Surfing the Latin American pink tide: secular trends or sudden change in public opinion? An Oaxaca-Blinder approach*

Brum, Matías†
Universidad ORT Uruguay

Cazulo, Paola
Universidad de la República

Rueda, Horacio
Universidad de la Republica
University of Houston

Siniscalchi, Sabrina
Universidad de la República

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Abstract

The Pink Tide had a profound political and economic impact on Latin America. While existing literature explores its drivers and reversal, this paper addresses a gap by combining two decomposition methods with a values and perceptions dataset. It makes three contributions. First, it quantifies the role of two key drivers: slow structural changes in society and faster shifts in political preferences. Second, it identifies which segments of the electorate experienced the largest preference shifts, using a novel combination of Oaxaca- Blinder and Recentered Influence Function (RIF) regressions—yielding the first empirical estimates of changes across the preference distribution. Third, it expands the use of these decomposition techniques beyond economic outcomes, offering tools for broader political analysis. Results show that 90% of the leftward shift during the Pink Tide stemmed from changes in voter preferences, not strategic "vote lending". The entire ideological distribution moved leftward, not just centrist voters. Similarly, the rightward reversal was driven entirely by preference changes and extended across nearly the whole electorate.

Keywords: Latin America, Pink Tide, Oaxaca-Blinder, RIF Regressions.
JEL codes: D72, O54, C21, C51, P16.

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†School of Management and Social Sciences, Universidad ORT Uruguay. Corresponding author; matias.brum@facs365.ort.edu.uy

1 Introduction

Interest in studying the Pink Tide and its reversal arises for many reasons. The Pink Tide had a significant political and economic impact on the region: it entailed the implementation of social welfare programs, expanded access to healthcare and education, and the extension of civil liberties. At the same time, it faced strong resistance from conservative forces, leading to increased political polarization and social unrest. The reversal of the Pink Tide has been marked by the resurgence of neoliberal policies, and more broadly, has cast doubt on the sustainability of the prior sociopolitical and economic changes. A large body of literature has examined the main drivers of the Pink Tide and its reversal (see Hatala (2018) for an comprehensive review), raising several questions relevant to this paper.

The literature on the Latin American Left can be divided into two main branches. The first focuses on defining the Latin American Left and evaluating whether the ten electoral victories in the region constitute a common phenomenon or whether internal differences challenge this classification. Panizza (2005) defines the Latin American Left as a collective rejection of neoliberalism, marked by a shift toward centrism and moderation. While countries differ in their adherence to populism, participatory, or liberal democracy, this definition sparked scholarly debate. One group of authors distinguishes between the ”moderate” and ”populist” Left (Castañeda, 1995, 2006; Castañeda and Morales, 2006, 2009; Weyland, 2009; Madrid, 2010), often with implicit or explicit critiques of the latter. Another group emphasizes shared features, arguing for a unified Left; for example, Kenneth and Levitsky (2011) contends that the reduction of inequality is a common goal across the region (Cleary, 2006; Seligson, 2007). A subset of this literature views the rise of the Left after 2001 as a shift from the Right to the Center, rather than a radical leftward turn (Arnold and Samuels, 2011; Remmer, 2012; Baker and Greene, 2011; Madrid, 2010).

A second branch investigates the causes of the Pink Tide and its reversal. In a comprehensive review, Hatala (2018) organizes the main explanatory factors. One prominent theme is the failure of the Washington Consensus to deliver macroeconomic stability.[1] A key theoretical distinction is whether the rejection of neoliberalism reflects retrospective (outcome-based) or prospective (policy-based) voting. Retrospective voting does not necessarily imply a shift in ideological preferences—voters may simply punish incumbents—whereas prospective voting suggests a genuine change in preferences. Empirical findings are mixed: while some studies (Lora et al., 2005; Stokes, 2001; Murillo et al., 2010; Blanco and Grier, 2013) show

[1]See Easterly et al. (1997), Portes and Hoffman (2003), Paus (2004), Huber and Solt (2004), and Arze and Kruse (2004).

voters punished right-wing incumbents due to inflation, others (Debs et al., 2010; Baker and Greene, 2011; Remmer, 2012; Queirolo, 2013) find inflation and growth to be insignificant factors. Thus, it remains unclear whether the Left's rise was due to neoliberalism's failure or a broader ideological shift. Many scholars also point to inequality as a key driver (Lora et al., 2005; Castañeda, 2006; Cleary, 2006; Murillo et al., 2010; Debs et al., 2010; Baker and Greene, 2011; Blanco and Grier, 2013), though the evidence is inconclusive.

Another line of argument sees globalization—via trade and capital openness—as a driver of the Pink Tide. According to this view, such policies heightened macroeconomic instability, including wage volatility, job insecurity, and de-industrialization. Some argue voters turned to the Left to counter these effects (Garretón, 2006). Yet empirical evidence is again mixed: some studies find no link between globalization and the Left's rise, while others suggest pro-globalization policies benefit the Right at the polls (Murillo et al., 2010; Blanco and Grier, 2013). Notably, when the Left adopts such policies, it sees no electoral rewards and may even be penalized for reversing them. Importantly, the Pink Tide unfolded during a transition from a period of low growth, low commodity prices, and high inflation to a boom in commodity prices, which enabled redistributive policies to various extents.

A third strand of literature emphasizes sociopolitical factors. Murillo et al. (2011) argues that longer democratic experience and greater elite tolerance for alternation in power reduce the political costs of redistributive policies, an argument also supported by Castañeda (2006) and Panizza (2005). However, Debs et al. (2010) finds no evidence for this hypothesis. Similarly, Baker and Greene (2011) does not find that democratic age or dissatisfaction with democracy significantly affected Left victories. Blanco and Grier (2013) also finds no relationship between democratic strength and electoral success for either the Left or Right.

A fourth perspective, following Panizza (2005), suggests that left-of-center parties in Latin America have matured. Historically liberal-republican, populist, or grassroots parties shifted focus from ideology to electoral competition. According to this view, the Left gained power by appealing to centrist voters. Morales (2009) provides empirical support for this thesis. Panizza (2005) argues that the Left traded ideological purity for strategic coalition-building. In contrast, Mainwaring (2006) contends that unresolved problems like crime and corruption de-legitimized traditional party systems, paving the way for radical left-wing parties that promised to reform state institutions and improve democratic representation.

Against this backdrop, this paper bridges a gap in the literature by combining the Oaxaca-Blinder decomposition with a dataset on values and perceptions in Latin America. It makes three main contributions. First, it provides quantitative estimates of two key drivers behind the Pink Tide and its reversal: slow, structural

changes in the composition of society and faster changes in political preferences within groups. Second, by combining the Oaxaca-Blinder methodology with Recentered Influence Function (RIF) regressions, the paper identifies *which segments* of the electorate experienced significant shifts in political preferences—offering, to the best of our knowledge, the first empirical estimates of changes *across the distribution of preferences* in the literature. Third, the paper contributes to a small but growing body of research that extends the application of two closely related decomposition methods beyond narrow economic outcomes, potentially reaching other scholars who may find these tools useful for diverse contexts. Moreover, the methodology serves as an informative reference for analyzing electoral and ideological shifts in other regions (e.g., the former Eastern Bloc).

The Oaxaca-Blinder decomposition technique has been widely used in economics to study labor market discrimination, such as decomposing wage gaps by race or gender (Fortin et al., 2011), but has been scarcely applied to ideological or electoral issues.[2] Three notable exceptions are closely related to our study. Fan and Alves Pena (2020) uses the Oaxaca-Blinder method to decompose changes in voter behavior in the United States between 2012 and 2016, distinguishing between changes in the characteristics of U.S. counties and changes in the vote shares associated with those characteristics. Gross and Fosse (2012) investigates the ideological gap between professors and the general public using survey data from 1974–2008 and applies the Oaxaca-Blinder decomposition to attribute differences to either characteristics or the ideological returns to those characteristics. Fieldhouse and Prosser (2018) employs the method to study changes in the vote share for the Scottish National Party before and after the Scottish Independence Referendum, decomposing the shift into changes in individual and party-level variables and changes in the vote share associated with them.

Our research departs from these studies by focusing on the ideological orientation of individuals across several Latin American countries and by decomposing *temporal* changes, rather than differences *between groups*. Moreover, we complement this analysis with another decomposition technique—using Recentered Influence Function (RIF) regressions—to examine movements *across the distribution of political preferences* for all individuals. To the best of our knowledge, RIF regression decomposition techniques have not been previously applied in political science research.

Although the application of the Oaxaca-Blinder decomposition in economic contexts, particularly in labor market studies, is well-established (Fortin et al., 2011),

[2]Though named after two papers independently published in the same year by economists Ronald Oaxaca and Alan Blinder (Oaxaca, 1973; Blinder, 1973), the method was first developed by sociologist and demographer Evelyn M. Kitagawa (Kitagawa, 1955), and is also known as the Kitagawa-Oaxaca-Blinder decomposition.

its potential for analyzing political behavior and electoral change remains underexplored. The technique's ability to disentangle the multiple factors influencing electoral outcomes invites broader use beyond economics. A more expansive review of its cross-disciplinary applications could yield underutilized insights for political science, particularly in understanding the complex relationship between socioeconomic characteristics and voter behavior. The aforementioned studies (Fan and Alves Pena, 2020; Gross and Fosse, 2012; Fieldhouse and Prosser, 2018) provide preliminary forays into this area. However, a critical evaluation of their methodologies and findings is essential for adapting the approach to new contexts. For instance, Fan and Alves Pena (2020) offers a compelling example of using Oaxaca-Blinder decomposition for electoral analysis in the United States, highlighting its potential to uncover latent patterns in voter behavior. Nonetheless, adapting this technique to Latin America requires consideration of distinct electoral systems, voter demographics, and political cultures.

The integration of decomposition techniques into political science would also benefit from alignment with existing theoretical frameworks on political alignment, voter mobilization, and ideological shifts. Understanding phenomena such as the Pink Tide in Latin America demands not only methodological innovation but also theoretical grounding in the region's political evolution and social transformations. Such integration could help identify the conditions under which specific demographic groups become more susceptible to ideological shifts, thereby offering a more nuanced interpretation of empirical findings.

Furthermore, our use of RIF regression decomposition techniques represents a methodological innovation aimed at capturing distributional nuances in political preferences across the electorate. This approach enables a more detailed analysis of how different segments of the population contribute to broader ideological shifts—an aspect that standard Oaxaca-Blinder decompositions may overlook. The absence of prior applications of RIF regressions in political science, to the best of our knowledge, underscores the novelty and potential significance of our contribution in opening new methodological frontiers.

In sum, applying decomposition techniques to the study of electoral behavior in Latin America not only fills a methodological gap but also fosters dialogue between economics and political science. By critically engaging with existing studies and introducing innovative methods, our study provides new insights into the dynamics of the Pink Tide and its reversal, contributing to the broader discourse on political alignments and voter behavior.

Regarding the shift to the left, our findings confirm a significant shift of 0.7 points in the average ideological orientation of individuals (from 5.8 to 5.1), 90% of which is attributable to changes in voters' preferences. In other words, the triumph

of the Left reflects a genuine transformation in political preferences, rather than voters merely *lending* their support to left-wing parties as a protest against right-wing incumbents while maintaining their original ideological stance. Moreover, the entire distribution of ideological orientation shifted to the left, including the median voter, who moved from 5.6 to 5.4. This suggests that the Pink Tide was not confined to centrist voters but encompassed the broader electorate. The most substantial shift occurred among right-leaning individuals, with deciles 6, 7, and 8 exhibiting changes of between 0.8 and 1.6 points.

As for the shift to the right, we observe a more moderate rightward shift of 0.26 points in average ideological orientation (from 5.14 to 5.36), again entirely driven by changes in voters' preferences. Although the average ideological position remains below 5.5, the median voter moved from 5.3 to 5.6, indicating a clear shift from the center-left to the center-right, in line with electoral outcomes. Furthermore, nearly the entire distribution of ideological orientation shifted rightward. A key takeaway is that this reversal was widespread across the electorate. Specifically, individuals in deciles 6, 7, and 8 (traditionally right-leaning) displayed the largest shifts—between 0.7 and 0.9 points—while even left-leaning individuals in deciles 2 and 3 showed significant movement, with shifts ranging from 0.3 to 0.6 points.

To summarize, the main empirical findings of the paper and contributions are as follows. First, there is no evidence of "vote lending": political preferences shifted in line with electoral outcomes during both the Pink Tide and its reversal. Second, voter preferences—particularly among center-right individuals—are highly malleable and subject to short-term change. In particular, our findings challenge interpretations that emphasize a durable shift to a populist Left, and instead lend support to the view that left-wing parties adopted a more pragmatic electoral strategy, appealing to the center of the political spectrum. In any case, our results should be considered in future efforts to explain the key drivers of electoral swings in Latin America.

The structure of the paper is as follows: in Section 2, we present the data and descriptive statistics, followed by the empirical methodology in Section 3. Section 4 discusses our results. The final section concludes.

2 Data and Descriptive Statistics

This section presents the datasets, the variable construction process, and basic descriptive statistics.

Latinobarometer

The Latinobarometer is a public opinion survey conducted across Latin Amer-

ica since 1995. Initially, it covered Argentina, Brazil, Chile, Mexico, Paraguay, Peru, Uruguay, and Venezuela. In 1996, it incorporated Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, and Panama, and in 2004, the Dominican Republic. The survey is based on nationally representative samples of approximately 1,100 individuals per country. A core questionnaire captures respondents' socioeconomic and demographic characteristics and includes various modules on perceptions, opinions, beliefs, and preferences, which often vary year to year. To capture both the rise of left-wing governments and their subsequent reversals, this paper focuses on the period from 1995 to 2018.[3]

The key variable of interest is individuals' self-placement on an ideological scale, based on the following question: *In politics, people normally speak of 'Left' and 'Right'. On a scale where 0 is Left, and 10 is Right, where would you place yourself?*

This variable allows for the computation of the average or median ideological orientation of a country's population in the years before and after the first (and last) electoral victory of a left-wing government. It also enables the analysis of changes in a wide variety of characteristics within the population at those same points in time. To identify left- or right-wing electoral victories, a classification of the ideological orientation of competing parties is required. This task is facilitated by the fact that many, if not all, of the left and center-left parties associated with the Pink Tide clearly identified themselves—and explicitly campaigned—as (center-)leftist parties.[4]

The countries that experienced a clear shift to the left in the ideological orientation of their governments following an election are Argentina, Bolivia, Brazil, Chile, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, Uruguay, and Venezuela. However, Chile and Venezuela are excluded from the analysis, as their shifts occurred in electoral years (1993) outside the sample window. Table 1 presents the year of the first (center-)left electoral victory, the winning party, the (center-)right incumbent party, the election result (victory margin), and the year of the previous election.

[3]The survey was not conducted in 1999, 2012, or 2014.

[4]Several political science scholars have compiled datasets classifying parties and governments for periods that partially or fully overlap with the one studied in this paper (Murillo et al., 2010; Beck et al., 2001; Coppedge, 1997; Baker and Greene, 2011). Our classification is consistent with those used in these sources.

Table 1: Countries - Pink Tide

	First (center)Left Party winning					Previous party in office				
Country	Election	Party	Candidate name	Voting (%)	Second Round?	Election	Party	Candidate name	Voting (%)	Second Round?
Argentina	2003	FPV	Kirchner	22.25	No*	1999	UCR	de la Rua	48.37	No
Bolivia	2005	MAS	Morales	53.72	No	2002	MNR	Sanchez de Lozada	22.50	No
Brazil	2002	PT	Lula da Silva	61.30	Yes	1998	PSDB	Cardoso	53.10	No
Chile	2000	Concertaci´on	Lagos	51.31	Yes	1993	PDC	Ruiz-Tagle	57.98	No
Ecuador	2006	PAIS - PSE	Correa	56.67	Yes	2002	PSP-MUPP-NP	Gutierrez	54.79	No*
El Salvador	2009	FMLN	Funes	51.32	No	2004	ARENA	Saca	57.71	No
Honduras	2005	PLH	Zelaya	49.9	No	2001	PNH	Maduro	52.21	No
Nicaragua	2006	FSLN	Ortega	38.07	No	2001	PLC	Bolanos	56.31	No
Paraguay	2008	PDC	Lugo	41.13	No	2003	ANR-PC	Frutos	37.18	No
Peru	2011	PNP	Humala	51.45	Yes	2006	APRA	Garcia	52.62	Yes
Uruguay	2004	FA	V´azquez	50.45	No	1999	PC	Batlle	54.13	Yes
Venezuela	1998	MVR	Ch´avez	56.20	No	1993	Convergencia	Caldera	30.46	No

Regarding the reversal, the countries that experienced a shift to the right in the ideological orientation of their governments after an election are Argentina, Brazil, Chile, Honduras, Paraguay, Peru, and Uruguay.[5] Table 2 presents the year of the return to the right, the winning party, the (center-)left incumbent party, the election result (victory margin), and the year of the previous election.

Table 2: Countries - Return to the right

	Return of Right-wing parties					Previous party in office				
Country	Election	Party	Candidate name	Voting (%)	Second Round?	Election	Party	Candidate name	Voting (%)	Second Round?
Argentina	2015	Cambiemos	Macri	51.34	Yes	2011	FPV	Fern´andez	54.11	No
Brazil	2018	PSL	Bolsonaro	55.13	Yes	2014	PT	Rousseff	51.64	Yes
Chile	2010	RN	Pin˜era	51.61	Yes	2006	PS	Bachelet	53.50	Yes
Honduras	2009	PNH	Lobo	56.56	No	2005	PLH	Zelaya	49.90	No
Paraguay	2013	ANR-PC	Cartes	45.68	No	2008	PDC	Lugo	41.13	No
Peru	2016	PPK	Kuczynski	50.12	Yes	2011	PNP	Humala	51.45	Yes
Uruguay	2019	PN	Lacalle	50.79	Yes	2014	FA	V´azquez	56.62	Yes

Descriptive Statistics

We restrict the analysis to individuals aged 18 to 80.[6] We include individual characteristics that are consistently available across all survey years: age, gender, religion, marital status, labor force status, educational level, socioeconomic status (as assessed by the interviewer), and seven indicators of wealth, capturing ownership

[5]Bolivia, Nicaragua, and Venezuela do not show a clear return to the right. The cases of Ecuador and El Salvador are debatable, but we have also chosen to exclude them. In Ecuador, President Len´ın Moreno belongs to the same party as former President Rafael Correa, although there is ongoing debate about Moreno's alleged shift to the right and the political persecution of Correa. In El Salvador, the party that led the country rightward (GANA) was created in 2010, self-identifies as the "popular right," and appears conservative; however, the candidate who won the election, Nayib Bukele, is a former member of the leftist guerrilla party FMLN.

[6]Individuals aged 81 and older comprise less than 1% of the sample (162 and 146 observations for the shifts to the left and to the right, respectively). Surveys conducted in different countries and years used varying codes for missing values; thus, reported ages such as 88, 98, 96, 99, and potentially others may correspond either to very old individuals or to missing data.

of goods and access to services.[7] We conduct two empirical exercises: the first focuses on the swing to the left, and the second on the swing to the right.

For the Pink Tide, we examine two election years for each country: the last election in which the left lost, and the first in which it won. For instance, in Brazil, a left-wing coalition led by the *Partido dos Trabalhadores* won the October 2002 election, after losing the previous election in 1998 to a right-wing coalition led by the *Partido da Social Democracia Brasileira*. The sample for Brazil thus includes individuals surveyed in 1998 and 2002. Presidential terms in Latin America generally last four or five years. The final sample used in our analysis comprises 21,234 individuals from ten Latin American countries: Argentina, Bolivia, Brazil, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, and Uruguay.

Figure 1 below presents the average ideological orientation of respondents in the estimation sample during the years immediately before and after the first election won by a (center-)left party. The figure shows that this electoral victory was preceded by a substantial and sustained shift in ideological orientation—away from the right and toward the left.

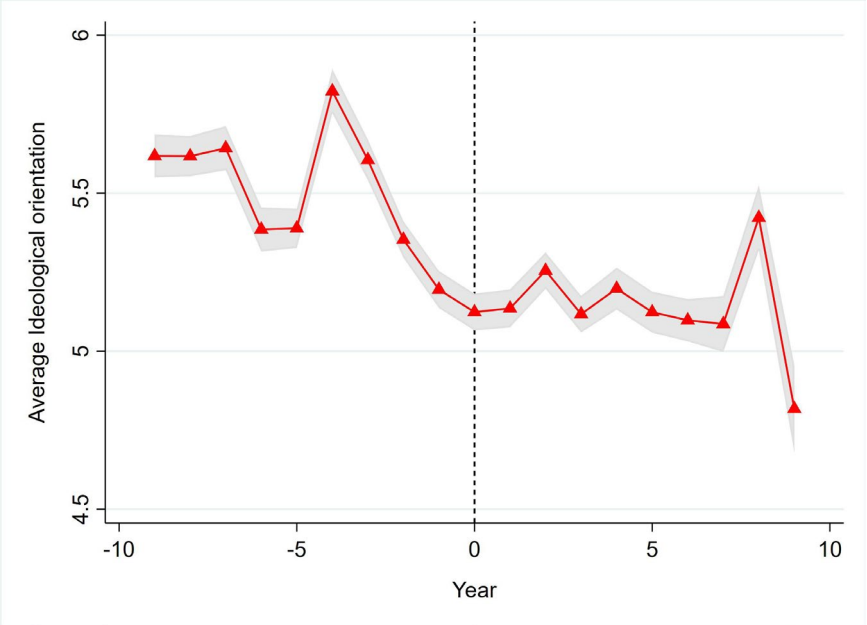

Figure 1: Latin American Pink Tide

Notes: The figure plots the average ideological orientation of individuals in Latin America, where 0 corresponds to 'Left' and 10 to 'Right'. The horizontal axis normalizes years: 0 represents the year a left or center-left government wins the elections. Sample: Argentina, Bolivia, Brazil, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, and Uruguay; years 1995 to 2011 (except 1999).

Table 3 presents descriptive statistics for the main socioeconomic variables used in the empirical analysis of the swing to the left. The first column displays the mean values or the percentage of the population in each category (for categorical vari-

[7]These include access to hot water, a sewage system, a computer, a washing machine, a landline telephone, a car, and home ownership.

ables). It shows that the sample consists primarily of relatively young individuals of modest socioeconomic status, with generally low levels of education and a labor market profile characterized by high levels of self-employment or private-sector work, along with a notable presence of housewives. Column 2 presents the same statistics for the election year lost by the (center-)left; Column 3 reports values for the election year won by the (center-)left; and Column 4 provides p-values for the test of differences between the two periods.

Overall, the table indicates statistically significant changes in socioeconomic and demographic characteristics between the two elections. These include a slight deterioration in perceived socioeconomic status and labor market conditions (e.g., increases in unemployment and self-employment), as well as educational attainment (with an increase in individuals without formal instruction or with only incomplete primary education, and a decrease in those with incomplete or completed tertiary education). Furthermore, the table reflects the ideological shift already illustrated in Figure 1, documenting a statistically significant movement in average ideological orientation from above the center (5.8) to below it (5.12), on a 0–10 left–right scale where 5.5 marks the ideological midpoint.

According to Figure 1, the election of a left-wing candidate coincides with a genuine ideological shift in the electorate, challenging the hypothesis that the Pink Tide was merely a protest vote by disillusioned center-right individuals reacting to short-term shocks such as economic crises or corruption scandals. At the same time, Table 3 highlights substantial changes in the composition of the electorate along dimensions that are likely to influence ideological orientation.[8]

The methodology introduced in the following section allows us to address two key questions. First, it enables us to determine what portion of the observed change in average ideological orientation is attributable to changes in the population's composition, and what portion reflects shifts in individual beliefs and preferences. Second, it helps us assess how much individuals at different points in the ideological distribution have moved in their ideological positioning.

The second point is particularly important. Although descriptive statistics suggest a shift in average ideological orientation from above to below the center, a more accurate analysis should focus on changes in the median ideological orientation of the sample.[9] The Oaxaca-Blinder decomposition based on RIF (Recentered Influence Function) regressions enables us to distinguish compositional from preference-related changes at the median, and also to trace shifts across the entire

[8]Figure A1 in the Appendix plots average years of education by year, before and after the first (center-)left victory, offering additional support for this point.

[9]A change in the average may be driven by, for example, individuals from the center-left (or far right) shifting further left (or toward the center-right), without affecting the position of the median voter.

distribution of ideological preferences. This yields a more nuanced understanding of ideological dynamics. In addition, the OB-RIF decomposition provides a useful robustness check.[10]

Table 3: Summary statistics - Pink Tide

	All population	Pre-period	Post-period	*p-value*
Variables	(1)	(2)	(3)	(4)
Ideology	5.46	5.80	5.12	0.000
Age	39.78	40.21	39.37	0.668
Gender	0.48	0.48	0.49	0.841
Socioeconomic status				
Very good	5.62	5.58	5.66	0.206
Good	29.41	31.05	27.83	0.000
Regular	44.80	43.76	45.81	0.000
Bad	16.72	16.60	16.83	0.046
Very Bad	3.45	3.01	3.87	0.000
Education level				
Without instruction	10.17	9.54	10.77	0.000
School (incomplete)	18.29	16.26	20.25	0.000
School	16.42	15.31	17.49	0.001
Highscool (incomplete)	9.34	10.13	8.58	0.067
Highschool	6.02	5.88	6.16	0.683
College (incomplete)	11.72	12.29	11.18	0.000
College	11.62	13.63	9.69	0.000
University (incomplete)	6.42	6.50	6.34	0.001
University	5.49	6.14	4.86	0.000
Higher technical educ (incomplete)	1.87	1.95	1.79	0.000
Higher technical educ	2.64	2.38	2.89	0.834
Occupational status				
Self-Employed	35.50	34.75	36.23	0.000
Public employee	6.88	6.87	6.88	0.197
Private employee	14.89	15.18	14.62	0.261
Unemployed	6.18	5.61	6.72	0.000
Retired	6.76	6.95	6.56	0.297
Housewife	23.29	23.48	23.10	0.915
Student	6.50	7.15	5.88	0.000
Wealth indicators				
Hot water	0.33	0.36	0.31	0.000
Sanitation	0.59	0.65	0.54	0.000
Personal Computer	0.15	0.13	0.17	0.000
Washing machine	0.30	0.30	0.30	0.134
Telephone (land line)	0.41	0.43	0.39	0.000
Car	0.21	0.23	0.19	0.000
Own house	0.73	0.72	0.73	0.779
Observations	21234	10399	10835	

Notes: Sample: Argentina, Bolivia, Brazil, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, and Uruguay; years 1995 to 2011 (except 1999).

In the case of the reversal to the right, the estimating sample includes two election years: the last election in which the right lost (following the initial electoral

[10]Results from the OB-RIF decomposition should be consistent with those from the simple OB decomposition. If the OB decomposition finds a leftward shift in average ideological orientation, while the OB-RIF decomposition shows predominantly rightward movements across the ideological spectrum, this would signal potential issues with the analysis, the data, or the underlying assumptions.

victory of the left), and the first election in which the right returned to power. For example, in Argentina, a (center-)right coalition led by *Cambiemos* won the presidential election in November 2015, after losing the previous election in 2011 to a (center-)left coalition led by *Frente Para la Victoria*. Accordingly, the sample used for estimation includes Argentine respondents surveyed in 2011 and 2015.[11] The final sample includes 16,021 individuals from Argentina, Brazil, Chile, Honduras, Paraguay, Peru, and Uruguay.[12]

Table 4 presents descriptive statistics for the main socioeconomic variables used in the second empirical analysis, focused on the swing to the right. The first column shows that the sample is composed of relatively young individuals of modest socioeconomic status—somewhat lower than in the first analysis—with generally low levels of education (also lower than in the previous sample). Most are self-employed or privately employed, and a significant share are housewives. Columns 2 to 4 again report statistically significant changes in socioeconomic and demographic characteristics between the two election periods. These shifts can be interpreted as a reversal of the patterns observed during the swing to the left: improvements in socioeconomic status (an increased proportion reporting "Very Good" or "Good" and a decreased proportion reporting "Regular," "Bad," or "Very Bad"), and improvements in educational attainment (a reduction in those with incomplete primary education, and increases in those with complete university or higher technical education).

More importantly, Table 4 reveals a change in average ideological orientation, increasing from 5.14 to 5.36 on a 0–10 scale. However, this shift does not cross the ideological center at 5.5. This modest change in the average may reflect a combination of movements: some centrist individuals shifting to the right, and some left-wing individuals moving further to the left. The first trend may account for the electoral victories of right-wing candidates, while the second—if sufficiently large—may counterbalance the former, thus making the average ideological shift appear small or even misleading. In this context, the OB-RIF (Oaxaca-Blinder with Recentered Influence Functions) decomposition becomes particularly valuable. It allows us to uncover the actual compositional and preference changes of the median voter. This is especially relevant when changes in the average ideological orientation (still below 5.5) appear insufficient to explain electoral outcomes, yet right-wing

[11]Note that the Latinobarómetro survey was not conducted in 2014 and 2019. For countries with elections in those years, we use the previous available survey year. This affects only Uruguay and Brazil, for which we use 2013 instead of 2014 and 2018 instead of 2019.

[12]It is not possible to present changes in average ideological orientation over a 10-year window around the turn to the right for two main reasons. First, data is unavailable for 2012 and 2014. Second, the recent nature of the rightward turn means that some relevant data has yet to be collected (e.g., the right won in Argentina in 2015 and in Uruguay in 2019; replicating Figure 1 for the rightward turn would require survey data up to 2025 and 2029, respectively).

parties and coalitions secured victories.

Thus far, the descriptive evidence has pointed to both ideological and demographic shifts among voters. In the following section, we introduce a methodology that helps disentangle preference-driven changes from those driven by shifts in the composition of the electorate. This analysis can be performed across different points of the ideological preference distribution, offering a more comprehensive picture of the transformation in political attitudes.

Table 4: Summary statistics - Reversal to the Right

	All population	Pre-period	Post-period	*p-value*
Variables	(1)	(2)	(3)	(4)
Ideology	5.25	5.14	5.36	0.000
Age	41.15	40.99	41.31	0.892
Gender	0.48	0.49	0.48	0.978
Socioeconomic status				
Very good	7.09	6.06	8.12	0.000
Good	36.19	34.99	37.39	0.000
Regular	42.17	42.65	41.69	0.038
Bad	12.53	13.92	11.15	0.000
Very Bad	2.02	2.38	1.66	0.000
Education level				
Without instruction	6.38	6.27	6.48	0.021
School (incomplete)	13.57	14.95	12.19	0.000
School	13.67	13.65	13.68	0.651
Highscool (incomplete)	11.99	11.79	12.18	0.333
Highschool	5.39	5.26	5.52	0.274
College (incomplete)	13.13	12.64	13.62	0.033
College	15.27	14.80	15.74	0.058
University (incomplete)	6.51	6.57	6.46	0.718
University	6.98	6.86	7.09	0.005
Higher technical educ (incomplete)	2.16	2.54	1.79	0.001
Higher technical educ	4.97	4.68	5.25	0.041
Occupational status				
Self-Employed	30.72	30.24	31.21	0.099
Public employee	7.43	7.53	7.34	0.547
Private employee	19.98	20.14	19.82	0.988
Unemployed	5.92	5.63	6.21	0.282
Retired	9.70	10.28	9.12	0.002
Housewife	21.14	21.13	21.16	0.483
Student	5.10	5.06	5.14	0.933
Wealth indicators				
Hot water	0.51	0.51	0.52	0.166
Sanitation	0.64	0.65	0.64	0.313
Personal Computer	0.43	0.40	0.46	0.000
Washing machine	0.64	0.61	0.67	0.000
Telephone (land line)	0.44	0.48	0.40	0.000
Car	0.32	0.31	0.32	0.000
Own house	0.76	0.76	0.76	0.564
Observations	16021	8010.	8011.	

3 Methodology

In this section, we first present the Oaxaca-Blinder decomposition and its application to the average ideological orientation. We then introduce an extension based on Recentered Influence Function (RIF) regressions, which allows us to identify effects at different points in the distribution of ideological orientation.

3.1 Oaxaca Blinder decomposition

The Oaxaca-Blinder decomposition technique (Oaxaca, 1973; Blinder, 1973) is used to analyze differences in the means of an outcome variable between two groups. In our context, the main outcome of interest is individuals' ideological orientation (I_i). The central question is how much of the difference in average ideological orientation in Latin America between two election years can be attributed to (i) changes in individual characteristics across the two periods and (ii) changes in the ideological orientation associated with these characteristics. We define:

$$ShiftLeft_{0,1} = E(I_{i1}) - E(I_{i0}) \tag{1}$$

Here, $ShiftLeft_{0,1}$ represents the change in mean ideological orientation between two election years (e.g., period 0 when the Right won, and period 1 when the Left won), and $E(I_i)$ denotes the expected ideological orientation of voters (indexed by i) in a given year. With X_i denoting a vector of socioeconomic and demographic characteristics (including a constant), we propose the following linear model:

$$I_{it} = X'_i\beta_t + \varepsilon_{it} \tag{2}$$

where t indicates period 0 or 1, ε_{it} is the error term, and we assume $E(\varepsilon_{it}) = 0$. The parameter vector β_t captures the average conditional association between ideological orientation (I_{it}) and each variable in X_{it}. Each β_t coefficient reflects the contribution of its associated characteristic to ideological orientation.

For example, if I_i takes two values (0 = Right, 1 = Left), and X_i includes a gender dummy (0 = male, 1 = female), a $\beta_{\text{gender}} = 0.2$ indicates that, on average, women are 20 percentage points more likely to identify with the Left than men. A left-wing electoral victory in period 1 following a right-wing victory in period 0 could then result from an increase in the proportion of women among voters, a leftward shift in male ideological preferences, or both. The Oaxaca-Blinder decomposition allows us to disentangle these channels. Formally, following Jann (2008):

$$ShiftLeft_{0,1} = E(I_{i1}) - E(I_{i0}) = E(X_{i1})'\beta_1 - E(X_{i0})'\beta_0 \tag{3}$$

Since $E(I_{it}) = E(X'it\beta_t + \varepsilon it) = E(X'it)\beta_t$ (because $E(\varepsilon it) = 0$ by assumption), we can decompose the total change into two components:

$$ShiftLeft_{0,1} = \underbrace{[E(X_{i1}) - E(X_{i0})]'\beta_0}_{\text{Composition}} + \underbrace{E(X_{i1})'(\beta_1 - \beta_0)}_{\text{Preferences}} \quad (4)$$

Equation 4 decomposes the change in ideological orientation between elections into two effects. The first term, $[E(X_{i1}) - E(X_{i0})]'\beta_0$, captures the **composition** effect — how changes in the electorate's structure (i.e., in X_i) would affect ideological orientation, assuming preferences remain constant (using coefficients from the earlier election, β_0). For example, this term estimates the contribution of an increase in the share of female voters, holding the ideological differences between men and women constant.

The second term, $E(X_{i1})'(\beta_1 - \beta_0)$, represents the **preferences** effect — the effect of changes in subgroup preferences (i.e., in β), holding the composition fixed at period 1 levels. This term estimates the contribution of changes in ideological differences between, for example, men and women.

Empirical estimation of the components in equation 4 is straightforward. OLS regressions are estimated separately for each period to obtain $\hat{\beta}_0$ and $\hat{\beta}_1$, the empirical counterparts of β_0 and β_1. Sample means of covariates and outcomes for each period are also calculated — $\bar{X}0$, $\bar{X}1$, $\bar{I}0$, and $\bar{I}1$, which estimate $E(Xi0)$, $E(Xi1)$, $E(Ii0)$, and $E(Ii1)$, respectively.[13]

The estimated shift in average ideological orientation can then be written as: $ShiftLeft_{0,1} = \bar{I}_1 - \bar{I}_0$. Then, we can rewrite equation 4 as:

$$\hat{ShiftLeft}_{0,1} = \hat{I}_1 - \hat{I}_0 = \underbrace{[\bar{X}_1 - \bar{X}_0]'\hat{\beta}_0}_{\text{Composition}} + \underbrace{\bar{X}_1'(\hat{\beta}_1 - \hat{\beta}_0)}_{\text{Preferences}} \quad (5)$$

As the decomposition involves multiplying regressor means ($\bar{X}$) by estimated coefficients (β), we follow Jann (2008) and apply the delta method to compute consistent standard errors.[14]

A common critique of the Oaxaca-Blinder decomposition is the potential endogeneity of the coefficients (β) to the covariates (X_i): changes in $\bar{X}$ may partly drive changes in β. For example, a sharp rise in college education might affect the returns to education (i.e., the βs) due to supply-demand dynamics. Thus, a shift in

[13] When covariates are dummy variables, a challenge arises concerning the omitted category. For example, in age dummies, one age group must be excluded as the reference. All other coefficients then reflect the effect relative to this reference. If ideological preferences are stable across all ages except the reference group, dummy coefficients may misleadingly suggest changes in ideology. We follow Jann (2008) and apply standardization across dummy variables, expressing effects as deviations from a constructed reference group based on all categories.

[14] This procedure is implemented by the `oaxaca` command in Stata.

X_i could itself alter ideological returns, confounding the interpretation of β changes as preference shifts.

However, our setting mitigates this concern in three ways. First, while labor market returns are directly tied to supply-demand forces, it is less obvious that ideological orientation should respond similarly to group size. That is, it is unclear whether an increase in the number of college graduates should change the political preferences of college graduates. Second, any such ideological feedback effects likely operate over long time horizons, while our analysis compares elections four to five years apart. Third, we observe no substantial changes in key characteristics across periods.

3.2 Decomposition based on RIF regressions

Recentered Influence Functions (RIFs) are powerful tools developed to assess how changes in explanatory variables affect not just the conditional mean of an outcome variable—as in traditional regression models—but its **unconditional** distribution. Introduced by Firpo et al. (2009), RIFs allow researchers to estimate the marginal effect of a predictor on various distributional statistics, such as the mean, quantiles, or variance, of the outcome variable without conditioning on the covariates. This makes them particularly useful when the goal is to understand how shifts in the distribution of explanatory variables—such as education or income—shape the entire distribution of an outcome of interest, such as ideological preferences or political behavior.

To understand how RIFs work, consider an outcome variable Y and a predictor X. Traditional regression models estimate how changes in X affect the expected value of Y given X (i.e., $\mathsf{E}[Y|X]$). In contrast, RIF regressions estimate the effect of changes in X on a functional of the **unconditional** distribution of Y, such as the median or the 90th percentile. The key insight is that influence functions, a concept borrowed from robust statistics, describe the influence of a small change in the distribution of Y on a particular distributional statistic. The RIF is obtained by recentering this influence function around the statistic of interest. That is:

$$RIF(Y;\upsilon) = \upsilon + IF(Y;\upsilon)$$

where υ is the statistic of interest (e.g., the median of Y) and $IF(Y;\upsilon)$ is the influence function of Y at υ. For example, when υ is a quantile, the influence function quantifies how a small mass added at value Y shifts the quantile, and the RIF recenters this function to make it usable as a dependent variable in a regression.

In practice, the method involves three steps. First, researchers compute the RIFs for the statistic of interest at a set of points in the outcome distribution.

Second, they estimate OLS regressions using these RIFs as dependent variables. The estimated coefficients then reflect the marginal effect of each covariate on the chosen statistic of the **unconditional** distribution of the outcome variable. This allows one to, for instance, estimate how much an increase in education shifts the median or upper deciles of ideological preferences—not just their conditional mean.

Formally, suppose we are interested in the effect of a predictor X on the τ -th quantile of Y, denoted q_τ. The regression:

$$RIF(Y; q_\tau) = \alpha + X^t\beta + \varepsilon$$

produces estimates β that can be interpreted as the marginal effects of X on the τ-th quantile of the unconditional distribution of Y.

This framework is particularly advantageous when combined with decomposition techniques. In Firpo et al. (2018), the authors extend the Oaxaca-Blinder decomposition—a technique traditionally used to decompose mean differences between groups—by using RIF regressions. This extension allows researchers to decompose differences in distributional statistics (e.g., quantiles) between groups or over time into portions explained by differences in characteristics (endowments) and by differences in returns to those characteristics (coefficients).

In our setting, we use RIFs to investigate how changes in predictors like education or socioeconomic status affect ideological preferences across the entire distribution—not just on average. For instance, we can estimate how increasing the education level of the electorate affects the left-right orientation of individuals at the 10th, 50th, or 90th percentiles of ideological preference. Crucially, RIF regressions provide **unconditional** estimates, meaning that they capture the effect of a covariate on the entire population's distribution of the outcome, rather than only within specific subgroups.

To apply the Oaxaca-Blinder decomposition using RIFs, we follow three steps. First, we compute RIFs for the outcome variable at selected quantiles (e.g., deciles of the ideological preference distribution). Second, we estimate OLS regressions of these RIFs on the explanatory variables. Third, we apply the Oaxaca-Blinder decomposition at each point, breaking down differences in ideological preferences into parts explained by differences in characteristics and parts explained by differences in coefficients. Because a separate regression is estimated for each point in the distribution, a different set of coefficients β is obtained for each quantile. This approach allows for a rich, nuanced understanding of how and why ideological preferences shift across the political spectrum over time or between groups.

3.3 Empirical application

We estimate the following OLS equation for the first and second election years:[15]

$$IdeologicalOrientation_{ict} = a + X'_{ict}\beta_t + \varepsilon_{ict} \quad (6)$$

Here, $IdeologicalOrientation_{ict}$ represents the ideological orientation of individual i, surveyed in country c during election year t (either the first or second year), X_{ict} is a vector of individual characteristics, and ε_{ict} is the error term. We estimate three model specifications.

First, we include age, gender, and cohort (year of birth) dummies, which are arguably exogenous to individuals and crucial for determining ideological orientation.[16] Second, we add education (11 categories), occupational status (7 categories), and socioeconomic status (5 categories).[17]

Third, we include variables that capture household wealth, which serve as more objective measures of an individual's economic well-being. These include seven items related to ownership of durable goods (computer, washing machine, landline telephone, car, and home ownership) and access to services (hot water and sewage system), which serve as proxies for wealth. Since income volatility tends to be higher among low-income and low socioeconomic status individuals, wealth indicators are often more reliable proxies for their actual economic situation.

Note that the vector X_{ict} in Equation 6 does not include country dummies: the coefficient vector β estimates the average effect of each variable across *all* Latin American countries in the sample. In other words, the results capture the shift to the Left and the return to the Right of the Latin American electorate as a whole.[18]

To perform the Oaxaca-Blinder decomposition based on RIF regressions, we first compute the RIFs using Equation 6. We then re-estimate this equation using the RIFs as dependent variables at nine points in the distribution of ideological preferences (i.e., the cutoffs for ten deciles of the distribution).[19] For example, this

[15] In practice, we use the STATA command *oaxaca*, which estimates both OLS models and computes the decomposition with the correct standard errors.

[16] To understand the importance of distinguishing between age and cohort effects, consider individuals aged 25 in election years 1990 and 1995, and individuals born in 1970 in those same years. The age effect estimates whether individuals aged 25 in 1995 think differently from how individuals aged 25 thought in 1990—i.e., whether "new generations are more progressive." The cohort effect, by contrast, estimates whether individuals born in 1970 think differently in 1995 than they did in 1990—i.e., whether "youth becomes more conservative with time."

[17] Socioeconomic status is based on the pollster's perception of the respondent's status, rather than self-reporting.

[18] Age, cohort, and year cannot be included in the same regression, as one is a linear combination of the other two (e.g., birth year plus age equals survey year).

[19] Intuitively, if the electorate consisted of 100 individuals, this procedure yields estimates of the effect of a marginal change in a characteristic on the ideological preferences of individuals ranked 10th, 20th, ..., 90th.

method allows us to estimate the effect of an additional year of education on the ideological preferences of individuals on the far left, center, and far right of the spectrum (e.g., individuals ranked 10th, 50th, and 90th). Crucially, these estimates are unconditional; that is, they *do not* depend on the actual characteristics of the sub-samples at the bottom, center, or top of the ideological distribution. Finally, we perform an Oaxaca-Blinder decomposition for each of the nine distributional points.

4 Results

This section presents the results of the OLS and RIF-regression Oaxaca-Blinder decompositions, first for the Pink Tide and then for its reversal. For the sake of simplicity, we only present the two-fold decomposition results; full tables with detailed results for all variables are included in the appendix.

4.1 Shift to the Left

Table 5 reports the main results of the Oaxaca-Blinder decomposition of changes in the average ideological orientation of individuals aged 18 to 80, surveyed in ten Latin American countries (Argentina, Bolivia, Brazil, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, and Uruguay) in two election years: the first electoral victory of the Left and the immediately preceding election in which the Left was defeated. Columns 1, 2, and 3 correspond to the three estimated specifications, with column 3 being our preferred one. The rows labeled **Mean in** T_0 and **Mean in** T_1 report the average ideological orientation of the electorate in the elections lost and won by the Left, respectively, while the fifth row reports the difference between them. This difference is decomposed into two components, presented in the rows **Composition** and **Preferences**. Standard errors are reported in parentheses. Throughout this and subsequent tables, note that negative values denote a shift to the Left, while positive values denote a shift to the Right.

First, results confirm a strong movement of 0.7 points (from 5.8 to 5.1) in average ideological orientation. Second, they show that this shift to the Left was primarily driven by the **preferences** effect, which is statistically significant at the 1% level across all specifications and accounts for 89.7% of the overall change. The **composition** effect is also statistically significant (at the 5% level in specification 1 and the 10% level in specifications 2 and 3), although smaller in magnitude, accounting for the remaining 10.3%.

These findings suggest that the Left's electoral triumph reflected a genuine shift in political preferences, rather than a strategic realignment by center-right voters

temporarily supporting left-wing parties. Moreover, only 10% of the change in average ideological orientation can be attributed to changes in the socioeconomic structure of the electorate. Nearly 90% of the shift to the Left occurred within narrowly defined population groups.

Table 5: Shift to the Left: OB Decomposition

	(1)	(2)	(3)
Mean in T_0	5.80***	5.80***	5.80***
	(0.04)	(0.04)	(0.04)
Mean in T_1	5.12***	5.12***	5.12***
	(0.03)	(0.03)	(0.03)
Difference	-0.68***	-0.68***	-0.68***
	(0.05)	(0.05)	(0.05)
Composition	-0.11**	-0.07*	-0.07*
	(0.05)	(0.05)	(0.05)
Preferences	-0.57***	-0.61***	-0.61***
	(0.07)	(0.07)	(0.07)
Observations	16894	16894	16894

Table A1 in the Appendix displays the **composition** and **preference** effects for all variables. Regarding the **composition** effect, results show statistically significant pro-left changes related to birth cohort (0.10 to 0.13 points), which account for 14% to 19% of the overall shift. In contrast, the changing composition of the electorate in terms of education and wealth—factors associated with more center-right orientations—contributed a shift of approximately 0.2 points to the Right, mainly due to changes in wealth (0.16).

With respect to the **preference** effect, two elements stand out. First, there is a strong and statistically significant pro-right shift in preferences associated with age (0.45 to 0.57 points). This indicates that, all else equal, individuals of a given age were more right-leaning in the election year when the Left won compared to individuals of the same age in the previous election. Second, and more importantly, the constant term (0.72 points) emerges as the main driver of the shift to the Left. This term captures residual changes in preferences not explained by the included variables (e.g., unobserved factors like access to health or social protection). While the inability to fully explain the change in preferences might seem discouraging, it is nonetheless revealing: the swing in preferences appears driven by factors beyond the typical socioeconomic determinants of ideology. The consistency of results across specifications helps mitigate concerns regarding model mis-pecification, and suggests that the key drivers of change may be inherently unobservable.

Table 6 presents the results of the Oaxaca-Blinder decomposition based on RIF regressions. Each column corresponds to a voter located at the top of a given decile of the distribution of ideological orientation.[20] The rows have the same

[20]If we sort individuals by ideological orientation and divide them into ten equal-sized groups,

interpretation as in Table 5 but refer specifically to each point in the (unconditional) distribution of ideological orientation.

Table 6: Shift to the Left: OB-RIF Decomposition

	OB-RIF results for chosen deciles (Specification 3)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean in T_0	1.804***	4.105***	5.133***	5.397***	5.661***	6.475***	8.068***	9.502***	10.38***
	(0.0468)	(0.0646)	(0.0139)	(0.0139)	(0.0139)	(0.0735)	(0.0599)	(0.0938)	(0.0220)
Mean in T_1	1.498***	3.323***	4.481***	5.165***	5.419***	5.674***	6.471***	8.070***	10.05***
	(0.0593)	(0.0464)	(0.0443)	(0.0141)	(0.0141)	(0.0141)	(0.0603)	(0.0543)	(0.0273)
Difference	-0.305***	-0.782***	-0.652***	-0.232***	-0.242***	-0.801***	-1.596***	-1.432***	-0.325***
	(0.0756)	(0.0796)	(0.0465)	(0.0198)	(0.0198)	(0.0749)	(0.0850)	(0.108)	(0.0351)
Composition	0.132**	0.133	-0.00802	-0.00802	-0.00802	-0.233**	-0.274***	-0.348**	-0.0595*
	(0.0605)	(0.0835)	(0.0199)	(0.0199)	(0.0199)	(0.106)	(0.0880)	(0.153)	(0.0359)
Preferences	-0.437***	-0.915***	-0.644***	-0.224***	-0.234***	-0.568***	-1.323***	-1.084***	-0.266***
	(0.0936)	(0.112)	(0.0503)	(0.0277)	(0.0277)	(0.129)	(0.120)	(0.184)	(0.0492)
Observations	16894	16894	16894	16894	16894	16894	16894	16894	16894

First, the results show that the ideological orientation of the median voter (column 5) shifted from 5.6 to 5.4, signaling a move from center-right to center-left, which aligns with the observed electoral outcomes. Second, the **entire** distribution shifted to the Left, with the difference being statistically significant at the 1% level in every decile. This is a key takeaway: the Pink Tide was not confined to centrist voters—it encompassed the full ideological spectrum. The largest leftward shifts occurred among right-leaning individuals (deciles 6, 7, and 8), with movements ranging from 0.8 to 1.6 points. Significant leftward shifts were also observed among left-leaning voters (deciles 2 and 3), with changes between 0.65 and 0.78 points.

Third, the decomposition again highlights the dominance of the **preference** effect, which accounts for between 81.8% and 143.3% of the overall ideological shift. The preference effect is most pronounced among far-left voters and tends to decrease in magnitude along the distribution. In contrast, the **composition** effect pulled far-left individuals (column 1) slightly to the right, but moved right-wing individuals (columns 6 to 8) toward the left. Importantly, for the center of the ideological spectrum (columns 4 to 6)—where the median voter is located—the shift to the Left was entirely driven by changes in preferences. From an electoral perspective, the key result is the swing in decile 5, where ideological scores moved from just above to just below 5.5.

Two findings merit further attention: first, the drivers of the shifts in deciles 6 and 7, and second, the "centripetal" composition effect observed across the distribution. Table A2 in the Appendix reports detailed OB-RIF decomposition results, allowing us to examine the contributions of individual variables. The cohort effect

each column reports results for the theoretical voter between deciles. Note that these percentile cut-offs do not always align perfectly with ideological values. For example, if few individuals self-identify as far left (score of 0), the first decile may comprise individuals with values of 0 and 1.

is particularly significant on the far left (column 1), contributing 0.15 points to the shift, which may suggest more left-leaning values among younger generations. Meanwhile, age, cohort, education, and wealth are all significant contributors to the shifts on the right. Notably, the cohort has a significant and negative effect in columns 6 and 9, suggesting that older generations drove the shift to the Left in these segments. In addition, age and education are particularly influential in deciles 6 and 8, accounting for 11.3% and 12.4% of the leftward shift, respectively—indicating that older voters with higher education levels may be more centrist or left-leaning in these groups.

The overall shift to the Left in deciles 6 to 8 is primarily explained by the **preference** effect. Specifically, age and cohort are the main contributors. The negative and significant effect of age in decile 6, and of cohort in deciles 7 and 8, suggests that individuals of the same age were more centrist or left-leaning in the election year in which the Left won, relative to the previous election. Again, the cohort effect implies a moderation of political preferences among younger right-leaning generations.

The results presented thus far apply to a pooled sample of ten Latin American countries (Argentina, Bolivia, Brazil, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, and Uruguay). As a robustness check, Appendix B reports the results of repeating the analysis for a subsample of six countries that experienced clearer shifts to the Left during the Pink Tide (Argentina, Bolivia, Brazil, Ecuador, Nicaragua, and Uruguay). The findings for this subsample are consistent with the main results reported above.

4.2 Shift to the right

Table 7 below presents the main results of the Oaxaca-Blinder decomposition of changes in the average ideological orientation of individuals aged 18 to 80 surveyed in seven Latin American countries (Argentina, Brazil, Chile, Honduras, Paraguay, Peru, and Uruguay) in two election years: the last electoral triumph of the Left and its subsequent defeat.

First, the results reveal a modest shift to the right of 0.26 points (from 5.14 to 5.36) in the ideological orientation of individuals. Second, they show that this shift is entirely driven by the **preferences** effect, which is statistically significant at the 1% level across all specifications and accounts for 147.8% of the overall change in average political orientation. This is possible because the **characteristics** effect is negative (albeit not statistically significant at conventional levels).

Table 7: Shift to the Right: OB Decomposition

	(1)	(2)	(3)
Mean in T_0	5.14***	5.14***	5.14***
	(0.03)	(0.03)	(0.03)
Mean in T_1	5.36***	5.36***	5.36***
	(0.04)	(0.04)	(0.04)
Difference	0.23***	0.23***	0.23***
	(0.05)	(0.05)	(0.05)
Endowments	-0.14	-0.11	-0.11
	(0.12)	(0.12)	(0.12)
Coefficients	0.37***	0.34***	0.34***
	(0.12)	(0.13)	(0.13)
Observations	(12649)	(12649)	(12649)

At first glance, given that the average ideological orientation in T_1 remains below 5.5, the results suggest that part of the reversal to the right may have been due to the electorate voting for a more moderate, center-right alternative to the status quo, **without** a substantial shift in ideological orientation. This interpretation highlights the importance of the RIF-OB decomposition, which provides further insight into the behavior of the full distribution of voters, especially the median voter. Once again, results are stable across specifications.

Table A3 in the Appendix presents detailed results, summarizing the **composition** and **preference** effects variable by variable. Notably, 48% of the overall pro-right swing in preferences can be attributed to gender (significant at the 5% level).

Next, Table 8 displays the main results of the Oaxaca-Blinder decomposition based on RIF regressions. Most notably, the results show that the ideological orientation of the median voter (column 5) shifted from 5.3 to 5.6: the median voter **did** move from the center-left to the center-right. This is consistent with the electoral results and adds nuance to the findings from the main OB decomposition.

Second, nearly the entire distribution of ideological orientation shifted to the right (negative and statistically significant differences at the 1% level across columns 2 to 9). In other words, and as another key takeaway of the paper, the reversal to the right encompassed nearly the entire electorate. The largest shifts to the right are observed among right-wing individuals: deciles 6, 7, and 8 show swings between 0.7 and 0.9 points. Left-wing individuals (deciles 2 and 3) also experienced notable shifts, ranging from 0.3 to 0.6 points.

Third, the decomposition once again confirms the predominance of the **preference** effect, which accounts for between 106.4% and 136.6% of the overall change in ideological orientation for deciles 2 onward (significant at the 1% level). The preference effect is strongest among far-right and center-left voters. Conversely, the **characteristics** effect pushed individuals slightly to the *left* across the entire

distribution, though this effect is not statistically significant. This implies that the shift to the right was driven almost entirely by changes in preferences. It is worth emphasizing that the critical electoral shift occurred among individuals in deciles 5 and 6, who moved from just below to just above 5.5—arguably representing the median voters in this context.

Table 8: Shift to the Right: OB RIF Decomposition

	OB-RIF results for chosen deciles (Specification 3)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean in T_0	2.167***	3.404***	4.464***	5.134***	5.299***	5.464***	6.199***	7.415***	9.349***
	(0.0413)	(0.0294)	(0.0364)	(0.0103)	(0.0103)	(0.0103)	(0.0463)	(0.0513)	(0.0991)
Mean in T_1	2.055***	3.708***	5.023***	5.289***	5.555***	5.822***	7.067***	8.229***	10.10***
	(0.0686)	(0.0604)	(0.0164)	(0.0164)	(0.0164)	(0.0164)	(0.0609)	(0.0613)	(0.0331)
Difference	-0.112	0.304***	0.559***	0.155***	0.256***	0.357***	0.868***	0.814***	0.747***
	(0.0800)	(0.0671)	(0.0399)	(0.0193)	(0.0193)	(0.0193)	(0.0765)	(0.0799)	(0.105)
Characteristics	-0.144	-0.0862	-0.0362	-0.0300	-0.0300	-0.0300	-0.0798	-0.111	-0.274
	(0.148)	(0.0877)	(0.0922)	(0.0246)	(0.0246)	(0.0246)	(0.107)	(0.128)	(0.307)
Preferences	0.0323	0.391***	0.595***	0.185***	0.286***	0.387***	0.948***	0.924***	1.020***
	(0.169)	(0.111)	(0.0997)	(0.0311)	(0.0311)	(0.0311)	(0.129)	(0.148)	(0.316)
Observations	12649	12649	12649	12649	12649	12649	12649	12649	12649

Table A4 in the Appendix presents detailed results for the OB-RIF decomposition, allowing us to identify which aspects of the **preference** effect explain the shift to the right, by decile. One important finding is the negative (and strongly significant) impact of birth cohort across the entire distribution, indicating that the oldest cohorts led the ideological shift to the right. This aligns with the observed influence of age, which is particularly significant at both ends of the ideological spectrum (deciles 1–3 and 7–9). As previously mentioned, gender is another key factor, especially for voters located in the left and center-right deciles. Finally, status explains a modest portion of the change in preferences in the central deciles, accounting for approximately 6% of the shift.

4.3 Discussion

This analysis investigates the underlying mechanisms driving political shifts in Latin America. It adopts a nuanced approach, employing the RIF-OB decomposition method to dissect the influence of various factors on electoral outcomes.

Regarding the *vote-lending* hypothesis, our findings indicate a significant ideological shift within the electorate, suggesting a permanent alteration in political preferences rather than a temporary electoral adjustment. The analysis reveals that this shift is primarily preference-driven—toward both the left and the right—with minimal influence from changes in voter characteristics. This challenges the notion that demographics are static determinants of political allegiance, highlighting

instead the electorate's capacity for ideological change.

Furthermore, the results suggest that governance performance significantly influences voter decisions beyond mere ideological alignment, as evidenced by a pattern of sophisticated voter behavior. Additionally, a substantial "constant" or residual effect accounts for a notable portion of the preference shift (0.72 points). This finding implies that factors beyond traditional socioeconomic determinants—potentially including political efficacy, values, and perceptions of governance Dalton (2007)—play a crucial role in shaping political preferences. It underscores the need to broaden the scope of inquiry into the mechanisms of preference formation.

Our investigation into the impact of secular changes on political dynamics reveals that long-term demographic shifts contribute minimally to observed political oscillations, both in the shift to the left and the return to the right. Instead, short-term changes in voter preferences emerge as the critical determinant of electoral outcomes. While secular trends may set the stage for political shifts, it is immediate preference changes that decisively influence electoral directions.

The RIF-OB decomposition analysis further refines our understanding, revealing a comprehensive shift in political preferences across the ideological spectrum. This underscores the complexity of voter motivations and challenges simplistic interpretations of electoral shifts as solely reactionary or demographically predetermined. Our findings highlight the multifaceted nature of political preferences and the intricate factors driving political dynamics in Latin America.

The Oaxaca-Blinder decomposition reveals a significant leftward ideological shift of 0.7 points (from 5.8 to 5.1) during the "pink tide" period. In contrast, a smaller but statistically significant shift from 5.14 to 5.36 occurs during Latin America's more recent turn to the right. Both shifts are overwhelmingly driven by changes in political preferences, accounting for 89.7% of the overall change in the leftward shift and 147% in the rightward shift (the latter figure indicating that other factors partly offset a stronger preference-driven effect).

Traditional political science literature posits that political preferences are largely shaped by socioeconomic factors such as education, wealth, and age Green and Shapiro (1994); Downs (1957). However, our findings suggest a divergence from these models, emphasizing preference change over demographic change as the primary driver of the observed ideological shifts. Notably, while age and status-related preferences shifted in a pro-right direction, changes in cohort composition exerted a slight leftward push—contradicting the conventional expectation that younger and wealthier cohorts tend to lean more conservative Norris (2007).

The application of RIF regressions reveals that the ideological shift spans the entire ideological spectrum, not just the center. The most pronounced leftward movements occurred among individuals who initially identified with the right (rang-

ing from 0.8 to 1.6 points), while the rightward shift was evident across the spectrum—challenging the median voter theorem Downs (1957).

The OB-RIF decomposition provides a more nuanced understanding of ideological shifts across different deciles of voter ideology, particularly regarding the effects of age, cohort, education, and wealth during the leftward shift. In this respect, our finding that younger generations tend to hold more left-leaning values aligns with the arguments of Inglehart and Norris (2003), who discuss cultural change and generational value shifts driven by distinct socialization experiences. Similarly, Mannheim (1952) offers theoretical support through his analysis of cohort effects, suggesting that formative experiences shape generational identities and political leanings. The moderation of right-leaning preferences among younger cohorts may reflect broader patterns described by Norris and Inglehart (2019), who examine the appeal of authoritarian-populist movements across generations.

Nie et al. (1996) and Hillygus (2005) highlight education's central role in shaping political engagement and preferences, consistent with our finding that older voters with higher education levels often exhibit more centrist or left-leaning orientations. This reflects the broader relationship between education and political liberalization explored in their work. Similarly, Weakliem (2002) explains how education influences political attitudes, potentially accounting for the observed leftward shift among more educated individuals.

The shifts we identified in the sixth and seventh deciles—particularly among voters distinguished by age and education—may represent a form of cognitive mobilization, as described by Dalton (2007), whereby more informed and educated voters tend toward ideological moderation or change.

Overall, this analysis underscores the complexity of political preference formation and transformation, highlighting the interplay between demographic factors (such as age and gender) and socioeconomic variables (like education and wealth). These findings challenge mono-causal explanations of political behavior and emphasize the need for multifaceted approaches to understanding electoral dynamics.

5 Final Remarks

This study provides robust empirical evidence on the mechanisms underlying ideological shifts in Latin America during the Pink Tide and its subsequent reversal to the right. By combining Oaxaca-Blinder (OB) and Recentered Influence Function (RIF) decompositions, we show that approximately 90% of the leftward shift was driven by changes in voters' preferences, rather than by a "vote-lending" phenomenon. This indicates a genuine transformation in the ideological orientation of the Latin American electorate. Similarly, the rightward reversal was entirely

explained by shifts in political preferences, suggesting that electoral swings were shaped by substantive changes in attitudes rather than by shifts in the demographic or socioeconomic composition of voters.

Our analysis also reveals that these ideological movements were not confined to centrist voters, but extended across the entire ideological spectrum. The most significant leftward changes occurred among traditionally right-leaning individuals during the Pink Tide, who later shifted back toward conservative positions during the reversal. These findings not only refute the vote-lending hypothesis but also challenge interpretations that attribute electoral cycles to stable structural factors such as education, wealth, or age.

In relation to the existing literature, our results lend support to the view that Latin America's left-wing parties adopted a pragmatic electoral strategy during the Pink Tide, moving closer to the political center rather than engaging in a purely ideological or populist turn. These findings call into question interpretations emphasizing a long-lasting ideological realignment, suggesting instead that leftist parties were able to read and respond to changes in public opinion effectively.

Despite the strengths of our approach, several limitations should be acknowledged. First, the analysis focuses on two time points per country (pre- and post-electoral shifts), which restricts our ability to capture more complex or nonlinear ideological trajectories over time. Second, the main measure of political orientation—a self-placement on a left-right scale from 0 to 10—is a unidimensional indicator that may not fully capture the complexity of contemporary political beliefs, including attitudes toward social, cultural, or environmental issues.

Third, the data used do not allow for the inclusion of contextual or institutional variables, such as macroeconomic performance, governance quality, or corruption scandals, which may account for part of the residual preference shifts. Fourth, while the regional approach is useful for identifying broad patterns, it may obscure important national specificities. Fifth, the decomposition methods employed, while powerful, are not designed to establish strict causal inference—associations between individual characteristics and ideological preferences may still be influenced by unobserved factors.

This study also opens several promising avenues for future research. One direction involves the use of longitudinal designs that capture the dynamic evolution of political preferences over time and across multiple electoral cycles, including the impact of major political and economic events. Another path involves country-level analyses that explore how institutional settings, party systems, and national histories shape ideological change. Integrating contextual variables such as economic indicators, democratic quality, or media exposure could further enhance our understanding of preference formation.

Future research could also benefit from expanding the dimensionality of ideological measurement by incorporating cultural, social, or authoritarian dimensions through factor analysis or latent variable models. Additionally, applying OB and RIF decomposition methods to other regions—such as Eastern Europe, Africa, or Asia—could test the external validity of our approach and contribute to comparative political behavior literature. Finally, qualitative research (e.g., in-depth interviews or focus groups) could provide insight into the subjective mechanisms behind preference shifts, particularly among ideologically "volatile" voters or those at the political center.

Overall, this study illustrates the usefulness of advanced econometric techniques for political analysis and reinforces the notion that political preferences in Latin America are dynamic, context-sensitive, and central to understanding electoral cycles in the region.

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A Supporting figures and tables

A.1 Figures

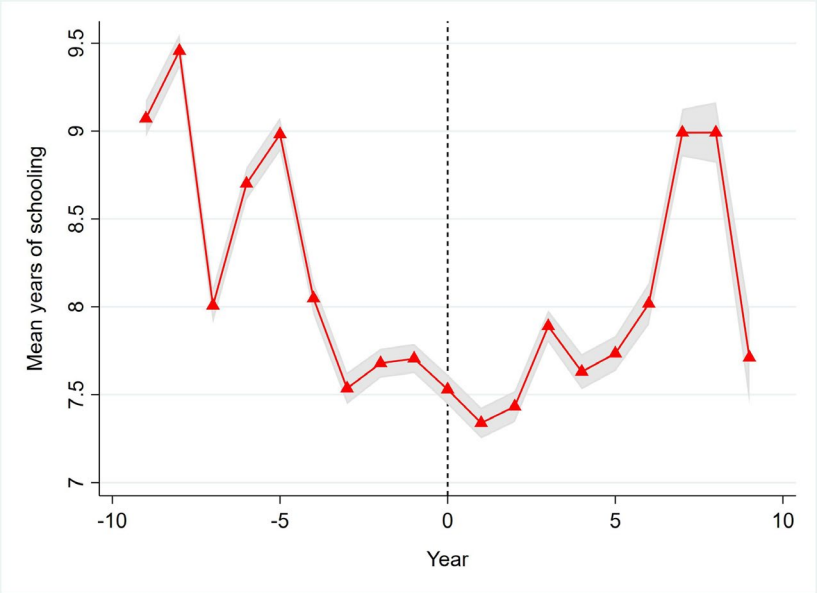

Figure A1: Shift to the Left: Evolution of Mean level of education

Notes:

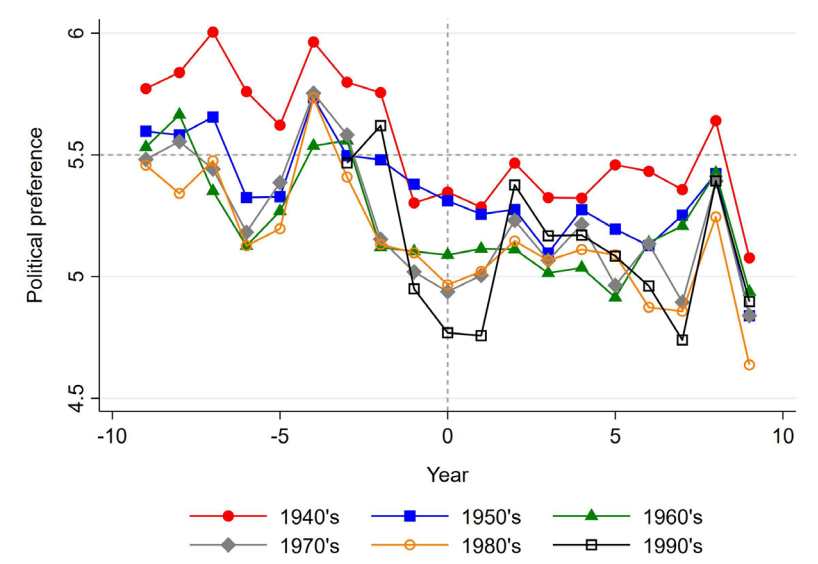

Figure A2: Shift to the Left: evolution of ideological orientation by cohort

Notes:

Figure A3: Shift to the right: evolution of ideological orientation

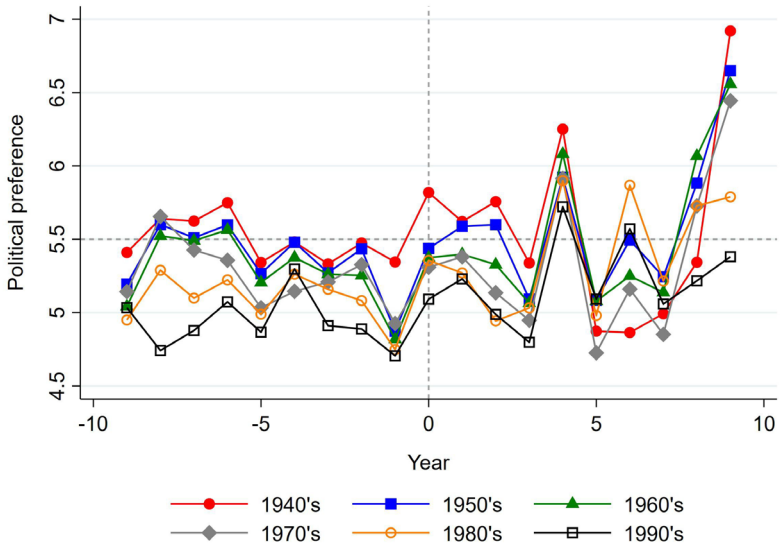

Figure A4

A.2 Tables

Table A1: Shift to the left: Detailed OB Decomposition

	(1)	(2)	(3)
Mean in T_0	5.801***	5.801***	5.801***
	(0.0361)	(0.0359)	(0.0359)
Mean in T_1	5.124***	5.124***	5.124***
	(0.0316)	(0.0317)	(0.0317)
Difference	-0.677***	-0.677***	-0.677***
	(0.0480)	(0.0478)	(0.0478)
Explained	-0.108**	-0.0656	-0.0676
	(0.0467)	(0.0480)	(0.0482)
Unexplained	-0.569***	-0.611***	-0.609***
	(0.0650)	(0.0660)	(0.0662)
Explained			
Age	0.000622	0.0134	0.0206
	(0.0160)	(0.0169)	(0.0173)
Cohort	-0.106**	-0.112**	-0.133**
	(0.0533)	(0.0543)	(0.0548)
Gender	-0.00291	-0.00196	-0.00202
	(0.00202)	(0.00158)	(0.00160)
Education		0.0439***	0.0435***
		(0.0103)	(0.0103)
Occupation		-0.00316	-0.00299
		(0.00280)	(0.00280)
Status		-0.00617	-0.00626
		(0.00424)	(0.00431)
Wealth			0.0121***
			(0.00468)
Unexplained			
Age	0.565***	0.506**	0.454**
	(0.199)	(0.210)	(0.211)
Cohort	-0.397*	-0.399	-0.312
	(0.226)	(0.243)	(0.245)
Gender	-0.00888	-0.0239	-0.0243
	(0.0492)	(0.0555)	(0.0554)
Education		0.0140	0.0151
		(0.0369)	(0.0370)
Occupation		0.0127	0.00990
		(0.0359)	(0.0359)
Status		-0.0250	-0.0278
		(0.0599)	(0.0599)
Wealth			-0.00244
			(0.00322)
Constant	-0.728***	-0.696***	-0.722***
	(0.116)	(0.147)	(0.148)
Observations	16894	16894	16894

Table A2: Shift to the left: Detailed OB-RIF Decomposition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean in T_0	1.804***	4.105***	5.133***	5.397***	5.661***	6.475***	8.068***	9.502***	10.38***
	(0.0468)	(0.0646)	(0.0139)	(0.0139)	(0.0139)	(0.0735)	(0.0599)	(0.0938)	(0.0220)
Mean in T_1	1.498***	3.323***	4.481***	5.165***	5.419***	5.674***	6.471***	8.070***	10.05***
	(0.0593)	(0.0464)	(0.0443)	(0.0141)	(0.0141)	(0.0141)	(0.0603)	(0.0543)	(0.0273)
Difference	-0.305***	-0.782***	-0.652***	-0.232***	-0.242***	-0.801***	-1.596***	-1.432***	-0.325***
	(0.0756)	(0.0796)	(0.0465)	(0.0198)	(0.0198)	(0.0749)	(0.0850)	(0.108)	(0.0351)
Characteristics	0.132**	0.133	-0.00802	-0.00802	-0.00802	-0.233**	-0.274***	-0.348**	-0.0595*
	(0.0605)	(0.0835)	(0.0199)	(0.0199)	(0.0199)	(0.106)	(0.0880)	(0.153)	(0.0359)
Preferences	-0.437***	-0.915***	-0.644***	-0.224***	-0.234***	-0.568***	-1.323***	-1.084***	-0.266***
	(0.0936)	(0.112)	(0.0503)	(0.0277)	(0.0277)	(0.129)	(0.120)	(0.184)	(0.0492)
Characteristics									
Age	-0.0420*	-0.0159	-0.00752	-0.00752	-0.00752	0.113***	0.0665**	0.0410	0.00797
	(0.0245)	(0.0336)	(0.00734)	(0.00734)	(0.00734)	(0.0429)	(0.0320)	(0.0448)	(0.0102)
cohort	0.150**	0.144	-0.00175	-0.00175	-0.00175	-0.428***	-0.424***	-0.531***	-0.0987**
	(0.0705)	(0.0999)	(0.0231)	(0.0231)	(0.0231)	(0.124)	(0.0992)	(0.165)	(0.0385)
Gender	-0.00161	-0.00438	-0.000914	-0.000914	-0.000914	-0.00302	-0.00222	-0.00147	-0.000229
	(0.00169)	(0.00329)	(0.000694)	(0.000694)	(0.000694)	(0.00277)	(0.00213)	(0.00266)	(0.000597)
Education	0.0136	0.0140	0.00350	0.00350	0.00350	0.0956***	0.0783***	0.124***	0.0263***
	(0.00948)	(0.0141)	(0.00316)	(0.00316)	(0.00316)	(0.0204)	(0.0180)	(0.0289)	(0.00655)
Occupation	-0.00353	-0.000758	-0.00106	-0.00106	-0.00106	-0.0105*	-0.00301	-0.00206	0.0000333
	(0.00327)	(0.00513)	(0.00121)	(0.00121)	(0.00121)	(0.00588)	(0.00491)	(0.00797)	(0.00185)
Status	-0.00212	-0.0102*	-0.00268*	-0.00268*	-0.00268*	-0.00597	-0.00609	-0.0125	-0.00265
	(0.00342)	(0.00600)	(0.00151)	(0.00151)	(0.00151)	(0.00727)	(0.00633)	(0.00978)	(0.00201)
Wealth	0.0179***	0.00673	0.00240	0.00240	0.00240	0.00621	0.0167**	0.0339**	0.00780**
	(0.00505)	(0.00866)	(0.00188)	(0.00188)	(0.00188)	(0.00910)	(0.00794)	(0.0133)	(0.00313)
Preferences									
Age	-0.490	-0.241	-0.196	0.0521	0.0521	-1.045***	1.563***	1.957***	0.636***
	(0.318)	(0.359)	(0.206)	(0.0921)	(0.0921)	(0.345)	(0.389)	(0.477)	(0.162)
cohort	0.0714	0.155	-0.132	-0.0619	-0.0619	1.370***	-1.085**	-1.813***	-0.478***
	(0.339)	(0.427)	(0.192)	(0.105)	(0.105)	(0.463)	(0.449)	(0.616)	(0.178)
Gender	-0.189**	0.0165	-0.143***	-0.0214	-0.0214	0.0677	0.0199	0.00933	0.0113
	(0.0911)	(0.0942)	(0.0543)	(0.0233)	(0.0233)	(0.0870)	(0.0975)	(0.122)	(0.0390)
Education	0.0749	0.0564	0.0382	0.0104	0.0104	0.0280	-0.0273	-0.00684	0.000162
	(0.0473)	(0.0505)	(0.0299)	(0.0126)	(0.0126)	(0.0628)	(0.0665)	(0.0978)	(0.0293)
Occupation	0.00557	-0.0577	-0.0231	-0.00948	-0.00948	-0.000263	0.0528	0.0694	0.0364
	(0.0600)	(0.0602)	(0.0357)	(0.0150)	(0.0150)	(0.0553)	(0.0634)	(0.0797)	(0.0255)
Status	-0.106	-0.132	0.0140	-0.0263	-0.0263	0.0258	0.0773	-0.0756	0.0337
	(0.0936)	(0.104)	(0.0582)	(0.0246)	(0.0246)	(0.0886)	(0.101)	(0.128)	(0.0416)
Wealth	-0.0130**	-0.00310	0.00387	0.000860	0.000860	-0.00215	0.000518	-0.0136	-0.00202
	(0.00544)	(0.00562)	(0.00304)	(0.00133)	(0.00133)	(0.00526)	(0.00550)	(0.00833)	(0.00244)
Constant	0.209	-0.709***	-0.205	-0.168***	-0.178***	-1.012***	-1.924***	-1.211***	-0.502***
	(0.216)	(0.225)	(0.136)	(0.0614)	(0.0614)	(0.256)	(0.284)	(0.396)	(0.117)
Observations	16894	16894	16894	16894	16894	16894	16894	16894	16894

Table A3: Shift to the Right: Detailed OB Decomposition

	(1)	(2)	(3)
Mean of T_0	5.136***	5.136***	5.136***
	(0.0333)	(0.0333)	(0.0333)
Mean of T_1	5.363***	5.363***	5.363***
	(0.0358)	(0.0357)	(0.0356)
Difference	0.227***	0.227***	0.227***
	(0.0489)	(0.0488)	(0.0488)
Characteristics	-0.141	-0.112	-0.110
	(0.116)	(0.116)	(0.117)
Preferences	0.368***	0.339***	0.336***
	(0.125)	(0.125)	(0.126)
Characteristics			
age	-0.0382	-0.0330	-0.0326
	(0.0273)	(0.0256)	(0.0252)
cohort	-0.105	-0.0907	-0.0897
	(0.117)	(0.117)	(0.117)
Gender	0.00251	0.00175	0.00177
	(0.00214)	(0.00161)	(0.00162)
Education		-0.000278	-0.000161
		(0.00630)	(0.00622)
Occupation		0.000643	0.000542
		(0.00375)	(0.00371)
Status		0.00949**	0.00997**
		(0.00426)	(0.00435)
Wealth			0.000339
			(0.00149)
Preferences			
Age	0.222	0.138	0.117
	(0.155)	(0.163)	(0.163)
Cohort	-0.155	-0.0960	-0.0634
	(0.257)	(0.263)	(0.263)
Gender	0.125***	0.115**	0.113**
	(0.0482)	(0.0517)	(0.0517)
Education		0.0532	0.0506
		(0.0471)	(0.0471)
Occupation		0.0268	0.0258
		(0.0351)	(0.0351)
Status		-0.166*	-0.168*
		(0.0898)	(0.0895)
Wealth			0.00273
			(0.00212)
Constant	0.175	0.268	0.258
	(0.234)	(0.257)	(0.257)
Observations	12649	12649	12649

Table A4: Shift to the Right: Detailed OB-RIF Decomposition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean in T_0	2.167***	3.404***	4.464***	5.134***	5.299***	5.464***	6.199***	7.415***	9.349***
	(0.0413)	(0.0294)	(0.0364)	(0.0103)	(0.0103)	(0.0103)	(0.0463)	(0.0513)	(0.0991)
Mean in T_1	2.055***	3.708***	5.023***	5.289***	5.555***	5.822***	7.067***	8.229***	10.10***
	(0.0686)	(0.0604)	(0.0164)	(0.0164)	(0.0164)	(0.0164)	(0.0609)	(0.0613)	(0.0331)
Difference	-0.112	0.304***	0.559***	0.155***	0.256***	0.357***	0.868***	0.814***	0.747***
	(0.0800)	(0.0671)	(0.0399)	(0.0193)	(0.0193)	(0.0193)	(0.0765)	(0.0799)	(0.105)
Explained	-0.144	-0.0862	-0.0362	-0.0300	-0.0300	-0.0300	-0.0798	-0.111	-0.274
	(0.148)	(0.0877)	(0.0922)	(0.0246)	(0.0246)	(0.0246)	(0.107)	(0.128)	(0.307)
Unexplained	0.0323	0.391***	0.595***	0.185***	0.286***	0.387***	0.948***	0.924***	1.020***
	(0.169)	(0.111)	(0.0997)	(0.0311)	(0.0311)	(0.0311)	(0.129)	(0.148)	(0.316)
Explained									
Age	-0.0147	-0.0228	-0.0227	-0.00648	-0.00648	-0.00648	-0.0204	-0.0303	-0.0951
	(0.0255)	(0.0187)	(0.0219)	(0.00508)	(0.00508)	(0.00508)	(0.0171)	(0.0266)	(0.0748)
cohort	-0.141	-0.0705	-0.0258	-0.0281	-0.0281	-0.0281	-0.0775	-0.0907	-0.179
	(0.148)	(0.0876)	(0.0916)	(0.0243)	(0.0243)	(0.0243)	(0.104)	(0.126)	(0.308)
Gender	0.00228	0.00166	0.00280	0.000767	0.000767	0.000767	0.000761	0.000569	0.00105
	(0.00208)	(0.00151)	(0.00241)	(0.000664)	(0.000664)	(0.000664)	(0.00128)	(0.00132)	(0.00246)
Education	0.00795	0.00390	0.00498	0.000665	0.000665	0.000665	-0.00308	-0.00731	-0.0151
	(0.00646)	(0.00430)	(0.00498)	(0.00145)	(0.00145)	(0.00145)	(0.00945)	(0.0112)	(0.0273)
Occupation	0.00160	0.000686	0.00142	0.000311	0.000311	0.000311	-0.00200	-0.00373	0.00114
	(0.00360)	(0.00266)	(0.00341)	(0.000953)	(0.000953)	(0.000953)	(0.00474)	(0.00569)	(0.00954)
Status	-0.00261	0.000167	0.00150	0.00218	0.00218	0.00218	0.0240***	0.0221***	-0.0193
	(0.00491)	(0.00363)	(0.00462)	(0.00140)	(0.00140)	(0.00140)	(0.00691)	(0.00717)	(0.0125)
Wealth	0.00243	0.000686	0.00166	0.000683	0.000683	0.000683	-0.00168	-0.00120	-0.00603
	(0.00170)	(0.00120)	(0.00193)	(0.000595)	(0.000595)	(0.000595)	(0.00219)	(0.00245)	(0.00497)
Enexplained									
Age	1.035***	0.758***	-0.328**	0.0995	0.0995	0.0995	0.474**	0.134	-1.468***
	(0.265)	(0.231)	(0.129)	(0.0615)	(0.0615)	(0.0615)	(0.238)	(0.257)	(0.369)
cohort	-1.361***	-1.070***	0.471**	-0.113	-0.113	-0.113	-0.845**	-0.0943	2.344***
	(0.383)	(0.332)	(0.207)	(0.101)	(0.101)	(0.101)	(0.388)	(0.420)	(0.600)
Gender	0.173**	0.151**	0.137***	0.0460**	0.0460**	0.0460**	0.0786	0.0437	0.0337
	(0.0881)	(0.0734)	(0.0433)	(0.0208)	(0.0208)	(0.0208)	(0.0815)	(0.0843)	(0.109)
Education	0.0697	0.0831	0.00427	0.0162	0.0162	0.0162	0.000402	0.0726	0.361***
	(0.0797)	(0.0643)	(0.0338)	(0.0166)	(0.0166)	(0.0166)	(0.0722)	(0.0752)	(0.103)
Occupation	0.00264	-0.0103	0.0271	0.0245*	0.0245*	0.0245*	0.00885	0.0234	0.0260
	(0.0591)	(0.0490)	(0.0293)	(0.0142)	(0.0142)	(0.0142)	(0.0551)	(0.0565)	(0.0742)
Status	-0.0591	-0.135	-0.0604	-0.0585*	-0.0585*	-0.0585*	-0.195	-0.229	-0.163
	(0.145)	(0.119)	(0.0642)	(0.0329)	(0.0329)	(0.0329)	(0.140)	(0.153)	(0.198)
Wealth	0.00389	0.00467	0.000715	0.00164	0.00164	0.00164	0.00375	0.00157	0.00406
	(0.00277)	(0.00304)	(0.000990)	(0.00112)	(0.00112)	(0.00112)	(0.00297)	(0.00220)	(0.00371)
Constant	0.168	0.610**	0.343*	0.169**	0.270***	0.371***	1.423***	0.973***	-0.118
	(0.340)	(0.252)	(0.192)	(0.0846)	(0.0846)	(0.0846)	(0.334)	(0.368)	(0.622)
Observations	12649	12649	12649	12649	12649	12649	12649	12649	12649

B Robustness checks

B.1 Shift to the Left: six country sub sample

Table A5: Shift to the Left: OB Decomposition, six country sub sample

	(1)	(2)	(3)
overall			
Mean in T_0	5.482***	5.482***	5.482***
	(0.0438)	(0.0432)	(0.0432)
Mean in T_1	5.112***	5.112***	5.112***
	(0.0422)	(0.0423)	(0.0423)
Difference	-0.370***	-0.370***	-0.370***
	(0.0609)	(0.0604)	(0.0604)
Explained	0.201	0.179	0.175
	(0.190)	(0.185)	(0.186)
Unexplained	-0.570***	-0.549***	-0.544***
	(0.197)	(0.192)	(0.193)
Explained			
Age	0.0309	0.0504	0.0485
	(0.0518)	(0.0532)	(0.0536)
Cohort	0.174	0.104	0.0995
	(0.180)	(0.174)	(0.174)
Gender	-0.00476	-0.00390	-0.00390
	(0.00292)	(0.00270)	(0.00270)
Education		0.0447***	0.0459***
		(0.0146)	(0.0147)
Occupation		-0.00695*	-0.00685*
		(0.00417)	(0.00416)
Status		-0.00977	-0.00964
		(0.00619)	(0.00617)
Wealth			0.000960
			(0.00836)
Unexplained			
Age	0.443	0.580	0.726
	(0.451)	(0.485)	(0.488)
Cohort	-0.628	-0.815	-0.969*
	(0.488)	(0.530)	(0.533)
Gender	-0.0228	-0.0314	-0.0373
	(0.0618)	(0.0693)	(0.0693)
Education		0.0616	0.0645
		(0.0451)	(0.0452)
Occupation		0.0451	0.0424
		(0.0401)	(0.0401)
Status		.000694	0.00622
		(0.0743)	(0.0743)
Wealth			0.0131**
			(0.00622)
Constant	-0.363**	-0.390*	-0.390*
	(0.171)	(0.203)	(0.204)
Observations	10400	10400	10400

Table A6: Shift to the Left: OB-RIF Decomposition, six country sub sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean in T_0	1.700***	3.758***	5.102***	5.442***	5.781***	6.065***	7.410***	8.679***	10.26***
	(0.0704)	(0.103)	(0.0234)	(0.0234)	(0.0234)	(0.0803)	(0.0961)	(0.0811)	(0.0461)
Mean in T_1	1.456***	3.237***	4.366***	5.186***	5.564***	5.942***	6.676***	8.207***	10.00***
	(0.0854)	(0.0715)	(0.0628)	(0.0281)	(0.0281)	(0.0281)	(0.0797)	(0.0775)	(0.0493)
Difference	-0.244**	-0.521***	-0.736***	-0.256***	-0.217***	-0.123	-0.734***	-0.473***	-0.262***
	(0.111)	(0.125)	(0.0671)	(0.0366)	(0.0366)	(0.0850)	(0.125)	(0.112)	(0.0675)
Characteristics	0.709**	1.034**	0.139	0.139	0.139	-0.00681	0.0870	-0.255	0.0539
	(0.340)	(0.408)	(0.0905)	(0.0905)	(0.0905)	(0.312)	(0.367)	(0.310)	(0.200)
Preferences	-0.953***	-1.555***	-0.875***	-0.395***	-0.356***	-0.117	-0.821**	-0.217	-0.316
	(0.348)	(0.418)	(0.112)	(0.0973)	(0.0973)	(0.324)	(0.389)	(0.332)	(0.210)
Characteristics									
Age	-0.0392	0.238*	-0.0110	-0.0110	-0.0110	0.117	0.158	0.0120	-0.0131
	(0.0867)	(0.144)	(0.0272)	(0.0272)	(0.0272)	(0.0915)	(0.110)	(0.0918)	(0.0537)
cohort	0.712**	0.771**	0.154*	0.154*	0.154*	-0.200	-0.173	-0.322	0.0706
	(0.325)	(0.388)	(0.0856)	(0.0856)	(0.0856)	(0.293)	(0.342)	(0.288)	(0.184)
Gender	-0.00449	-0.00658	-0.00197	-0.00197	-0.00197	-0.00464	-0.00606	-0.00496	-0.00167
	(0.00392)	(0.00561)	(0.00142)	(0.00142)	(0.00142)	(0.00416)	(0.00509)	(0.00423)	(0.00207)
Education	0.0174	0.0573*	0.00801	0.00801	0.00801	0.113***	0.140***	0.0864***	0.00485
	(0.0214)	(0.0322)	(0.00775)	(0.00775)	(0.00775)	(0.0287)	(0.0351)	(0.0290)	(0.0163)
Occupation	-0.0127**	-0.0152	-0.00329	-0.00329	-0.00329	-0.0151*	-0.00748	-0.00592	-0.00117
	(0.00614)	(0.00955)	(0.00246)	(0.00246)	(0.00246)	(0.00785)	(0.00841)	(0.00814)	(0.00483)
Status	0.00159	-0.0217	-0.00813**	-0.00813**	-0.00813**	-0.00533	-0.0146	-0.00787	-0.00430
	(0.00736)	(0.0146)	(0.00363)	(0.00363)	(0.00363)	(0.0105)	(0.0131)	(0.0105)	(0.00553)
Wealth	0.0345***	0.0118	0.000924	0.000924	0.000924	-0.0125	-0.0105	-0.0130	-0.00138
	(0.0117)	(0.0164)	(0.00439)	(0.00439)	(0.00439)	(0.0153)	(0.0194)	(0.0167)	(0.0114)
Preferences									
Age	0.227	-0.306	1.877***	0.891***	0.891***	0.497	-0.174	1.115	1.076*
	(0.885)	(0.914)	(0.539)	(0.276)	(0.276)	(0.597)	(0.966)	(0.916)	(0.605)
cohort	-0.702	-0.0804	-2.301***	-1.073***	-1.073***	-0.543	0.122	-1.397	-1.248*
	(0.977)	(0.977)	(0.605)	(0.303)	(0.303)	(0.622)	(1.052)	(1.009)	(0.672)
Gender	-0.298**	-0.0571	-0.143*	-0.0302	-0.0302	0.0407	0.0581	0.0304	0.0299
	(0.132)	(0.147)	(0.0776)	(0.0421)	(0.0421)	(0.0968)	(0.141)	(0.126)	(0.0751)
Education	0.136*	0.122	0.126***	0.0489**	0.0489**	0.0994	0.0147	-0.0480	0.0490
	(0.0728)	(0.0814)	(0.0442)	(0.0240)	(0.0240)	(0.0643)	(0.0949)	(0.0884)	(0.0590)
Occupation	0.0487	-0.0293	-0.0110	0.00189	0.00189	0.0389	0.107	0.122*	0.0985**
	(0.0805)	(0.0852)	(0.0466)	(0.0247)	(0.0247)	(0.0558)	(0.0821)	(0.0723)	(0.0424)
Status	-0.00690	-0.180	-0.0265	-0.0415	-0.0415	0.105	0.199	0.0993	0.0644
	(0.118)	(0.167)	(0.0791)	(0.0445)	(0.0445)	(0.107)	(0.150)	(0.134)	(0.0800)
Wealth	-0.0143	0.00304	0.0158**	0.00693**	0.00693**	0.0134	0.0326**	0.0295**	0.00928
	(0.00926)	(0.0102)	(0.00659)	(0.00350)	(0.00350)	(0.00828)	(0.0134)	(0.0123)	(0.00783)
Constant	-0.343	-1.027**	-0.413**	-0.199*	-0.161	-0.368	-1.180***	-0.169	-0.395
	(0.352)	(0.409)	(0.181)	(0.110)	(0.110)	(0.311)	(0.425)	(0.383)	(0.245)
Observations	10400	10400	10400	10400	10400	10400	10400	10400	10400