are averaged over all available years for each country.

Given that unskilled workers (U) make up the majority of the labor force in Latin America, the analysis does not solely compare S to U. Instead, the unskilled group (U) is further divided into two subgroups: (i) medium-skilled workers (H) with complete secondary education, and (ii) low-skilled workers (D) with incomplete secondary education or less. The skill premium between medium-skilled (H) and low-skilled (D) workers within the unskilled group is calculated analogously:

$$\ln\left(\frac{w_{H_t}}{w_{D_t}}\right) = [\beta_{\text{secct}}] - [\gamma_{\text{seciU}}\beta_{\text{secit}} + \gamma_{\text{pricU}}\beta_{\text{prict}}]\,. \tag{10}$$

3.2.2 Calculation of Relative Supply

We compute the relative supply of skilled and unskilled labor using the working-age population (WAP) for each educational level.[5] Specifically, for each country and year, the supply of skilled labor is defined as the total number of individuals within the WAP who have completed or partially completed higher education. Conversely, the supply of unskilled labor comprises individuals within the WAP whose education ranges from incomplete primary to completed secondary education.

After determining the total number of individuals in each skill group, these figures are adjusted for efficiency units to compute the "relative supply adjusted for efficiency units"[6]. The adjustment for efficiency units (EU) re-weights the number of individuals in each skill group by their productivity differentials, recognizing that not all workers exhibit the same productivity, which varies due to factors such as their educational attainment. Wage differentials between different types of workers are used to calculate efficiency units and re-estimate relative supply. Specifically: i) the WAP is divided into 24 cells based on (2) genders, (4) education groups, and (3) experience groups; ii) for each cell, the average wage over the years is calculated; iii) a relative wage is computed as the ratio of the average wage in each cell to the average wage in the largest cell; iv) these relative wages are used as weights to scale the number of individuals in each WAP cell, expressing them in terms of efficiency units; v) once the WAP adjusted for efficiency units is obtained for each of the 24 cells (population subgroups), the EU-adjusted supply for each cell is aggregated according to skill levels to calculate the relative supply adjusted for efficiency units for groups S and U, as well as groups H and D.[7]

Under the standard canonical supply and demand model, assuming equilibrium in a perfectly competitive labor market, once relative wages and the relative supply are obtained, demand is derived residually. The model developed by Vogel (2023), presented in Section 2, extends the canonical supply and demand model to incorporate labor institutions, such as minimum wages. Within this framework, changes in the wage premium that cannot be explained by relative supply are not immediately and solely attributed to demand, but rather to both demand and institutional factors.

3.2.3 Estimating the Role of Minimum Wages

The extended canonical model proposed by Vogel (2023), presented in Section 2, enables the estimation of the following equation to analyze the contribution of minimum wages to the wage premium:

$$\log\left(\frac{w_{Sct}}{w_{Uct}}\right) = \alpha + \beta\log(MW_{ct}) + \gamma\log\left(\frac{supply_{Sct}}{supply_{Uct}}\right) + \delta_{ct} + \tau_c + \lambda_t + \epsilon_{ct} \tag{11}$$

[5] The results throughout this paper remain robust when relative supply is calculated using the economically active population (EAP), the number of employed individuals, or hours worked.

[6] From this point onward, we will refer simply to relative supply without specifying the adjustment for efficiency units.

[7] For example, to calculate the EU-adjusted supply of skilled workers, the EU-adjusted WAP for the following 12 cells is summed: six cells corresponding to completed higher education: $\{H_{E1supc} + H_{E2supc} + H_{E3supc} + M_{E1supc} + M_{E2supc} + M_{E3supc}\}$, and six cells corresponding to incomplete higher education: $\{H_{E1supi} + H_{E2supi} + H_{E3supi} + M_{E1supi} + M_{E2supi} + M_{E3supi}\}$, where H and M represent male and female cells, respectively, and E1, E2, and E3 represent the three experience groups.

where the dependent variable $\log\left(\frac{w_{S_{ct}}}{w_{U_{ct}}}\right)$ represents the estimated wage premium for country c and year t. Meanwhile, $\log\left(\frac{supply_{Sct}}{supply_{Uct}}\right)$ denotes the relative supply of skilled labor to unskilled labor for country c and year t, and $\log(MW_{ct})$ is the logarithm of the national minimum wage for country c and year t. Fixed effects at the country level are included to account for time-invariant unobservable heterogeneity, and year fixed effects control for demand-specific factors varying across years.

Time fixed effects are useful for capturing demand-related factors, under the assumption that changes in relative demand remain relatively stable over time. However, as argued by Acosta et al. (2019), Latin American countries exhibit a mix of factors associated with stable trends, such as technological change, alongside frequent macroeconomic shocks, policy shifts affecting the relative prices of production factors, changes in trade openness, and other disruptions. To account for these dynamics, a vector of control variables, X_{ct}, is included, comprising GDP per capita, terms of trade for each country and year, and the unemployment rate across skill groups, serving as a proxy for demand fluctuations. Given that this study aims to assess the role of minimum wages in the evolution of the wage premium, the key parameter of interest is β.

These estimates correspond to a reduced-form approach, implying potential endogeneity issues due to simultaneity and common shocks affecting wage premiums, relative supply, demand, and labor policies such as minimum wages. Consequently, the results should be interpreted as suggestive conditional correlations rather than conclusive evidence of a causal relationship.

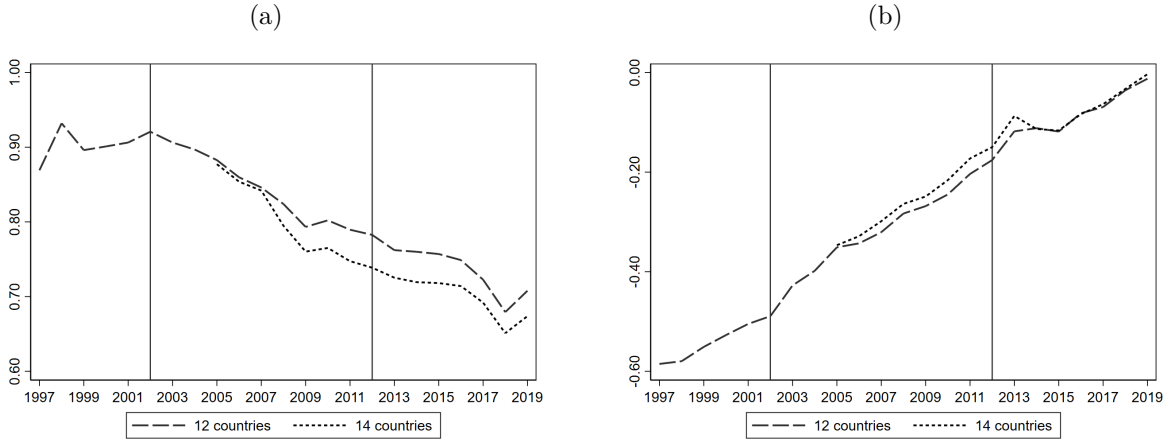
4 Results

4.1 Evolution of the Wage Premium and Relative Supply

As discussed in Section 3, wage premiums between workers with different skill levels are estimated using Mincer equations. Figure 3 presents the results for the most relevant comparison: skilled versus unskilled workers. The evolution of the wage premium and the average relative supply across the 14 analyzed countries for the S/U group follows a distinct pattern: a modest increase during the 1990s, a sharp decline throughout the 2000s, and a subsequent slowdown starting in 2012. On average, the region experienced a 5.5% increase between 1997 and 2002, corresponding to an annual growth rate of 1.1%. Over the following decade, the wage premium declined by 16.1%, translating into an average annual reduction of 1.6%. Finally, the slowdown observed during the 2010s resulted in a 6.3% decrease, with an average annual decline of 0.9%.[8]

[8] These calculations are based on the group of 14 countries, extrapolating regional average variations for years in which data is unavailable for some countries.

Figure 3: Skill premium and relative supply for skilled and unskilled workers



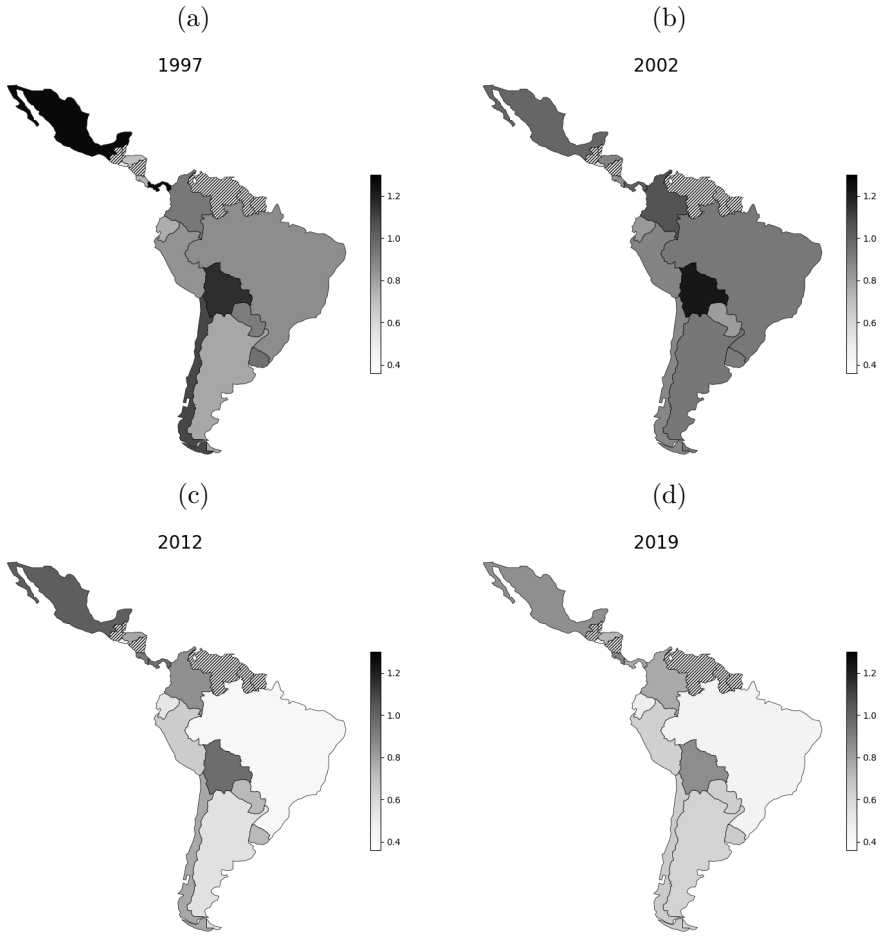
Notes: Unweighted average for Latin American countries, 1997-2019. "12 countries" refers to: Argentina, Brazil, Chile, Colombia, Costa Rica, Honduras, Mexico, Panama, Peru, Paraguay, El Salvador, and Uruguay, as these countries present more complete series for the entire period. "14 countries" also includes Bolivia and Ecuador.

Source: Author's calculations based on SEDLAC (CEDLAS and World Bank).

This pattern of increase, reduction, and deceleration is common across most countries, as illustrated in the maps in Figure 4 and in Table A1.[9] Regarding the first period (1997-2002), the skill premium increased in all countries except Honduras, Mexico, Chile, Paraguay, and Uruguay, with annual average increases ranging from 1.2% to 4.2%. During the 2000s, the skill premium reversed its upward trend. This decline occurred in 12 of the 14 analyzed countries, with annual variations ranging between 0.5% and 4%. The skill premium continued to decrease during the following decade, although at a slower pace, with annual averages varying between 0.5% and 2.5% across countries.

[9] For countries where household surveys are unavailable for certain years, values are imputed using extrapolations based on regional average variations.

Figure 4: Evolution of the skill premium for skilled and unskilled workers by country



Source: Author's calculations based on SEDLAC (CEDLAS and World Bank).

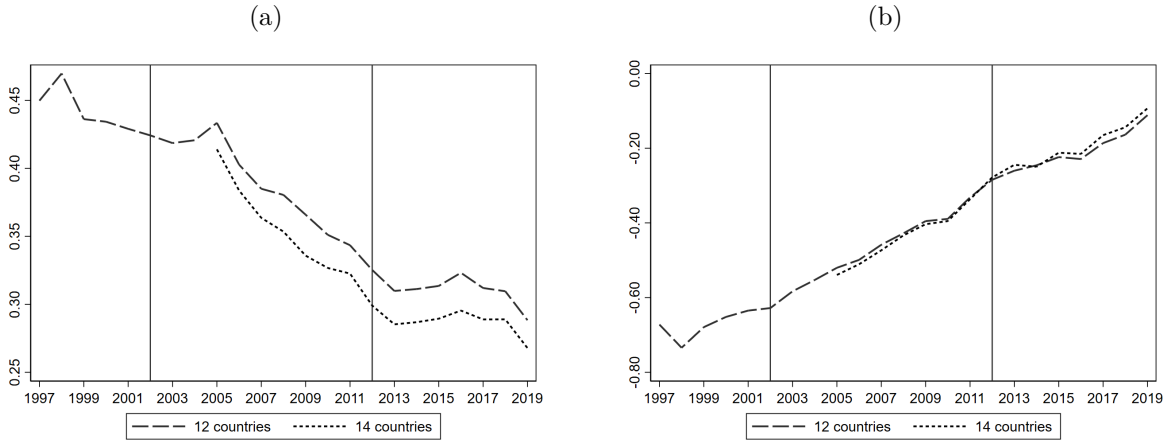
Panel B of Figure 3 shows that relative supply exhibited sustained growth across the three analyzed periods, with an average annual increase of 3.5%. This trend is observed in nearly all countries, except for Chile, Costa Rica, and Ecuador (Table A1).

The patterns documented so far reveal a dynamic evolution of the skill premium: a moderate increase in the 1990s, a sharp decline throughout the 2000s, and a subsequent slowdown from 2012 onward. Meanwhile, the relative supply of skilled workers followed a steady upward trajectory. This suggests that factors beyond supply-side changes played a role in shaping wage differentials. Under the standard canonical framework, unexplained fluctuations in the skill premium are typically attributed to shifts in the relative demand for skilled labor. However, in labor markets that deviate from perfect competition, institutional factors—such as minimum wages or collective bargaining—may also influence wage dispersion. The next section explores this hypothesis using the framework developed by Vogel (2023).

Before turning to that analysis, it is useful to examine wage differentials between workers with medium and low educational attainment (group H vs. group D). Figure 5 shows that the wage premium

between these groups declined persistently over the period, though with varying intensities across sub-periods. This pattern is consistent across all countries in the sample (Table A2, Appendix). On the supply side, the relative availability of medium-skilled workers steadily increased throughout the period, following a uniform upward trend.

Figure 5: Skill premium and relative supply for medium- and low-skilled workers



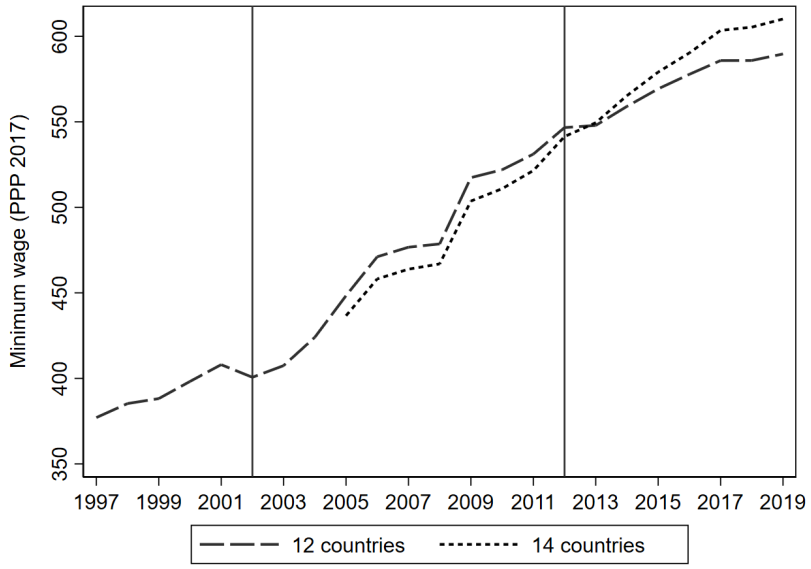
Notes: Unweighted average for Latin American countries, 1997-2019. "12 countries" refers to: Argentina, Brazil, Chile, Colombia, Costa Rica, Honduras, Mexico, Panama, Peru, Paraguay, El Salvador, and Uruguay, as these countries present more complete series for the entire period. "14 countries" also includes Bolivia and Ecuador.

Source: Author's calculations based on SEDLAC (CEDLAS and World Bank).

4.2 Skill Premium and Minimum Wage

Over the past two decades, most Latin American economies have seen significant increases in minimum wages, particularly during the 2000s. Figure 7 depicts the evolution of the real minimum wage across 14 countries in the region. After remaining largely stagnant throughout the 1990s, minimum wages experienced substantial growth during the 2000s, followed by a slowdown in the 2010s. On an unweighted regional average, the real minimum wage increased by just 1.8% between 1992 and 2002, surged by 29.4% from 2003 to 2012, and then rose by 11.9% between 2013 and 2019.

Figure 6: Real Minimum Wage, 1997–2019

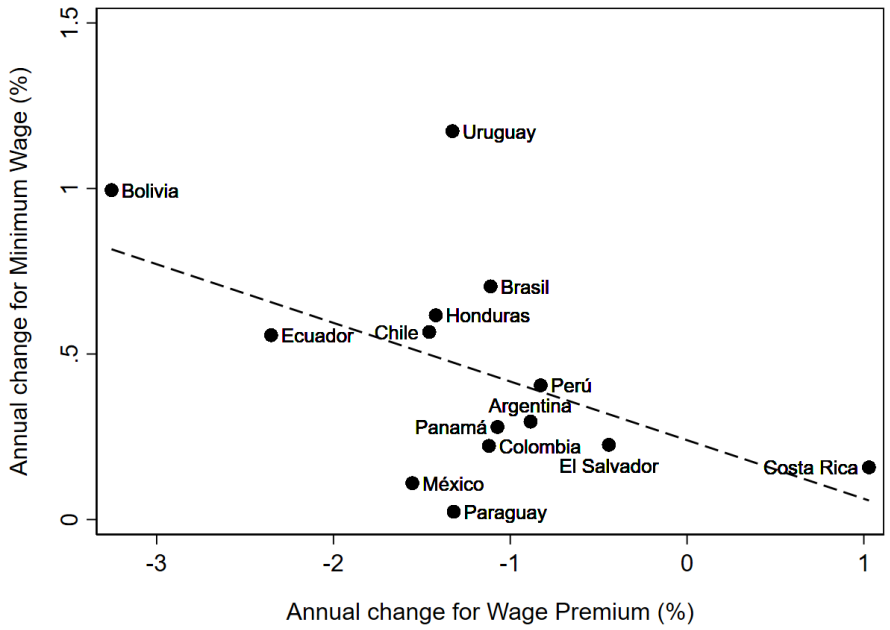


Notes. Unweighted average for Latin American countries, 1997–2019. "12 countries" refers to Argentina, Brazil, Chile, Colombia, Costa Rica, Honduras, Mexico, Panama, Peru, Paraguay, El Salvador, and Uruguay, as these countries have the most complete data series for the entire period. "14 countries" also includes Bolivia and Ecuador.

Source: Author's elaboration based on combined data from official statistical institutes, ILO, and ECLAC.

A comparison between the evolution of the minimum wage and the skill premium for skilled versus unskilled workers (Section 4.1) reveals that these trends have moved in opposite directions since the 2000s. Between 2002 and 2012, the real minimum wage grew at an average annual rate of 3.9% across the region, while the skill premium declined. In the following years, both trends slowed: the skill premium, which had been rising at an average annual rate of 2%, decelerated to 1.3%, while the growth rate of the minimum wage fell from 3.6% to 1.8%. Figure 7 illustrates this pattern, highlighting a strong negative correlation between changes in the minimum wage and the skill premium across nearly all analyzed countries.

Figure 7: Correlation Between Minimum Wage and Skill Premium for Skilled and Unskilled Workers, 2002–2019.



Notes. The horizontal axis shows the annual variation in the skill premium for each country during 2002–2019, calculated as the change over the entire period divided by the number of years. The vertical axis reflects the annual variation in the minimum wage.

Source: Author's elaboration based on SEDLAC (CEDLAS and World Bank).

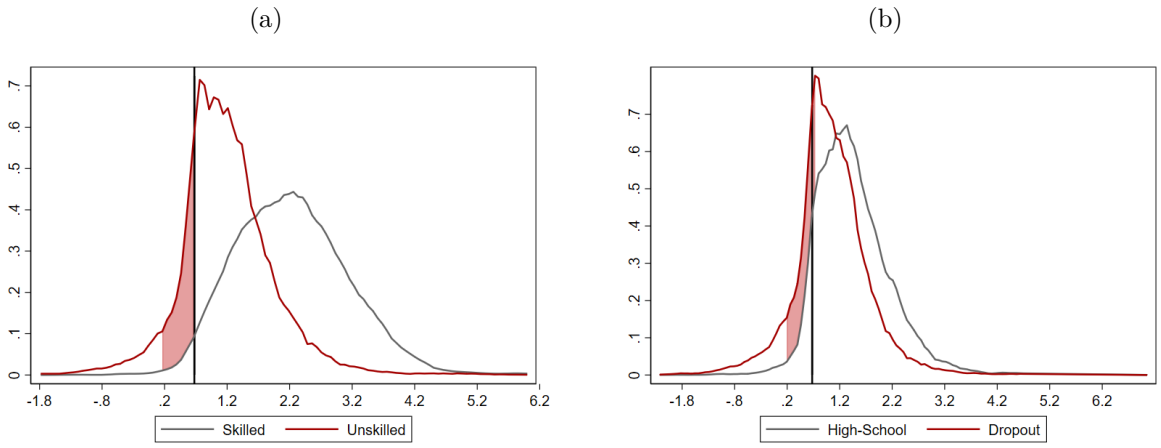
The descriptive evidence presented so far indicates a strong negative correlation between changes in the minimum wage and the skill premium across countries: economies with the largest increases in minimum wages tend to experience the sharpest declines in the skill premium. This suggests that minimum wage policies may have played a role in shaping skill premiums. This section provides evidence to support this hypothesis.

As shown in Equation 7, derived from the model of Vogel (2023), the impact of the minimum wage on the skill premium can be decomposed into two components: (i) differences across skill groups in the share of workers earning close to the minimum wage (the coverage factor) and (ii) wage level differences across skill groups (the wage gap factor). The combination of these elements defines the *bite*, a measure of the relative incidence of the minimum wage across skill groups. The following subsections present descriptive evidence for both components of the *bite*.

To illustrate these dynamics, we use the case of Brazil in 2012, though similar patterns emerge in other countries, as shown in Figures A4 and A5 in the Appendix. Figure 8 presents the wage distributions for skilled and unskilled workers (Panel A) and for medium- and low-skilled workers (Panel B). The shaded area highlights differences in the *share* of workers earning close to the minimum wage for each skill group pair, corresponding to the coverage factor. In both cases, the smaller *share* for the less-skilled group suggests that the minimum wage exerts a downward pressure on the skill premium, as it directly

affects a larger proportion of relatively less-skilled workers. Moreover, since the difference in *shares* is larger between skilled and unskilled workers than between medium- and low-skilled workers, the *bite* of the minimum wage should be greater (in absolute terms) for the former group.

Figure 8: Wage Distributions by Skill Level for Brazil in 2012



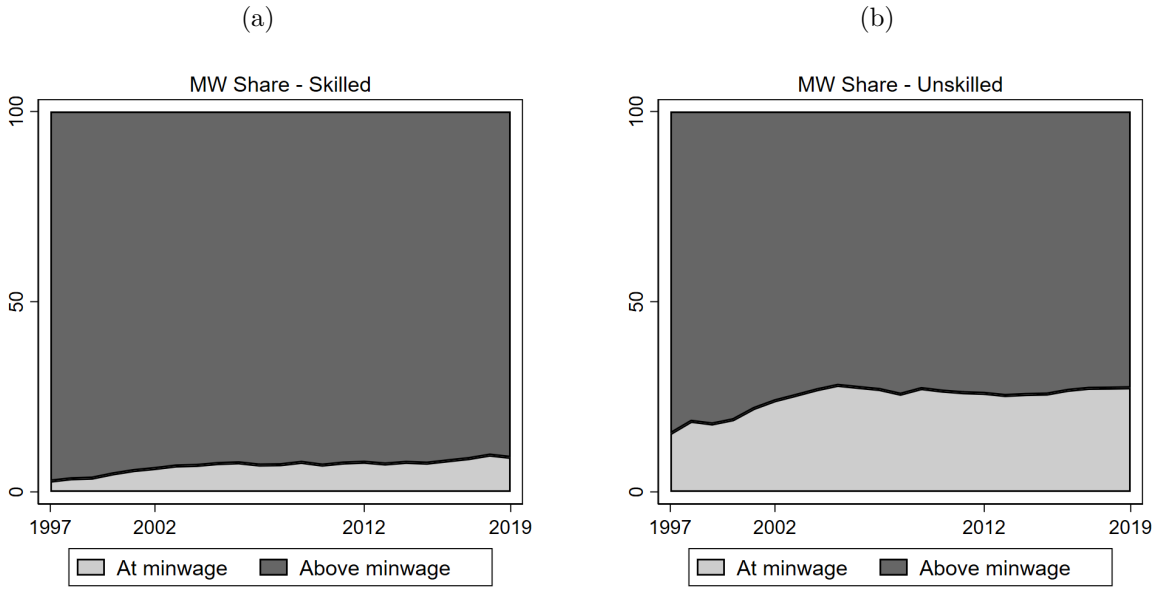
Source: Author's elaboration based on SEDLAC (CEDLAS and World Bank), ECLAC, ILO, and official data.

Analyzing wage distributions also allows for identifying the role of the wage gap component. Figure 8 shows that in both cases, the higher-skilled group earns higher wages, reinforcing the negative effect of the minimum wage *bite*. In Panel (a), the average wage of skilled workers exceeds that of unskilled workers, meaning that a uniform increase in the minimum wage would proportionally affect the wages of the latter group more, thereby compressing the skill premium. A similar pattern emerges in Panel (b) for medium- and low-skilled workers, though the smaller wage differentials suggest a weaker *bite* in absolute terms. In summary, for Brazil in 2012, wage distributions by skill level indicate that both the coverage and wage gap factors contribute to a negative minimum wage effect on the skill premium, with a stronger impact on the skilled-unskilled wage gap than on the medium-low skill gap.

To assess trends across all countries and the entire period, Figures 9 and 10 illustrate the evolution of the share of workers earning close to the minimum wage across skill groups. Specifically, the figures depict the proportion of workers earning between 60% and 110% of the minimum wage ($[0.6*mw; 1.1*mw]$), with results remaining robust to alternative thresholds. A comparison between the left (skilled) and right (unskilled) panels reveals that the minimum wage's incidence is considerably higher for unskilled workers. While approximately 7% of skilled workers earn close to the minimum wage, this figure rises to 25% for unskilled workers, highlighting the coverage factor. Combined with the 110% wage gap between S/U groups, this suggests that increases in the minimum wage would disproportionately affect unskilled workers relative to skilled workers[10].

[10] Although the figures show regional averages for Latin America, similar patterns hold at the country level, as shown in Figures A2 and A3. Wage differentials over time are presented in Figure **??** in the appendix.

Figure 9: Share of skilled and unskilled minimum wage workers.

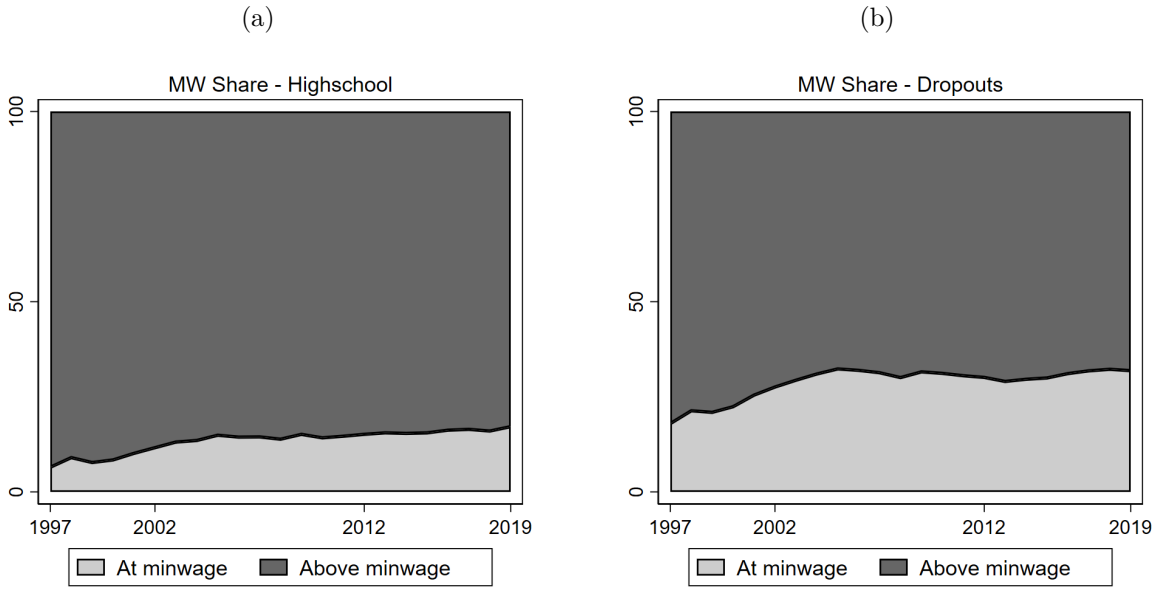


Notes: Unweighted average for Latin America. 1997-2019. *At* refers to the share of people within skilled and unskilled workers who make less than 110% the national minimum wage. *Above* refers to those who make at least 10% more than the minimum wage.

Source: Own elaboration based on SEDLAC (CEDLAS and World Bank), ECLAC, ILO, and official data.

Concerning medium and low-education workers, Figure 10 shows that the share of low-education workers earning around the minimum wage is higher than that of workers who completed secondary education. These differences are smaller than those observed between groups S and U. A similar pattern is observed in wages: while workers with medium education earn, on average, more than those with low education, the average wage difference is 35%, compared to 110% for S/U. This supports the prediction that the reducing effect of the minimum wage on the skill premium for medium- and low-education workers will be smaller (in absolute terms) than for group S/U.

Figure 10: Share of high-school and dropout minimum wage workers.



Notes: Unweighted average for Latin America. 1997-2019. *At* refers to the share of people within skilled and unskilled workers who make less than 110% the national minimum wage. *Above* refers to those who make at leat 10% more than the minimum wage.

Source: Own elaboration based on SEDLAC (CEDLAS and World Bank), ECLAC, ILO, and official data.

Applying the empirical strategy proposed in Section 3, we can estimate the contribution of the minimum wage to reductions in the skill premium. The results of estimating Equation 11 are presented in Table 1. In the left panel (columns 1, 2, and 3), the dependent variable is the skill premium between skilled (S) and unskilled (U) workers; the right panel (columns 4, 5, and 6) refers to the skill premium between medium-skilled (H) and low-skilled (D) workers. All specifications include fixed effects by country and year. The second column of each block also incorporates controls such as terms of trade and GDP per capita to account for changes in relative demand, while column (3) includes the ratio of unemployment rates by skill level to account for specific labor market dynamics in each country and year.[11]

Analyzing the results for skilled and unskilled workers, and using column 3 of each block as the preferred specification, the findings suggest that a 10% increase in the relative supply of skilled workers compared to unskilled workers leads to a 2.9% reduction in the skill premium.[12]

Regarding the role of the minimum wage, the estimated coefficients are negative and statistically significant, consistent with theoretical expectations. Specifically, a 10% increase in the minimum wage is associated with a 1.2% reduction in the skill premium under the full specification. According to the theoretical model, the minimum wage's effect on the skill premium operates through the *bite*, a

[11] An additional control was included for the share of each sector (agriculture, industry, and services) in employment by country and year. The results remain unchanged.

[12] These results remain robust to alternative measures of relative supply, such as labor force participation, number of employed workers, or hours worked. Tables A4 and A3 in the Appendix provide these estimates.

measure of relative incidence. Using observed data to compute this incidence—based on worker shares and average wages, as defined in Equation 7—yields an average estimate of -0.116 for the S/U group, closely matching the estimated parameter.

The right panel of Table 1 shows that a 10% increase in the relative supply of medium-education workers compared to low-education workers results in a 1.6% decline in the skill premium. The estimated coefficients for the minimum wage are negative but not statistically significant. While the sign aligns with theoretical predictions, the lack of significance is consistent with the descriptive evidence presented earlier. This result is also in line with the *bite* analysis for the H/D group, where the differences in both the coverage factor and wage gap factor were considerably smaller than in the S/U group, making the minimum wage's compression effect on this skill premium less evident.

Table 1: Estimates. The role of the minimum wage in skill premium reduction.

	Skilled vs unskilled			Highschool vs dropouts		
	(1)	(2)	(3)	(4)	(5)	(6)
Relative supply	-0.274*	-0.285*	-0.289*	-0.171***	-0.162**	-0.163**
	[0.093]	[0.085]	[0.094]	[0.003]	[0.014]	[0.013]
Hourly minwage	-0.124*	-0.125*	-0.124*	-0.040	-0.045	-0.045
	[0.072]	[0.068]	[0.063]	[0.363]	[0.297]	[0.295]
Observations	263	263	263	263	263	263
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	+ Unemp	No	Yes	+ Unemp

Cluster-robust wild-bootstrap p-values shown in brackets. *Significant at the 10% level, **significant at the 5% level and ***significant at the 1% level. Controls include terms of trade (Net Barter Index) and constant 2017 PPP per capita GDP. Wage gap, relative supply, and minimum wage variables are expressed in logarithms. Column (3) of each block incorporates the unemployment rate ratio between skill groups.

The results are robust to alternative definitions of workers' relative supply, as shown in Tables A3 and A4 in the Appendix. Additionally, the results hold when individuals aged 55 to 60 are included in the sample or when individuals aged 21 to 25 are excluded, as shown in Tables A6 and A5 in the Appendix.

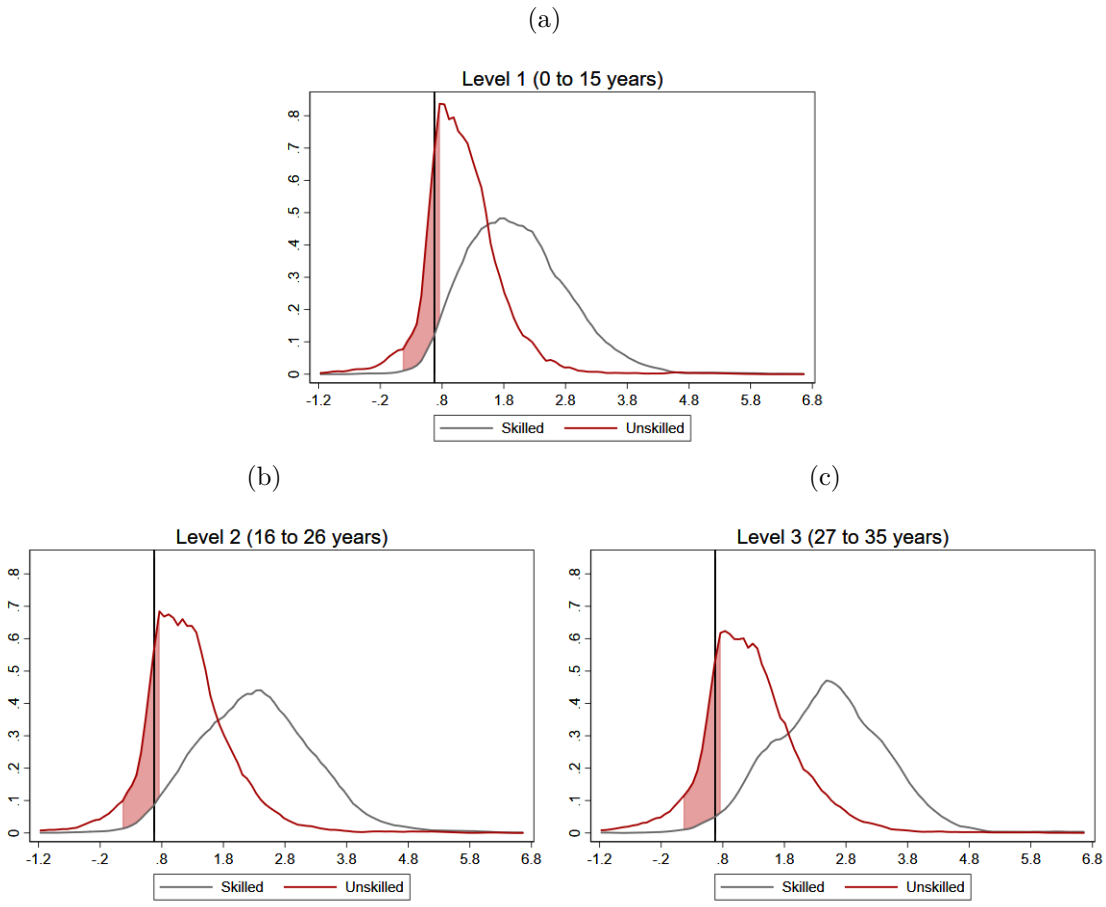
4.2.1 Experience-Level Estimations

As discussed in Section 1, the literature on skill wage premiums remains an active field, with recent studies emphasizing that younger and more experienced workers are not perfect substitutes. As a result, the evolution of the skill wage premium often varies across experience groups (Glitz and Wissmann (2021)). This section analyzes the evolution of the skill wage premium and its relationship with the

minimum wage, accounting for potential differences by workers' experience levels.[13] Specifically, workers are classified into three experience groups: 1–15 years (level 1), 16–26 years (level 2), and 27–35 years (level 3).

Panels A, B, and C of Figure 11 present the wage distributions for skilled and unskilled workers across these experience levels for Brazil in 2012. The figure shows that as experience increases, skilled workers' wages grow proportionally more than those of unskilled workers, reflecting differential returns to experience. According to the framework in Vogel (2023), these widening wage gaps across experience levels imply a stronger wage gap effect, leading to higher elasticity of the skill wage premium with respect to the minimum wage.

Figure 11: Share of high and medium-skill workers earning close to the minimum wage. Example: Brazil 2012



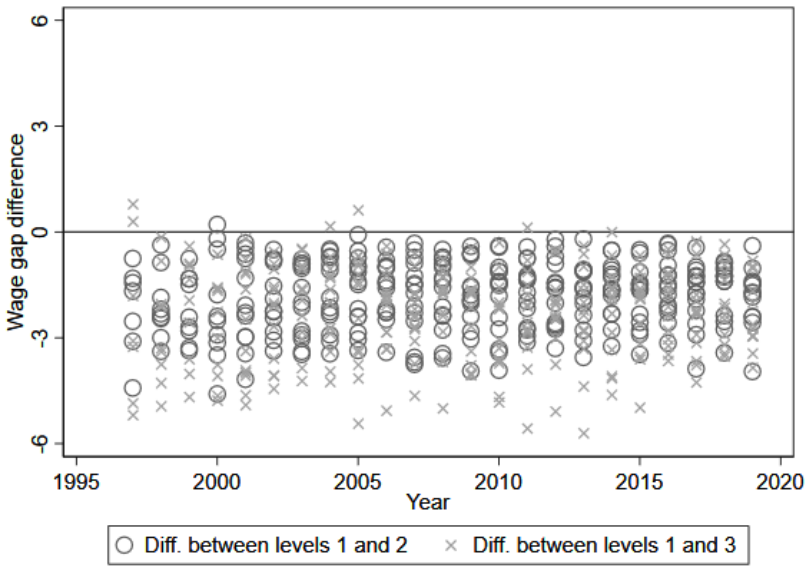
Source: Authors' elaboration based on SEDLAC (CEDLAS and World Bank), ECLAC, ILO, and official data.

Figure 12 reflects this phenomenon for the entire sample. Each point represents a country/year and quantifies the difference in skill wage gaps across experience levels. For example, the differences

[13] Potential experience is formally defined as $exp = age - aedu - 7$, where $aedu$ represents years of education attained.

between levels 1 and 2 are calculated as $(\bar{w_{S1}} - \bar{w_{U1}}) - (\bar{w_{S2}} - \bar{w_{U2}})$, while the differences between levels 1 and 3 are computed as $(\bar{w_{S1}} - \bar{w_{U1}}) - (\bar{w_{S3}} - \bar{w_{U3}})$. The fact that this difference is negative in most observations (86% for levels 1 and 2, and 87% for levels 1 and 3) indicates that skill wage gaps increase with workers' experience levels.

Figure 12: Differences in skill wage gaps by experience level



Notes: Each point represents the observed skill wage gap (expressed in levels and in 2017 PPP) for each country and year.

Source: Authors' elaboration based on SEDLAC (CEDLAS and World Bank).

Regarding the coverage factor, the wage distributions by experience level presented in Figure 11 show that as experience increases, the wage distribution for highly skilled workers shifts further to the right compared to that of low-skilled workers, thereby accentuating differences between skill groups. This result suggests that the coverage factor of the minimum wage should increase with experience level. These patterns are replicated in most countries, as shown in Figures A6, A7, and A8 in the Appendix, along with Table A7 in the Appendix.

From the calculations presented above (and complemented in the Appendix), two key findings emerge. First, skill wage gaps increase with experience, meaning that the differences in average earnings between skilled and unskilled workers widen at higher experience levels. If the *bite* is redefined to vary by experience level, yielding $bite_j$ where $j = 1, 2, 3$, the wage gap effect implies that $|bite_3| > |bite_2| > |bite_1|$. Second, the difference in the shares of skilled and unskilled workers earning close to the minimum wage also grows with experience. Although this phenomenon exhibits greater variability across the sample, it likewise suggests that $|bite_3| > |bite_2| > |bite_1|$, as greater experience leads to larger differences in $shares_{mw}$. Thus, both the wage gap and coverage factors imply that the elasticity of the skill wage premium to minimum wage changes is expected to increase (in absolute value) with experience level.

To formally measure these results, worker panels were constructed based on the three experience

groups, and skill wage premiums, efficiency unit weights, and relative supply estimates were recalculated. For each of these panels, Equation 11 was re-estimated separately with $j = \{1, 2, 3\}$:

$$\ln\left(\frac{w_{S_{ctj}}}{w_{U_{ctj}}}\right) = \alpha_j + \beta_j \ln\left(\frac{S_{tcj}}{U_{tcj}}\right) + \gamma_j \ln(MW_{ctj}) + \theta_c + \gamma_t + X_{ctj} + \epsilon_{ctj} \tag{12}$$

The results of these estimations are summarized in Table 2. All estimations include controls for GDP per capita, terms of trade, and unemployment by skill level. The results indicate that as experience increases, the elasticity of the skill wage premium relative to the minimum wage grows both in magnitude and statistical significance. These findings support and quantify the descriptive evidence presented earlier.

Table 2: Estimations: The role of the minimum wage in the skill premium by experience level

	Experiencia < 15 años	16 a 26 años	Experiencia > 27
Hourly minwage	-0.105	-0.139*	-0.162**
	[0.133]	[0.084]	[0.023]
Observations	263	263	263
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Controls	All	All	All

P-values computed using cluster-robust wild-bootstrap in parentheses. *Significant at 10%; **significant at 5%; ***significant at 1%. Controls: terms of trade (Net barter index); constant GDP per capita in 2017 PPP, and unemployment rate ratio for S/U.

5 Conclusions

Several studies have highlighted that the reduction in the skill premium has been a key factor behind the decline in wage inequality observed in Latin America since the 2000s. This underscores the importance of monitoring wage gap dynamics, particularly by skill level, which has led to an active body of literature on the topic.

This paper builds on this existing literature and provides updated evidence on the evolution of skill premiums in Latin America. Using harmonized household survey microdata from 14 countries, we estimate skill premiums and the relative supply of workers at various skill levels. The results reveal a sustained increase in the relative supply of skilled and semi-skilled workers. The skill premium between workers with and without secondary education declines over the entire period, while the skill premium between workers with and without higher education does not exhibit a consistent trend. This suggests that changes in the relative supply of workers alone are insufficient to explain the differentiated pattern of the skill premium for highly skilled workers.

A second key contribution of this study is moving beyond the standard canonical model, which assumes competitive labor markets in equilibrium between supply and demand, where all changes not

attributed to supply shifts would be ascribed to changes in the relative demand for skilled and unskilled workers. This study acknowledges the role of labor institutions in shaping the observed changes in skill premiums and investigates whether the minimum wage played a role in influencing skill premiums in Latin America between 1997 and 2019. In doing so, it builds on the existing literature by integrating two frontier topics: wage gap dynamics and labor institutions, with a direct precedent in the study by Vogel (2023) for the United States.

Using Two-Way Fixed Effects (TWFE) regressions, the findings suggest that the increases in the minimum wage experienced by countries in the region since the 2000s contributed to reducing the skill premium between workers with and without higher education. In contrast, changes in the minimum wage do not appear to have affected the skill premium between workers with medium and low education levels. These results are consistent with the theoretical predictions of the model employed in this study. Lastly, the findings suggest that the role of the minimum wage in reducing the skill premium grows with workers' experience level.

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Appendix A

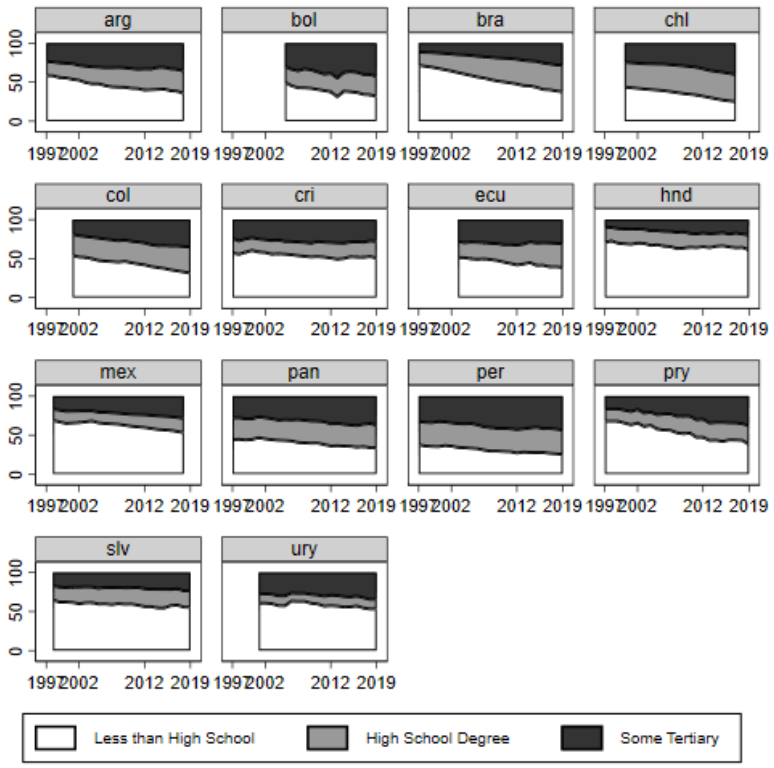
Table A1: Changes in skill premium and relative supply. S/U group.

	Skill premium			Relative supply		
Country	**1997-2002**	**2002-2012**	**2012-2019**	**1997-2002**	**2002-2012**	**2012-2019**
Argentina	3.3%	-3.2%	1.1%	6.2%	2.2%	2.4%
Bolivia	1.4%	-4.0%	0.5%	3.1%	6.8%	2.5%
Brazil	1.4%	-2.3%	-1.4%	3.2%	5.2%	6.8%
Chile	-3.8%	-1.0%	-1.6%	1.9%	3.9%	-0.7%
Colombia	2.7%	-1.8%	-1.1%	6.2%	4.5%	3.5%
Costa Rica	3.0%	0.7%	-0.5%	-1.9%	1.1%	-1.0%
Ecuador	1.3%	-2.6%	-0.6%	3.3%	4.0%	-1.0%
El Salvador	4.2%	-1.1%	-0.7%	0.7%	1.6%	1.8%
Honduras	-4.8%	0.3%	-2.2%	2.3%	5.8%	3.0%
Mexico	-4.4%	-0.5%	-2.5%	2.8%	3.5%	5.8%
Panama	1.0%	-2.1%	-0.3%	1.7%	2.4%	0.5%
Paraguay	-2.0%	-0.8%	-1.2%	0.0%	11.0%	6.5%
Peru	1.2%	-1.2%	-0.5%	1.5%	4.1%	0.3%
Uruguay	-0.7%	-1.8%	-1.0%	3.0%	1.2%	3.8%
Mean 12 countries	**1.1%**	**-1.3%**	**-1.0%**	**2.0%**	**3.7%**	**2.5%**
Mean 14 countries	**1.1%**	**-1.6%**	**-0.9%**	**2.2%**	**3.9%**	**2.3%**

Table A2: Changes in skill premium and relative supply. H/D group.

	Skill premium			Relative supply		
Country	**1997-2002**	**2002-2012**	**2012-2019**	**1997-2002**	**2002-2012**	**2012-2019**
Argentina	-1.1%	-0.7%	-0.6%	2.1%	9.9%	2.5%
Bolivia	-0.3%	-1.9%	0.8%	-0.4%	8.8%	4.4%
Brazil	-1.5%	-2.2%	-0.9%	8.9%	10.5%	5.5%
Chile	-0.9%	-1.2%	-0.8%	5.2%	4.8%	-0.6%
Colombia	-1.5%	-0.9%	-0.8%	1.2%	3.2%	8.8%
Costa Rica	9.9%	0.1%	-0.5%	-11.9%	3.8%	1.1%
Ecuador	-0.4%	-0.7%	-0.7%	-0.3%	6.7%	3.9%
El Salvador	-1.3%	-0.9%	0.6%	1.6%	1.5%	-0.3%
Honduras	-1.4%	-0.8%	-1.3%	-2.6%	0.4%	2.4%
Mexico	-1.8%	-0.4%	-1.4%	8.7%	2.5%	8.1%
Panama	-1.5%	-1.1%	0.5%	0.0%	2.7%	1.4%
Paraguay	-2.1%	-2.0%	0.5%	3.5%	8.5%	4.6%
Peru	0.6%	-0.3%	-0.7%	0.4%	3.7%	1.7%
Uruguay	-1.2%	-0.7%	-0.6%	4.5%	1.7%	0.0%
Mean 12 countries	**-0.5%**	**-0.9%**	**-0.5%**	**0.9%**	**4.1%**	**2.7%**
Mean 14 countries	**-0.5%**	**-1.0%**	**-0.4%**	**0.7%**	**4.6%**	**2.9%**

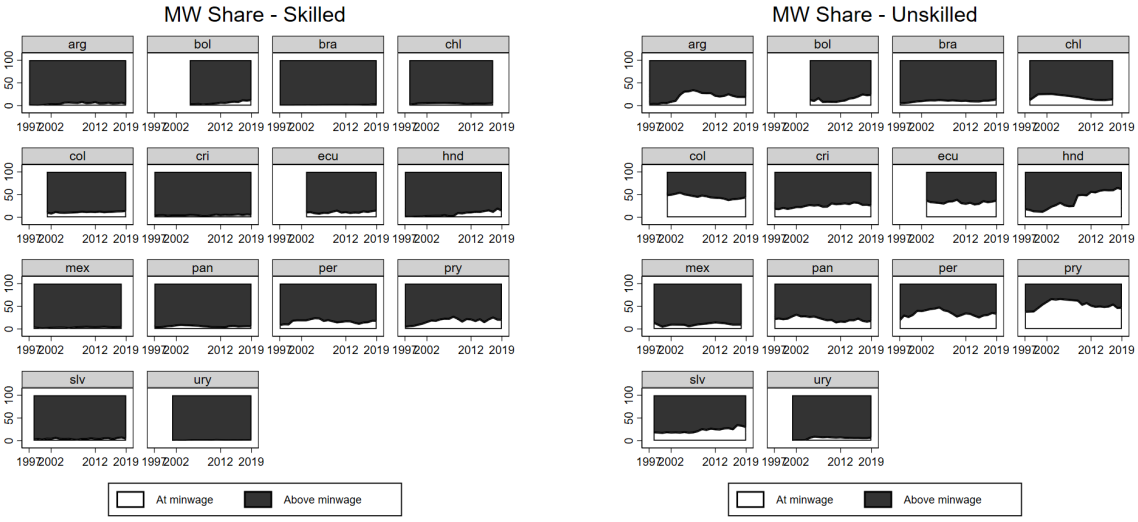
Figure A1: Educational attainment in Latin America (by country).



Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

Figure A2: Minimum wage incidence between skilled and unskilled workers.

(a) (b)

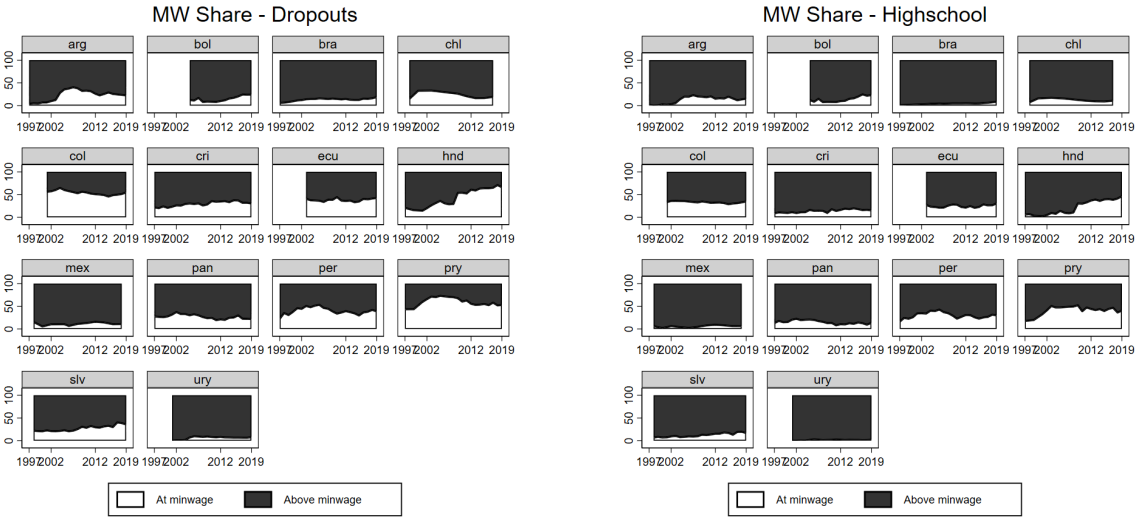


Notas: At refers to the share of people within skilled and unskilled workers who make less than 110% the national minimum wage. *Above* refers to those who make at leat 10% more than the minimum wage.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

Figure A3: Minimum wage incidence between low and medium-skill workers.

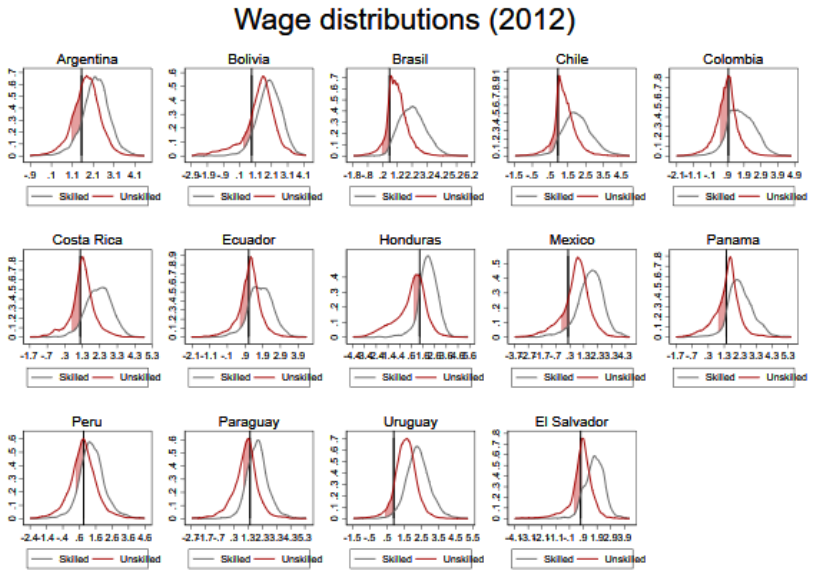
(a) (b)



Notas: At refers to the share of people within skilled and unskilled workers who make less than 110% the national minimum wage. *Above* refers to those who make at leat 10% more than the minimum wage.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

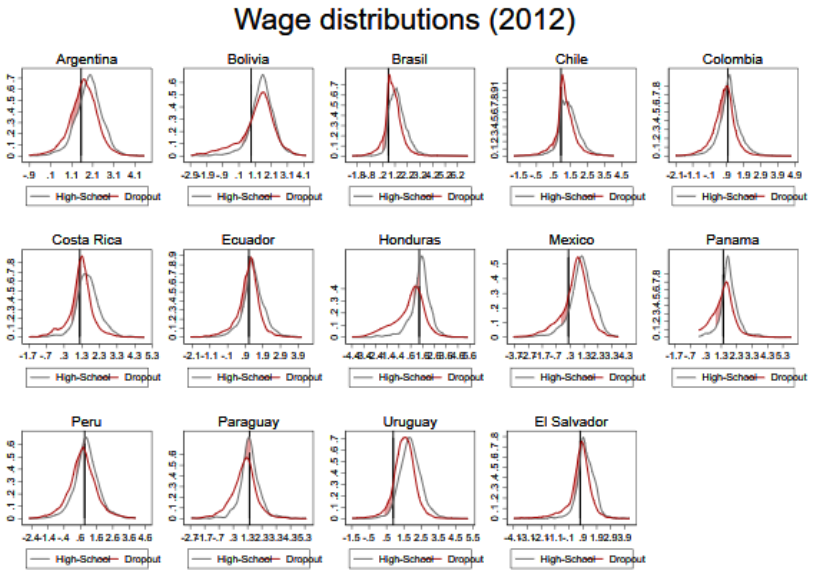
Figure A4: Wage distributions by skill (Skilled and Unskilled) in 2012*



*Chile is shown in 2013.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

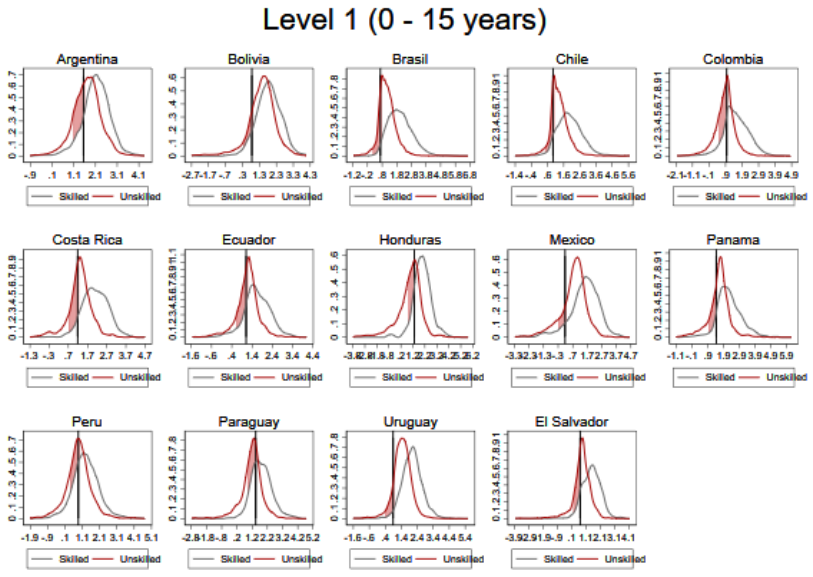
Figure A5: Wage distributions by skill (High-School and Dropout) in 2012*



*Chile is shown in 2013.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

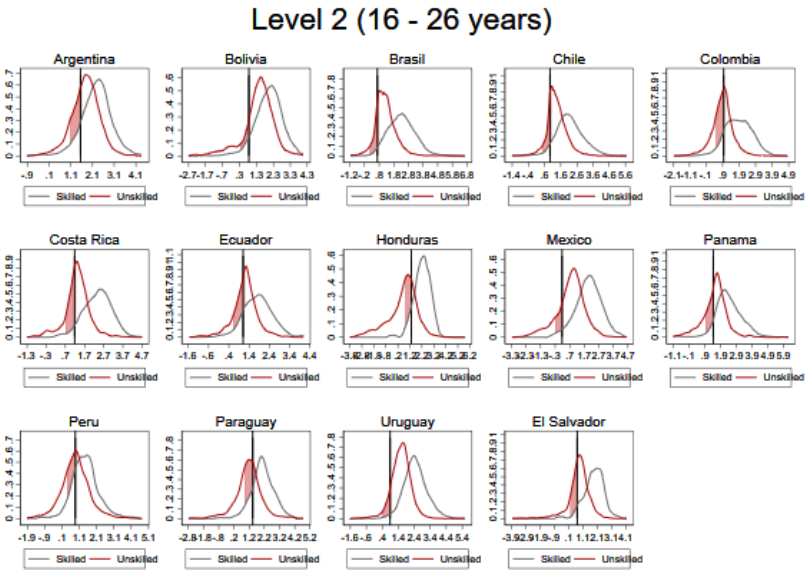
Figure A6: Wage distributions of skilled and unskilled workers with experience level 1 in 2012*



*Chile is shown in 2013.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

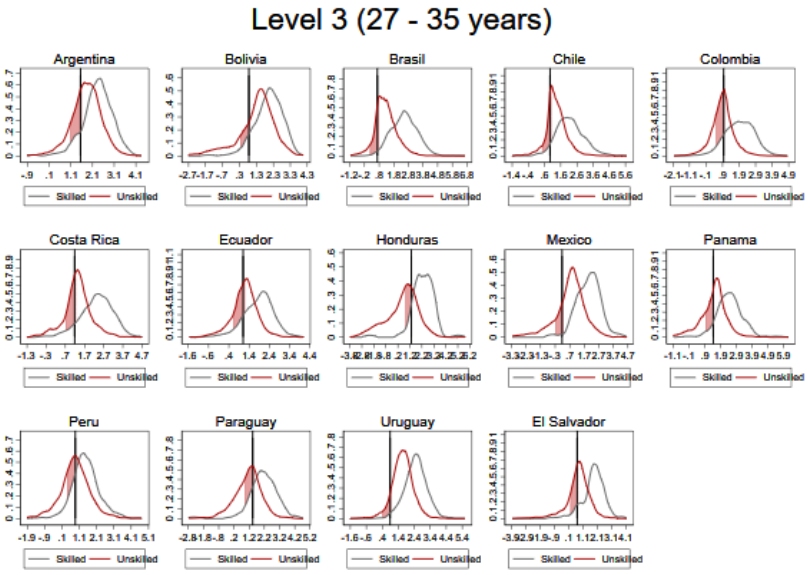
Figure A7: Wage distributions of skilled and unskilled workers with experience level 2 in 2012*



*Chile is shown in 2013.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

Figure A8: Wage distributions of skilled and unskilled workers with experience level 3 in 2012*



*Chile is shown in 2013.

Source: authors' elaboration based on SEDLAC (CEDLAS & The World Bank).

Table A3: Robustness tests with alternative supply definitions. S/U group.

	Skilled vs unskilled			
	(1)	(2)	(3)	(4)
Relative supply	-0.289*	-0.275*	-0.264*	-0.277*
	[0.094]	[0.096]	[0.107]	[0.094]
Hourly minwage	-0.124*	-0.129*	-0.129*	-0.124*
	[0.063]	[0.068]	[0.076]	[0.072]
Observations	263	263	263	263
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	+ Unemp	+ Unemp	+ Unemp	+ Unemp
Supply	PET	Hours	Employed	PEA

Cluster-robust wild-bootstrap p-values shown in brackets. *Significant at the 10% level, **significant at the 5% level and ***significant at the 1% level. Controls include terms of trade (Net Barter Index), constant 2017 PPP per capita GDP, and ratio between unemployment rates for each skill. Column one is the alternative chosen for the main results: population within the skill group. Column 2 uses total work hours, column 3 uses total employment and column 4 uses the number of people in the WAP. All cases are adjusted for efficiency units.

Table A4: Robustness tests with alternative supply definitions. H/D group.

	High-School vs Dropout			
	(1)	(2)	(3)	(4)
Relative supply	-0.163**	-0.161**	-0.155**	-0.156**
	[0.013]	[0.019]	[0.021]	[0.019]
Hourly minwage	-0.045	-0.048	-0.047	-0.044
	[0.295]	[0.254]	[0.277]	[0.300]
Observations	263	263	263	263
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	+ Unemp	+ Unemp	+ Unemp	+ Unemp
Supply	PET	Hours	Employed	PEA

Cluster-robust wild-bootstrap p-values shown in brackets. *Significant at the 10% level, **significant at the 5% level and ***significant at the 1% level. Controls include terms of trade (Net Barter Index), constant 2017 PPP per capita GDP, and ratio between unemployment rates for each skill. Column one is the alternative chosen for the main results: population within the skill group. Column 2 uses total work hours, column 3 uses total employment and column 4 uses the number of people in the WAP. All cases are adjusted for efficiency units.

Table A5: Robustness tests with different age intervals considered in the sample. S/U group.

	Skilled vs unskilled			
	21 to 55	21 to 60	25 to 55	25 a 60
Relative supply	-0.289*	-0.289*	-0.289*	-0.318*
	[0.094]	[0.094]	[0.065]	[0.077]
Hourly minwage	-0.124*	-0.124*	-0.133**	-0.134**
	[0.063]	[0.063]	[0.038]	[0.042]
Observations	263	263	266	266
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	All	All	All	All

Cluster-robust wild-bootstrap p-values shown in brackets. *Significant at the 10% level, **significant at the 5% level and ***significant at the 1% level. Controls include terms of trade (Net Barter Index), constant 2017 PPP per capita GDP, and ratio between unemployment rates for each skill. Column one is the alternative chosen for the main results: people between 21 and 55 years of age. Column 2 uses people between 21 and 60, column 3 between 25 and 55 and column 4 between 25 and 60.

Table A6: Robustness tests with different age intervals considered in the sample. H/D group.

	Highschool vs dropouts			
	21 to 55	21 to 60	25 to 55	25 to 60
Relative supply	-0.163**	-0.163**	-0.165***	-0.169***
	[0.013]	[0.013]	[0.002]	[0.008]
Hourly minwage	-0.045	-0.045	-0.061	-0.058
	[0.295]	[0.295]	[0.203]	[0.215]
Observations	263	263	266	266
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	All	All	All	All

Cluster-robust wild-bootstrap p-values shown in brackets. *Significant at the 10% level, **significant at the 5% level and ***significant at the 1% level. Controls include terms of trade (Net Barter Index), constant 2017 PPP per capita GDP, and ratio between unemployment rates for each skill. Column one is the alternative chosen for the main results: people between 21 and 55 years of age. Column 2 uses people between 21 and 60, column 3 between 25 and 55 and column 4 between 25 and 60.

Table A7: Robustness tests with different age intervals considered in the sample. H/D group.

	Levels 1 and 2	Levels 1 and 3	Levels 2 and 3
Argentina	-.009	-.009	0
Brasil	.003	.028	.025
Bolivia	.002	.005	.003
Chile	.009	.017	.008
Colombia	.011	.031	.02
Costa Rica	0	.006	.006
Ecuador	.004	.006	.002
Honduras	.017	.007	-.01
Mexico	.004	.015	.011
Panama	.002	.004	.002
Paraguay	.018	.019	.001
Peru	.011	-.005	-.016
Uruguay	-.002	-.003	-.001
El Salvador	.01	.015	.005
Latin America	**.006**	**.008**	**.003**

Source: Authors' elaboration based on SEDLAC (CEDLAS and World Bank).