

Social Change and Party Identification in Latin America:  
An Age-Period-Cohort Analysis

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## **Abstract**

Latin America has experienced a series of political changes since the neoliberal turn and the re-opening of competitive elections in the 1980s and 1990s. At the core lies citizens' relationship with political parties, a key prerequisite for democratic politics. Applying an age-cohort-period analysis, we investigate the place parties hold in citizens' minds across all 18 countries in the region over a period of 14 years (2006-2020). We find important age, period, and cohort effects, suggesting that partisan learning does not stem from differences in regime type but from the clarity of the choices to which voters are exposed in the long run. Our study contributes to the understanding of party-voter relationship in emerging democracies, and the conditions that facilitate their development over time.

**Key words:** party identification, political socialization, Bayesian inference, democratization, multilevel modeling

## **Résumé**

L'Amérique latine a traversé une série de changements politiques majeurs depuis la transition démocratique et le virage néolibérale vers la fin du dernier siècle. Au cœur de ces transformations se trouve la relation entre les citoyens et les partis politiques. En appliquant une analyse âge-cohorte-période, nous étudions la place que les partis politiques occupent dans l'esprit des citoyens au fil du temps, une condition essentielle pour la légitimation démocratique. Nous trouvons que l'âge, la période (d'enquête), ainsi que la génération politique des électeurs latino-américains incident sur le développement partisan entre 2006 et 2020. Ainsi, l'apprentissage partisan ne découlerait pas de l'âge d'une démocratie mais de la clarté des choix auxquels les électeurs sont exposés et ce, de manière cumulative. Notre étude contribue à une meilleure compréhension des relations parti-électeur dans les démocraties émergentes, et les conditions facilitant leur formation au fil du temps.

**Mots-clés:** identification partisane, socialisation politique, inférence bayésienne, démocratisation, modélisation multiniveau

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## **A Note on Data and Replication**

We use the latest release of the Penn World Table (PWT) and Varieties of Democracy (V-Dem), available at the time of this project. That is, PWT version 10, released in 2021, and V-Dem version 12, released in 2022. Both historical databases rely on country experts for the data collection process, covering the time period needed (1925-2020) for our cross-country analysis.

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All necessary materials to replicate our study are available in the following repository, which includes the codes and data used, as well as our codebook:

<https://github.com/andreafg95/mcgill2022>

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*Este pensador observó que todos los libros,  
por diversos que sean,  
constan de elementos iguales:  
el espacio, el punto, la coma,  
las veintidós letras del alfabet.*

This philosopher observed that all books,  
however different from another they might be,  
consist of identical elements:  
the space, the period, the comma and,  
the twenty-two letters of the alphabet.

*Jorge Luis Borges*



## 1 ※ Introduction

Party identification plays an important role in the consolidation of democratic rule. Citizens who identify with political parties think about themselves and the political world in terms of the political system that permeates their everyday life (Bankert et al., 2017; Ward & Tavits, 2019; Zaller, 1992). It becomes a matter of self-definition within the boundaries of the governing logic (Campbell et al., 1954, p. 102). As a result, party identification bears the double function of consolidating the democratic process into a political norm, while legitimizing its political authority as the one of the people. The extent to which citizens relate to the party system – the mechanism by which popular will translates into political power at the minimal level – rationalizes democratic governance. It stabilizes the political regime. As citizens declare themselves partisans, they accept the rules by which power is organized. Therefore, investigating the development of partisan attitudes becomes essential to assess the procedural legitimacy of democracy, a minimal condition to justify its political authority.

Interestingly, one of the main predictors of partisan attitudes in recent and older democracies is age (R. Carlin et al., 2015; Dassonneville, 2017; Lisi, 2015; Stoker & Jennings, 2008). Older voters are more likely to self-identify as partisans than younger voters. But why? While previous research explains the relationship between age and partisanship with the length of exposure to party systems, many confirm the decreasing importance of political parties in citizens' mind regardless of the age of democracy (Converse, 1969; Mainwaring, 2018; Mair, 2013; Wattenberg & Dalton, 2000; Whiteley, 2011). This downward trend in party identification coincides with the neoliberal turn undertaken by most democracies since 1980. Scholars document a shift in people's perception, where parties become synonymous with business as usual (Norris, 1999, 2011). Cynicism rises with people questioning the very functioning of democracy. The relationship between age and partisanship, therefore, reflects a growing disconnect between the democratic procedure and citizens. At the aggregate, it means that younger voters are less partisan because of the changing nature of the political space, where mass-based politics are replaced by a more individualized relation with the state (Brown, 2015). In other words, context matters for the reinforcement of procedural legitimacy in democracies. This calls for further research on the role of the sociopolitical environment in inciting citizens to play by the rules of the democratic game. Do certain conditions affect the relative weight of political parties more than others in citizens' mind and their propensity to identify with them? If so, what does it say about the dynamics of political change and its normalization?

We build upon prior insights on party identification to assess the extent to which political parties represent key players in the minds of Latin American citizens and the conditions that facilitate the consolidation of this relationship over time. From the complete collapse of long-established party systems to the stability of partisan attitudes in nascent democracies, significant variations in the experience of citizens with political parties and democracy make the region the ideal setting to investigate the underlying mechanisms of partisanship (Balán & Montambeault, 2020; Mainwaring, 2018). Our main goal is to better comprehend the temporal dynamics – age,

periods, and generations – at play in driving citizens to normalize the electoral rules, once introduced. As such, our study contributes to the literature on political behaviour and democratization in two fundamental ways. First, we test the validity of key assumptions about the consolidation of party identification outside the electoral context that has informed classical studies (Campbell et al., 1954; Converse, 1969). In fact, most of the literature on the subject comes from the US, limiting the generalizability of the data. Second, we examine all 18 countries in Latin America over a period of 14 years, which broadens our understanding of party identification in the region both cross-nationally and over time. This adds to recent efforts in the region, where scholars have used comparative and longitudinal approaches separately to investigate the development of political attitudes (Bargsted et al., 2019; Carlin et al., 2015; Lupu et al., 2019; Nadeau et al., 2017).

Our research project makes use of opinion survey data conducted by the firms Latinobarómetro and LAPOP between 2006 and 2020. We also use several macro indicators from Varieties of Democracy (V-Dem) and the Penn World Table (PWT) to measure the effect of sociopolitical conditions on the development of party identification. The analysis is organized in five parts. First, we discuss the general trends in citizens' party identification and the three theories that inform our first set of hypotheses. Do democracies in Latin America follow our main expectations about citizens' identification with political parties over time? We then introduce a second set of hypotheses on the mediating role of three sociopolitical conditions in the development of partisanship. Third, we present our methodological choices and research design before performing our statistical analysis in the order of the hypotheses presented. Lastly, a conclusion summarizes our findings and discusses the implications of our research in understanding the development of party identification in Latin America and developing democracies more broadly.

## 2 ※ The Rise and Fall of Mass-Based Parties

The three theories presented here presuppose that party identification results from citizens' exposure to political parties in their environment. How they relate to the new objects defines how they think of them. We begin by reviewing each theory and the Latin American literature on political parties before investigating citizens' response to change.

Converse (1969)'s theory of partisan learning presupposes a top-down consolidation of democratic rule where structural changes condition individual political attitudes and behaviours. Individuals form partisan identification the more they gain exposure to the competitive electoral system. That is, the system under which political parties compete as the main actors for political offices. Yet placing political parties at the center of democratic politics remains insufficient for the development of voter-party ties. It requires parties to be salient actors able to mobilize the mass, two criteria assumed as fixed in Converse (1969)' study of the American political context. This makes the causal attribution of partisan development less clear when assessing the consolidation of democracy at the mass level.

In fact, recent political developments challenge the assumption of party saliency in democratic politics. Latin America is no exception. Less than a third of Latin American voters report self-identifying with a political party in 2012 (Carlin et al., 2015; Nadeau et al., 2017). More important is the evidence that the age of a democracy, while being an important predictor of party identification, is not sufficient to explain the likelihood of developing partisan ties. As Lupu and Stokes (2010), and Dalton and Weldon (2007) note, partisan stability heavily depends on political continuity<sup>1</sup>. Some of the oldest democracies in Latin America can be found to deviate on both ends of the 2012 regional average, i.e., Uruguay (55 per cent) and Chile (14 per cent). Still political continuity is not only about the survival of the old regime's party system. It also signifies the preservation of the lines of partisan conflict and what they mean for citizens. In fact, Lupu (2015) and Roberts (2014) demonstrate through both qualitative and quantitative methods that neoliberal convergence depresses the formation of partisanship across the region. This includes changing policy positions that contradict parties' prior performance records. Scholars find the depoliticization of the regime-type divide in democratizing societies to be another factor of ideological convergence in Latin America and elsewhere (Kitschelt et al., 2010; Moreno, 1999; Tóka, 1998; Tóka & Gosselin, 2010). As a result, the extent to which waves of political change reinforce or cut across each other should determine how citizens relate to political parties, and the democratic procedure over time. Hence, party saliency is not fixed, even in long-established democracies. It fluctuates throughout the introduction and institutionalization of competitive elections both between and within countries.

The function of parties can vary as well. Scholars have developed a substantive typology of political parties based on their organizational networks and membership (Dix, 1992; Levitsky et al., 2016; Sartori, 2005). One important development in the region is the decline of mass "catch all" parties, previously used to incorporate various segments of society under the state-led development logic (Dix, 1992; Roberts, 2014). Hence, party systems that relied heavily on the state-led logic for mass mobilization had a harder time re-adjusting to the 1980s debt crisis and neoliberal restructuring (Luna, 2014; Mainwaring, 2018; Roberts, 2014). Whether resulting in societal uprooting or resource scarcity, these changes in party function challenge the core premise of parties in linking voters back to political power and stress the importance of context in shaping incentives for popular mobilization. They also showcase the significant variation of Latin Americans' experience with partisan competition before and after the neoliberal turn. We expect frequency of contact with political parties to be the main driving force in explaining the development of partisan identification among citizens, where time reflects the length of accumulated exposure. Exposure should, in turn, reinforce the use of parties as 'normal' in

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<sup>1</sup> Lupu and Stoke (2010) find rates of party identification to decline between authoritarian interludes in Argentina, using change in parties' vote shares to proxy party identification. By contrast, studies in Brazil (Samuels & Zucco, 2014) and Chile (Bargsted & Maldonado, 2018; Mainwaring, 2018) show levels of mass partisanship to fall, following the neoliberal convergence of political parties. Venezuela exhibits similar patterns of partisan decline until the ascension of the new Left under Chávez in the early 2000s (Morgan, 2007). Note that little to no research covers the evolution of party identification across all 18 countries over an extended period of time that allows to disentangle the time-related effects of political change (Dassonneville, 2017; Yang & Land, 2013).

navigating politics. In the next section, we explore three theories linking party exposure to the passage of time over one's life course.

#### *Partisan Stability: A Life-Cycle Effect?*

Proponents of Converse (1969)'s theory on the political life cycle study in more depth partisan change in terms of individuals' differences in the accumulation of competitive electoral experience throughout their lifetime. Consequently, age reflects a habituation process to the competitive system. Individuals become progressively more partisan, the more they use mass parties to navigate politics by repeatedly being exposed to them under the political environment (Campbell et al., 1954; Converse, 1969). Hence, entering the electoral system plays a major role in the formation of partisan identification by increasing exposure to mass parties. It also means that variations in the composition of party systems influence the positive relationship between age and partisanship. Systems with enduring mass parties make the lifelong habituation process intersects with the normal age curve as the intergenerational transmission primes voters upon their entry (Converse, 1969; Stoker & Jennings, 2008). Conversely, changes in mass parties' saliency depress the effect of age on partisanship by disrupting exposure (Bargsted & Maldonado, 2018; Lupu & Stokes, 2010).

We test the incremental effects of age on partisan identification with the following hypotheses:

*Hypothesis 1 (general):* Voters are more likely to be partisan as they age.

*Hypothesis 2 (flat curve):* The lack of electoral experience with political parties narrows the partisan gap between older and younger voters.

#### *Political Generations*

Early political socialization can also explain changes in partisan identification. Individuals who come of age in an environment with salient and persistent mass parties are more likely to develop strong partisan attachment than those who socialize without. This, in turn, creates distinct political generations; individuals bound together by their common position in the consolidation of life experiences as deep-seated perceptual markers (Campbell et al., 1954; Mannheim, 1952; Rogoff, 1990). In fact, empirical evidence demonstrates early political learning to have long-lasting effects on individuals' basic understanding of politics, despite historical changes in the political context (see Baker et al., 1981; Stoker & Jennings, 2008 for some examples). When mass parties are enduring objects of the political environment, they become the basis for understanding party-voter linkages as group-based. Therefore, the continuing experience of the same parties from the formative years facilitates the development of party-voter linkages, despite changes in their organizational function. This can also happen during regime change. Socialization under authoritarian regimes with clear pre-existing loyalties, such as one dominant party systems, can prime individuals to develop partisan ties (Dalton & Weldon, 2007; Domínguez et al., 2014; Rose

& Mishler, 1998). Hence, generational change in partisanship goes beyond lifelong habituation and account for the peculiarities of political experience in shaping deep-seated biases. Change tends to be slower, resulting from the gradual replacement of older segments of the population with distinct political experiences of the current environment.

We present a third hypothesis to test for the generational effects on partisanship:

*Hypothesis 3 (impressionable years):* Individuals who come of age during periods of mass party erosion are less likely to be partisan than other individuals.

### *Political Events*

Finally, change in partisanship can also be attributed to specific events in time that simultaneously affect all segments of a population. These moments represent exogenous shocks that momentarily shift party-voter patterns of interaction away from the expected trajectory observed in the place of interest (Roberts, 2014; Yang & Land, 2013). The short duration of these events implies that period effects are too short to permanently affect an entire cohort, in contrast to the conditions that shape citizens' formative years such as of the experience of political violence or the introduction of the neoliberal policies in the 1980s and 1990s. Some examples of period effects include the effects of electoral cycles on the expression of partisan identification in response to the rise in political activity in Latin America and the US (Greene, 2011; Michelitch & Utych, 2018) or candidate ratings (Morgan & Buice, 2013; Sanbonmatsu & Dolan, 2009). Hence, controlling for the temporal repercussions of significant political events helps identify the conditions associated with partisan change on the short-term. We test for the effects of periods on partisanship with a fourth hypothesis:

*Hypothesis 4 (general period effect):* Exogenous shocks affect the partisan identification of all segments of the electorate, regardless of their age or cohort.

### *Coming-of-Age Conditions*

Most Latin American scholars hold the market liberalization of the 1980s and 1990s as a critical moment in the binding in of partisan loyalties. The introduction of the neoliberal reforms, along with the collapse of state-led industrialization, altered the clarity of partisan choice based on whether party systems offered political alternatives against free-market orientations (Kitschelt et al., 2010; Roberts, 2014). Where institutional continuity prevailed, neoliberal reforms drove for greater programmatic distinction between parties on the traditional left-right state market divide. The reverse, referred by Mainwaring, Bejarano and Leongómez (2006) as a “crisis of representation”, led party systems to rapidly breakdown as party labels lost meaning in structuring the political arena.

We therefore expect changes in state-citizen relations, following the neoliberal turn, to explain generational differences in partisanship. Voters are more likely to form party ties if they have time habituating to the electoral conflict during their impressionable years. In fact, research

on long-established democracies shows that the main issues from voters' coming-of-age continue to play a major role in how they sort parties and make sense of new elements in the political environment (Mahéo & Bélanger, 2018; Stoker & Jennings, 2008). The same parties will mean different things depending on how people have learned to map them on the political space. Hence, party systems with clear and stable partisan divides facilitate the acquisition of partisanship early on – a key criterion for party identification to crystallize. We test the effect of political polarization on cohorts' attitudes with hypotheses 5a and 5b.

*Hypothesis 5a:* Overall, voters are less likely to identify as partisan in countries where a leftist party has adopted the neoliberal market reforms of the 1980s and 1990s.

*Hypothesis 5b:* In contrast, voters are more likely to identify as partisan when a conservative party has introduced the market reforms and a leftist party stands in opposition.

In addition to ideological polarization, scholars find the effect of the economy on partisan learning to vary during the formative years. Research on economic voting in the region suggests party identification to act as a running tally of political and economic evaluations, following American traditions (Fiorina, 1981; Franklin & Jackson, 1983; Moreno, 2015; Morgan, 2007). Positive assessments of incumbent performance over the economy reinforce party identification, while the reverse leads voters to dealign. Of course, this depends upon the salience of the economic divide and the presence of credible alternatives to the incumbent (Kitschelt et al., 2010; Lupu, 2015). Yet how voters attribute incumbent responsibility for good or bad economic times is still up to debate. Recent studies on economic voting in the region have started to account for income effects – voters' perception of a fall or a rise in their personal income – to reconcile results from past research. Murrillo and Visconti (2017), as well as Visconti (2019), find that income volatility hit poorer voters the hardest in the absence of a strong welfare state, a reality shared by many following the neoliberal turn of the 1980s and 1990s in the region. Voters who perceive their personal economic situation as worse, when compared to past elections, are more likely to defect from the incumbent than those who perceive little to no change or an improvement in their conditions. Benton (2005) also finds that voters who grew up during crises continue attributing negative evaluations to parties they associate to the incumbent government of that time. Hence, economic considerations seem to matter the most under circumstances that raise the salience of the economic divide. Economic shocks are more likely to influence voters during their formative years as their partisan preferences have not consolidated into a perceptual screen yet (Bartels, 2002; Córdova & Seligson, 2010).

*Hypothesis 6 (material insecurity):* Individuals who come of age under economic crises are less likely to identify with a political party.

Past exposure to violence can also leave a long-lasting effect on voters' evaluation of the political offerings. Short-term circumstances that highlight the competence of the state on the provision of security – a key characteristic for legitimacy – inform citizens on whether to follow the rules of the game and build partisan loyalties as they age. In fact, research in post-conflict countries finds



that growing up in areas exposed to high levels of state violence decreases overall engagement with political institutions in the long-run (Lupu & Peisakhin, 2017; Pérez, 2003; Wang, 2021), while violence attributed to guerrillas attacks increases it (Weintraub et al., 2015). Pérez (2003, 2011) explains these variations in political behaviour with the formation of political trust. Citizens who trust the state for the provision of security are more likely to form partisan loyalties because they view the organization as the best form of governance, when compared to challengers (see Ponce, 2016 for an example). Hence, state-citizen relations do not limit themselves to the representative function of the state. They encompass citizens' experience of the most salient state institutions in their environment, such as the armed forces during civil conflicts. These encounters shape citizens' general understanding of how to relate to the political system and what to expect from it.

To be sure, challengers can also become political alternatives. In fact, scholars find insurgent violence to be a significant catalyst for mass mobilization and the hardening of partisan loyalties by increasing militant contact and creating parties with strong organizational capacities (Levitsky et al., 2016). Hence, what matters is whether the party system represents the only game in town. The consideration is an important one to better understand partisan consolidation in situations of weak state legitimacy. We test the effects of political violence during the formative years on partisanship with hypothesis 7:

*Hypothesis 7 (physical insecurity):* Individuals who come of age under high levels of political violence are more likely to identify with a political party.

The rapid democratic transition of the military dictatorships in Latin America during the mid 1980s and 1990s makes the region the ideal laboratory to investigate the evolution of state-citizen relations over time (see Pérez-Liñán et al., 2019 for an overview). That is, how much of partisan stability is attributable to cumulative experience (age), generational replacement (cohorts), and external shocks (periods). In fact, the theories presented explain for the acquisition of partisanship, without expanding on its stabilization – a key process for the consolidation of democracy at the mass level. In using a regional approach, we improve our ability to isolate the relationship between each time-related process and the outcome, while controlling for contextual factors that influence state building (Brady & Collier, 2010; Mill, 1941). Hence, the development of partisanship reflects citizens' normalization of the political rules in guiding their interactions with the state. This, in turn, depends on the capacity of the state to preserve the social conditions that define their everyday lives with the delivery of the public good.

Clientelism also plays an important role in the development of partisan linkages, especially in Latin America. When state capacity is low, political actors and parties are more likely to use clientelist networks to mobilize partisans (Carlin et al., 2015; Stokes et al., 2013). Thus, citizens' propensity to identify with a party may change, according to the effectiveness of programmatic and clientelistic efforts to provide mutual benefits (Lawson & Greene, 2014). State capacity only represents one aspect of the improvement in social conditions. While clientelism is likely to be an important predictor of partisanship and the formation of party-voter linkages in the region, our

data limit what can be said on this subject (for a recent discussion of the limitations of public opinion data in studying the effect of clientelism on political behavior, see Nadeau et al. 2017, pp. 56-62). In fact, investigating clientelism and its impact on partisanship would require a qualitative rather than quantitative approach, which goes beyond the scope of this thesis.

### 3 ※ Data and Research Design

#### *Data*

We employ repeated cross-sectional survey waves conducted by Latinobarómetro and LAPOP between 2006 and 2020 to investigate the evolution of party identification over time. The same questions are asked in all 18 countries, using face-to-face interviews. Surveys are predominantly conducted face-to-face due to the lower penetration of communication technologies in rural areas in the region, particularly for the Internet and telephones (Lupu & Michelitch, 2018). Combining the survey data allows for greater precision by filling in the gaps in the observation of self-reported partisan attitudes among larger samples of the voting-age populations of approximately 1,000 to 1,500 respondents for each country-year point. This improves our ability to estimate the effect size of party exposure on three time scales – age, periods, cohorts – that would otherwise be indistinguishable from one another because of their perfect multicollinearity (Glenn, 2005; Yang & Land, 2013). These effects move together through an individual’s life. We complement the individual-level observations with historical data on economic and political performance from V-Dem and the PWT to account for the sociopolitical conditions of respondents’ coming-of age for each country surveyed.

Our dependent variable, partisanship, is a binary indicator that distinguishes respondents based on whether they identify with a political party or not. Scholars in the region find Latin American voters to be easily swayed by campaign effects, while their party identification remains relatively stable (Carlin et al., 2015; Domínguez et al., 2014; Lupu et al., 2019)<sup>2</sup>. Hence, using partisanship instead of vote intention ensures that our observations follow respondents’ long-term considerations towards political parties. This is especially important for the identification of the temporal trends explaining the evolution of state-citizen relations after the introduction of electoral competition. The wording for the partisanship question is slightly different in the Latinobarómetro and LAPOP surveys. Latinobarómetro asks “*Is there any political party to which you feel closer to than the rest of the parties?*”, whereas LAPOP asks “*Do you currently identify with a political party?*”. Despite these variations, Baker and Renno (2019) find that attachment descriptors (“*feel closer*”) yield no significant changes in the distribution of partisan and nonpartisan identifiers. In fact, combining the two questions gives similar results than when they are used separately. We exclude nonresponses and no-opinions from the analysis to avoid conflation. Because our dependent variable only detects general changes between partisan and nonpartisan

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<sup>2</sup> Our survey data are not bound to electoral cycles, which also prevents periods with higher levels of political activity to skew our results for partisan identification (Banducci & Stevens, 2015; Green & Palmquist, 1990).



identification, we cannot explain smaller shifts in partisan strength. That is, the distinction between moderate and weak partisans. Our measure remains the best indicator to investigate systematic changes over time in partisanship across Latin America <sup>3</sup>.

We test the time-related effects of party exposure on partisanship with three independent variables: age, cohorts, and periods. Age is a continuous variable that groups respondents by age at the time of the survey, while survey years are proxies for period-specific events. We decide to use year-of-birth groups with 10-year intervals to measure cohort effects for a total of 6 cohorts as shown in [Table 1](#). Our methodological choice guards us from assuming partisan identity to consolidate after the experience of political events during the formative years and provides a more consistent unit of comparison within and across countries. Our investigation of the time-related effects also accounts for the effect of three formative conditions – material and physical security, as well as choice clarity – in explaining variations between cohorts. We measure choice clarity with the average effective number of parties (ENP) during respondents' impressionable years between 18 and 24 years old <sup>4</sup>. The range is wide enough to account for potential changes in the respondents' political experience, while acknowledging scholars' debate over the exact range of the impressionable years (Bartels & Jackman, [2014](#); Mannheim, [1952](#)). We use the same age range to construct our measures of relative change in physical and material conditions, using real GDP per capita from the PWT, and V-Dem indicators for state and insurgent violence.

**Table 1. Political generations**

	Pre-1950s *	1950s	1960s	1970s	1980s	1990s *
Formative period	1920s-1960s	1970s	1980s	1990s	2000s	2010s
N Total	25, 337	28, 341	37, 878	49, 185	60, 425	37, 828
%	12	12	16	21	25	16

*Note.* Asterix (\*) indicate the merging of cohorts due to their negligible size. Pre-1950s includes respondents born between 1920 and 1949, while 1990s includes those born between 1990 and 2002.

The analysis also accounts for potential confounding effects on the relationship of interest. First, we may expect sociodemographic characteristics associated with political exclusion to differentiate party exposure. The unequal historical institutionalization of voting rights throughout the region should limit female respondents' opportunities to accumulate electoral experience (Collier & Collier, [2002](#)). Exclusion may also prompt vulnerable populations to affiliate with a party for goods and services if targeted by clientelist networks (Lupu et al., [2019](#); Samuels, [2006](#); Stokes et al., [2013](#)). Hence, we add controls for respondents' wealth, race, and education level, as

<sup>3</sup> Latinobarómetro only asks for partisan strength across the 18 countries in 2010, 2011, 2013 and 2015.

<sup>4</sup> The ENP scores are retrieved from Pérez-Linan ([2019](#))'s dataset, found on the data repository Harvard Dataverse.

well as whether they work for the government or not <sup>5</sup>. We also examine individual predispositions to register party cues as a second set of factors affecting partisan identification. Lupu (2013, 2015a, 2015b) finds in a series of cross-national studies in the region that self-declared partisans are more likely to be interested in politics and express ideological preferences (also see Nadeau et al., 2017). We add a dummy variable for respondents' self-placement at the far ends of the conventional left-right scale. Meanwhile, social and civic group membership may contribute to increasing party contact through recruitment and mobilization networks (Karp & Banducci, 2007; Verba et al., 1995). We control for the third set of effects with a measure of religiosity and a categorical variable capturing respondents' affiliation with the groups best known to mediate political engagement across the region; Protestant/Evangelicals and none/others with Catholics as the reference group (Carlin et al., 2015; Moreno, 2015).

### Method

We begin by testing the general effects of age, period, and cohort on party identification using multilevel modeling. This approach allows to estimate simultaneously the relationship between time and partisanship at the population (global) -level, while accounting for the moderation of group-level predictors on the outcome of being partisan. In other words, multilevel or "hierarchical" modeling allows the overall relationship to vary, given respondents' position in different groups for each group-level predictor estimated (Gelman & Hill, 2006; Hox, 2018). An individual nested in one cohort may not have the same propensity to form partisan attachments than someone else because of between-group differences in party exposure. The same logic applies for period effects. Hence, the assumption of nonindependence underlying the model makes it possible to decompose the dynamics of change in political attitudes, following democratization and market liberalization in the 1980s. Equations 1 and 2 express our two-stage modeling, with age (i.e., chronological age and age squared) at the population-level and cohort and survey year at the group-level.

$$PID_{ij} = \beta_0 + \beta_1 Age_{ij} + \beta_2 Age^2_{ij} + e_{ij}, \quad e_{ij} \sim \text{Bernoulli}(p) \quad (1)$$

where  $\beta_0$  is the grand mean for the entire voting population.  $e_{ij}$  is the lowest-level error term,  $i$  expresses the population-level unit (individuals), and  $j$ , corresponds to the group-level unit (cohort and period).

At the group-level, we have

$$\beta_{0jk} = \gamma_{00} + u_{0j} + v_{0k} \quad (2)$$

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<sup>5</sup> Race is a categorical variable with mestizos as the reference group and White, Black/Afro-Latino and Indigenous as the other categories compared with.

where  $u_{0j}$  and  $v_{0k}$  represent the effect of being in cohort  $j$  and period  $k$ , and  $u_{0j} \sim N(0, \tau_u)$  and  $v_{0k} \sim N(0, \tau_v)$ . The varying-intercept model for each group-level predictor allows  $\beta_0$  to vary by group.

Of course, changes in the predicted probability of being partisan do not occur at the same time and at the same extent across all 18 countries in the region. They vary with a country's partisan configurations and democratic legacy (Balán & Montambeault, 2020; Mainwaring, 2018; Roberts, 2014). Countries that experience regime change are more likely to encapsulate group variations if associated with major changes in the experience of the party system. The time by which each individual is exposed to these events in their lifetime may also have a different weight in their political outlook (Bartels & Jackman, 2014; Mannheim, 1952). Therefore, we understand cohorts as features of the political organization of those countries. Allowing cohorts to vary by country yields the following set of equations for our population- and group-level models:

$$\text{Level 1: } PID_{ij} = \beta_0 + \beta_1 \text{Age}_{ij} + \beta_2 \text{Age2}_{ij} + \beta_3 \text{Cohort}_{ij} + e_{ij}, \quad (3)$$

$$e_{ij} \sim \text{Bernoulli}(p)$$

$$\begin{aligned} \text{Level 2: } \beta_{0jk} &= \gamma_{00} + u_{0j} + v_{0k} \\ \beta_{3j} &= \gamma_{30} + u_{3j} \end{aligned} \quad (4)$$

where  $u_{0j}$  and  $v_{0k}$  represent the effect of being in country  $j$  and period  $k$ , and  $u_{0j} \sim N(0, \tau_u)$  and  $v_{0k} \sim N(0, \tau_v)$ . Cohort effect varies by country, and  $u_{3j} \sim N(0, \tau_u)$ .

The next step in our hypothesis testing is to investigate the conditions that make up generational differences in partisan learning in the region. We expand the varying intercept, varying slope model from Equations 3 and 4 by substituting birth cohorts for three formative conditions, we believe generate varying levels of party identification between age groups (*hypothesis 5a to hypothesis 7*). The conditions are the relative change in an individual's living standards and his or her exposure to political violence between the ages of 18 and 24 years, as well as the effective number of parties (ENP) in the party system during the same time period. Our belief is that individuals who experience noticeable increases in political violence and their standards of living during their impressionable years are more likely to develop partisan attitudes than at any other periods in their life cycle. Similarly, we expect partisanship to be fairly high in party systems that feature fewer choices, on the basis of decision fatigue. Because of our limited ability to register every aspect in our environment, too many choices make it difficult to align with a party, especially when those choices constantly change and are hard to distinguish (Carlin et al., 2015; Downs, 1957; Lupu, 2013). Of course, the opposite – no options – should lead to similar results, as shown during the complete suppression of parties in the last authoritarian period in

Argentina and Chile (Collier & Collier, 2002; Garretón, 1989) <sup>6</sup>. Replacing cohorts for their expected formative conditions gives:

**Level 1:** (5)

$$PID_{ij} = \beta_0 + \beta_1 Age_{ij} + \beta_2 Age2_{ij} + \beta_3 violence_{ij} + \beta_4 economy_{ij} + \beta_5 ENP_{ij} + e_{ij},$$

$$e_{ij} \sim \text{Bernoulli}(p)$$

**Level 2:** (6)

$$\beta_{0jk} = \gamma_{00} + u_{0j} + v_{0k}$$

$$\beta_{3j} = \gamma_{30} + u_{3j}$$

$$\beta_{4j} = \gamma_{40} + u_{4j}$$

$$\beta_{5j} = \gamma_{50} + u_{5j}$$

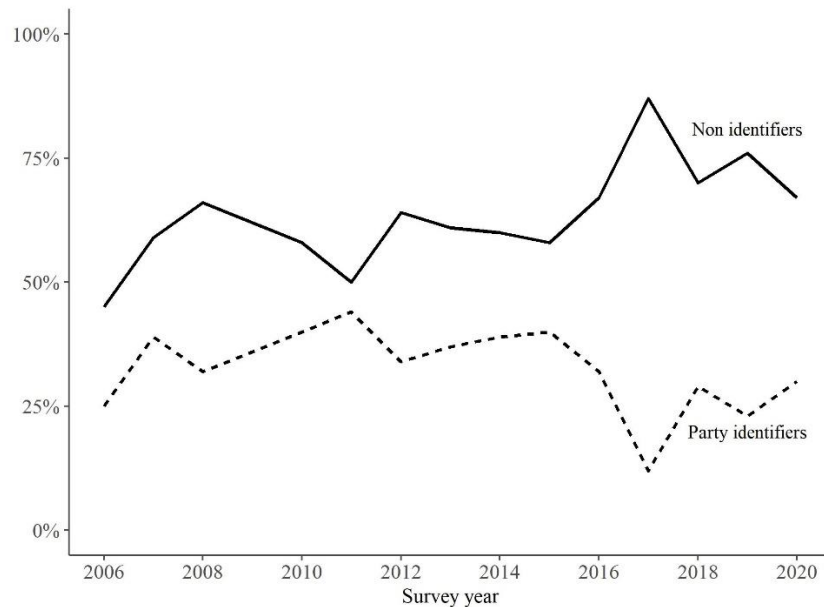
The final step is the inclusion of the control variables to our substitution model (see Table 2 in the [Appendix](#) for descriptive statistics of all the covariates). We apply Bayesian inference to estimate the true probabilities of identifying with a party, given an individual's age, period, cohort and country. Using this approach has two advantages. First, it allows for greater flexibility in modeling complex relationships, where effects happen simultaneously. Probabilistic estimations generate a distribution of all possible values the outcome can actually take (Gelman & Hill, 2006, 2018). These estimations are calculated by simulating new evidence repeatedly from our data to test the relative plausibility of our expectations (Gelman & Hill, 2006, 2018). Second, we can quantify uncertainty since each new trial updates our prior beliefs about the probability that the outcome of interest takes place (Gelman & Hill, 2006, 2018).

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<sup>6</sup> As stipulated before, our measure for choice clarity limits itself to the number of effective parties, weighted by their relative vote share. Although, ideally, party polarization should also be added, no dataset offers the relevant observations covering all 18 countries in the region for the time period needed (1925-2020). The most exhaustive dataset on the subject, the Latin American Electoral Volatility Dataset ([LAEVD](#)), only accounts for the required range in Chile, while starting by 1960s and 1980s in most countries (see Mainwaring & Su, 2021). We could also measure the age of the main parties for each country to account for the length of exposure as proposed by Lupu in Carlin and his colleagues (2014)'s volume, but this task goes beyond the scope of this thesis.

## 4 ※ Empirical Analysis

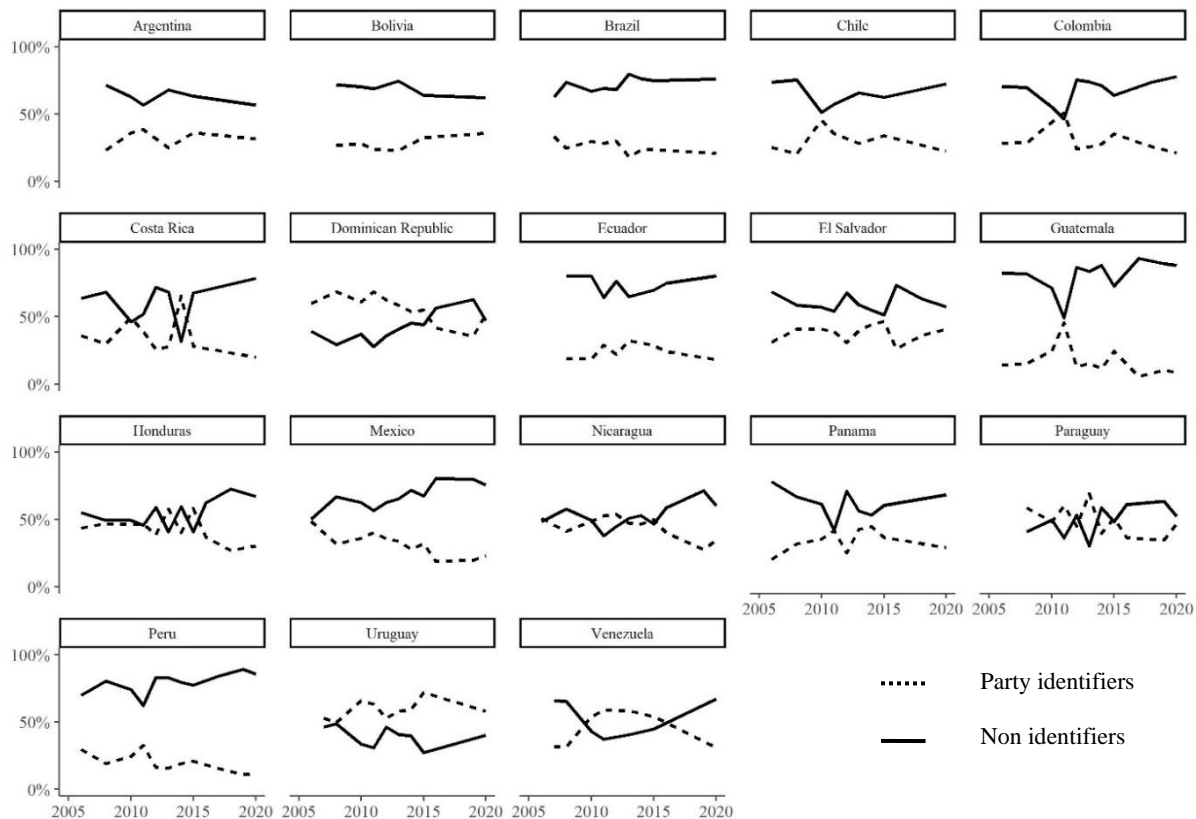
How has the relationship between political parties and voters changed over time since the renewal of democracy in Latin America? We first report the general temporal trend in the evolution of party identification in the region, before investigating how partisan attitudes vary with electoral contexts. General movements in mass partisanship reflect the significance of the electoral rules in people's mind as they accumulate experience with the competitive party system.



**Fig. 1.** Latin America, mean total party attitude expressed yearly accounting for don't knows and non-responses between 2006 and 2020.

Figure 1 shows overall changes in party identification across the 18 countries surveyed between 2006 and 2020. Non identifiers (solid line) are on the rise since 2015, while the proportion of partisans (dashed line) only makes up a third of respondents between 2006 and 2015. Taking a closer look at the time series demonstrates that voters who express party loyalties are less likely to change attitudes. In fact, most of the variation over the first decade translates into a small increase (4 per cent) in the number of respondents who identify as partisans. This suggests that people stick to what they learned, once acquired. The moderate growth in party identification is then followed by a period of steep decline that hits its lowest point in 2017 before stabilizing to an average 5 per cent lower than the first decade. Hence, we can distinguish between two phases of partisan change in the region, pre- and post-2015. Non identifiers represent the majority in both phases, but their share in the total electorate population goes up by 20 per cent between 2015 and 2017, making up 87 per cent of the Latin Americans surveyed. Our results are consistent with previous reports in a resurgence of partisanship between 1998 and 2015, following the re-opening of the electoral competition to the Left with democratization (Balán & Montambeault, 2020; Castañeda, 2006; Levitsky & Roberts, 2011). Scholars associate the failure of leftist and left-leaning governments to implement substantial redistributive policies with the rise of citizen disenchantment across the

region (Levitsky, 2018; Torcal & Montero, 2006). The programmatic disconnect, in turn, prevents citizens from making meaningful distinctions between political parties and forming durable partisan identities (Lupu, 2013). Overall, the renewal of democracy at the institutional level does not translate into a consolidation of the political norm at the individual level over time. As citizens accumulate electoral experience, they become more detached from political parties. We now turn to a cross-country analysis to investigate the extent to which national patterns of partisanship deviate from the regional trend.



**Fig. 2.** By country mean party attitude expressed yearly accounting for don't knows and non-responses between 2006 and 2020.

Figure 2 confirms a short-lived resurgence in partisan attitudes across most of the countries surveyed. Roughly speaking, mass partisanship rises by 10 to 20 per cent within a period of five years before coming back to levels below 50 per cent. As in Figure 1, the solid line denotes the share of non identifiers among the electorate population of each country, while the dashed line represents the share of partisans. Countries with high levels of partisan instability tend to also have experienced a weakening of their traditional left-right cleavage lines, thereby eroding mobilizational capacity in the post-neoliberal era (Kitschelt et al., 2010; Roberts, 2014). This leaves voters more vulnerable to short-term partisan forces, including presidential popularity, electoral violence and societal mobilizations against the government as seen in Colombia and Peru, Guatemala, and Chile and Argentina respectively (Balán & Montambeault, 2020; Gonzalez-

Ocantos et al., 2020; Mainwaring, 2018). By contrast, countries where new alternatives institutionalize because of their broad social base – Bolivia – or their rearticulation of the traditional left linkages – Brazil and Uruguay – against the neoliberal turn, experience more stable patterns of partisan change (Anria, 2018; Balán & Montambeault, 2020; Samuels & Zucco, 2014). In Venezuela, declarations of partisanship follow an inverted-u trend that coincides with the experience of the 2000s commodities boom and the introduction of Chávez’ state-sponsored social organizations <sup>7</sup> (Handlin, 2013). More Venezuelans identify with a party under Chávez’ rule, while his death in 2013 marks the decline in partisan declarations. Those declared partisans represent 30 per cent of the electorate population surveyed in the country in 2006 and 65 per cent in 2013, before falling again to 30 per cent in 2020. The 30 points rise, and fall, suggests that the rate of partisan change increases when mobilizing support for new political alternatives (de)institutionalize. More importantly, parties with strong social roots are more likely to maintain political power when they use programmatic rather than personalistic linkages.

Similarly, countries with long-dominant revolutionary parties experience a constant partisan decline in post-conflict settings. Voters who identify with a party in the Dominican Republic, Mexico, and Nicaragua, make up 50 per cent or more of the electorate in 2006, while their share drops by half in 2020. In other words, all three countries present levels of partisanship comparable to Uruguay, the country with the most durable party-voter linkages in the region, before converging towards the regional trend (20 per cent) in less than a decade. By contrast, El Salvador, where conflict still prevails, sustains an average of 40 per cent during the 14-year span. Party-voter linkages, therefore, seem to endure over time due to the capacity of insurgent groups to remain relevant political alternatives. As the political struggle loses in saliency, partisans demobilize from the pro- and anti-insurgent lines of conflict that have previously structured political life (Domínguez et al., 2014; Levitsky et al., 2016; Moreno, 1999).

Finally, figures 1 and 2 confirm an important decline in party identification after the neoliberal turn in the region. Party identifiers (dashed line) consistently represent a smaller share of the national electorate populations when compared to non identifiers (solid line) over the time period surveyed. In other words, Latin American voters are more likely to relate to their electoral system without the need for party affiliation. The depolarization of the traditional left-right cleavage blurs the lines of political conflict in an era of high disconnect between the state and society. On the other hand, case studies in Argentina (Tagina, 2022), Costa Rica (Sánchez, 2007) and Venezuela (Morgan, 2007) report an important fall in mass partisanship following the economic effects of neoliberal policies on people’s everyday lives during the 1990s. While being partisan represented the political norm in most party systems in the region, the introduction of free-market capitalism marks a reversal in the attitudinal trend where political parties converge towards a new neoliberal center (Mainwaring, 2018; Roberts, 2014). Hence, the evolution of partisanship reflects a transformative shift in the organization of politics with citizens at the outskirts of the

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<sup>7</sup> These social organizations link beneficiaries from the redistributive programs, also called social missions, to Chávez’s party.

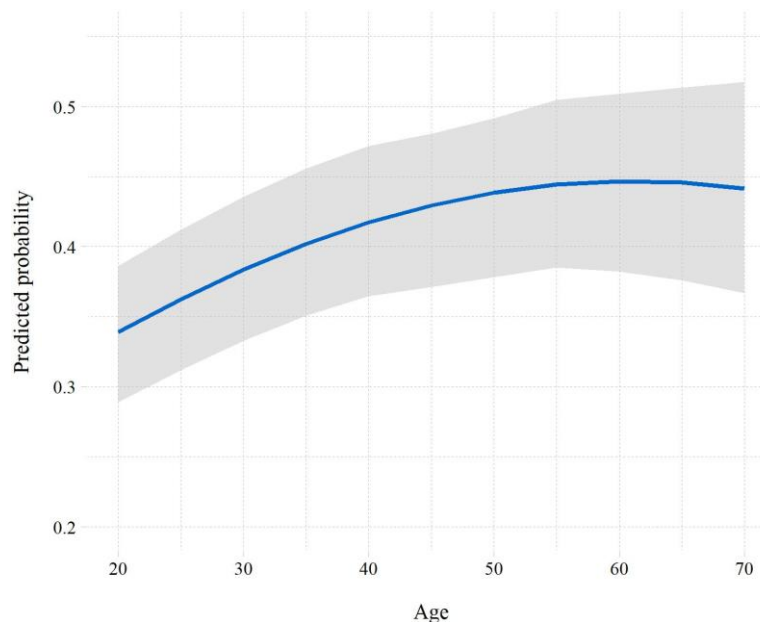


decision process. Now, how much of the decline in voters' partisan attitudes is attributable to life-cycle effects, generational replacement or period shocks remain to be explored.

### *What Moves Party Identification?*

We now report the results of our empirical tests for the effects of age, period, and cohort on partisanship in Latin America between 2006 and 2020. Figure 3 to 5 provide evidence of the effects of each time-related variable. Figure 6 illustrates the changes in the predicted probability of being partisan once we replace birth cohorts by the formative conditions producing them and allow the conditions to vary by country. This, in turn, allows to assess whether voters' partisan predispositions are affected by the political environment in which they are embedded. Finally, figure 7 shows what happens once we control for potential confounding variables across all Latin American voters.

Figure 3 displays the predicted relationship between age and partisanship for all voting-age citizens in the region. Recall that the intervals quantify uncertainty about our inference. We can clearly see that the odds of expressing a partisanship increase with age until the mid-sixties. Voters are 5.52 times more likely to identify with a party for each additional yearly increase in age, after controlling for period and cohort effects (see Table 3 in the [Appendix](#)). Conversely, the odds of expressing partisan attitudes decrease by just 4 percentage points on the probability scale for voters older than 65 years of age. This means that Latin American voters are quicker to learn than they are to forget their partisan habits. Our results support the proposition that age effect largely reflects incremental gains in electoral experience across the region (*Hypothesis 1*). Older voters are more likely than younger voters to express partisan attitudes as they accumulate more experience with parties over time. Still, the large uncertainty of our estimate calls for a better understanding of electoral context and its influence on the relationship between age and partisanship in Latin America.

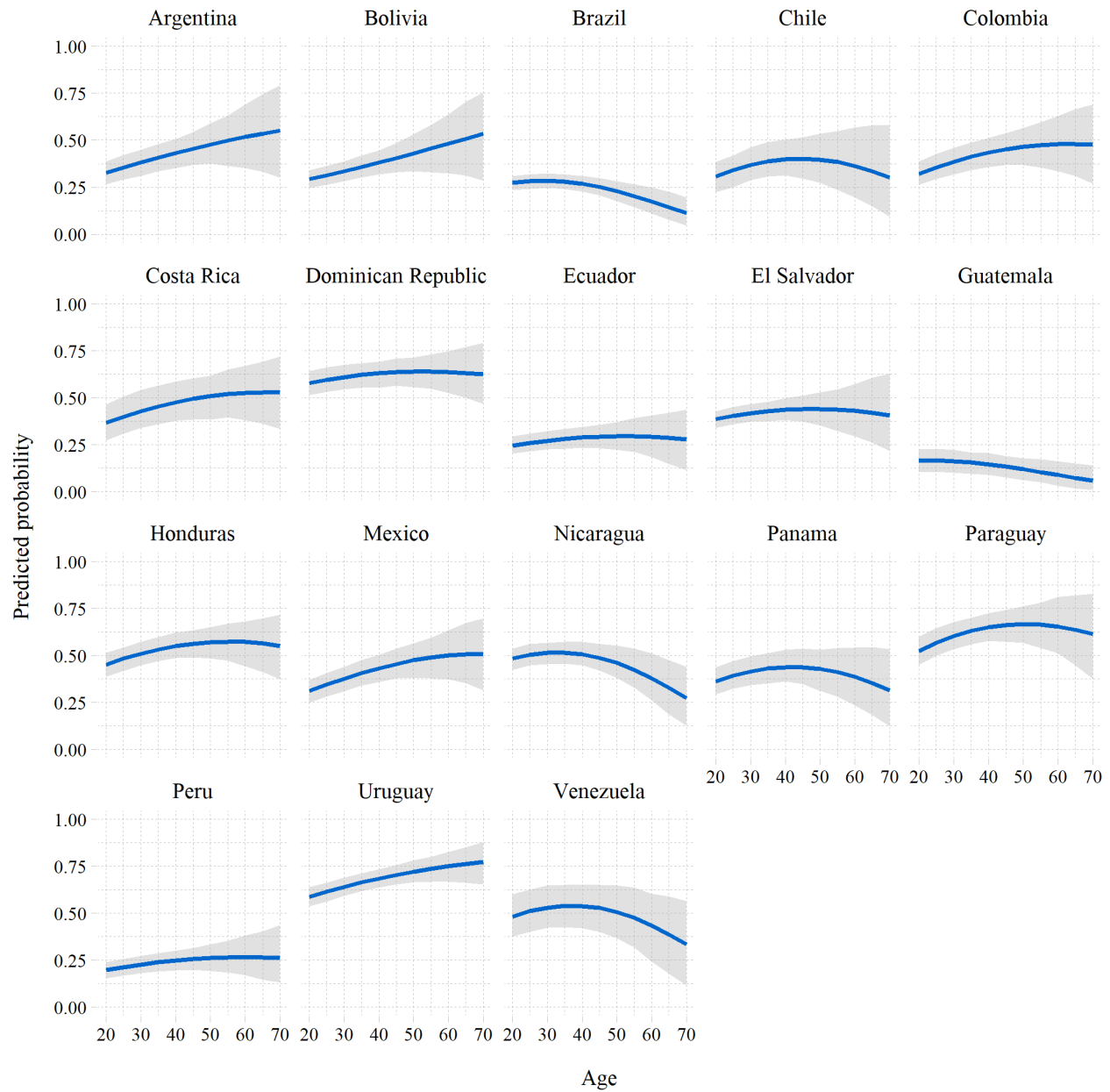


**Fig. 3.** Predicted age effect on Latin American voters' partisanship with 90% uncertainty intervals.

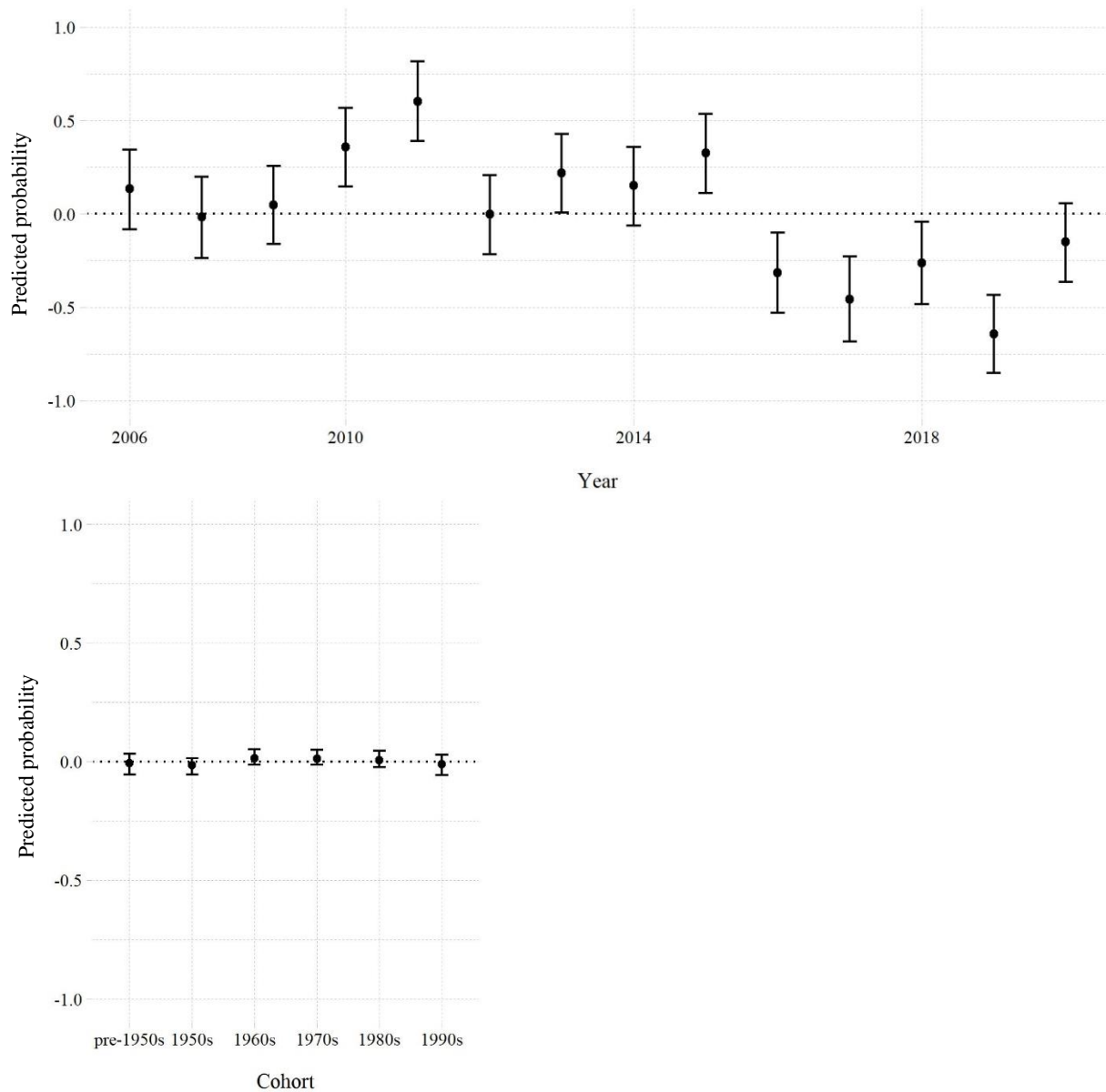


Figure 4 reports the predicted relationship between age and partisanship by country, our proxy for electoral context. Party systems with clearly defined programmatic choices – Argentina, Bolivia, and Uruguay – provide support for the experience effect of age (Anria, 2018; Levitsky et al., 2016). Citizens living in those countries see their odds of being partisan increase by 20 percentage points between the ages of 20 and 70, with Uruguayans expressing the highest level of partisanship in the region. By contrast, party systems where political alternatives erode – Brazil, Chile, Nicaragua, and Venezuela – are associated with a reversal of the age effect on partisanship (Levitsky et al., 2016; Mainwaring, 2018; Morgan, 2007). In those countries, older voters are less likely than younger voters to express partisan attitudes, regardless of democratic age. We find no support for *Hypothesis 2*. This is to show that party and party system age do not always explain voters' partisan predispositions. What matters is voters' continuous exposure to the same parties as key players in the political game. This echoes Lupu and Stokes' (2010) argument on political continuity. Perhaps one of the most interesting findings is the null effect of age on predicted partisanship in four countries – the Dominican Republic, Ecuador, El Salvador, and Peru. Growing older does not affect voters' propensity to identify with a political party. One distinction remains, however, between those countries: the overall level of predicted partisanship. Living in the Dominican Republic is associated with one of the highest probabilities of being partisan in the region (60 percentage points), unlike Peru and Ecuador (25 percentage points). In fact, being exposed to party systems with the highest levels of fragmentation in the region – Brazil, Ecuador, Guatemala, and Peru – seems to decrease dramatically the odds of identifying with a party with age (Mainwaring, 2018). Voters in those countries are more likely to declare themselves nonpartisan than identify with any party.

Hence, investigating age effects by country yields some evidence that choice clarity in party systems shapes partisan predispositions, along with political stability. The differences between countries are quite large (60 points), suggesting that the country variable from our third model captures important elements of party-voter interactions. This, in turn, explains our null cohort effects in the bottom panel of figure 5, since birth cohorts on their own do not account for the underlying conditions that shape partisan learning.



**Fig. 4.** By country predicted age effect on partisanship with 90% uncertainty intervals.



**Fig. 5.** Predicted probability of being partisan, given respondents' survey year (top) and cohort (bottom).

We now turn towards the effects of period shocks on partisanship. The upper panel of [Figure 5](#) reveals important variations across Latin American voters in the predicted odds of expressing partisan attitudes between 2006 and 2020. Voters nested within survey years differ from each other by 68 percentage points, suggesting that part of the influence of time is mediated by short- and medium-term events. Hence, our fourth hypothesis on period effects is likely true, given the evidence from the data. We find that most of the variation between periods come from three points in time: 2011 (60), 2017 (-46) and 2019 (-64). While it is tempting to infer electoral cycles as the main source of change in the period effect's size, little evidence supports that statement. A simple count of the legislative and presidential elections shows that 2018 and 2019

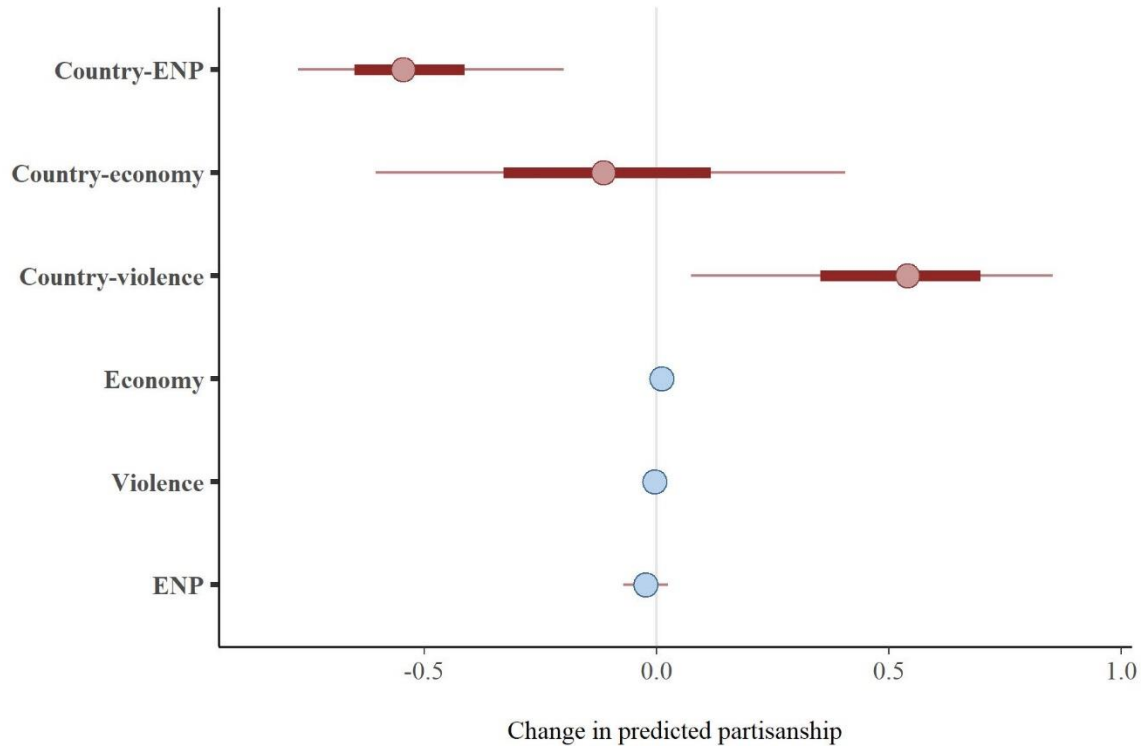
contain the highest number of elections held in the region, while the lowest number is found in 2011<sup>8</sup>. An alternative explanation is that the period effects capture a larger political event in the region. Our observations coincide with the end of leftist governments' mandate, as well as the rise and fall of the reactionary right starting in early 2010s (Balán & Montambeault, 2020; Lupu et al., 2019). As political alternatives to the status quo raise in salience, so does the odds of expressing a partisanship. Inversely, the odds of being partisan appear to decrease as political parties converge towards the center over time.

Change in party saliency during voters' impressionable years may also affect their propensity to develop partisan attitudes. We therefore replace birth cohorts with three conditions believed to mediate the exposure of citizens to political parties, before comparing each effect at the population (blue intervals) and country (red intervals) level. In other words, we assess whether allowing conditions to vary by country reveals the presence of long-term partisan predispositions among voters in the region. Figure 6 displays the results for the number of effective parties (ENP), as well as for the experience of relative change in political violence and voters' living standards during their impressionable years. As expected, averaging the effects of each formative condition across the whole population of Latin American voters makes them disappear. In fact, all three conditions have the upper and lower bounds of their 50% and 90% uncertainty intervals very close or equal to zero, indicating that their population effects are likely insignificant. On average, voters who experienced increasing rates of political violence and their living standards are not more likely to identify with a political party later in life. The same goes for voters socialized in party systems with higher ENP scores.

Once we allow each condition to vary by country, generational effects appear. This is consistent with the notion that the large differences observed between countries arise in part from initial differences in state-citizen interactions across the region. Voters tend to develop long-term partisan predispositions when the political environment in which they socialize becomes increasingly violent (51 percentage points). Likewise, the set of parties constituting the party system greatly affects partisan learning in the expected direction. The greater the number of political parties, the more difficult it is for voters to make sense of the political map and form an identification with parties. The odds decrease by 52 points on the probability scale. Our data suggest no evidence that experiencing changes in living standards affects partisanship later in life. Both of the variable's uncertainty intervals overlap zero. Overall, voters in the region tend to form long-term partisan predispositions when initial state-citizens interactions are clearly defined by the number of parties to choose from and raising concerns about security provision.

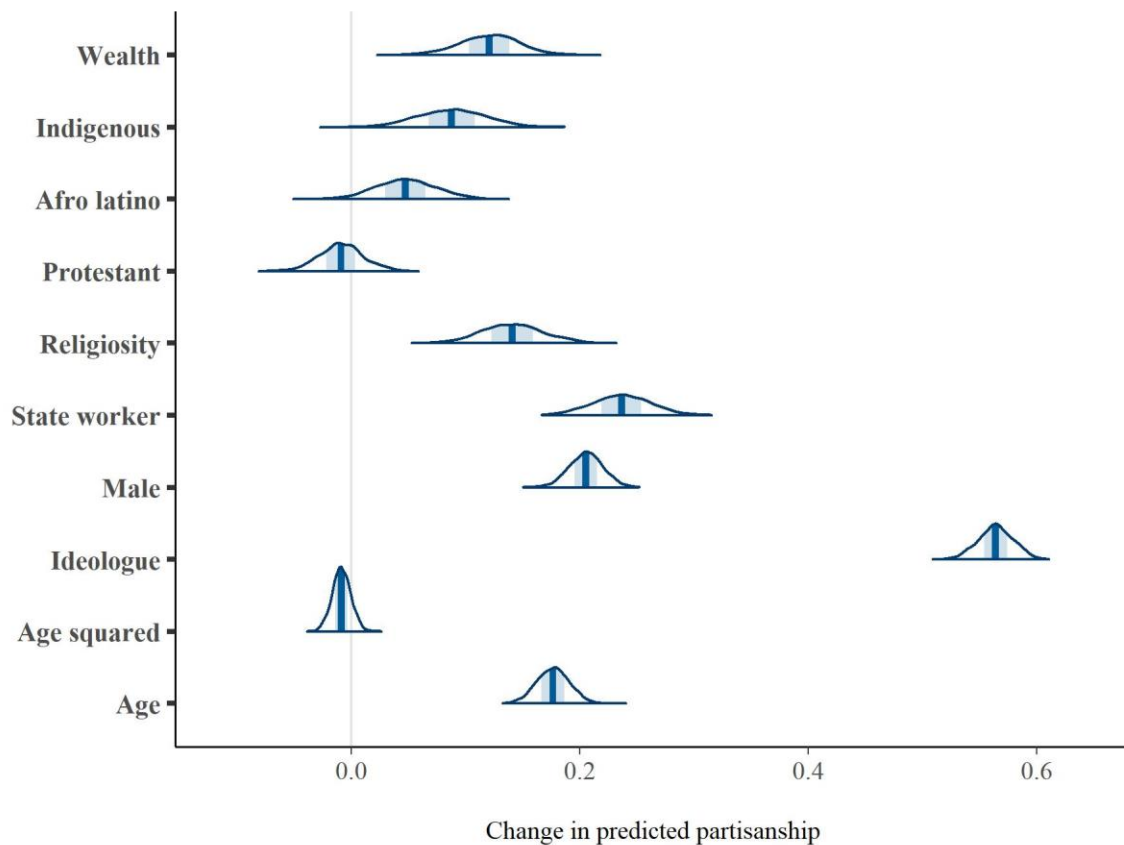
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<sup>8</sup> See the Executive Approval Database (EAP) for more information on presidential approval ratings for each of the 18 Latin American countries between 1980 and 2016, and Carlin and his colleagues (2018) for a study on the effect of electoral cycles in the region.



**Fig. 6.** Estimated formative condition effects at the population- (*blue*) and country-level (*red*) with means, 50% (wide short bars) and 90% (narrow long bars) uncertainty intervals.

Finally, [Figure 7](#) reports the predicted probability of identifying with a political party once we account for the potential confounding effects at the population-level. The direction of influence is the same for all correlates. None of the sociodemographic characteristics seem to explain partisanship, except for gender and wealth. On average, being a man increases the odds of identifying with a political party by 23 percentage points, in comparison to being a woman. Likewise, wealthy citizens tend to be more supportive of a political party by 13 percentage points. Occupation also matters in raising awareness about partisan competition. Citizens who work for the state are more likely to self-categorize as partisans by 26 percentage points. Interestingly, we also find that belongingness is a greater predictor of partisanship than group membership across the region. Holding everything else constant, religious voters tend to self-categorize more readily as partisans (15 points) when compared to secular voters. Self-placement on the traditional left-right scale is the strongest predictor of partisanship. In Latin America, ideologues are 75 percentage points more likely to express partisan attitudes than if they expressed a more moderate position on the left-right scale. Adding the controls decreases the size of the age effect by 7 points, becoming the third most important predictor of partisanship. Note that we do not include education due to its inability to capture meaningful effects. One potential reason is the different place education hold in politicizing citizens across the region (Carlin et al., 2015; Lupu et al., 2019).



**Fig. 7.** Estimated population-level effects with means and 50% uncertainty intervals.

### *Robustness Checks*

Next, we perform robustness checks to test the predictive accuracy of each model using the leave-one-out cross-validation approach (see Table 4 in the [Appendix](#)). Higher expected log-predictive densities (ELPD) indicate better predictions if we fit the model to a new dataset. Comparing the two models' ELPD show that substituting birth cohorts for the formative conditions makes the model too complex, decreasing its predictive accuracy.

## 5 ✖ Conclusion

In this study, we argued that the political environment plays an important role in raising the salience of political parties in citizens' minds. The extent by which they experience the political system defines how they relate and abide by its governing logic. Variations in state capacity across Latin America help investigate the relationship between citizens and the state across time, looking specifically at the procedural dimension. Specifically, which conditions affect the consolidation of political parties in citizens' minds once we account for state capacity?

Our data confirm a positive and significant relationship between age and the likelihood of being partisan across all 18 countries. While the effect decreases with the added controls, age remains among the most important predictors of partisanship in the region. Interestingly, the effect of long-term politicization increases drastically when we allow citizens' formative experiences to vary by country. Voters who are exposed to more political parties during their formative years are less likely to declare themselves partisan, while the experience of political violence increases the odds. We also find the current configuration of the party system to mediate party identification. High party system stability strengthens the relationship between age and partisanship while high party fragmentation reverses the age effects observed. Likewise, citizens' propensity to identify with political parties also varies greatly with period effects that encapsulate changes in choice clarity. This study contributes to the understanding of party-voters relationship in emerging democracies, and the dynamics of institutionalization at the mass level.

Our analysis still has some limits. Despite recent advances in survey research in the region, efforts remain constricted to the time period of the data collection. Hence, we cannot directly observe the effects of the neoliberal turn on partisanship across the region with the passage of time. LAPOP carried out the earliest cross-national survey, including all 18 countries, in 2006. Due to the difficulty in obtaining earlier data, future researchers should work on creating a comprehensive dataset of past national census and survey data from the region. This is a concern that many point out in studying political attitudes in Latin America and developing democracies more generally (Luna & Zechmeister, 2005; Lupu, 2015; Lupu et al., 2019).

## References

- Anria, S. (2018). *When movements become parties: The Bolivian MAS in comparative perspective* (Vol. 1–1 online resource). Cambridge University Press. <https://doi.org/10.1017/9781108551755>
- Baker, A., & Renno, L. (2019). Nonpartisans as false negatives: The mismeasurement of party identification in public opinion surveys. *The Journal of Politics*, 81(3), 906–922. <https://doi.org/10.1086/703129>
- Baker, K. L., Hildebrandt, K., & Dalton, R. J. (1981). *Germany transformed: Political culture and the new politics*. Harvard University Press. <https://catalog.hathitrust.org/Record/000728886>
- Balán, M., & Montambeault, F. (2020). *Legacies of the left turn in Latin America: The promise of inclusive citizenship* (Vol. 1–1 online resource). University of Notre Dame Press. <https://muse.jhu.edu/book/72621/>
- Banducci, S., & Stevens, D. (2015). Surveys in context. *Public Opinion Quarterly*, 79(S1), 214–243. <https://doi.org/10.1093/poq/nfv007>
- Bankert, A., Huddy, L., & Rosema, M. (2017). Measuring partisanship as a social identity in multi-party systems. *Political Behavior*, 39(1), 103–132. <https://doi.org/10.1007/s11109-016-9349-5>
- Bargsted, M., & Maldonado, L. (2018). Party identification in an encapsulated party system: The case of postauthoritarian Chile. *Journal of Politics in Latin America*, 10(1), 29–68. <https://doi.org/10.1177/1866802X1801000102>
- Bargsted, M., Somma, N. M., Muñoz-Rojas, B., Bargsted, M., Somma, N. M., & Muñoz-Rojas, B. (2019). Participación electoral en Chile. Una aproximación de edad, período y cohorte. *Revista de Ciencia Política (Santiago)*, 39(1), 75–98. <https://doi.org/10.4067/S0718-090X2019000100075>
- Bartels, L. M. (2002). Beyond the running tally: Partisan bias in political perceptions. *Political Behavior*, 24(2), 117–150. <https://doi.org/10.1023/A:1021226224601>
- Bartels, L. M., & Jackman, S. (2014). A generational model of political learning. *Electoral Studies*, 33, 7–18. <https://doi.org/10.1016/j.electstud.2013.06.004>
- Benton, A. L. (2005). Dissatisfied democrats or retrospective voters?: Economic hardship, political institutions, and voting behavior in Latin America. *Comparative Political Studies*, 38(4), 417–442. <https://doi.org/10.1177/0010414004273856>
- Brady, H. E., & Collier, D. (2010). *Rethinking social inquiry: Diverse tools, shared standards* (2nd ed, Vol. 1–1 online resource (xviii, 410 p.)). Rowman & Littlefield Publishers. <http://www.dawsonera.com/depp/reader/protected/external/AbstractView/S9781442203457>
- Brown, W. (2015). *Undoing the demos: Neoliberalism's stealth revolution*. Zone Books.
- Campbell, A., Gurin, G., & Miller, W. E. (1954). *The voter decides* (pp. xiii, 242). Row, Peterson, and Co.
- Carlin, R. E., Hartlyn, J., Hellwig, T., Love, G. J., Martínez-Gallardo, C., & Singer, M. M. (2018). Public support for Latin American presidents: The cyclical model in comparative perspective. *Research & Politics*, 5(3), 2053168018787690. <https://doi.org/10.1177/2053168018787690>



- Carlin, R., Singer, M., & Zechmeister, E. (2015). *The Latin American voter: Pursuing representation and accountability in challenging contexts*. University of Michigan Press. <http://muse.jhu.edu/book/41278>
- Castañeda, J. G. (2006). Latin America's Left turn. *Foreign Affairs*, 85(3), 28–43. <https://doi.org/10.2307/20031965>
- Collier, R. B., & Collier, D. (2002). *Shaping the political arena: Critical junctures, the labor movement, and regime dynamics in Latin America* (2002nd ed.). University of Notre Dame Press. <http://muse.jhu.edu/book/45473>
- Converse, P. E. (1969). Of time and partisan stability. *Comparative Political Studies*, 2(2), 139–171. <https://doi.org/10.1177/001041406900200201>
- Córdova, A., & Seligson, M. A. (2010). Economic shocks and democratic vulnerabilities in Latin America and the Caribbean. *Latin American Politics and Society*, 52(2), 1–35. <https://doi.org/10.1111/j.1548-2456.2010.00080.x>
- Dalton, R. J., & Weldon, S. (2007). Partisanship and party system institutionalization. *Party Politics*, 13(2), 179–196. <https://doi.org/10.1177/1354068807073856>
- Dassonneville, R. (2017). Age and voting. In *The SAGE Handbook of electoral behaviour* (Vol. 1–2, pp. 137–158). SAGE Publications Ltd. <https://doi.org/10.4135/9781473957978>
- Dix, R. H. (1992). Democratization and the institutionalization of Latin American political parties. *Comparative Political Studies*, 24(4), 488–511. <https://doi.org/10.1177/0010414092024004004>
- Domínguez, J. I., Greene, K. F., Lawson, C. H., & Moreno, A. (2014). *Mexico's evolving democracy: A comparative study of the 2012 elections*. Johns Hopkins University Press. <https://doi.org/10.1353/book.36902>
- Downs, A. (1957). *An economic theory of democracy*. Harper. <https://bac-lac.on.worldcat.org/oclc/299495710>
- Fiorina, M. P. (1981). *Retrospective voting in American national elections*. Yale University Press.
- Franklin, C. H., & Jackson, J. E. (1983). The dynamics of party identification. *The American Political Science Review*, 77(4), 957–973. <https://doi.org/10.2307/1957569>
- Garretón, M. A. (1989). *The Chilean political process*. Unwin Hyman.
- Gelman, A., & Hill, J. (2006). *Data analysis using regression and multilevel/hierarchical models*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511790942>
- Gelman, A., & Hill, J. (2018). *Data analysis using regression and multilevel/hierarchical models* (19. print). Cambridge Univ. Press.
- Glenn, N. D. (2005). *Cohort analysis* (2nd ed). Sage Publications. <http://catdir.loc.gov/catdir/toc/ecip0421/2004019523.html>
- Gonzalez-Ocantos, E., de Jonge, C. K., Meléndez, C., Nickerson, D., & Osorio, J. (2020). Carrots and sticks: Experimental evidence of vote-buying and voter intimidation in Guatemala. *Journal of Peace Research*, 57(1), 46–61. <https://doi.org/10.1177/0022343319884998>
- Green, D. P., & Palmquist, B. (1990). Of artifacts and partisan instability. *American Journal of Political Science*, 34(3), 872–902. <https://doi.org/10.2307/2111402>
- Greene, K. F. (2011). Campaign persuasion and nascent partisanship in Mexico's new democracy. *American Journal of Political Science*, 55(2), 398–416.


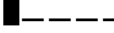


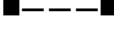








- Handlin, S. (2013). Social protection and the politicization of class cleavages during Latin America's Left turn. *Comparative Political Studies*, 46(12), 1582–1609. <https://doi.org/10.1177/0010414012463907>
- Hox, J. J. (2018). *Multilevel analysis: Techniques and applications*. Lawrence Erlbaum Associates. <http://catdir.loc.gov/catdir/enhancements/fy0634/2001057760-d.html>
- Karp, J. A., & Banducci, S. A. (2007). Party mobilization and political participation in new and old democracies. *Party Politics*, 13(2), 217–234. <https://doi.org/10.1177/1354068807073874>
- Kitschelt, H., Hawkins, K. A., Luna, J. P., Rosas, G., & Zechmeister, E. J. (2010). *Latin American party systems*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511750311>
- Lawson, C., & Greene, K. F. (2014). Making clientelism work: How norms of reciprocity increase voter compliance. *Comparative Politics*, 47(1), 61–85. <https://doi.org/10.5129/001041514813623173>
- Levitsky, S. (2018). Democratic survival and weakness. *Journal of Democracy*, 29(4), 102–113. <https://doi.org/10.1353/jod.2018.0066>
- Levitsky, S., Loxton, J., Van Dyck, B., & Domínguez, J. I. (Eds.). (2016). *Challenges of party-building in Latin America*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316550564>
- Levitsky, S., & Roberts, K. M. (2011). *The resurgence of the Latin American Left*. Johns Hopkins University Press. <http://books.google.com/books?isbn=9781421401096>
- Lisi, M. (2015). Partisanship and age effects in recent democracies: Southern Europe from a comparative perspective. *Comparative European Politics*, 13(4), 493–513. <https://doi.org/10.1057/cep.2014.3>
- Luna, J. P. (2014). *Segmented representation: Political party strategies in unequal democracies* (Vol. 1–1 online resource (xxv, 374 pages) : illustrations (black and white), maps (black and white)). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199642649.001.0001>
- Luna, J. P., & Zechmeister, E. J. (2005). Political Representation in Latin America: A study of elite-mass congruence in nine countries. *Comparative Political Studies*, 38(4), 388–416. <https://doi.org/10.1177/0010414004273205>
- Lupu, N. (2013). Party brands and partisanship: Theory with evidence from a survey experiment in Argentina. *American Journal of Political Science*, 57(1), 49–64. <https://doi.org/10.1111/j.1540-5907.2012.00615.x>
- Lupu, N. (2015). Party polarization and mass partisanship: A comparative perspective. *Political Behavior*, 37(2), 331–356. <https://doi.org/10.1007/s11109-014-9279-z>
- Lupu, N., & Michelitch, K. (2018). Advances in Survey Methods for the Developing World. *Annual Review of Political Science*, 21(1), 195–214. <https://doi.org/10.1146/annurev-polisci-052115-021432>
- Lupu, N., Oliveros, V., & Schiumerini, L. (2019). *Campaigns and voters in developing democracies: Argentina in comparative perspectives*. University of Michigan Press. <https://doi.org/10.3998/mpub.10087303>
- Lupu, N., & Peisakhin, L. (2017). The legacy of political violence across generations. *American Journal of Political Science*, 61(4), 836–851. <https://doi.org/10.1111/ajps.12327>

- Lupu, N., & Stokes, S. (2010). Democracy, interrupted: Regime change and partisanship in twentieth-century Argentina. *Electoral Studies*, 29(1), 91–104. <https://doi.org/10.1016/j.electstud.2009.07.005>
- Magaloni, B. (2006). *Voting for autocracy: Hegemonic party survival and its demise in Mexico*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511510274>
- Mahéo, V.-A., & Bélanger, É. (2018). Is the Parti Québécois bound to disappear? A study of the current generational dynamics of electoral behaviour in Quebec. *Canadian Journal of Political Science/Revue Canadienne de Science Politique*, 51(2), 335–356. <https://doi.org/10.1017/S0008423917001147>
- Mainwaring, S. (Ed.). (2018). *Party systems in Latin America: Institutionalization, decay, and collapse*. Cambridge University Press. <https://doi.org/10.1017/9781316798553>
- Mainwaring, S., Bejarano, A. María., & Pizarro Leongómez, E. (2006). *The crisis of democratic representation in the Andes* (Vol. 1–1 online resource (xv, 359 pages) : illustrations). Stanford University Press. <http://site.ebrary.com/id/10156554>
- Mainwaring, S., & Su, Y.-P. (2021). Electoral volatility in Latin America, 1932–2018. *Studies in Comparative International Development*, 56(3), 271–296. <https://doi.org/10.1007/s12116-021-09340-x>
- Mair, P. (2013). *Ruling the void: The hollowing of Western democracy*. Verso Books.
- Mannheim, K. (1952). The problem of generations. In *Essays on the sociology of knowledge. Collected works of Karl Mannheim*. (Routledge&Kegan Paul, Vol. 5, pp. 276–322).
- Michelitch, K., & Utych, S. (2018). Electoral cycle fluctuations in partisanship: Global evidence from eighty-six countries. *The Journal of Politics*, 80(2), 412–427. <https://doi.org/10.1086/694783>
- Mill, J. S. (1941). *A system of logic: Ratiocinative and inductive, being a connected view of the principles of evidence and the methods of scientific investigation* (New impression, Vol. 1–1 online resource (xvi, 622 pages)). Longmans, Green. <http://books.google.com/books?id=ILskAQAAMAAJ>
- Moreno, A. (1999). *Political cleavages: Issues, parties, and the consolidation of democracy*. Westview Press. <http://hdl.handle.net/2027/mdp.39015048778792>
- Moreno, A. (2015). *El votante mexicano: Democracia, actitudes políticas y conducta electoral*. Fondo de Cultura Económica.
- Morgan, J. (2007). Partisanship during the collapse of Venezuela’s party system. *Latin American Research Review*, 42(1), 78–98.
- Morgan, J., & Buice, M. (2013). Latin American attitudes toward women in politics: The influence of elite cues, female advancement, and individual characteristics. *American Political Science Review*, 107(4), 644–662. <https://doi.org/10.1017/S0003055413000385>
- Murillo, M. V., & Visconti, G. (2017). Economic performance and incumbents’ support in Latin America. *Electoral Studies*, 45, 180–190. <https://doi.org/10.1016/j.electstud.2016.10.007>
- Nadeau, R., Bélanger, É., Lewis-Beck, M. S., Turgeon, M., & Gélneau, F. (2017). *Latin American elections: Choice and change* (Vol. 1–1 online resource (vi, 239 pages)). University of Michigan Press. <http://site.ebrary.com/id/11340189>
- Pérez, O. J. (2003). Democratic legitimacy and public insecurity: Crime and democracy in El Salvador and Guatemala. *Political Science Quarterly*, 118, 627–644. <https://doi.org/10.2307/30035699>

- Pérez, O. J. (2011). *Political culture in Panama: Democracy after invasion* (1st ed). Palgrave Macmillan.
- Pérez-Liñán, A., Schmidt, N., & Vairo, D. (2019). Presidential hegemony and democratic backsliding in Latin America, 1925–2016. *Democratization*, 26(4), 606–625. <https://doi.org/10.1080/13510347.2019.1566321>
- Ponce, A. F. (2016). Carteles de drogra, violencia y competitividad electoral a nivel local: Evidencia del caso mexicano. *Latin American Research Review*, 51(4), 62–85.
- Roberts, K. M. (2014). *Changing course in Latin America: Party systems in the neoliberal era* (Vol. 1–1 online resource (xx, 330 pages) : illustrations). Cambridge University Press. <https://doi.org/10.1017/CBO9780511842856>
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford University Press. <https://catalog.hathitrust.org/Record/004506485>
- Rose, R., & Mishler, W. (1998). Negative and positive party identification in post-communist countries. *Electoral Studies*, 17(2), 217–234. [https://doi.org/10.1016/S0261-3794\(98\)00016-X](https://doi.org/10.1016/S0261-3794(98)00016-X)
- Samuels, D. (2006). Sources of mass partisanship in Brazil. *Latin American Politics and Society*, 48(2), 1–27. <https://doi.org/10.1111/j.1548-2456.2006.tb00345.x>
- Samuels, D., & Zucco, C. (2014). The power of partisanship in Brazil: Evidence from survey experiments. *American Journal of Political Science*, 58(1), 212–225. <https://doi.org/10.1111/ajps.12050>
- Sanbonmatsu, K., & Dolan, K. (2009). Do gender stereotypes transcend party? *Political Research Quarterly*, 62(3), 485–494. <https://doi.org/10.1177/1065912908322416>
- Sánchez, F. (Fernando F. S. C. (2007). *Partidos políticos, elecciones y lealtades partidarias en Costa Rica: Erosión y cambio* (1. ed). Ediciones Universidad de Salamanca.
- Sartori, G. (2005). Party types, organisation and functions. *West European Politics*, 28(1), 5–32. <https://doi.org/10.1080/0140238042000334268>
- Stoker, L., & Jennings, M. K. (2008). Of time and the development of partisan polarization. *American Journal of Political Science*, 52(3), 619–635. <https://doi.org/10.1111/j.1540-5907.2008.00333.x>
- Stokes, S. C., Dunning, T., Nazareno, M., & Brusco, V. (2013). *Brokers, voters, and clientelism: The puzzle of distributive politics*. Cambridge University Press. <https://doi.org/10.1017/CBO9781107324909>
- Tagina, M. L. (2022). *Working paper*.
- Tóka, G. (1998). Party appeals and voter loyalty in new democracies. *Political Studies*, 46(3), 589–610. <https://doi.org/10.1111/1467-9248.00156>
- Tóka, G., & Gosselin, T. (2010). Persistent political divides, electoral volatility and citizen involvement: The freezing hypothesis in the 2004 European election. *West European Politics*, 33(3), 608–633. <https://doi.org/10.1080/01402381003654619>
- Torcal, M., & Montero, J. R. (2006). *Political disaffection in contemporary democracies: Social capital, institutions and politics*. Routledge. <https://doi.org/10.4324/9780203086186>
- Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and equality: Civic voluntarism in American politics*. Harvard University Press. <http://www.gbv.de/dms/hbz/toc/ht007358399.pdf>

- Visconti, G. (2019). Economic perceptions and electoral choices: A design-based approach. *Political Science Research and Methods*, 7(4), 795–813. <https://doi.org/10.1017/psrm.2017.26>
- Wang, Y. (2021). The political legacy of violence during China’s cultural revolution. *British Journal of Political Science*, 51(2), 463–487. <https://doi.org/10.1017/S0007123419000255>
- Ward, D. G., & Tavits, M. (2019). How partisan affect shapes citizens’ perception of the political world. *Electoral Studies*, 60, 102045. <https://doi.org/10.1016/j.electstud.2019.04.009>
- Wattenberg, M. P., & Dalton, R. J. (2000). *Parties without partisans: Political change in advanced industrial democracies*. Oxford University Press. <https://doi.org/10.1093/0199253099.001.0001>
- Weintraub, M., Vargas, J. F., & Flores, T. E. (2015). Vote choice and legacies of violence: Evidence from the 2014 Colombian presidential elections. *Research & Politics*, 2(2), 2053168015573348. <https://doi.org/10.1177/2053168015573348>
- Whiteley, P. F. (2011). Is the party over? The decline of party activism and membership across the democratic world. *Party Politics*, 17(1), 21–44. <https://doi.org/10.1177/1354068810365505>
- Yang, Y., & Land, K. C. (2013). *Age-period-cohort analysis: New models, methods, and empirical applications*. Taylor & Francis. <https://library.oapen.org/handle/20.500.12657/41269>
- Zaller, J. (1992). *The nature and origins of mass opinion*. Cambridge University Press. <http://hdl.handle.net/2027/hvd.32044051850329>

**Appendix****Table 2. Summary statistics of covariates**

Variable	Median	Mean	SD	.25 Q	.75 Q	Hist
ageR	-0.17	0.00	1.00	-0.85	0.70	
ageR2	0.62	1.00	1.24	0.15	1.43	
year	2012.00	2012.37	3.95	2010.00	2015.00	
race	0.00	0.77	0.94	0.00	1.00	
male	0.00	0.49	0.50	0.00	1.00	
education	6.00	6.94	4.42	3.00	11.00	
religion	0.00	0.54	0.80	0.00	1.00	
religiosity	0.67	0.51	0.35	0.33	0.67	
state_wrk	0.00	0.10	0.30	0.00	0.00	
ideologue	0.00	0.45	0.50	0.00	1.00	
quintile	2.00	2.00	1.08	1.00	3.00	
econ_living0	1.70	1.45	1.97	0.38	2.65	
pol_violence0	-0.24	0.61	8.79	-2.34	1.60	
enph0	2.73	3.10	1.67	2.18	3.72	

**Table 3. Models with explanatory variables**

Model	M <sub>0</sub> : population-level age effects	M <sub>1</sub> : with varying intercept	M <sub>2</sub> : with formative conditions
<b>Fixed part</b>	<i>Odds ratio</i> (Cr. I.)	<i>Odds ratio</i> (Cr. I.)	<i>Odds ratio</i> (Cr. I.)
Intercept	0.59 (0.58 – 0.59)	0.36 (0.28 – 0.45)	0.63 (0.44 – 0.92)
Age	1.25 (1.24 – 1.26)	5.52 (4.37 – 6.77)	1.27 (1.25 – 1.29)
Age squared	0.97 (0.96 – 0.98)	0.40 (0.29 – 0.58)	0.96 (0.96 – 0.97)
ENP			0.98 (0.93 – 1.03)
Political violence			1.00 (0.99 – 1.00)
Economic insecurity			1.01 (0.99 – 1.03)
<b>Random part</b>			
$\sigma^2$		3.29	3.29
$\tau_{00}$		0.00 <sub>cohort</sub>	0.61 <sub>country</sub>
		0.25 <sub>year</sub>	0.15 <sub>year</sub>
$\tau_{11}$			0.00 <sub>country.pol_violence</sub>
			0.00 <sub>country.econ_insecurity</sub>
			0.01 <sub>country.enp</sub>
ICC		0.07	0.16
N		6 <sub>cohort</sub>	18 <sub>country</sub>
		14 <sub>year</sub>	14 <sub>year</sub>
R <sup>2</sup> Bayes	0.010	0.025	0.088

\* 90% credible intervals (Cr. I.)

**Table 4. Model comparison with LOOIC**

Models	$\Delta$ ELDP	$\Delta$ SE	weight	right side formula
M2	0.0	0.0	0.530	ageR + ageR2 + enp0 + violence0 + economy0 + (1 + enp0 + violence0 + economy0   country) + (1   year)
M1	7559.7	236.1	0.422	ageR + ageR2 + (1   cohort) + (1   year)
M0	9568.0	230.0	0.048	ageR + ageR2