

# Method Section

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This study adopts a cross-country least squares regression on panel data as its benchmark method. The specification of this regression will be as follows:

$$y_i = \alpha_0 + \alpha_1 \left( \frac{rem}{GDP} \right)_i + \alpha_2 \left( \frac{rem}{GDP} \right)_i^2 + \beta_1 edu\_13_i + \beta_2 edu\_13_i^2 + \beta_3 edu\_58_i + \beta_4 edu\_58_i^2 + \epsilon_i.$$

In the equation above,  $y_i$  is our income inequality indicator, represented by two measures: the standardized Gini coefficient (`gini_std`), and the difference between the income share of the top 20 percent earners and the bottom 20 percent earners (`top20-bottom20`). Our variable of interest, which is the share of international remittance in GDP (`Remittance.as.percent`), is denoted as  $\left( \frac{rem}{GDP} \right)_i$ . According to previous theoretical and empirical literature on remittances and inequality, an inverted U-shaped relationship is expected (Koechlin and Leon, 2006). Therefore, I include both the linear and quadratic terms of remittances in the regression model. Following this assumption, we expect a positive sign for the linear coefficient  $\alpha_1$ , and a negative sign for the quadratic coefficient  $\alpha_2$ .

The control variable in this regression is education level, represented by two separate indicators (detailed in the Data section). These variables are used to capture both the general level of educational attainment in a country and the proportion of the population receiving higher education, allowing us to examine their influence on the relationship under study.

The use of quadratic terms in the regression is motivated by the assumption that the relationship between educational expansion and income inequality may vary across different stages of development. In the early phases of expansion, access to education is typically limited to specific groups—such as individuals from higher-income backgrounds, urban residents, or particularly high-performing students. By contrast, when education becomes widely accessible, further expansion may influence inequality in a fundamentally different way. In both low- and high-coverage contexts, marginal changes in educational attainment are unlikely to alter the underlying structure of access. Therefore, the relationship between education and inequality may evolve nonlinearly over the course of development, justifying the inclusion of squared terms in the model.

Time fixed effects are incorporated through the construction of 14 multi-year periods, rather than using yearly fixed effects. This approach is adopted because many individual years—particularly in the earlier part of the dataset—contain

too few observations to support reliable year-specific fixed effects. By grouping years into broader periods, each time unit contains at least 20 to 30 observations, thereby ensuring the stability and credibility of the fixed-effects estimates. Additionally, the periods are defined to avoid splitting across major historical or economic events—such as the 1991 dissolution of the Soviet Union and the 2008 global financial crisis—thereby preserving temporal coherence and improving the accuracy of estimation.

The detailed period definitions and corresponding observation counts are shown in the table below. Notably, many periods after the year 2000 are defined at the single-year level. This choice reflects two key considerations. First, these years contain sufficient observations individually, eliminating the need to aggregate them to ensure statistical reliability. Second, single-year periods offer greater temporal precision—particularly important given the accelerated growth of personal international remittances in the post-2000 era, as documented by the World Bank. Where data availability allows, shorter periods are used to better capture changes in remittance dynamics and improve the accuracy of the estimated time effects.

Table 1: Number of Observations by Time Period

<b>Time Period</b>	<b>Observations</b>
1980–1990	23
1991–1996	50
1997–2000	56
2001–2003	55
2004	29
2005	31
2006	27
2007	35
2008	36
2009	31
2010	38
2011	39
2012	40
2013–2015	68