

# The Importance of the Socio-Cultural Dimension in Latin American Politics

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## Abstract

In advanced democracies, scholars are in widespread agreement that two distinct ideological dimensions are needed to understand the structure of political contestation—a socio-cultural one and an economic one. However, in the literature on Latin America, the socio-cultural dimension is largely overlooked, focusing almost exclusively on how economic issues influence citizens' preferences. This focus on economics is justified in terms of sheer explanatory power if the socio-cultural dimension and the economic dimension are highly correlated—that is, when one's position on one dimension can be inferred from their position on the other. I will show that a level of correlation that would justify collapsing the socio-cultural and the economic into a single dimension has faded away as Latin American democracies consolidate after redemocratization. During more recent periods, the two dimensions have been more cross-cutting—one's position on one cannot be inferred from their position on the other. When this is the case, any account of politics that relies on a conception of ideology that is unidimensional runs the risk of omitting a potentially important causal force. I will further show that issues associated with what we might call “traditional values” and “law-and-order” are in the minds of citizens in defining their latent socio-cultural position.

**Keywords:** Ideology | GAL–TAN | Latin America | Political behavior

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Traditionally, left–right has been the dominant ideological space evaluated by the literature (for example, see [Sani and Sartori, 1983](#)). Left and right represent two poles, where the left favors greater state intervention in the economy for redistribution; the right champions the free market and economic efficiency ([Luna and Rovira Kaltwasser, 2014](#)). Together, they form a dimension centered around economic issues.

Historically, this economic dimension has been prevalent across advanced democracies in Western Europe and North America ([Lipset and Rokkan, 1967](#)). More recently, the literature on these countries has noted the increasing importance of a socio-cultural dimension, characterized by disputes over identity and social values ([Bustikova, 2014](#); [Ignazi, 1996](#); [Inglehart, 1971](#); [Kitschelt, 1994](#)). These topics are often summarized under the GAL–TAN dimension, where GAL stands for green/alternative/libertarian; TAN signifies traditional/authoritarian/nationalist (see, [Hooghe and Marks, 2018](#); [Hooghe, Marks, and Wilson, 2002](#); [Vachudova, 2021](#)). Political behavior in these democracies has thus become increasingly two-dimensional, with one axis being the economic dimension (left–right) and the other being the socio-cultural dimension (GAL–TAN).<sup>1</sup>

In Latin American politics, however, the literature downplays the importance of the GAL–TAN ideological dimension. Since [Collier and Collier \(2002\)](#) seminal work, most of the focus has been solely on the economic dimension. The literature on the region has a tradition of underscoring the importance of the economic dimension for understanding Latin American politics (see, for example, [Kapiszewski, Levitsky, and Yashar, 2021b](#); [Roberts, 2014](#)).

However, a growing literature is exploring the importance of socio-cultural issues in Latin America. For example, [Smith and Boas \(2024\)](#) argue that the importance of topics like

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<sup>1</sup>Throughout the article, I will use socio-cultural dimension and GAL–TAN dimension interchangeably

abortion and same-sex marriage is rising due to media and political opposition, shaping the political behavior of Latin American voters. While relevant, this research does not comprehensively assess the relevance of a more broadly defined socio-cultural dimension. This gap in the literature prompts a central question: Is the socio-cultural dimension relevant for Latin American individuals?

Following [Hinich and Munger's \(1994\)](#) take that the number of ideologies in a polity is an empirical question, this article assesses whether a GAL–TAN dimension is relevant in Latin American politics. I argue that the socio-cultural dimension has become increasingly relevant because of a change in the public's positions on the two dimensions—from overlapping to increasingly cross-cutting (i.e., from aligned to orthogonal) ([Sani and Sartori, 1983](#)). As a result, the socio-cultural dimension has gained importance because knowing one's position on the economic dimension is no longer enough to assess one's political behavior.

I contend that the increasing importance of the socio-cultural dimension derives from socio-economic improvements in Latin America after redemocratization. Despite alternating between right- and left-wing leadership, democratic governance resulted in economic stabilization and the creation of redistributive policies to support the low-income population. Nevertheless, the region remains markedly unequal and poor. This uneven development has allowed a greater interest in socio-cultural issues while maintaining the support for wealth redistribution in recent years. As a result, both dimensions can now play an important role in the region politics.

To analyze this argument, I developed an original measurement of the economic and socio-cultural dimensions. Using a novel Item Response Theory (IRT) method developed by [Morucci et al. \(2024\)](#), I construct indexes to assess the underlying political preferences of

the respondents to all 23 waves (1995–2023) of the Latinobarómetro.<sup>2</sup>

I conducted analyses at both the country and individual levels to evaluate the ideological shift in the region and the relevance of socio-cultural issues. The findings indicate that the economic and GAL–TAN dimensions have become more cross-cutting in the most recent period. On average, the distance between respondents’ positions on the economic and socio-cultural dimensions is 49% larger than it was in the previously most cross-cutting period. These findings suggest that, in recent years, an individual’s stance on the economic dimension has been a weak predictor of their stance on the socio-cultural dimension.

This paper contributes by underscoring the importance of a socio-cultural cleavage in Latin America. The decreasing correlation between the socio-cultural and economic dimensions generates a potentially more complex political landscape in the region. Voters are now more likely to face a trade-off, having to prioritize either economic or social concerns when casting their ballots. The study also offers a solid examination of ideological trends in the region by tracing the evolution of both economic and socio-cultural dimensions. Finally, it investigates the political relevance of socio-cultural issues in a context where conventional wisdom suggests that such postmaterialist concerns should not play a significant role.

## The Socio-cultural Dimension

The literature has consolidated its view on ideology as a consistent set of beliefs (Knight, 2006; Lee, 2009). Largely due to Downs’s 1957 seminal work, the literature represents this set as a dimension. The ideological space, then, consists of individuals’ latent positions,

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<sup>2</sup>The analysis encompasses the following countries: Argentina, Brazil, Chile, Mexico, Paraguay, Peru, Uruguay, Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Panama, and Dominican Republic.

with each position reflecting an ideology (i.e., a bundle of preferences) (Hinich and Munger, 1994).

The existence of an ideological space raises the question of which and how many dimensions exist across societies. It is clear, however, that every polity has, at the very least, one ideological dimension where the public is distributed. Building on Inglehart (1971), I argue that individuals' goals follow a hierarchical order in which economic and material security take priority, thus underscoring the primacy of material disputes among individuals. Moreover, historical accounts highlighted in Lipset and Rokkan (1967) and Collier and Collier (2002) document the cross-national importance of owner-worker cleavage, which is intrinsically related to the economic dimension. Hence, all modern societies have a dimension related to economic preferences, whose poles are left and right. Nonetheless, the existence of an economic dimension does not preclude the manifestation of other dimensions (Hinich and Munger, 1994).

There is a broad consensus that a second dimension related to socio-cultural issues has become important for understanding contemporary politics in many democracies. This dispute relates to postmaterialist issues (Inglehart, 1981), including immigration, environmental concerns, and sexual rights. In contrast to the economic dimension, whose terminology has been consolidated as the left-right dispute, there is a lack of consensus on defining this socio-cultural dimension. The literature has developed a myriad of definitions to address this ideological dispute (Bustikova, 2014; Hooghe and Marks, 2018; Hooghe, Marks, and Wilson, 2002; Ignazi, 1996; Inglehart, 1971, 1981; Kitschelt, 1994; Norris and Inglehart, 2019; Vachudova, 2021). One of the most prominent is GAL-TAN, representing the poles of the socio-cultural dimension (Hooghe, Marks, and Wilson, 2002). As Vachudova (2021,

473) defines it, GAL and TAN concerns “universalistic and socially liberal values [GAL] in competition with traditional and communitarian [TAN] ones.”

While the study of the GAL–TAN dimension emerged in the late 1960s (Inglehart, 1971), recent globalization shocks—immigration and trade—have made socio-cultural issues critical topics in advanced democracies. Studies have shown that an influx of immigrants primarily increases natives’ anxiety regarding cultural aspects (Alesina and Tabellini, 2022; Hainmueller and Hopkins, 2014). Separately, the trade shock has created economic “losers”<sup>3</sup> who feel left behind by the political elites and the state (Autor, Dorn, and Hanson, 2016; Colantone and Stanig, 2018*a,b*; Rodrik, 2018).

These shocks from globalization have increased the importance of socio-cultural issues through different mechanisms. First, the immigration anxiety has made nativist rhetoric that excludes immigrants and ethnic minorities more appealing (Mudde, 2007). Second, globalization’s economic dynamics have increased the cleavage between a cosmopolitan and educated (upper) middle class that benefits from it and unskilled and culturally insecure individuals who suffer from it (Hooghe and Marks, 2018). Finally, globalization has created a general sense of status decline (Gest, Reny, and Mayer, 2018), resulting in a socio-cultural backlash to many socially liberal positions. These factors have resulted in a cosmopolitan–nativist divide that made the GAL–TAN dimension increasingly central to electoral politics in advanced democracies.

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<sup>3</sup>Those unable to compete with the cheaper labor in developing countries, especially China.

# The Socio-cultural Dimension in Latin America

The political relevance of the GAL–TAN dimension has been overlooked in Latin America in comparison to advanced democracies for three main reasons. First, high levels of inequality and poverty distinguish the countries in the region from advanced democracies ([Kapiszewski, Levitsky, and Yashar, 2021b](#); [Luna and Rovira Kaltwasser, 2014](#)). This economic reality results in a scholarly focus on economics as a key driver of the region’s political history ([Baker and Greene, 2011](#); [Remmer, 2012](#); [Roberts, 2014](#)). The general expectation of this literature, and modernization theory more broadly ([Inglehart, 1971](#)), is that the high levels of economic hardship make the economic dimension considerably more significant than socio-cultural issues.

Second, the consequences of globalization-related shocks in Latin America differ substantially from those observed in advanced democracies. Immigration has not triggered an equivalent anti-immigrant backlash. Colombia, for example, has received the largest number of Venezuelan migrants worldwide, but its citizens have not developed a strong negative view of those immigrants ([Rozo and Vargas, 2021](#); [Uscategui and Andrea, 2019](#)). Additionally, the trade shock from globalization has been largely advantageous to Latin America by boosting demand for relevant commodities for the region, such as soybeans and beef, making the region a beneficiary of economic globalization ([Ravallion, 2018](#)). As a result, the literature expectation is that the region should not have experienced the same polarizing impact of globalization, preventing the emergence of the GAL–TAN dimension.<sup>4</sup>

Finally, empirical research has found that the public comprehends the ideological labels in

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<sup>4</sup>See, for example, [Rodrik \(2018\)](#) discussion on different types of populism.

different ways in Latin America. This lack of consensus extends to the economic dimension, where citizens across the region do not share a common understanding of what left and right mean (Zechmeister, 2006; Zechmeister and Corral, 2010). Besides this difference in interpretation, there is variation in what topics motivate the political dispute. Neither the political elites' disputes nor the factors that generate the population attachment to parties and candidates are the same across Latin American countries (Pop-Eleches, 2021; Rosas, 2005). This evidence suggests that Latin America lacks shared ideological frameworks across the region, especially regarding the GAL–TAN dimension.

I challenge these three justifications by arguing that the socio-cultural dimension is relevant across Latin America. This relevance derives from the economic and GAL–TAN dimensions becoming increasingly cross-cutting. This change has a relevant political impact as it increases the trade-off between economic and socio-cultural issues for voters. This shift increases the likelihood that voters will select candidates who do not align with their preferences on the economic dimension in favor of those who do match with their socio-cultural views.

After the Latin American redemocratization in the 1980s, the region went through three periods in which socio-economic reality changed drastically. Most of the countries in the region emerged from authoritarian rule in a scenario of economic disarray. Consequently, the first democratic governments were forced to make profound political and economic adjustments (Gasparini and Lustig, 2011). This first period (from the mid-1980s to early 2000s) is known as the Neoliberal era. The second period (from the early 2000s to early 2010s) is known as the Left Turn when leftists who challenged the Neoliberal era ascended to power. These governments partially expanded the role of the state in the economy and promoted

wealth redistribution.

Despite their differences, the economic policies of the two periods were largely positive, especially for the lowest socio-economic strata (Baker, 2003; Gasparini and Lustig, 2011; Kapiszewski, Levitsky, and Yashar, 2021b; Remmer, 2012). These policies stabilized the economy, controlled hyperinflation, and expanded the welfare state. In the third period (from the early 2010s to today), this socio-economic improvement lessened the material concerns of a significant share of the population.

This economic improvement, combined with democratic consolidation in Latin America, has affected the relative importance of the ideological dimensions for the region's public. The improvement in the general economic security, especially among the poorest, increases the relative saliency of the socio-cultural dimension vis-à-vis the economic dimension. In turn, electoral competition and easier access to resources facilitate the organization and mobilization of a wider set of political groups (see, for example, Blofield, Ewig, and Piscopo, 2017; Corrales, 2017; Daby and Moseley, 2022; Díez, 2013).

These political and economic factors have enabled a greater interest in socio-cultural issues in the recent period, generating a greater political dispute around those issues. On the one hand, socially progressive issues, like abortion, have motivated increasing political activism (Daby and Moseley, 2022; Díez, 2013). On the other hand, members of Catholic and Evangelical groups have become more active politically to support socially conservative policies (Boas, 2021; Reuterswärd, 2021; Smith, 2019; Smith and Boas, 2024). In addition, these developments might have motivated some voters to become welfare chauvinists—individuals who hold conservative positions on socio-cultural issues while favoring more redistribution (Gidron, 2022).

A potential reason for the increase in welfare chauvinists relates to particular dynamics of how this democratic consolidation and economic improvement have happened in Latin America. Particularly after the pink tide, democracy has been associated with welfare expansion and greater wealth distribution. For example, Brazilians link democratic norms with redistribution since redemocratization (Samuels and Zucco, 2018). More generally, the structural reality of the persistent poverty and inequality in the region makes pro-poor policy very appealing for most of the population (Kapiszewski, Levitsky, and Yashar, 2021*b*; Luna and Rovira Kaltwasser, 2014).<sup>5</sup> It is this lingering appeal of more redistribution policies that hinders the two dimensions from overlapping more, allowing voters to combine leftist economic positions with socially conservative views rather than polarizing along traditional left-liberal versus right-conservative lines. The rising importance of socio-cultural issues has resulted in the GAL–TAN dimension becoming more cross-cutting (i.e., orthogonal).

## The Construction of Latent Ideologies with an IRT-M Model

To assess the relevance of a socio-cultural dimension for Latin Americans and whether it is cross-cutting with the economic dimension, I rely on the Latinobarómetro—the longest-running survey of social, political, and economic attitudes in the region. Latinobarómetro spans over 23 waves across 19 countries (1995–2023).<sup>6</sup> Hence, it encompasses most of the

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<sup>5</sup>It is this economic reality that sets the region apart from advanced democracies. The improvement in material well-being in advanced democracies after World War II was significantly greater, resulting in a more substantial societal movement towards socially liberal positions (Inglehart and Norris, 2017).

<sup>6</sup>Argentina, Brazil, Chile, Mexico, Paraguay, Peru, Uruguay, and Venezuela appear in all 23 waves. Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Panama, and Nicaragua are not in the 1995 wave. The Dominican Republic only joined in 2004. Nicaragua did not participate in the last wave. The

period since Latin America’s redemocratization, allowing a comprehensive analysis of ideological evolution in the region. I excluded the respondents from Nicaragua and Venezuela because these countries are not democracies.<sup>7</sup>

Since ideologies are latent characteristics and, consequently, cannot be observed directly (Hinich and Munger, 1994), I use a variation of an Item Response Theory (IRT) model known as IRT-M to generate the ideological position of Latinobarómetro’s respondents. IRT is one of the various methods researchers use to reduce dimensions or to generate measurements of an unobservable (i.e., latent) phenomenon. IRT connects a set of items that the researcher can directly measure, like survey questions, to derive a representation of the data in fewer dimensions, which oftentimes is associated with a latent construct of interest.

IRT-M differs from a regular IRT because it relies on a Bayesian semi-supervised approach. Regular IRT suffers from the fact that the generated latent dimensions that best predict the data do not necessarily relate to theoretical concepts (Morucci et al., 2024). Consequently, there is a problem of bridging the theoretical construct and measurement. IRT-M addresses this problem of properly performing a substantive interpretation of the latent dimensions. Its Bayesian approach allows that the created latent dimensions are associated with theoretical expectations developed by the analyst—even if those dimensions correlate to each other.

IRT-M depends on a set of priors (assumptions) about the relationship between one answer and a latent dimension of interest. This model combines the input data with a constraint matrix that links the observed data with the latent dimensions. The input data, years missing are 1999, 2012, 2014, 2019, 2021, and 2022.

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<sup>7</sup>Their Polity4 score is below 6, a common threshold to define democratic countries. I also exclude Spain because it is not a Latin American country.

$R$ , is a matrix where all possible options of answers ( $k$ ) to a set of questions,  $\ell$ , are the number of columns.<sup>8</sup> The number of rows in this matrix is the total number of respondents,  $N$ , where each row indicates whether respondent  $i$  selected a particular response option for a given question according to the following function:

$$r_{i\ell k} = \begin{cases} 1 & \text{if respondent } i \text{ selects option } k \text{ for question } \ell, \\ 0 & \text{otherwise,} \end{cases}$$

The researcher has priors about how each possible option  $k$  relates to each latent dimension, generating a constraint matrix,  $M$ , with dimensions  $k \times d$ , where  $d$  is the number of dimensions of interest to the researcher. The researcher assigns the values -1, 1, 0, or NA to indicate the prior belief of how each response option  $k$  to question  $\ell$  relates to each dimension  $d$ . A value of 1 indicates that the answer correlates positively with the dimension. In contrast, -1 indicates a negative correlation. 0 indicates no correlation. Finally, NA indicates that there is no prior expectation of a correlation.  $R$  and  $M$  are combined to generate the posterior distribution of the latent dimensions. It generates posteriors through draws using Gibbs sampling.<sup>9</sup>

I use the IRT-M model to generate two dimensions<sup>10</sup>. The expectation is that those dimensions are capturing the theoretical concepts of the economic and socio-cultural dimen-

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<sup>8</sup>For example, the possible answers “strongly disagree”, “disagree”, “agree”, and “strongly agree” to a given question are four different columns in this matrix.

<sup>9</sup>I have used the R package IRTM (Morucci and Siegel, 2025) to generate the results. It uses Markov chain Monte Carlo (MCMC) iterations of a Bayesian hierarchical model. See Morucci et al. (2024) for a more detailed explanation of the model.

<sup>10</sup>Appendix F has the table that shows the descriptive statistics of the two dimensions.

sions. This expectation derives from the IRT-M design which the latent dimensions are posteriors that derive from priors that are theoretically linked. I did not assume any priors about whether questions primarily associated with one dimension might also relate to others, thus taking an agnostic approach to how the dimensions interact with each other.<sup>11</sup>

In constructing these dimensions, I employed 38 questions across all Latinobarómetro waves.<sup>12</sup> There are two potential risks and limitations of this study. First, not all questions were asked in all years. However, the questions the pollsters selected are indicative of what was important in that year. Second, the variation between Latinobarómetro’s waves regarding respondents and the survey itself may undermine their comparability. However, this issue is mitigated by a key benefit of the IRT-M model: it can be applied across heterogeneous data sources, as long as a consistent coding theory is maintained (Morucci et al., 2024). I assume this consistency because there is a substantial set of questions asked in all waves, and I presume that the different respondents do not drastically change their understanding of the questions. Nevertheless, I performed my analysis with a focus on time periods—Neoliberal (1995-2002), Left Turn (2003-2010), and current period (2011-2023)<sup>13</sup>—because pooling across periods reduces the risk of the results being affected by the presence or absence of a set of questions in a given Latinobarómetro wave.

The 38 questions are about the two dimensions and three relevant political topics: economic threat, crime threat, and democratic values. The economic threat topic refers to

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<sup>11</sup>This assignment strategy is the most conservative since it assumes no prior knowledge of the effect of that answer on the dimension. Instead of assuming no correlation and assigning them as 0, it takes a more neutral approach (i.e., assigning NA) in dealing with those answers. A version assigning 0 is in the appendix. Mathematically, this strategy results in using a non-truncated normal distribution with a large standard deviation as the prior. Consequently, the prior behave as-if random.

<sup>12</sup>All questions are listed in Appendix A. A further discussion of the selected questions is in Appendix B.

<sup>13</sup>This choice of set of years is because it divides the 23 Latinobarómetro waves into three fairly even groups (one with seven waves and two with eight waves).

the well-known impact of the economic situation on political behavior (Bechtel and Liesch, 2020; Kinder and Kiewiet, 1981). The crime threat topic relates to the sense of criminal fear and its impact on political behavior (Bateson, 2012). Finally, the topic concerning democratic values refers to satisfaction with the democratic and its effect on political behavior (e.g., Lubbers, Gijsberts, and Scheepers, 2002). I assume no prior relationship between the questions associated with these topics and the two latent dimensions.

Regarding the ideological dimensions, I have largely followed Baker and Greene’s (2011) strategy of dividing the dimensions into issues. However, their focus was solely on the economic dimension. For this reason, I mainly used their issues regarding the economic dimension, while I generated a new set regarding the socio-cultural dimension. The economic dimension is divided into (i) “privatization” or the role of the market vis-à-vis the state, and (ii) economic globalization. The first issue includes 5 questions about privatization of public companies and the primacy of the market as the generator of wealth and development.<sup>14</sup> In turn, the second issue includes 5 questions about the favorability of economic globalization through assessments of international economic integration and foreign investment.<sup>15</sup>

I organized the questions related to the socio-cultural dimension according to the TAN components—Tradition, Authoritarianism, and Nationalism—that are part of the GAL–TAN definition.<sup>16</sup> Tradition refers to the degree to which externally imposed prescriptions regulate one’s life (Thompson, Ellis, and Wildavsky, 1990). There are 7 questions related to this issue.<sup>17</sup> Authoritarianism, in turn, is about law-and-order and greater social con-

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<sup>14</sup>One example of a question is: “The state should leave productive activity to the private sector. Do you (4) strongly agree, (3) agree, (2) disagree, or (1) strongly disagree with this statement?”

<sup>15</sup>An example of a question on this topic is: “Would you say that your country benefits (4) a lot, (3) quite a bit, (2) a little or (1) not at all for being part of your regional trade agreement?”

<sup>16</sup>See Appendices A and B for more information.

<sup>17</sup>For example, “How would you describe yourself? Very devout, devout, not very devout, or not devout

trol, and there are 6 questions about it.<sup>18</sup> Finally, nationalism questions address national pride, attitudes toward immigration, and views on international organizations. There are 5 questions related to nationalism.<sup>19</sup>

Using the latent dimensions constructed by the IRT-M, I perform a country- and respondent-level analysis. In both cases, I examine two key issues. First, I assess whether the two ideological dimensions have become more cross-cutting over time. Second, I evaluate the relevance of issues related to tradition and authoritarianism in shaping the latent socio-cultural dimension of Latinobarómetro respondents.

## **Study I: Ideological Variation in Latin American Countries**

In the country- and individual-level studies, it is necessary to have a measurement of the degree of similarity of the ideological dimensions. This measurement allows us to assess whether the two dimensions are overlapping, allowing us to assume that one dimension is enough to analyze ideological dynamics in Latin America. In the case of individual-level analysis, this measurement is straightforward. Since everyone has one point for each dimension, the Euclidean distance measures how far apart the two dimensions are for any respondent. However, the country-level analysis is more complex because the two dimensions are distributions of the positions of all respondents from a given country.

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at all?”

<sup>18</sup>One example is “Do you believe that it is better to live in an orderly society where certain freedoms are limited, or do you believe it is better to live in a society where all rights and freedoms are respected, although there may be less order as a result?”

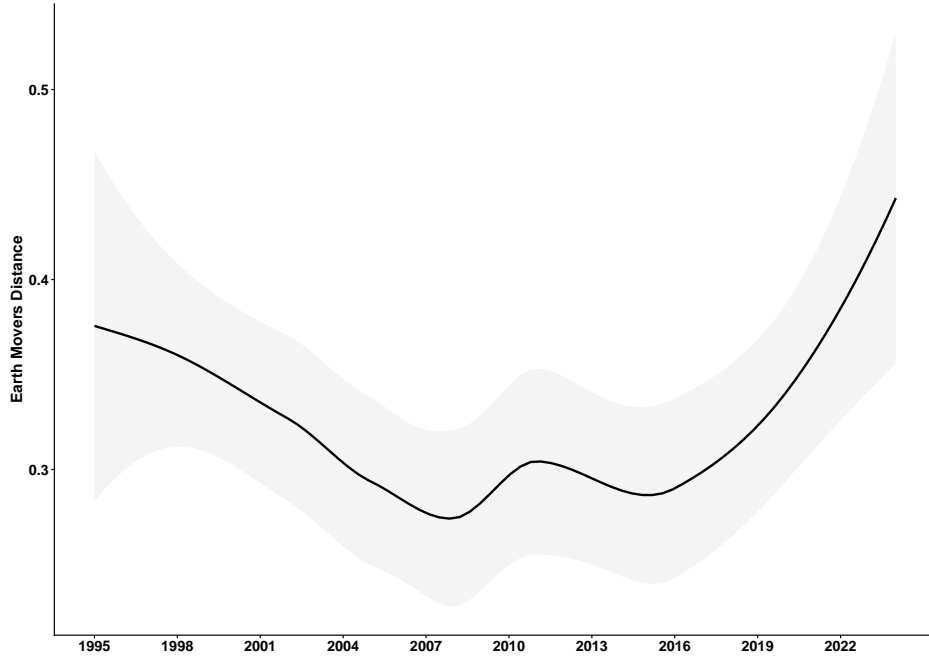
<sup>19</sup>For example, “How proud are you to be [nationality]? Are you very proud, fairly proud, a little proud, or not proud at all?”

To address this challenge of comparing distributions, I use Earth Mover’s Distance (EMD). EMD is a statistical tool that quantifies the “cost” required to transform one distribution into another. In political science, [Lupu, Selios, and Warner \(2017\)](#) show that EMD is a more effective measurement of ideological congruence between voters and politicians than former methods by showing how a higher EMD effectively indicates greater dissimilarity (i.e., incongruence) between voters and politicians.

Similarly, I am evaluating the “congruence” of the ideological dimensions. I use EMD between the economic and GAL–TAN dimension distributions to assess the two dimensions’ orthogonality. Lower congruence (indicated by a higher EMD) signifies more cross-cutting dimensions because the “cost” to make one ideological dimension distribution equal to the other is higher. [Figure 1](#) illustrates the evolution of EMD over time. It shows that, in the transition from the Neoliberal period to the Left Turn, EMD decreased until reaching its lowest point around 2006. Afterward, it sharply rose and reached its highest value in 2023. This variation indicate a variation of how much the two dimensions have overlapped each other.

I gauge the relevance of tradition and authoritarianism in making the GAL–TAN and the economic dimensions more cross-cutting by evaluating the loadings. I associated the loadings with the issues mentioned above. There are eight types of loadings: three related to the socio-cultural dimension (tradition, authoritarianism, and nationalism), two related to the economic dimension (globalization and privatization), crime, democracy, and sociotropic. I assess the different loadings of the countries by doing country-year IRT-M models. Hence, my explanatory variables are loadings related to tradition and authoritarianism specific to each country in a given year. I sum the absolute value of all the loadings of each type to

Figure 1: Earth Movers Distance between dimensions across time (by country)



assess its relevance for each country-year.

For temporal evaluation, the main variable consists of period dummies.<sup>20</sup> Concerning the significance of tradition and authoritarianism, the principal variable is the loadings, as previously detailed.

## Results

Table 1 shows the results of different models on Earth Movers Distance between the socio-cultural and economic dimensions. I conducted four OLS models where the unit of observation is country-year. I use robust standard errors clustered at the country level since the correlation *within* the same country is not the same as the correlation of the different observations *between* countries. The linear regressions are for the equation:

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<sup>20</sup>The reference (intercept) is the first period, known as the Neoliberal era.

$$EMD_{it} = \alpha_{it} + \text{Current Period } \beta_1 + \text{Left Turn } \beta_2 + X'\gamma + c_i + \varepsilon_i$$

where  $EMD_{it}$  is the EMD for country  $i$  in year  $t$ .  $\alpha_i$  is the intercept, Current Period and Left Turn are two dummies that are 1 if  $t$  is in their period; 0 otherwise.  $c_i$  is a country fixed effects to control for unobserved covariates. Finally,  $X'$  is a set of covariates.

The first model does not include any control variables. The second model includes covariates linked to socio-cultural aspects—Ethnic Fragmentation Index (EFI) (Drazanova, 2019) and the proportion of non-religious population (Maoz and Henderson, 2013). The third model examines general country-level characteristics such as democratic quality (polity) and overall well-being (HDI). The final model integrates all the covariates. Although not causal, these observational models provide a robust indication that the GAL–TAN and economic dimensions are more cross-cutting and assess the relevance of tradition and authoritarianism in making these dimensions more orthogonal.

In all models, we see that the coefficient for the current period is positive and significant, varying from 0.101 to 0.399. Conversely, none of the coefficients related to the left turn are significant. These findings indicate that EMD is significantly greater in the current period than it is in the Neoliberal period (the reference period). However, the Left Turn is not statistically different from the neoliberal period. In other words, it is more “costly” to transform the GAL–TAN distribution to the economic distribution in the current period than anytime in the past. This greater cost suggests that the two dimensions are more

cross-cutting in recent years.<sup>21</sup>

To assess the relevance of tradition and authoritarianism in making the two ideological dimensions more cross-cutting, models in table 2 show the results of the effect of each issue’s loadings on EMD. In order to gauge the relevance of the issues,<sup>22</sup> I use the summation of the absolute value of the loadings of all questions related to each issue. These regressions follow this equation:

$$EMD_{it} = \alpha_{it} + T'\beta + X'\gamma + u_t + \varepsilon_i$$

where  $EMD_{it}$  is the EMD for country  $i$  in year  $t$ .  $\alpha_{it}$  is the intercept,  $T'$  is a vector of the issues,  $X'$  is a vector of control variables, and  $u_t$  is year fixed-effects. Like the regressions above, the models 2 to 4 incorporate control covariates. All models have standard errors clustered at the country-year level.

The results in 2 show that tradition has a positive and significant effect on the GAL–TAN and economic dimensions’ EMD, regardless of the covariates. These coefficients indicate that, in years and countries in which questions related to tradition are more important in defining the latent dimensions, the two GAL–TAN and economic dimensions are more cross-cutting. Authoritarianism, however, is not significant in any of the models. Finally, no other type of loading is significant. These findings provide evidence that only issues related to tradition have been playing an important role in shaping the socio-cultural dimension and making it

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<sup>21</sup>The other significant coefficient, HDI in model 3, suggests the effect predicted by modernization theory (Inglehart, 1971). As societies become wealthier and secular, the number of welfare chauvinists reduces. Consequently, these societies become more sorted on a liberal-leftist versus conservative-rightist dispute in a similar fashion to what has happened in advanced democracies.

<sup>22</sup>Recall that the issues are tradition, authoritarianism, and nationalism in relation to GAL–TAN; privatization and globalization in relation to the economic dimension; and democracy, sociotropic, and crime threat as other salient issues.

Table 1: Determinants of Cross-cutting between Countries

	Dependent Variable:			
	Earth Movers' Distance (EMD)			
	(1)	(2)	(3)	(4)
Periods:				
Current (2011-2023)	0.101*	0.103*	0.399***	0.215*
	(0.045)	(0.043)	(0.105)	(0.105)
Left turn (2003-2010)	-0.024	-0.047	0.131*	0.014
	(0.040)	(0.056)	(0.066)	(0.104)
Socio-cultural Aspects:				
EFI		-0.577		-0.401
		(1.068)		(1.388)
% of Secular Population		-0.996*		-0.584
		(0.474)		(0.564)
Country-level Characteristics:				
PolityIV Score			0.002	0.002
			(0.001)	(0.001)
HDI			-3.915***	-1.924
			(0.987)	(1.530)
Num.Obs.	356	151	291	151
R2	0.211	0.201	0.216	0.220
R2 Adj.	0.171	0.131	0.167	0.140
Country Clustered Std.Errs	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes

\* p &lt; 0.05, \*\* p &lt; 0.01, \*\*\* p &lt; 0.001

*Note:* Regressions with robust standard errors clustered at the country and year fixed effects. The dependent variable is the Earth Movers' Distance between the distribution of the economic and socio-cultural dimension for each country-year. The coefficients indicate that the current period (2011-2023) significant and positive correlated with EMD, indicating that the economic and socio-cultural dimension are more dissimilar from each other than the Neoliberal period (the reference). Conversely, the Left Turn (2002-2010) is not statistically different from the Neoliberal period.

more orthogonal to the economic dimension.

The results at the country-level are consistent with my expectations. The majority of the

models indicate that the most recent years are the period with the highest EMD between the two dimensions, suggesting that they are more cross-cutting in the recent period. Moreover, all models indicate a positive and significant effect of tradition—and tradition alone—in making the economic and socio-cultural dimensions more cross-cutting. However, these results carry a significant risk of being an ecological fallacy, as they aggregate individual behavior and may not accurately reflect how an individual will behave. Therefore, I present additional evidence of the importance of tradition at the individual level in the next section.

Table 2: IRT-M Loadings as Determinants of Cross-cutting Dimensions

	Dependent Variable:			
	Earth Movers' Distance (EMD)			
	(1)	(2)	(3)	(4)
GAL–TAN issues:				
Tradition	0.012**	0.024***	0.014**	0.024**
	(0.004)	(0.007)	(0.004)	(0.007)
Authoritarianism	0.004	0.003	0.004	0.004
	(0.003)	(0.004)	(0.004)	(0.004)
Nationalism	−0.020	0.022	−0.028	0.020
	(0.030)	(0.040)	(0.033)	(0.040)
Economic issues:				
Globalization	−0.006	0.008	−0.003	0.009
	(0.005)	(0.013)	(0.006)	(0.013)
Privatization	−0.014	0.027	−0.018	0.023
	(0.024)	(0.032)	(0.023)	(0.031)
Other issues:				
Democracy	0.004	0.007	0.005	0.008
	(0.003)	(0.004)	(0.003)	(0.005)
Sociotropic	−0.003	0.002	0.001	0.003
	(0.004)	(0.005)	(0.005)	(0.005)
Crime threat	0.002	0.004	0.003	0.004
	(0.002)	(0.003)	(0.002)	(0.003)
Num.Obs.	356	151	291	151
R <sup>2</sup>	0.195	0.233	0.226	0.242
R <sup>2</sup> Adj.	0.120	0.072	0.137	0.068
Country-year Clustered Std.Errs	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Socio-cultural Aspects controls	No	Yes	No	Yes
Country-level characteristics controls	No	No	Yes	Yes

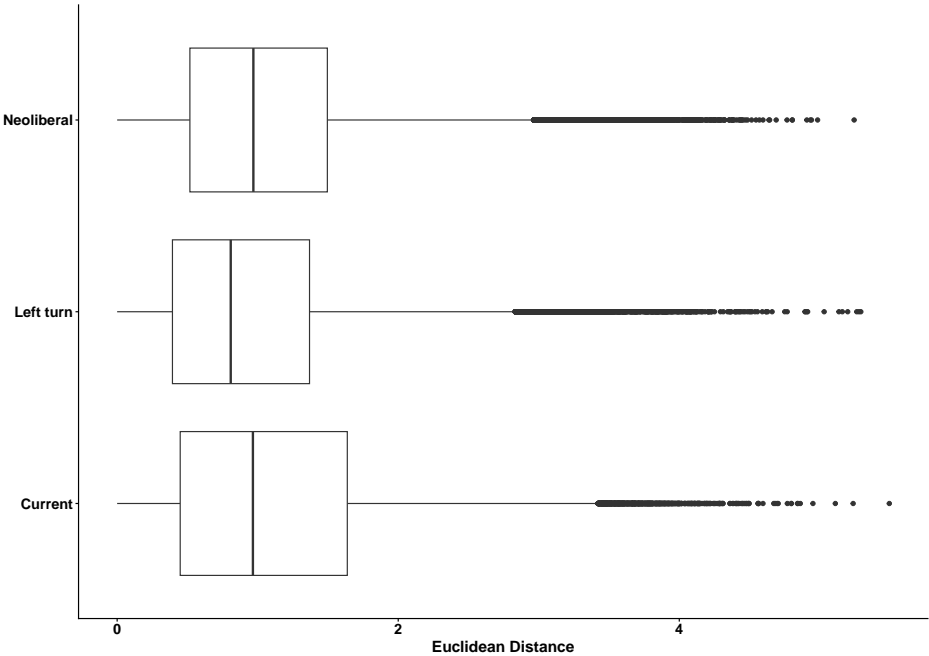
\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

*Note:* Regressions with robust standard errors clustered at the country, year fixed effects, and HDI, Polity4, EFI, and secular population as controls. The dependent variable is the Earth Movers' Distance between the distribution of the economic and socio-cultural dimension for each country-year. The coefficients indicate that “Tradition” is the only coefficient with positive and significant coefficients, indicating its increase relevance is associated with greater cross-cutting between the dimensions.

# Study II: Ideological Variation in Latin American Individuals

I use Euclidean distance (i.e., the straight-line distance) between an individual’s position in the two dimensions as a similar approach to EMD to measure how much the two dimensions are cross-cutting at the individual-level. Hence, as this distance increases, the respondent’s economic and socio-cultural positions become more dissimilar. Figure 2 shows the evolution over time of this distance. Similar to figure 1, it shows a relevant fluctuation across time. The median Euclidean distance reduces from the left turn in relation to the neoliberal period. However, we see that interquartile range increases in the current period.

Figure 2: Respondents’ Euclidean distance by period cycle



At the individual level, I gauge the relevance of tradition and authoritarianism topics on the dimensions being more cross-cutting through two additional IRT-M models. In those

models, I used only the questions related to tradition and authoritarianism, respectively. I took an agnostic approach to the other questions and did not assign any priors to the answers related to other themes. I use the absolute value of respondents' scores from those models as the main variable of interest. The expectation is that having radical views (i.e., high absolute value) on those new latent dimensions is an appropriate proxy for significantly caring about tradition and/or authoritarian issues.

Individual characteristics likely affect latent ideological preferences. For this reason, I added control variables that address three key personal characteristics. First, I added gender (men as the reference). Studies have shown that women are more consistently more to the left than men in the economic dimension ([Barros and Santos Silva, 2019](#); [Miller, 2008](#)). The second perception of the respondent's socioeconomic status by the interviewer. Wealth is also linked with different preferences regarding redistribution ([Albertus and Menaldo, 2014](#); [Lupu and Pontusson, 2011](#)). The third is education level due to its link with modernization theory ([Inglehart, 1971, 1981](#)). Finally, I added religious affiliation aggregated by their families.<sup>23</sup> The selection of this variable derives from a growing literature stressing the importance of religion in shaping political behavior in Latin America ([Boas, 2021](#); [Smith and Boas, 2024](#)).

## Results

Table 3 presents the results for the effect of the different periods on the dimensions being more cross-cutting. It has the Euclidean distance between the two latent dimensions as the dependent variable. Since the unit of analysis is each respondent, I clustered the standard

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<sup>23</sup>I followed the division in religious families made by [Maoz and Henderson \(2013\)](#). Non-religious is defined as the reference.

errors by country. Since this choice assumes that all respondents of the same country are correlated regardless of when they participated in the survey, resulting in the largest standard error, it is the most conservative option. The linear regressions are for the equation:

$$ED_i = \alpha_i + \text{Current Period } \beta_1 + \text{Left Turn } \beta_2 + X'\gamma + c + \varepsilon_i$$

where  $ED_i$  is the Euclidean distance between the two dimensions for individual  $i$ . Current Period and Left Turn are two dummies that are 1 if  $i$  participated in their period; 0 otherwise.  $c$  is a country fixed effects to account for geographical unobserved covariates that might bias the results. Finally,  $X'$  is a set of covariates that I only added in the second model.

Similar to the country-level, the results show that the coefficients for the current period are positive and significant. The Euclidean distance of respondents during the current period is greater than that of the Neoliberal period, indicating a more cross-cutting behavior. Conversely, the coefficients for the left turn are negative and significant, signaling a greater overlapping in this period. Regarding the controls, the women covariate is the only significant one, suggesting a relevant gender difference among respondents. These results provide evidence that the two ideologies were more overlapping during the left turn and have become the most cross-cutting in the current period.

Table 3: Determinants of Cross-cutting between Individuals

	<i>Dependent Variable:</i>	
	Euclidean Distance	
	(1)	(2)
Periods:		
Current (2011-2023)	0.048** (0.016)	0.046** (0.015)
Left turn (2003-2010)	-0.126*** (0.023)	-0.125*** (0.023)
Personal characteristics:		
Women		-0.018*** (0.003)
Wealth		-0.002 (0.004)
Education		0.001 (0.001)
Religious Affiliation:		
Other Religion		-0.001 (0.012)
Other Christian		-0.028 (0.016)
Protestant		-0.047*** (0.009)
Roman Catholic		-0.032*** (0.008)
Num.Obs.	389 314	387 647
R <sup>2</sup>	0.015	0.015
R <sup>2</sup> Adj.	0.014	0.015
Country Clustered Std.Errs	Yes	Yes
Country FE	Yes	Yes

\* p &lt; 0.05, \*\* p &lt; 0.01, \*\*\* p &lt; 0.001

*Note:* Regressions with robust standard errors clustered at the country and with year fixed effects, The dependent variable is the Euclidean distance between individuals' position on the economic and GAL-TAN dimensions. The current period coefficient is positive and significant, indicating its increase relevance is associated with greater cross-cutting between the dimensions.

Determinants of Economic Latent Ideological Position

	Economic latent dimension			
	All periods	Neoliberal	Left turn	Current
Ideology self-position:				
Left	-0.006 (0.022)	0.000 (0.028)	0.008 (0.039)	-0.005 (0.023)
Center-Left	0.070** (0.024)	0.073** (0.027)	0.037 (0.035)	0.111*** (0.029)
Center	0.095*** (0.011)	0.136*** (0.015)	0.043* (0.019)	0.122*** (0.017)
Center-right	0.137*** (0.012)	0.178*** (0.026)	0.105*** (0.019)	0.148*** (0.014)
Right	0.073*** (0.016)	0.106*** (0.023)	0.062** (0.022)	0.068** (0.022)
Personal characteristics:				
Women	-0.051*** (0.004)	-0.044*** (0.008)	-0.043*** (0.005)	-0.061*** (0.008)
Age: 25 to 45	-0.049*** (0.006)	-0.047*** (0.007)	-0.040*** (0.009)	-0.063*** (0.007)
Age: 45 to 65	-0.068*** (0.010)	-0.080*** (0.018)	-0.033** (0.011)	-0.092*** (0.007)
Age: 65+	-0.073*** (0.015)	-0.094*** (0.027)	-0.032+ (0.017)	-0.097*** (0.014)
Low educational level	0.011 (0.014)	0.004 (0.032)	0.001 (0.014)	0.008 (0.015)
Medium educational level	0.050*** (0.013)	0.093*** (0.022)	0.028+ (0.015)	0.045*** (0.013)
High educational level	0.095*** (0.016)	0.111*** (0.031)	0.059*** (0.016)	0.105*** (0.014)
Very high educational level	0.153*** (0.015)	0.146*** (0.026)	0.128*** (0.016)	0.171*** (0.018)
Bad economic situation	0.015 (0.020)	0.072* (0.033)	-0.033 (0.029)	0.055*** (0.016)
Average economic situation	0.064* (0.015)	0.094 (0.026)	0.019 (0.016)	0.135*** (0.018)

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Determinants of Economic Latent Ideological Position (Continued)

	(0.029)	(0.057)	(0.032)	(0.018)
Good economic situation	0.152***	0.183***	0.119***	0.211***
	(0.029)	(0.056)	(0.033)	(0.022)
Very good economic situation	0.213***	0.276***	0.194***	0.241***
	(0.029)	(0.051)	(0.037)	(0.032)
Religious Affiliation:				
Other Christian	-0.019	0.055**	-0.047***	-0.013
	(0.034)	(0.017)	(0.014)	(0.037)
Other religion	0.035+	0.102***	0.015	0.013
	(0.019)	(0.023)	(0.018)	(0.035)
Protestant	0.035**	0.130***	0.010	0.032*
	(0.013)	(0.023)	(0.016)	(0.013)
Catholic	0.040***	0.130***	-0.009	0.041***
	(0.011)	(0.021)	(0.014)	(0.012)
Num.Obs.	348 265	90 698	129 998	127 569
R2	0.035	0.034	0.052	0.045
R2 Adj.	0.035	0.034	0.052	0.045
Country and Year Fixed Effects	Yes	Yes	Yes	Yes
Country Clustered Std.Errs	Yes	Yes	Yes	Yes

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

*Note:* Regressions with robust standard errors clustered at the country and year fixed effects. The dependent variable is the Earth Movers' Distance between the distribution of the economic and socio-cultural dimension for each country-year. The coefficients indicate that the current period (2011-2023) significant and positive correlated with EMD, indicating that the economic and socio-cultural dimension are more dissimilar from each other than the Neoliberal period (the reference). Conversely, the Left Turn (2002-2010) is not statistically different from the Neoliberal period.

Determinants of GAL-TAN Latent Ideological Position

	Economic latent dimension			
	All periods	Neoliberal	Left turn	Current
Ideology self-position:				
Left	-0.066**	-0.135***	-0.076**	-0.056*

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Determinants of GAL–TAN Latent Ideological Position (Continued)

	(0.024)	(0.036)	(0.029)	(0.024)
Center-Left	−0.010	−0.058+	0.025	−0.026
	(0.022)	(0.030)	(0.026)	(0.026)
Center	0.036*	−0.005	0.074***	0.010
	(0.015)	(0.021)	(0.017)	(0.014)
Center-right	0.150***	0.101***	0.194***	0.126***
	(0.016)	(0.022)	(0.024)	(0.017)
Right	0.188***	0.123***	0.178***	0.197***
	(0.018)	(0.026)	(0.028)	(0.016)
Personal characteristics:				
Women	−0.016*	−0.020*	−0.039***	0.004
	(0.007)	(0.009)	(0.007)	(0.009)
Age: 25 to 45	−0.070***	−0.060***	−0.088***	−0.061***
	(0.009)	(0.014)	(0.010)	(0.010)
Age: 45 to 65	−0.087***	−0.062***	−0.134***	−0.064***
	(0.012)	(0.018)	(0.016)	(0.015)
Age: 65+	−0.025	0.039	−0.099***	0.001
	(0.013)	(0.023)	(0.021)	(0.018)
Low educational level	0.005	0.003	−0.005	0.005
	(0.015)	(0.016)	(0.019)	(0.019)
Medium educational level	−0.013	−0.048*	−0.006	−0.022
	(0.018)	(0.022)	(0.021)	(0.018)
High educational level	−0.078**	−0.077**	−0.034	−0.147***
	(0.024)	(0.024)	(0.031)	(0.022)
Very high educational level	−0.078**	−0.077*	−0.034	−0.147***
	(0.024)	(0.030)	(0.022)	(0.025)
Average economic situation	0.080***	0.059**	0.148***	−0.046*
	(0.015)	(0.022)	(0.019)	(0.023)
Bad economic situation	0.026*	0.010	0.057***	−0.039*
	(0.013)	(0.022)	(0.017)	(0.018)
Good economic situation	0.127***	0.129***	0.215***	−0.037
	(0.019)	(0.030)	(0.021)	(0.029)
Very good economic situation	0.160***	0.202***	0.241***	−0.024

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Determinants of GAL-TAN Latent Ideological Position (Continued)

	(0.028)	(0.033)	(0.030)	(0.030)
Religious Affiliation:				
Other Christian	0.096*** (0.024)	0.135*** (0.022)	0.070* (0.032)	0.102 (0.053)
Other religion	0.051* (0.023)	0.100*** (0.024)	0.062* (0.028)	0.041 (0.025)
Protestant	0.212*** (0.021)	0.247*** (0.021)	0.203*** (0.028)	0.194*** (0.020)
Catholic	0.187*** (0.023)	0.234*** (0.019)	0.199*** (0.025)	0.164*** (0.018)
Num.Obs.	348 265	90 698	129 998	127 569
R2	0.032	0.050	0.048	0.044
R2 Adj.	0.032	0.050	0.048	0.043
Country and Year Fixed Effects	Yes	Yes	Yes	Yes
Country Clustered Std.Errs	Yes	Yes	Yes	Yes

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table 4: Determinants of Latent Position between Individuals

	<i>Dependent Variable:</i>	
	Latent dimensions	
	Economic	GAL-TAN
Periods:		
Current (2011-2023)	-0.056 (0.057)	0.104* (0.042)
Left turn (2003-2010)	0.020 (0.051)	-0.040 (0.043)
Ideological position:		
Left	-0.102** (0.037)	-0.166*** (0.027)
Center-Left	-0.089 (0.046)	-0.227*** (0.036)
Center	-0.026 (0.049)	-0.154*** (0.038)
Center-right	0.026 (0.038)	-0.108*** (0.029)
Right	0.044 (0.033)	-0.004 (0.026)
Socio-demographic factors:		
Education	0.017*** (0.002)	-0.006*** (0.001)
Women	-0.050*** (0.005)	-0.020*** (0.004)
Wealth	0.070*** (0.007)	0.040*** (0.005)
Religion :		
Other Christian	-0.034 (0.018)	0.115*** (0.018)
Other religion	0.022 (0.016)	0.066*** (0.016)
Protestant	0.022 (0.012)	0.226*** (0.015)

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Table 4: Determinants of Latent Position between Individuals (Continued)

Roman Catholic	0.025*	0.207***
	(0.011)	(0.014)
Periods $\times$ Ideological position:		
Current $\times$ Left	0.033	-0.091*
	(0.047)	(0.038)
Current $\times$ Center-Left	0.132*	-0.085
	(0.061)	(0.050)
Current $\times$ Center	0.116	-0.114*
	(0.065)	(0.051)
Current $\times$ Center-right	0.070	-0.118**
	(0.052)	(0.040)
Current $\times$ Right	0.040	-0.074*
	(0.047)	(0.034)
Left turn $\times$ Left	0.042	-0.022
	(0.046)	(0.038)
Left turn $\times$ Center-Left	0.066	0.070
	(0.060)	(0.052)
Left turn $\times$ Center	0.006	0.072
	(0.061)	(0.055)
Left turn $\times$ Center-right	-0.024	0.081*
	(0.046)	(0.041)
Left turn $\times$ Right	-0.008	0.055
	(0.040)	(0.036)
Num.Obs.	383 702	383 702
R <sup>2</sup>	0.038	0.032
R <sup>2</sup> Adj.	0.038	0.032
RMSE	0.84	0.84
Std.Errors clustered by	Country-year	Country-year

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

*Note:* Regressions with robust standard errors clustered at the country-year. The dependent variable are the latent dimensions.

The results in table 5 show the effect of having more extreme positions (i.e., a higher absolute value of the tradition- and authoritarianism-specific IRT models) on the Euclidean distance between the two dimensions. In this case, the models are clustered by country-year, and they have country-year fixed effects. This choice for clustering at the survey level is the most conservative since it assumes that respondents from the same country and year are clustered together. The regressions follow this equation:

$$ED_i = \alpha_i + \text{Tradition } \beta_1 + \text{Authoritarianism } \beta_2 + X'\gamma + \mathcal{T} + \varepsilon_i$$

$ED_i$  is the Euclidean distance for individual  $i$ . Tradition and Authoritarianism are the absolute values of the specific IRT models.  $X'$  is a vector of controls and  $\mathcal{T}$  is country-year fixed effects to account for temporal and geographical unobserved characteristics. Similar to the models above, I perform an OLS regression with and without control variables.

The results show that Tradition and Authoritarianism strongly correlate with the Euclidean distance between the two dimensions. These findings indicate that caring more about tradition and authoritarian topics makes an individual more likely to hold a cross-cutting position on the economic and GAL–TAN dimensions. These results remain substantively the same, even when considering additional factors that influence political behavior, such as gender, wealth, and education.

The results indicate that both factors are relevant in making respondents more likely to hold cross-cutting positions, reinforcing the importance of caring about GAL–TAN issues. However, tradition has a markedly greater coefficient than authoritarianism, indicating that issues related to tradition have a greater impact on the two dimensions, becoming more

Table 5: Topic Specific IRT-M as Determinants of Cross-cutting Dimensions

	<i>Dependent Variable:</i>	
	Euclidean Distance	
	(1)	(2)
Topic specific IRT:		
Tradition	0.566*** (0.029)	0.566*** (0.029)
Authoritarianism	0.394*** (0.027)	0.394*** (0.027)
Personal characteristics:		
Women		-0.001 (0.003)
Wealth		0.000 (0.002)
Education		0.000 (0.001)
Religious Affiliation:		
Other Religion		-0.022* (0.010)
Other Christian		-0.039*** (0.010)
Protestant		-0.035*** (0.007)
Roman Catholic		-0.033*** (0.007)
Num.Obs.	389 314	387 647
R <sup>2</sup>	0.283	0.284
R <sup>2</sup> Adj.	0.283	0.283
Country-year Clustered Std.Errs	Yes	Yes
Country-year FE	Yes	Yes

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

*Note:* Regressions with robust standard errors clustered at the country and with country-year fixed effects, The dependent variable is the Euclidean distance between individuals' position on the economic and GAL-TAN dimensions. The coefficients show that Tradition and Authoritarianism have positive and significant coefficients. However, Traditions' coefficient is substantially larger.

orthogonal. The question that remains is how tradition and authoritarianism evolve over time.

To assess this temporal variation, I perform an interaction between the scores of my two additional IRT-M models and the periods. The interaction model is the following:

$$ED_i = \alpha_i + \text{Current Period } \beta_1 + \text{Left Turn } \beta_2 + \text{Tradition } \beta_3 + \text{Authoritarianism } \beta_4 + \\ \text{Tradition} \times \text{Current Period } \beta_5 + \text{Tradition} \times \text{Left Turn } \beta_6 + \\ \text{Authoritarianism} \times \text{Current Period } \beta_7 + \text{Authoritarianism} \times \text{Left Turn } \beta_8 + X'\gamma + c + \varepsilon_i$$

where,  $ED_i$  is the Euclidean distance for respondent  $i$ .  $\beta_1$  to  $\beta_4$  are the different coefficients for the periods and specific IRT. In turn,  $\beta_5$  to  $\beta_8$  are the coefficients for the different interactions between the periods and the specific IRT models.  $X'$  is a vector of control variables and  $c$  is country fixed-effects. In other words, besides the interaction, the model is the same as the model 2 in table 3. Figure 3<sup>24</sup> shows the coefficients and confidence intervals of this interaction.

The results show that tradition has become more important over time, while the opposite happens with authoritarianism. In the Neoliberal period, both authoritarianism and tradition were relevant in making the economic and socio-cultural dimensions more cross-cutting.<sup>25</sup> In the following period, the left-turn, there was a decrease in the effect of tradition and authoritarianism. In the current period, however, only tradition has increased. Put differently, tradition has decreased its relevance in relation to the Neoliberal period during the left turn but regained steam more recently. Authoritarianism, however, has become steadily

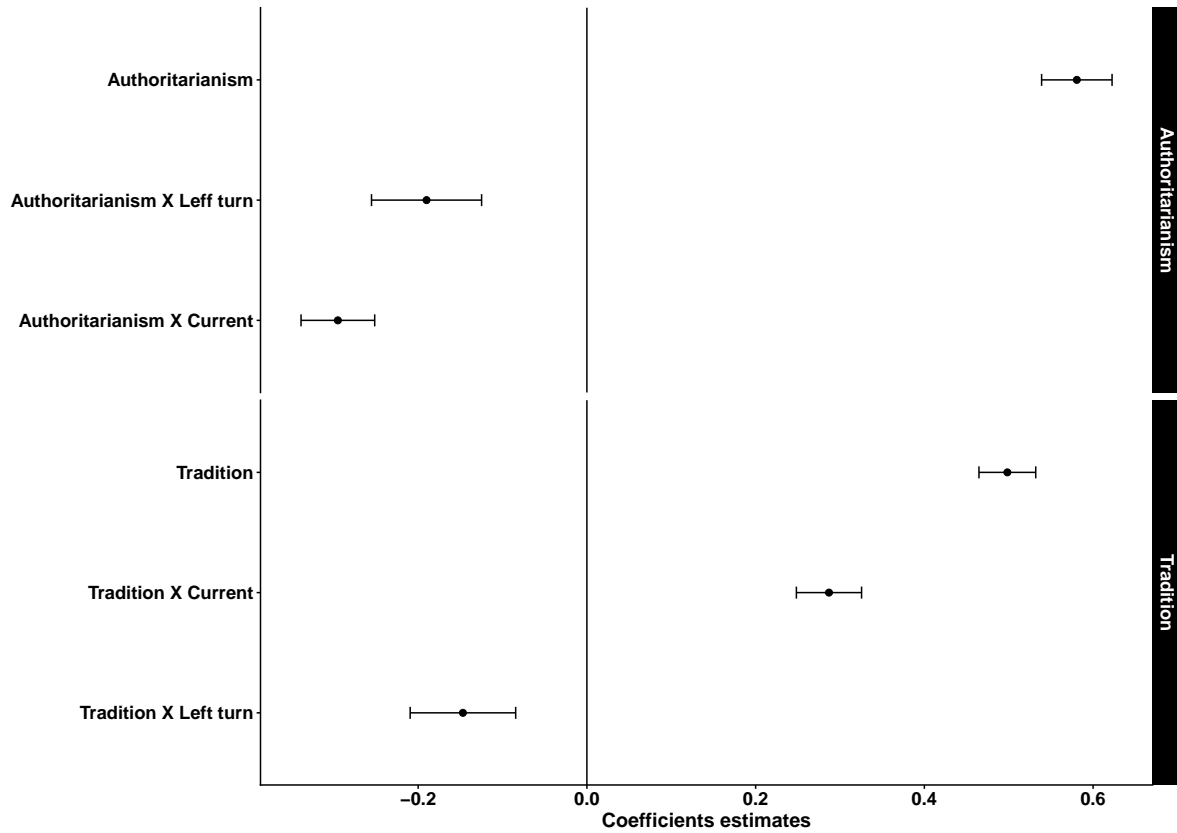
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<sup>24</sup>See Appendix D for the coefficient table.

<sup>25</sup>These are the coefficients without the interaction, as this period was the reference (the intercept).

less relevant through time. The stronger effect of tradition in the most recent period is particularly important because the respondents have become increasingly cross-cutting recently.

Figure 3: Predicted value of the Euclidean distance by time periods



The results of the individual-level analysis align with those observed in the country-level analysis. Both show that Latin America has experienced an ideological change in which the economic and socio-cultural dimensions have become more cross-cutting. The results also indicate that tradition and, to a lesser degree, authoritarianism are the main factors driving this ideological change.

## Conclusion

Ideological change and the rising importance of socio-cultural topics are widespread phenomena in democratic countries. In advanced democracies, the study of the importance of these topics on political behavior has a long tradition ([Bustikova, 2014](#); [Colantone and Stanig, 2018b](#); [Hooghe and Marks, 2018](#); [Hooghe, Marks, and Wilson, 2002](#); [Vachudova, 2021](#)). However, this interest has been limited in Latin America. Research on the region has overlooked this dimension and focused mainly on the political effects of the economic dimension (for example, [Kapiszewski, Levitsky, and Yashar, 2021a](#); [Roberts, 2014](#)). I argue and provide empirical evidence that supports that the socio-cultural dimension is increasingly significant in Latin America.

Following [Hinich and Munger \(1994\)](#), I contend that ideologies are latent dimensions; the topic and the number of these dimensions are context-dependent. I propose that the dimension concerning socio-cultural issues (also known as GAL–TAN) has become more relevant in Latin America. This growing importance stems from this dimension being increasingly cross-cutting (i.e., more orthogonal) with the dimension of economic issues. Moreover, I show that issues related to tradition and, to a lesser degree, authoritarianism are important in defining this GAL–TAN dimension, and making these two dimensions more cross-cutting.

I evaluate this argument through empirical analysis at the country- and individual-level. I have used an IRT-M model developed by [Morucci et al. \(2024\)](#) to assess the latent ideological preference of Latinobarómetro respondents on the economic and socio-cultural dimensions. At the country level, I have demonstrated that the two ideologies have become increasingly cross-cutting in the most recent period. The individual-level analysis shows the same trend.

Regarding the relevance of issues in determining this trend, the results show that tradition-related issues are the most important. Moreover, the effect of tradition on decoupling the socio-cultural and economic dimensions is stronger in the most recent period, while the effect of authoritarianism weakens through time. The results indicate that politics in Latin America is becoming more two-dimensional, and issues related to tradition are a relevant driving force for this change.

These results show that a socio-cultural dimension is increasingly salient in Latin America, shedding new light on the region's political behavior. This finding suggests that, despite significant structural differences, there are some common trends in Latin America and advanced democracies, as the politics in both regions have become more two-dimensional. Therefore, this research underscores the importance of better understanding the ideological variation within Latin America.

The ideological change in Latin America generates many avenues for future research. First, there is the effect of this change on electoral behavior. One could argue that this decoupling has a significant impact by increasing the number of voters who perceive that they are making a trade-off decision in the ballot box between their economic and socio-cultural preferences. Moreover, one could expect that this trade-off might help right-of-center candidates if voters give primacy to their GAL-TAN position. Since the Church, the Armed Forces, local conservative elites, and, more recently, evangelical groups have exerted significant influence in Latin America, particularly on socio-cultural themes, the political context has become more favorable for socially conservative ideas. Hence, the rise of socio-cultural issues might be a relevant factor explaining the recent success of many rightist candidates in the region.

A second possible avenue of research concerns the political reaction to this ideological change. The GAL–TAN dimension, being more cross-cutting with the economic dimension, is likely to affect the relationship between voters and parties. Since the expectation is that a link between the socio-cultural dimension and the right occurs, the natural consequence would be the rising electoral success of rightist parties. However, we see a significant heterogeneity across countries. For example, several, but not all, countries in the region have seen the rise of relevant populist radical right (PRR) parties (Mudde, 2007) that emphasize these socio-cultural issues.<sup>26</sup> Conversely, many establishment right parties eschew embracing socio-cultural issues, possibly due to the fear of credibility loss and losing their historical rank-and-file supporters (Hinich and Munger, 1994), which could result in a party brand collapse (Lupu, 2017). This variation in party behavior is puzzling, as the increased salience of the GAL–TAN dimension is meaningful across the region. Future work should address these and other questions and further expand our understanding of recent political changes in Latin America.

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<sup>26</sup>In fact, the region saw a boom of new and successful parties in recent years across the ideological spectrum: *Nuevas Ideas* in El Salvador, *Morena* in Mexico, *Partido Nueva República* in Costa Rica, *Movimiento Semilla* in Guatemala, *Partido Republicano* and *Partido Nacional Libertario* in Chile, *Cabildo Abierto* in Uruguay, *La Libertad Avanza* in Argentina, *Creemos* in Bolivia, and others.

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# Appendix A: Questions used for the IRT-M measurement

## Geographical and temporal variables

country – country. Countries excluded: Spain, Venezuela, and Nicaragua.

region – Country’s region.

year – Year of the survey [1995-2023]. There were no waves in 1999, 2012, 2014, 2019, 2021, and 2022.

## Socio-cultural dimension

Questions regarding the socio-cultural dimension. Socially conservative positions were coded to be higher values.

### Tradition

**soc\_1** – How would you describe yourself? Very devout, devout, not very devout, or not devout at all?

Number of NA: 15,565 (1997)

“Not practising at all” = 1, “Not devout at all” = 1, “No practicante at all” = 1, “No practicante” = 1, “Not very practising” = 2, “Not very practicante” = 2, “No muy practicante” = 2, “Not very devout” = 2, “Practising” = 3, “Practicante” = 3, “Devout” = 3, “Practicante” = 3, “Very practising” = 4, “Muy practicante” = 4, “Very practicante” = 4. “Very devout” = 4, other answers = 0

**soc\_2** – “Please tell me, for each one of these groups, institutions, or persons listed on this card, how much confidence do you have in each? The Church. (1) A lot, (2) some, (3) a little, or (4) none?”

Number of NA: 0

“No confidence at all” = 1, “Nothing” = 1, “No trust” = 1, “Ninguna” = 1, “Little confidence” = 2, “Little” = 2, “Poca” = 2, “Some confidence” = 3, “Some” = 3, “Algo” = 3, “A lot of confidence” = 4, “A lot” = 4, “Lot”, “Mucha” = 4, other answers = 0

**soc\_13** – Do you strongly agree, agree, disagree or strongly disagree with each of the following phrases: It is preferable woman in the house and man in his work.

[Alternative question in 2008 and 2015: The woman must work only if the couple doesn't earn enough money]

Number of NA: 272,847 (1995, 1996, 1998, 2001, 2002, 2003, 2005, 2006, 2007, 2010, 2011, 2013, 2016, 2017, 2018, 2020 )

“Strongly disagree” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

**soc\_14** – Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between. Homosexuality

Number of NA: 325,199 (1995, 1996, 1997, 1998, 2000, 2001, 2003, 2005, 2006, 2007, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

From “10. It can always be justified” = 1 to “1. Never be justified” = 10, other answers = 0

**soc\_15** – Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between. Abortion

Number of NA: 325,145 (1995, 1996, 1997, 1998, 2000, 2001, 2003, 2005, 2006, 2008, 2009, 2010, 2011, 2013, 2016, 2017, 2018, 2020, 2023)

From “10. It can always be justified” = 1 to “1. Never be justified” = 10, other answers = 0

**soc\_16** – Do you strongly agree (1), agree (2), disagree (3) or strongly disagree (4) with the following statements? Homosexual marriage

Number of NA: 339,659 (1995, 1996, 1997, 1998, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2013, 2016, 2017, 2018, 2020)

“Strongly disagree” = 4, “Disagree” = 3, “Agree” = 2, “Strongly agree” = 1, other answers = 0

**soc\_17** – In this list you will see various groups of people. Could you select any that you would not like to have as neighbors? Homosexuals

Number of NA: 379,279 (1995, 1996, 1997, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Not mentioned” = 1, “Mentioned” = 2, other answers = 0

## **Authoritarianism**

**soc\_7** – “Please tell me, for each one of these groups, institutions, or persons listed on this card, how much confidence do you have in each? Armed Forces. (1) A lot, (2) some, (3) a little, or (4) none?”

Number of NA: 0

“No confidence at all” = 1, “Nothing” = 1, “No trust” = 1, “Ninguna” = 1, “Little confidence” = 2, “Little” = 2, “Poca” = 2, “Some confidence” = 3, “Some” = 3, “Algo” =

3, “A lot of confidence” = 4, “A lot” = 4, “Lot”, “Mucha” = 4, other answers = 0

**soc\_8** – “Please tell me, for each one of these groups, institutions, or persons listed on this card, how much confidence do you have in each? The police. (1) A lot, (2) some, (3) a little, or (4) none?”

Number of NA: 0

“No confidence at all” = 1, “Little confidence” = 2, “Some confidence” = 3, “A lot of confidence” = 4, other answers = 0

**soc\_9** – Some people say that a bit of a firm hand (“mano dura”) from the government is not a bad thing for [Country]. Others say that we don’t need the government’s firm hand. Which statement is closest to your way of thinking?

[Alternative question 2023: Even if we have a government with a “hard hand”, it will not be able to solve problems]

Number of NA: 332,435 (1996, 1997, 1998, 2000, 2001, 2002, 2003, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2015, 2017, 2018, 2020)

“‘Firm hand’ from the government is not good for the country” = 1, “agree” = 1, “strongly agree” = 1, “A little of ‘firm hand’ from the government is not a bad thing for the country” = 2 “Disagree” = 2, “Strongly disagree” = 2, other answers = 0

**soc\_10** – If you had to choose, which of these things would you say is the most important? And which is the next most important? Maintain the nation’s order [the most important thing]

[Alternative question in 2013: If you have to choose only one from each four sets of statements that I am going to read, which one would you choose as the most essential characteristics of a democracy? Government ensures law and order]

Number of NA: 267,868 (1997, 2001, 2003, 2004, 2005, 2006, 2007, 2009, 2010, 2011, 2015, 2016, 2017, 2018, 2020)

“Citizen participation” = 1, “Government ensures job opportunities for all” = 1, “Giving people more say in important government decisions” = 1, “Fight inflation” = 1, “Fighting rising prices” = 1, “Freedom speech” = 1, “Protecting freedom of speech” =1, “Media is free to criticize the things government does” = 1, “Multiple parties compete fairly in the election” =1, “Maintain order” = 2, “Maintaining order in the nation” = 2, “Government ensures law and order” = 2, other answers = 0

**soc\_11** – Do you believe that it is better to live in an orderly society where certain freedoms are limited, or do you believe it is better to live in a society where all rights and freedoms are respected, although there may be less order as a result. Number of NA: 304,268 (1995, 1996, 1997, 1998, 2000, 2002, 2003, 2005, 2007, 2008, 2010, 2011, 2013, 2015, 2017, 2018, 2020) “I prefer to live in an orderly society although some freedom” = 2, “I prefer to live in a society where all rights are respected” = 1, “I prefer a society that defends our Traditions and habits” = 2, “I Prefer a society that is open to a diversity of traditions and habits.” =1, other answers = 0

**soc\_12** – Would you support a military government in replace of a democratic one if things get very bad? or you would not support under any circumstances a military government.

[Alternative question in 2013: Do you strongly agree (1), agree (2), disagree (3) or strongly disagree (4) with the following statements? The army (military) should come in to govern the country]

Number of NA: 248,066 (1995, 1996, 1997, 1998, 2000, 2001, 2002, 2003, 2006, 2007, 2013,

2015, 2016, 2017, 2018) “Under no circumstances would support a military government” = 1, “Strongly disagree” = 1, “Disagree” = 1, “Would support a military government if the situation got very bad” = 2, “Agree” = 2, “Strongly agree” = 2, other answers = 0

## **Nationalism**

**soc\_3** – How proud are you to be [nationality]? Are you very proud, fairly proud, a little proud, or not proud at all?

Number of NA: 219,334 (1998, 2007, 2008, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Not proud at all” = 1, “A little proud” = 2, “Fairly proud” = 3, “Very proud” = 4, other answers = 0

**soc\_4** – And how much confidence do you have in the United Nations?

[Alternative question 2001, 2002, 2003, 2009, 2010, 2011, 2012, : From the list of institutions on the card, can you please evaluate each one on a scale from 0 to 10, 0 being very bad and 10 very good, tell me if you have not heard enough to give an opinion. United Nations]

Number of NA: 210,115 (1996, 1997, 1998, 2000, 2004, 2005, 2006, 2007, 2008, 2013, 2020, 2023)

In 1995, the options were “No confidence at all”, “Little confidence”, “Some confidence”, “A lot of confidence”. In the other years were from 0 or 1 to 10. I adapted to go from 1 to 4. “No confidence at all” = 4, “Little confidence” = 3, “Some confidence” = 2, “A lot of confidence” = 1. 10 and 9 = 1. 6 to 8 = 2, 3 to 5 = 3, and 0 to 2 = 4, other answers = 0

**soc\_5** – Do you think that the [nationals] are very, quite, a little or not at all Honest

[Alternative question in 2002, 2003, 2005, 2008, 2020: Do you think that the [nation-

als/countrymen] are very, quite, a little or not at all. Lawful/Law-abiding]

[Alternative question in 2010, 2009, 2010, 2011: Will you say that the (nationality) obey the law]

Number of NA: 130,078 (1995, 2004, 2005, 2006, 2007, 2009, 2013, 2015, 2016, 2017, 2018, 2023)

“Not at all” = 1, “A little” = 2, “Quite” = 3, “Very” = 4, other answers = 0

**soc\_6** – There ought to be laws to prevent immigrants entry into (Country)

[Alternative question in 2020: What should the government do with illegal immigrants?]

Number of NA: 322,354 (1995, 1996, 1997, 1998, 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, 2010, 2011, 2013, 2016, 2017, 2018, 2023)

In 2020, the options are: Send them back home immediately, Allow them to stay a specific time, and Allow them to stay all the time. For this reason, I constrain in three options. “Allow them to stay all the time” = 1, “Strongly disagree” = 1, “Disagree” = 1, “Allow them to stay a specific time” = 2, “Neither agree nor disagree” = 2, “Agree” = 3, “Strongly agree” = 3, “Allow them to stay all the time” = 3, other answers = 0

**soc\_61** – Immigrants come to compete for our jobs.

Number of NA: 301,451 (1995, 1996, 1997, 1998, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2010, 2011, 2013, 2016, 2017)

“Strongly disagree” = 1, “Disagree” = 2, “Neither agree nor disagree” = 3, “Agree” = 4, “Strongly agree” = 5, other answers = 0

## Economic dimension

### Globalization

**eco\_1** – “Would you say that your country benefits (4) a lot, (3) quite a bit, (2) a little or (1) not at all for being part of your regional trade agreement?”

Number of NA: 316,104 (1995, 2000, 2001 [partially], 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Not at all” = 1, “a little” = 2, “quite a bit” = 3, “a lot” = 4, other answers = 0

**eco\_2** – “Thinking about trade between your country and the United States, how important do you think it is for the economic development of your country? (4) Very important, (3) somewhat important, (2) not very important, (1) not important at all.” [Alternative question in 2011: How much do you think the United States helps to develop the economy of (country) through trade and investment?] [Alternative question in 2020: What is your opinion on trade between USA and (country)? Is it very favorable (1), somewhat favorable (2), somewhat unfavorable (3), or very unfavorable (4) for the economic development of the country?]

Number of NA: 309,078 (1995, 1996, 2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2013, 2015, 2016, 2017, 2018, 2023)

“Not at all important” = 1, “Not at all” = 1, “Not very important” = 2, “Not very much” = 2, “Somewhat important” = 3, “A fair amount” = 3, “Very important” = 4, “A great deal” = 4, other answers = 0

**eco\_3** – “Foreign investment should be encouraged. Do you (4) strongly agree, (3) agree, (2) disagree, or (1) strongly disagree with this statement?”

Number of NA: 363,349 (1995, 1996, 1997, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Strongly disagree” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

**eco\_4** – “In general, do you consider foreign investment to be (1) beneficial or (0) harmful for the development of the country?”

Number of NA: 315,202 (1996, 1997, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2015, 2018, 2023)

“harmful” = 1, “Beneficial” = 2, other answers = 0

**eco\_5** – “Generally speaking, are you in favour of, or against, the economic integration of the countries of Latin America, even if this implies certain costs or sacrifices for [nationals]?” [Alternative question in 1998, 2001, 2018: “Generally speaking, are you in favour of, or against, the economic integration of the countries of Latin America? Would you say that you are very in favour, quite in favour, slightly against or very against it?”] [Alternative question in 2003, 2005, 2008, 2009, 2010, 2016, 2017: Generally speaking, are you very in favor, quite in favor, slightly against or very against of the economic integration of the countries of Latin America?] [Alternative question in 2020, 2023: Are you very much in favor, somewhat in favor, somewhat against or very much against integration of your country with other countries of Latin América?]

Number of NA: 139,773 (2000, 2003, 2004, 2006, 2007, 2011, 2013, 2015)

In 1995 and 1996, the answers were either “in favor,” or “against”. Hence, I forced it in a binary variable. Very much against” = 1, “Against” = 1, “Somewhat against” = 1, “Very bad” = 1, “Bad” = 1, “Somewhat in favor” = 2, “In favor” = 2, “Very much in favor” = 2,

“Good” = 2, “Very good” =2, other answers = 0

## **Privatization**

**eco\_6** – “The privatization of state-owned enterprises has been beneficial to the country. Do you (4) strongly agree, (3) agree, (2) disagree, or (1) strongly disagree with this statement?”

[Alternative question in 2003: Do you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with the following sentence: The privatization of state companies has been beneficial to the country.]

Number of NA: 206,727 (1995, 1996, 1997, 2004, 2006, 2008, 2015, 2016, 2017, 2018, 2020, 2023)

“Strongly disagree” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

**eco\_7** – “The state should leave productive activity to the private sector. Do you (4) strongly agree, (3) agree, (2) disagree, or (1) strongly disagree with this statement?”

Number of NA: 347,043 (1995, 1996, 1997, 2000, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Strongly disagree” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

**eco\_8** – “The market economy is the most suitable system (más conveniente) for the country. Do you (4) strongly agree, (3) agree, (2) disagree, or (1) strongly disagree with this statement?”

Number of NA: 311,119 (1995, 1996, 1997, 2001, 2003, 2004, 2005, 2006, 2008, 2010, 2011, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Strongly disagree” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

**eco\_9** – “The market economy is the single system in which (country) can become developed” [Alternative question in 2008 and 2009: Only with a market economy can (country) become a developed country]

Number of NA: 157,418 (1995, 1996, 1997, 1998, 2000, 2001, 2002, 2006, 2015, 2016)

“Disagree strongly” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

**eco\_10** – Private enterprise is indispensable for the development of (country) [Alternative question in 1998: Private enterprise is beneficial for the country]

Number of NA: 271,828 (1995, 1996, 1997, 2000, 2001, 2002, 2003, 2006, 2008, 2013, 2015, 2016, 2018, 2020, 2023)

“Disagree strongly” = 1, “Disagree” = 2, “Agree” = 3, “Strongly agree” = 4, other answers = 0

## **Economic performance covariates**

Questions regarding sociotropic/pocketbook concerns. Questions related to government performance. Greater economic insecurity answers were coded to be higher values.

**eco\_11** – “Do the salary or wages that you receive and your family income allow you to satisfactorily cover your necessities? In which of the following situations do you find yourself? (0) They don’t cover necessities, we have great difficulties. (1) They don’t cover necessities, we have difficulties. (2) They just cover necessities without great difficulties. (3)

They cover necessities well, we can save

Number of NA: 0

“It is sufficient, you can save” = 1, “It is sufficient and we can save” = 1, “It is sufficient, can save” = 1, “It’s enough, we can save = 1, “Well enough, they can save” = 1, “Les alcanza bien, pueden ahorrar” = 1, “It is just sufficient, without major problems” = 2, “It’s just enough, we don’t have major problems” = 2, “It reaches them just, without great hardship” = 2, “Les alcanza justo, sin grandes dificultades” = 2, “It is just sufficient, doesn’t have major problems” = 2, “It is just sufficient and we don’t have major problems” = 2, “No les alcanza, tienen dificultades” = 3, “It is not sufficient, you have problems” = 3, “It is not sufficient, has problems” = 3, “It’s not enough, we have problems” = 3, “They are not enough, they have difficulties” = 3, “It is not sufficient, you have big problems” = 4, “No les alcanza, tienen grandes dificultades” = 4, “It’s not enough, we have major problems” = 4, “They do not reach them, they have great difficulties” = 4, other answers = 0

**eco\_12** – “How worried are you about being without work or becoming unemployed during the next twelve months? (1) Not worried, (2) a little worried, (3) worried, (4) very worried.”

Number of NA: 0

“Not at all concerned” = 1, “No esta preocupado” = 1, “A little concerned” = 2, “Poco preocupado” = 2, “Concerned” = 3, “Preocupado” = 3, “Very concerned” = 4, “Muy preocupado” = 4, other answers = 0

**eco\_13** – “How would you evaluate the current general economic situation of the country? Would you say that it is (5) very good, (4) good, (3) normal, (2) bad, or (1) very bad?”

Number of NA: 0

“Very good” = 1, “Good” = 2, “About average” = 3, “Bad” = 4, “Very bad” = 5, other answers = 0

**eco\_14** – “How would you evaluate the current economic situation of you and your family? Would you say that it is (5) very good, (4) good, (3) normal, (2) bad, or (1) very bad?”

Number of NA: 113,629 (2007, 2016, 2017, 2018, 2020, 2023)

“Very good” = 1, “Good” = 2, “About average” = 3 “Bad” = 4, “Very bad” = 5, other answers = 0

**eco\_15** – “In the next 12 months, do you think your economic situation and that of your family will be much better, a little better, about the same, a little worse or much worse than now?”

[Writing of the question in 1995, 1996, 1997 “And in the next 12 months do you think that your economic situation and that of your family will improve, stay the same or get worse compared to the way it is now? (Interviewer, write one answer)?]

Number of NA: 15,639 (1998)

The answers in 1995, 1996, and 1997 are either “better”, “worse” or “the same”. For this reason, I constrain it to be only from 1 to 3. “Much better” = 1, “Very good” = 1, “Good” = 1, “better” = 1, “Same” = 2, “About the same” = 2, “Worse” = 3. “Bad” = 3, “Very bad” = 3, other answers = 0

## Evaluations on crime

Questions regarding sociotropic/pocketbook concerns. Greater economic insecurity answers were coded to be higher values.

**crime\_1** – “Have you, or someone in your family, been assaulted, been attacked, or been the victim of a crime in the last 12 months? (1) Yes, (0) No”

[Alternative question: Have you (1) or a relative (2) been assaulted, attacked, or the victim of a crime in the last 12 months?]

Number of NA: 0

“No” = 1, “Not mentioned” = 1, “None” = 1, “Yes” = 2, “Yes, I” = 2, “Mentioned” = 2, “Yes, a parent” = 2, “You” = 2, “Relative” = 2, “Both” = 2, “Ud.” = 2, “Algun pariente” = 2, “Ambos” = 2, other answers = 0

**crime\_2** – “From the list of things that I’m going to read, do you think each has (5) increased a lot, (4)increase a little, (3) stayed the same, (2) decreased a little, or (1) decreased a lot in the last twelve months? Crime”

Number of NA: 255,560 (2003, 2004, 2006, 2007, 2008, 2009, 2010, 2013, 2015, 2016, 2017, 2018, 2020, 2023)

“Decreased a lot” = 1, “Decline a lot” = 1, “Decreased a little” = 2, “Slightly decline” = 2, “Remained the same” = 3, “Increased a little” = 4, “Little increase” = 4. “Increased a lot” = 5, other answers = 0

**crime\_4** – “How often, if at all, do you worry about becoming a victim of violent crime?”

Number of NA: 191,223 (1995, 1996, 1997, 1998, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2008)

“Never” = 1, “Occasionally” = 2, “Sometimes” = 3, “All or almost the time” = 4, other answers = 0

## Democracy support

Questions regarding support for democracy. Lower support for democracy were coded to be higher values.

**dem\_1** – “In general, would you say that you are (4) very satisfied, (3) fairly satisfied, (2) not very satisfied, or (1) not at all satisfied with the way democracy works in your country?”

Number of NA: 0

“Very satisfied” = 1, “Rather satisfied” = 2, “Not very satisfied” = 3, “Not at all satisfied” = 4, other answers = 0

**dem\_2** – “With which of the following statements do you agree most? (3) Democracy is preferable to any other kind of government. (1) Under some circumstances, an authoritarian government can be preferable to a democratic one. (2) For people like me, it does not matter whether we have a democratic or a non-democratic regime.” Number of NA: 0  
“Democracy is preferable to any other kind of government” = 1, “For people like me, it does not matter whether we have a democracy” = 2, “Under some circumstances, an authoritarian government can be preferable to a democratic one” = 3, other answers = 0

## Anti-Americanism

Question regarding view of the United States. More positive view of the United States were coded to be higher values,

**pro\_us** – “I’d like to know your opinion about the United States. Do you have a (1) very good, (2) good, (3) bad, or (4) very bad opinion of the United States?”

Number of NA: 0

Since 2000, there is not the option “Average”. I coded this answer in the waves from 1995 to 1998 as other answers. “Very bad” = 1, “Muy mala” = 1, “Very unfavorable” = 1, “Bad” = 2, “Mala” = 2, “Somewhat unfavorable” = 2, “Good” = 3, “Buena” = 3, “Somewhat favorable” = 3, “Very good” = 4, “Muy buena” = 4, “Very favorable” = 4, other answers = 0

## Self-declaratory left and right scale

Question regarding self-position on the left and right scale. More right-wing positions were coded to be higher values.

**leri** – “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?”

Number of NA: 3,945 (2009 [partially], 2010 [partially])

0 [leftmost] = 1 to 10 [rightmost] = 11, other answers = 0

## Education

Question regarding respondent education. More educated were coded to be higher values

**edu** – “What education have you finished? Which is the last year completed?”

Number of NA: 0

“Without education” = 1, “1 year” = 2, “2 years” = 3, “3 years” = 4, “4 years” = 5,

“5 years” =6, “6 years” = 7, “7 years” = 8, “8 years” = 9, “9 years” = 10, “10 years” = 11, “High school/academies/Incomplete technical training” = 11, “11 years“ = 12, “High school/academies/Complete technical training” = 12, “12 years” = 13, “Incomplete university” = 13, “Completed university” = 14, other answers = 0

## Appendix B: Question Selection, Coding Procedures and Constraint Matrix

The selection of questions partially derives from the work from [Baker and Greene \(2011\)](#). In their paper, [Baker and Greene](#) also develop an ideological measurement of Latinobarómetro respondents<sup>27</sup>. However, their focus is solely on the economic dimension. Hence, the questions related to this dimension derive from their work. I update it to the most recent wave of the survey.

Regarding the socio-cultural dimension, the goal was to follow a similar approach to [Baker and Greene \(2011\)](#) in subdividing the dimension to qualitatively assess the questions. For this goal, the elements of the GAL–TAN definition (green/alternative/libertarian and traditional/authoritarian/nationalist) were helpful. The decision to focus on the elements related to TAN derived from an acknowledgment that they are more important in Latin America than the elements linked to GAL (for example, Green parties are significantly more important in Western Europe). In addition, TAN was better represented in the Latinobarómetro surveys. Thus, questions related to tradition are about religious practices, gender roles, and sexual morality. Authoritarianism questions measure support for order and state authority. Nationalism questions measure national pride, attitudes toward international institutions, and immigration. Tables [6](#) and [7](#) are the constraint matrix of each dimension.

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<sup>27</sup>Their measurement is in the online appendix of the paper that is available in <https://www.andybaker.org/latinamericanelections/>

**Table 6: IRT-M Constraint Matrix: Socio-Cultural Dimension**

Question	Response	Economic	Socio-Cultural
<i>Tradition Questions</i>			
soc_1	Not devout at all	NA	-1
	Not very devout	NA	-1
	Devout	NA	+1
	Very devout	NA	+1
soc_2	No confidence in the Church	NA	-1
	Little confidence	NA	-1
	Some confidence	NA	+1
	A lot of confidence	NA	+1
soc_13	Strongly disagree	NA	-1
	Disagree	NA	-1
	Agree	NA	+1
	Strongly agree	NA	+1
soc_14	Always justified	NA	-1
	(Scale 2)	NA	-1
	(Scale 3)	NA	-1
	(Scale 4)	NA	-1
	(Scale 5)	NA	-1
	(Scale 6)	NA	+1
	(Scale 7)	NA	+1
	(Scale 8)	NA	+1
	(Scale 9)	NA	+1
Never justified	NA	+1	
soc_15	Always justified	NA	-1
	(Scale 2)	NA	-1
	(Scale 3)	NA	-1
	(Scale 4)	NA	-1
	(Scale 5)	NA	-1
	(Scale 6)	NA	+1
	(Scale 7)	NA	+1
	(Scale 8)	NA	+1

Continued on next page

Table 6: IRT-M Constraint Matrix: Socio-Cultural Dimension (Continued)

Question	Response	Economic	Socio-Cultural
	(Scale 9)	NA	+1
	Never justified	NA	+1
soc_16	Strongly agree	NA	-1
	Agree	NA	-1
	Disagree	NA	+1
	Strongly disagree	NA	+1
soc_17	Would not mind	NA	-1
	Would not like	NA	+1
<i>Authoritarianism Questions</i>			
soc_7	No confidence in Armed Forces	NA	-1
	Little confidence	NA	-1
	Some confidence	NA	+1
	A lot of confidence	NA	+1
soc_8	No confidence in Police	NA	-1
	Little confidence	NA	-1
	Some confidence	NA	+1
	A lot of confidence	NA	+1
soc_9	Firm hand not good	NA	-1
	Firm hand not bad	NA	+1
soc_10	Other priorities more important	NA	-1
	Maintain order most important	NA	+1
soc_11	Respect all rights and freedoms	NA	-1
	Orderly society, limit freedoms	NA	+1
soc_12	Never support military govt	NA	-1
	Support military govt if bad	NA	+1

*Continued on next page*

Table 6: IRT-M Constraint Matrix: Socio-Cultural Dimension (Continued)

Question	Response	Economic	Socio-Cultural
<i>Nationalism Questions</i>			
soc_3	Not proud	NA	-1
	A little proud	NA	-1
	Fairly proud	NA	+1
	Very proud	NA	+1
soc_4	No confidence in national	NA	-1
	Little confidence	NA	-1
	Some confidence	NA	+1
	A lot of confidence	NA	+1
soc_5	Not honest at all	NA	-1
	A little honest	NA	-1
	Quite honest	NA	+1
	Very honest	NA	+1
soc_6	Strongly disagree	NA	-1
	Neither agree nor disagree	NA	0
	Strongly agree	NA	+1
soc_61	Strongly disagree	NA	-1
	Disagree	NA	-1
	Neither agree nor disagree	NA	0
	Agree	NA	+1
	Strongly agree	NA	+1

*Note:* This table shows constraint assignments for socio-cultural dimension questions. +1 = conservative response increases GAL-TAN score, -1 = liberal response decreases GAL-TAN score, 0 = constrained to zero loading, NA = no constraint on economic dimension. *Question Categories:* Tradition questions measure religious devotion, gender roles, and sexual morality. Authoritarianism questions measure support for order and state authority. Nationalism questions measure national pride and attitudes toward international institutions and immigration.

**Table 7: IRT-M Constraint Matrix: Socio-Cultural Dimension**

Question	Response	Economic	Socio-Cultural
<i>Globalization Questions</i>			
eco.1	Country benefits not at all (trade)	-1	NA
	Country benefits a little	-1	NA
	Country benefits quite a bit	+1	NA
	Country benefits a lot	+1	NA
eco.2	US trade not important at all	-1	NA
	US trade not very important	-1	NA
	US trade somewhat important	+1	NA
	US trade very important	+1	NA
eco.3	Strongly disagree (foreign investment)	-1	NA
	Disagree	-1	NA
	Agree	+1	NA
	Strongly agree	+1	NA
eco.4	Foreign investment harmful	-1	NA
	Foreign investment beneficial	+1	NA
eco.5	Against Latin American integration	-1	NA
	In favor of integration	+1	NA
<i>Privatization Questions</i>			
eco.6	Strongly disagree (privatization)	-1	NA
	Disagree	-1	NA

Continued on next page

Table 7: IRT-M Constraint Matrix: Socio-Cultural Dimension (Continued)

Question	Response	Economic	Socio-Cultural
eco_7	Agree	+1	NA
	Strongly agree	+1	NA
	Strongly disagree (private sector)	-1	NA
	Disagree	-1	NA
	Agree	+1	NA
eco_8	Strongly agree	+1	NA
	Strongly disagree (market economy)	-1	NA
	Disagree	-1	NA
	Agree	+1	NA
eco_9	Strongly agree	+1	NA
	Strongly disagree (market only way)	-1	NA
	Disagree	-1	NA
eco_10	Agree	+1	NA
	Strongly agree	+1	NA
	Strongly disagree (private enterprise)	-1	NA

*Note:* This table shows constraint assignments for economic dimension questions and control variables. +1 = pro-market response increases economic dimension score, -1 = anti-market response decreases score, NA = no constraint on socio-cultural dimension.

*Economic Question Categories:* Globalization questions measure attitudes toward trade and foreign investment. Privatization questions measure support for market economy and private enterprise.

## Appendix C: Regression results of dropping loadings

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tradition	0.012** (0.004)	0.009* (0.004)	0.010** (0.003)	0.013** (0.004)	0.015*** (0.004)	0.010** (0.004)	0.012** (0.004)	0.013*** (0.004)
Democracy	0.004 (0.003)	0.002 (0.002)	0.002 (0.002)	0.005 (0.002)	0.005* (0.002)	0.002 (0.003)	0.004 (0.003)	0.004 (0.003)
Authoritarianism	0.004 (0.003)	0.002 (0.003)	0.002 (0.003)	0.005 (0.003)	0.005 (0.003)	0.002 (0.002)	0.004 (0.003)	0.004 (0.003)
Sociotropic	-0.003 (0.004)	-0.007* (0.003)	-0.006 (0.004)		-0.001 (0.003)	-0.005 (0.004)	-0.002 (0.004)	-0.003 (0.004)
Globalization	-0.006 (0.005)	-0.010* (0.004)	-0.009* (0.004)	-0.006 (0.004)		-0.009* (0.004)	-0.006 (0.005)	-0.006 (0.005)
Crime threat	0.002 (0.002)	0.000 (0.002)	0.001 (0.001)	0.003 (0.002)	0.003 (0.002)		0.003 (0.002)	0.002 (0.002)
Nationalism	-0.020 (0.031)	-0.027 (0.030)	-0.027 (0.030)	-0.018 (0.031)	-0.016 (0.030)	-0.025 (0.031)		-0.020 (0.031)
Privatization	-0.014 (0.026)	-0.026 (0.026)	-0.021 (0.025)	-0.013 (0.026)	-0.010 (0.026)	-0.020 (0.026)	-0.013 (0.027)	
Num.Obs.	356	356	356	356	356	356	356	356
R <sup>2</sup>	0.195	0.189	0.191	0.194	0.192	0.192	0.194	0.194
R <sup>2</sup> Adj.	0.120	0.117	0.119	0.122	0.120	0.120	0.122	0.123
Clustered Std.Errs	Country	Country	Country	Country	Country	Country	Country	Country
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

## Appendix D: Regression of tradition and authoritarianism with a time period interaction on GAL–TAN and the economic dimensions Euclidean distance

Table 8: Regression of tradition and authoritarianism with a time period interaction on GAL–TAN and the economic dimensions Euclidean distance

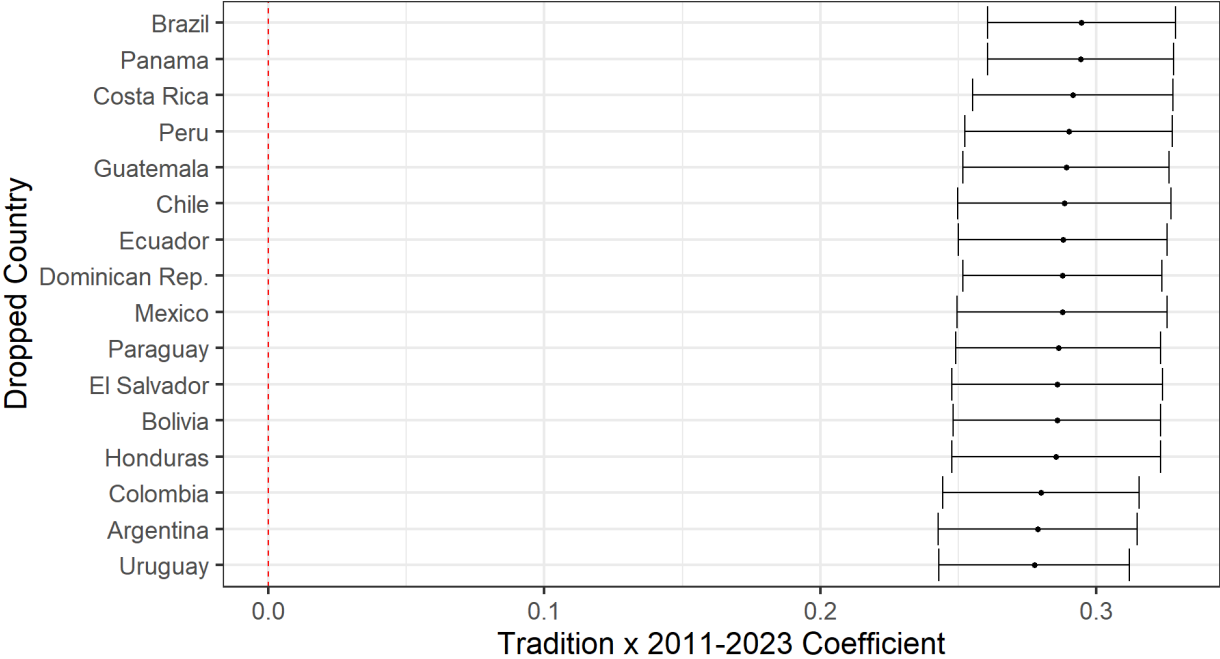
	(1)
Tradition	0.498*** (0.016)
Authoritarianism	0.581*** (0.020)
2003-2010	0.103*** (0.021)
2011-2023	0.057*** (0.017)
Tradition x 2003-2010	−0.147*** (0.029)
Tradition x 2011-2023	0.287*** (0.018)
Authoritarianism x 2003-2010	−0.190*** (0.031)
Authoritarianism x 2011-2023	−0.295*** (0.020)
Num.Obs.	387 647
R2	0.234
R2 Adj.	0.234
Clustered Std.Errs	Country
Country FE	Yes
Socio-demographic controls	Yes

*Note:* \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Note: The socio-demographic controls are gender, education, wealth, and religious affiliation

# Appendix E : Interaction Jackknife

Figure 4: Jackknife of Tradition x 2011-2023 interaction



## Appendix F: Descriptive Statistics

Table 9: Descriptive statistics of the economic and GAL-TAN dimensions

Dimension	Count	Min	Mean	Median	Max	Std.Dev.
Economic	389317	-3.37956	0.00066	-0.01076	3.02414	0.86015
GAL-TAN	389317	-3.21420	0.00015	0.02218	3.24627	0.85554

**Note:** Data covers 19 countries over 23 Latinobarómetro waves