One vote, many Mexicos: Income and vote choice in the 1994, 2000, and 2006 presidential elections*

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Abstract

Using multilevel modeling of state-level economic data and individual-level exit poll data from the 1994, 2000 and 2006 Mexican presidential elections, we find that income has a stronger effect in predicting the vote for the conservative party in poorer states than in richer states—a pattern that has also been found in recent U.S. elections. In addition (and unlike in the U.S.), richer states on average tend to support the conservative party at higher rates than poorer states. Our findings raise questions regarding the role that income polarization and region play in vote choice. The electoral results since 1994 reveal that collapsing multiple states into large regions entails significant loss of information that otherwise may uncover sharper and quiet revealing differences in voting patterns between rich and poor states as well as rich and poor individuals within states.

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1 Introduction

> "The electorate is genuinely divided and the close election underlines it. Many are opting for a change while many are opting for continuity."[1] (Dresser 2006)

> "Yesterday, the electorate confirmed a regional division in which the north and north-west parts of the country favored Felipe Calderón, while the center and south supported Andrés Manuel López Obrador at higher rates."[2] (Reforma 2006)

> "The only thing that the election shows is that social polarization is not a children's story and less an invention. This polarization is a reality.... It is or it seems to be the legitimization of the fight between the rich and the poor."[3] (Alemán 2006)

> "The new map depicts an industrialized north, where business ties to the United States have played an enormous role in the rise of the right-leaning, conservative party, and a more agricultural south that is a hotbed of leftist discontent and anti-globalization sentiment." (McKinley 2006)

The conservative candidate from the National Action Party (PAN) won the most contested presidential election in Mexico's modern times by a margin of 0.6% over the leftist candidate from the Party of the Democratic Revolution (PRD) and almost 14% over the "catchall" candidate from the Institutional Revolutionary Party (PRI). One thing was evident from election day: the presidential vote was geographically divided, with the states of the north and center-west supporting the PAN and the states of the center and the south supporting the PRD. In other words, the electoral result was characterized by a divide between rich and poor states. This pattern was strikingly clear in 2006 –not so in the two previous presidential elections of 1994 and 2000– but, as we shall see, this it is not a simple aggregation of rich voters supporting the conservative candidate and poor voters supporting the left-wing candidate.

What happened in the 1994, 2000, and 2006 presidential elections? Does living in a rich or poor state change individual vote preferences–that is, does geography matter for voting behavior? Why geography now matters more than ever? Why explaining the presidential

[1] "El electorado está genuinamente dividido y la elección apretada lo subraya. Muchos optan por el cambio y muchos optan por la continuidad."

[2] "Los electores confirmaron, el día de ayer, una división regional en la que el norte y centro-occidente del País favorecieron a Felipe Calderón, mientras que las regiones centro y sur se manifestaron más por Andrés Manuel López Obrador."

[3] "Lo único que muestra es que la polarización social no es un cuento y menos un invento. Esa polarización es una realidad.... Es o parece ser la legitimación de la lucha de pobres contra ricos."

electoral outcomes entails bringing the 'states' back in? We try to answer these questions by analyzing the relation between income and vote choice at the state and individual level on the outcome of the 1994, 2000 and 2006 Mexican presidential elections.

Each of the past three Mexican presidential elections illustrate a breaking point in Mexico's political history, which must be accounted for when interpreting the electoral returns. The 1994 presidential election can be characterized as the election of "fear." Events such as the Zapatista uprising , the assassination of Luis Donaldo Colosio (the PRI presidential candidate), and NAFTA contextualized the election. Many scholars, as well as journalists (Loaeza 1999), have argued that the PRI took advantage of these events in a huge marketing campaign suggesting that the country needed experience and continuity and not a new political party with no governing experience. The 2000 presidential election, the election of "change", can be considered as the apogee of Mexico's democratic transition[4] that started in the late 1970s with the first comprehensive electoral reform (Becerra, Salazar & Woldenberg 2000, Lujambio 1997, Ochoa-Reza 2004). Finally, the 2006 election has been portrayed as the election in which political entrepreneurs tried to capitalize on the socioeconomic and regional cleavages that, to some extent, became more evident during the 1990s with the political and economic reforms and exacerbated by the economic crisis of that decade. Others argue that the results of the 2006 election highlight voters' perceptions of the inherent risk associated with each candidate as well as with their personalities (Beltran Forthcoming). In economic terms, the 2006 presidential election can be qualified as the election of the "neoliberals" versus the "neopopulists," the "elite" versus the "populace", the PAN representing the right (fiscally and culturally conservative) versus the PRD representing a "Kafkanian" left, with the PRI somewhere in the middle and swinging left and right contingent upon which group won the internal hegemony.

Given each party's foundational myths, and the polarizing rhetoric used during the campaign, one could anticipate that under fair electoral conditions,[5] the PAN would capture the votes of the conservative middle-class and of the rich; while, given the backlash of neoliberal policies in other Latin American countries, it seemed plausible that the PRD would assure the vote of the less affluent voters. Mexican political pundits in the months

[4] "A democratic transition is complete when sufficient agreement has been reached about political procedures to produce an elected, government, when a government comes to power that is the direct result of a free and popular vote, when this government de facto has the authority to generate new policies, and when the executive, legislative and judicial power generated by the new democracy does not have to share power with other bodies de jure." (Linz & Stepan 1996, p. 3)

[5] According to Freedom House in 1994 Mexico was a "partly free" country and a free country in political and civil liberties since the year 2000.

preceding the election criticized the PAN candidate, Felipe Calderon, for being unable to articulate a message that would also address the concerns of large sectors of the population that had been hurt by the neoliberal economic model (Dresser 2005). Now, given Mexico's socioeconomic conditions and the numeric superiority of less affluent voters, many believed that the PRD could overwhelmingly win a national election such as the 2006 presidential election; however, as we all know, the PRD did not win. So, did richer voters support the PAN candidate and poorer voters support the PRD or the PRI?

Studies of the Mexican presidential elections have found that political factors such as party identification, the content of political campaigns, the notion of regime change, and the pro and anti-regime divide in the electorate proved to better account for the variation in voting behavior than socio-demographic variables or even the left-right ideological division within the electorate (see the edited volume by Dominguez & Lawson 2004). While income is often included as a control, and the positive link between income and support for the conservative party is almost always noted in multivariate analyses (for example, see Klesner 1995, Dominguez & McCann 1996, Moreno 2003, Dominguez & Lawson 2004), the connection between income and vote choice has not been analyzed when geography is taken into account.

In this paper, we find that, on average, individual income matters more in poorer states than in richer states—a similar pattern as found by Gelman, Shor, Bafumi & Park (2007) and Gelman, Park, Shor, Bafumi & Cortina (2008) in analyzing U.S. electoral data. The difference in voting patterns between rich and poor individuals is greater in rich states than in poor states. At the aggregate level, however, the conservative party (PAN) does better in richer states (in terms of GDP per capita) than in poorer states—unlike in the United States, where the Republicans have in recent years performed better in the poor states.

The rest of this paper is organized as follows. Section 2 summarizes the state-level presidential results for the 1994, 2000 and 2006 elections, Sections 3 and 4 describe our methods and results, and we discuss our findings in Section 5.

2 Geography and the vote

2.1 Geography matters: Mexico's political mosaic

Mexico is a country of geographically and ethnically diverse traditions and cultures. Just as the cuisine changes considerably all over the territory, income, state development and individual political preferences change dramatically from one Mexican state to another. For

instance, the GDP per capita of the richest state (Mexico, D.F.) is more than six times than that of the poorest state (Chiapas). Similar differences are found in other realms such as health and education (PNUD 2003). Politically, nowadays Mexico can be defined as an ideologically polarized tripartite party system. On the left of the political spectrum, we find the PRD, the party of the *"clase popular"* (i.e., the poor); on the right is the PAN, the party of the middle class; and in a blurry center is the PRI, the former ruling party. At the individual level, public opinion and exit poll data show that voters of higher income and socioeconomic status tend to support the PAN while the less affluent tend to support the PRD or the PRI (Moreno 2003, Klesner 2004, Reforma 2006). Figure 1 shows that at the individual level, richer voters tend to support the conservative party in greater proportions than poorer voters, who tend to support the PRI and the PRD significantly more.

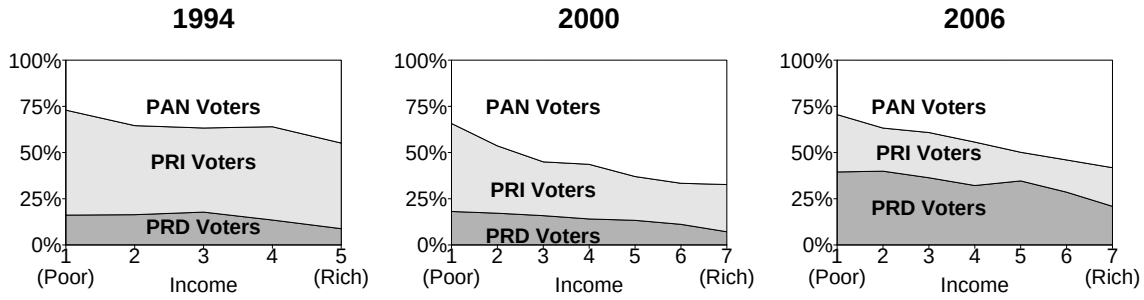

Figure 1: For each of the three major parties, the vote share plotted vs. individual income.[7] On average, richer voters tend to support the conservative party (PAN) in greater proportions than poorer voters

At the regional level, Figure 2 shows that the PAN has done better[8] in the wealthier parts of the country (center-west and north), and worse in Mexico City and the south(Klesner 2004, p.105).[9] In contrast to the commonly held view of clear regional divisions between PAN supporters and PRD/PRI supporters, that is, between the rich Northern and Northwestern states v. the poor southern states, at this level of aggregation, however, the relationship between income and vote choice is not so clear. For instance, the average GDP

[8]Although the PRI won all the states in 1994 the official electoral results for the presidential election confirm that the PAN did better in the center-west and northern regions of the country

[9]Adapting Klesner (2004), we define the regions as: *north*: Baja California, Baja California Sur, Coahuila, Chihuahua, Durango, Nuevo Leon, San Luis Potosi, Sinaloa, Sonora, Tamaulipas, Zacatecas; *center-west*: Aguascalientes, Colima, Guanajuato, Jalisco, Michoacan, Nayarit, Queretaro; *center*: Estado de Mexico, Hidalgo, Morelos, Puebla, Tlaxcala; *south*: Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Veracruz, Yucatan. For our analyses, we consider the Federal District (Mexico, D.F.) as a separate state from the rest of the Estado de Mexico.

per capita[10] in the regions won by the PAN in 2000 was $9,050, while the GDP per capita in those regions where the PAN under-performed was $8,800 (PNUD 2003). At the state level, a different picture emerges. The average GDP per capita in the states won by the PAN was $10,200 for 2000 and $9,700 in 2006. In contrast, the GDP per capita in those states won by the PRD was $4,800 in 2000 and $7,300 for 2006.

2.2 Context matters: Unpacking the vote in the 1994-2006 presidential elections

Since 1988, each presidential election has been inscribed within major political and economic processes. In this sense, the relationship between income and vote choice in the past three presidential elections has to be situated within each election and its context, which necessarily colors the perception of the choices offered by each party.

1994 was one of the most eventful years of Mexico's modern economic and political history. This year saw NAFTA coming into effect, the Zapatista uprising, and high profile political assassinations. The unrolling of these events severely questioned the capacity of the Mexican political system to advance towards full democracy in a non violent way. Maintaining the country's peace and stability and safeguarding the electoral process, therefore, became the primordial goal of all political actors. The result was the acquiescence of the PRI to collaborate and modify legal dispositions that would allow international and national individuals and organizations to function as electoral observers. These elections were both, highly contested as well as the most closely watched, embedding the winner with a newfound legitimacy through the popular mandate. The fear of violence and political chaos favored the PRI that positioned itself as the only political party capable –with enough governing experience– to manage the crisis, thus obtaining 49% of the vote. The media collaborated with this image by launching what was later criticized as a "fear" campaign (Scherlen 1998), that favored the PRI. The "fear" campaign hurt the PRD and gave some leverage to the PAN: the former had an "unofficial" and ambivalent relationship with the Zapatista Army, while the later championed peace and "orderly change" (Loaeza 1999, Tuiran & Grobet 1995).

The general sentiment during the 2000 presidential election was that getting rid of the PRI would solve almost all of Mexico's problems regardless of their nature. 2000, the year of "change" ended more than 71 years of the PRI's political hegemony at the national level. During this election a vast majority of the electorate voted for political alternation,

[10] GDP in 2000 PPP U.S. dollars.

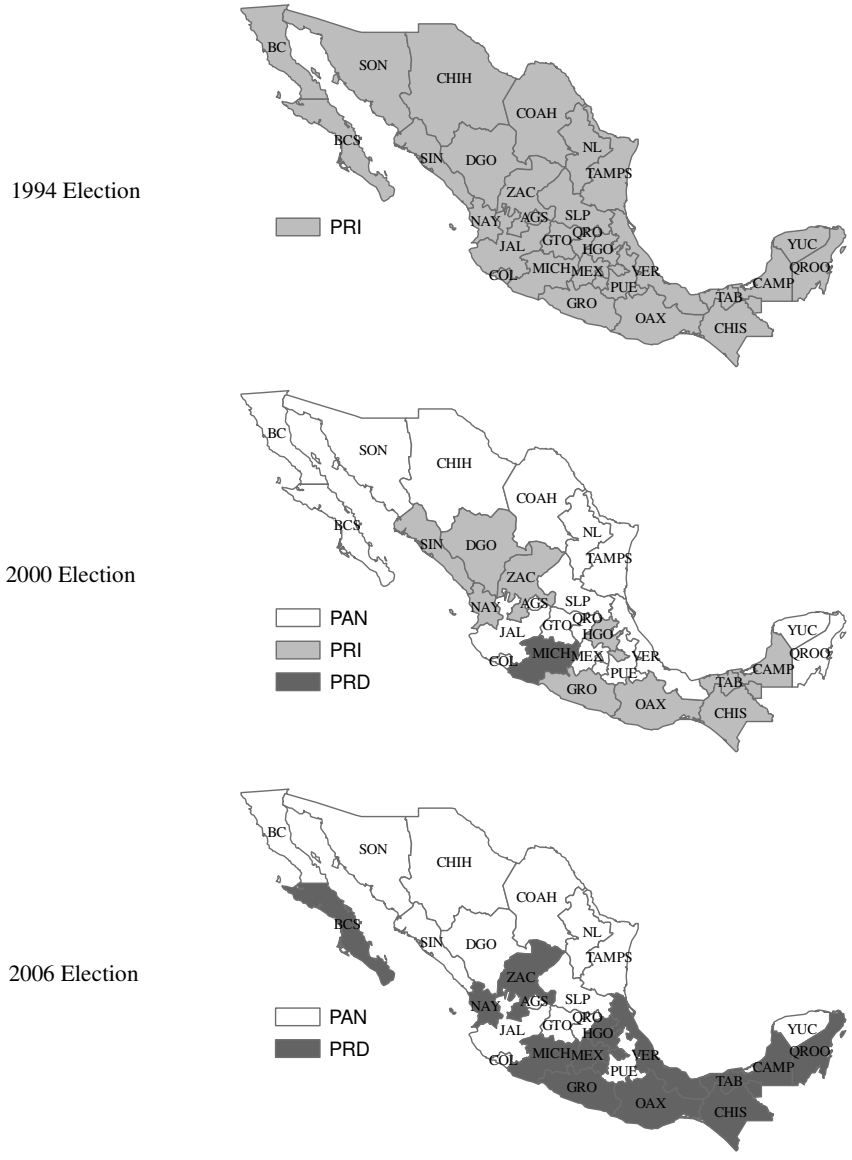

Figure 2: States won by each of the political parties in the 1994, 2000 and 2006 elections. White represents those states in which the PAN won, light gray represents those states won by the PRI, and dark gray represents the states won by the PRD.

ensuring however, a continuation of macroeconomic stability and also of social peace. After the 1994 economic crisis the economy was probably one of the most salient issues during the campaign. The PRI tried to take advantage of what it thought it would be a backlash of neoliberal policies and its candidate assumed the most left-wing position a PRI candidate had taken since the 1970's. At the end, this strategy backfired for two reasons. First, it alienated middle and high-income PRI voters who had been benefited by these policies. Second, this issue was aptly lumped together by the PAN candidate who argued that the economic situation was not so much the effect of neoliberal policies but due to an inefficient, undemocratic and corrupt PRI government. The PAN strategy also hurt the PRD indirectly. Many PRD supporters agreed that the main goal of their vote in that election was to get rid of 71 years of PRI rule. The PAN obtained 43% of the vote followed by the PRI with 36% and again the PRD with 17% of the popular vote. For the first time in more than half a Century an opposition party won the presidency.

The 2006 election has been portrayed as the most polarized, at least at the elite level (Bruhn & Greene, 2007). However, key ideological differences between the parties' platforms that were present in the 1994 and 2000 elections seem to have eroded in 2006. In the economic policy dimension, the PRD moved towards the center with respect to previous elections. The group that won political hegemony within the PRD, alienated some of its most left-wing bases as they criticized the party of becoming "a vehicle for the political ambitions of many of the same politicians who surrounded Salinas" (Gilly 2006, p. 78). The PAN also moved to the left of most neoliberal programs envisioned by the PRI for Mexico's rural sector. Instead of reducing expenditures in the rural sector, the Fox administration spent more than the previous five PRI administrations (Ardila 2006). The spending was mostly concentrated on the Northern areas of the country, where agricultural entrepreneurs easily fulfilled the requirements to receive governmental support and where coincidentally the PAN has had more political sympathizers (see Soto (2003) for a discussion).

One significant difference or commonalty –depending one's view– from the previous presidential campaigns was the PAN's adoption of old PRI's media tactics. In 2006, the use of the media by the governing party to breed a "fear of change" mimic, to some degree, those used by the PRI during the 1994 presidential campaign. The PAN, which severely questioned the PRI's use of state resources to guarantee privileged access to the media and the loyalty of unions, resorted to similar tactics. However, once in power, the PAN spent a considerable amount of resources in order to finance a campaign against the PRD candidate that portrayed him as a destabilizing element who would threaten social peace

and economic stability. For the second time in Mexico's modern political history, the PAN won the presidency with 36% of the vote closely followed by the PRD with 35% of the popular mandate and, for the first time in its history, the PRI came in third, with 22% of the vote.

Even though each election is unique and there are no definite or absolute regional partisan strongholds (as Figure 2 shows), the PAN tends to do better in the richer states, while the PRD does better in the poorer states and the PRI seems to do better in a potpourri of rich and poor states. The electoral results since 1994 reveal that collapsing multiple states into large regions entails significant loss of information that otherwise may uncover sharper and quite revealing differences between states. In other words, there is more variation between states than is suggested by the convention of the day. One way to account for this variation between states, going beyond the inclusion of indicator variables for each state, is to use multilevel modeling.

3 Methods

There are two compelling reasons for a multilevel approach. First, there is a theoretical justification based on Mexico's unique democratic transition. Second there is a statistical justification; multilevel modeling allows us to understand the relation between income and vote among individuals and states simultaneously.

The Mexican states have played an important role in Mexico's transition to democracy, which began in the late 1970s with the first comprehensive electoral reform (Lujambio & Segl 2000, Ochoa-Reza 2004). In the following decades, as multiparty participation increased across the 31 states and Mexico City, a new political dynamic was generated. Political activity at the state and local levels was not only essential for a smooth change in the Mexican political climate, but also created a set of state and local political conditions that in turn gave rise to unique political cultures that need to be modeled (for a discussion, see De Remes 1998, Hernandez-Rodriguez 2003, Loaeza 1999).

Multilevel modeling allows us to estimate patterns of variation within and between groups (in this case, states), taking into account the hierarchical nature of the data (individuals within states) and also the specific characteristics of each state by allowing their intercepts and slopes to vary (See, e.g., Snijders & Bosker (1999) for a general overview of multilevel models, and Gelman et al. (2007) for the particular example of income and voting.).

Our central model is a varying-intercept, varying-slope model predicting vote choice from

individual income and GDP per capita, which we fit independently to data from Mitofsky International for 1994, Consulta Mitofsky-Televisa for 2000 and BGC Ulises Beltrán y Asocs. for 2006 excluding those respondents who did not report for whom they voted or who supported parties other than the PAN, PRI, or PRD. This left us with 4,213 responses for 1994, 24,584 for 2000 and 3,709 for 2006 with sample sizes within states ranging from 9 in Tlaxcala and Colima in the year 2000 to 736 in Estado de Mexico in 1994. The multilevel model allows us to estimate the income-voting relation in each state, with the estimates for the larger states coming largely from their own data and the estimates for smaller states relying more of the state-level regression model.[11]

The model for individual voters i is

$$\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i), \text{ for } i = 1, \ldots, n, \tag{1}$$

where $Pr(y_i = 1)$ represents the probability of voting for a particular party (PRD, PRI, or PAN), and x_i represents household income on a standardized scale.[12] Given the unique nature of each presidential election we fit two different logistic regressions: PAN vs PRI for 1994 and 2000 and PAN vs PRD for 2006. These models allow us to predict the vote for the parties of the right and the left that had real chances to win the election.

Since we are interested in comparing states with different wealth, we include GDP per capita within each state as a state-level predictor. The group-level intercepts and slopes are modeled as,

$$\begin{aligned} \alpha_j &= \gamma_0^\alpha + \gamma_1^\alpha u_j + \epsilon_j^\alpha, \text{ for } j = 1, \ldots, 32 \\ \beta_j &= \gamma_0^\beta + \gamma_1^\beta u_j + \epsilon_j^\beta, \text{ for } j = 1, \ldots, 32, \end{aligned} \tag{2}$$

where u_j is the GDP per capita in state j, and the errors ϵ_j^α, ϵ_j^β have mean 0, variances σ_α^2, σ_β^2, and correlation ρ, all of which are estimated from the data when combined with the individual model. We also let the general levels for the intercepts and slopes (the parameters γ_0^α and γ_0^β) vary by region (north, center-west, center, south, and Mexico City), so that the model allows systematic variation by region and among states within regions.

In addition, we examine the estimated intercepts α_j and slopes β_j when including other predictors: sex, age, the type of locality (urban or rural), the main reason for voting they

[11] More specifically, each estimated state-level coefficient in a multilevel model is a weighted average of the unpooled estimate for the state and the completely pooled estimate using individual and state-level predictors.

[12] The survey had seven minimum-wage income categories (in pesos per month for 2000 and 2006 and five minimum-wage income categories for 1994).We coded these as 1–7 and then standardized by subtracting the mean and dividing by two standard deviations (Gelman 2007).

voted,[13] and education.

For the logistic models (1), positive slopes β_j correspond to richer voters being more likely to support the PAN candidate. We summarize the models by plotting the curves $\text{logit}^{-1}(\alpha_j + \beta_j x)$ (for the logistic models) for each of the 32 states, and by plotting the estimated intercepts α_j and estimated slopes β_j vs. u_j, the state-level GDP per capita.

We fit the models using the lmer function in R (R Development Core Team 2006, Bates 2005), following the approach of Gelman et al. (2007).

4 Results

We first present the results of fitting the logistic model (1) predicting vote choice (PAN vs. PRI for 1994 and 2000 and PAN vs. PRD for 2006) given individual income. Figure 3 shows the vote share plotted vs. individual income for each party and the average fitted lines from the multilevel model by election year for the richest, medium, and poorest states and for DF (Mexico City).

In 1994, the line for the poorest states tends to be steeper. This means that rich voters residing in the 10 poorest states (Chiapas, Oaxaca, Tlaxcala, Zacatecas, Michoacan, Guerrero, Veracruz, Puebla, Hidalgo, and Nayarit) were more likely to vote for the PAN candidate than similar voters residing in rich states. In the 2000 presidential election the line for the poorest states (Chiapas, Oaxaca, Zacatecas, Guerrero, Tlaxcala, Michoacan, Nayarit, Veracruz, Hidalgo, and Tabasco) also tends to be steeper than the line of DF, the richest "state" but slightly less than the line for the 10 richest states. In 2006, contrary to the convention of the day, poor voters residing in the 10 poorest states (Chiapas, Oaxaca, Zacatecas, Guerrero, Tlaxcala, Michoacan, Nayarit, Veracruz, Hidalgo, and Tabasco) were more likely to vote for the PAN candidate than poor voters residing in DF. This pattern is reversed, however, at higher levels of income where richer voters in poor states are lees likely to vote for the PAN than richer voters in DF.

When we take a closer look at each presidential election we uncover very interesting patterns. Figures 4, 5, and 6 show the logistic regression line of income predicting vote choice (PAN versus PRI for 1994 and 2000 and PAN versus PRD for 2006) for each state ordered from poorest to richest in terms of their GDP. Overall, in 1994 and 2000 the logistic regression lines seem to be steeper in the poorest states than in richer states. In 2006, however, there is no clear pattern between states, that is, in some poor states the regression

[13] We include the reason for voting because of its relevance in determining vote choice, as mentioned in Section 1.

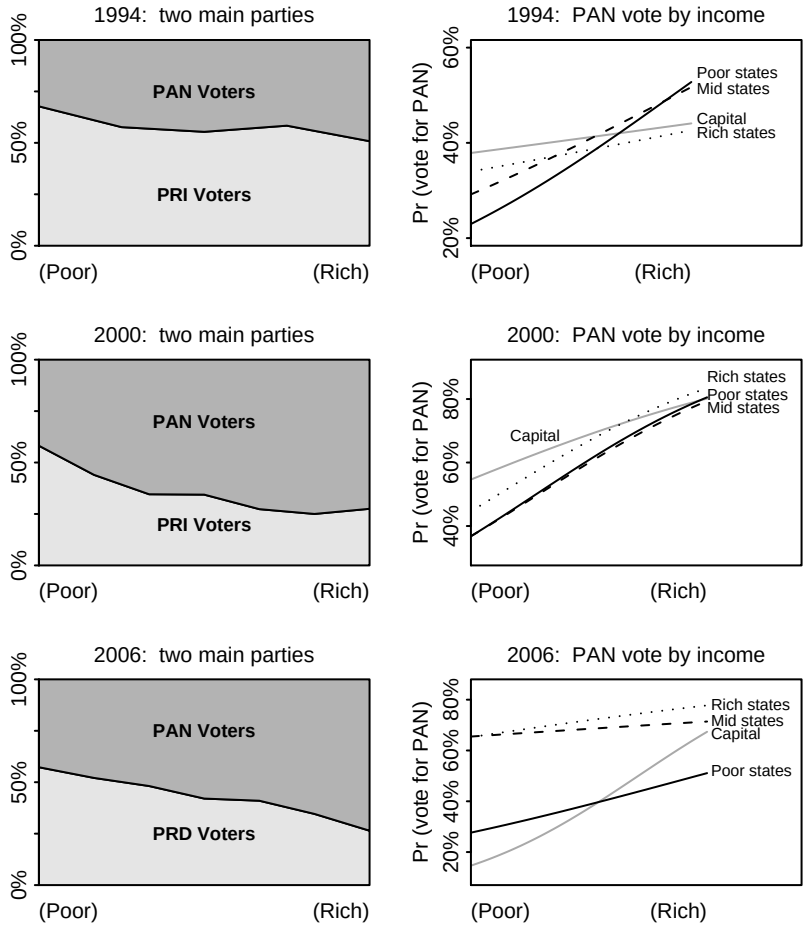

Figure 3: *Left column: percentage of Mexicans at different income levels who voted for the conservative PAN and its main opposition on the left (the PRI or PRD), in the past three presidential elections. The conservative party consistently does better among richer voters. Right column: estimated probability of voting for the conservative candidate, as a function of income, in poor, middle-income, and rich states, with the capital (Mexico, D.F.) shown separately. As in the United States, the difference in voting between high and low incomes has tended to be less in richer states.*

lines tend to be steeper than in some richer states (compare Chiapas versus Nuevo Leon) in contrast, in other states the contrary is true (see for example Oaxaca and DF).

Our next step is to add gender, age, type of locality, the reason for voting and education (see Appendix 1). The coefficients for individual and state-level income show similar patterns as before, so for the remaining analyses we only use income and GDP per capita as predictors, since we are interested in studying the differences between the affluent and less affluent voters. Even if the effects of income and GDP per capita had been explained by other predictors, the correlations would still be real, in the sense of representing real differences between rich and poor voters, and rich and poor states.

Now, to ascertain if income matters more in poor states than in rich states just as in the U.S., we plot the estimated state intercepts and slopes as a function of the average state GDP per capita. To explore these results further, we display in Figure 7 the intercept α_j and the slope β_j for the 32 states including Mexico City,[14] plotted vs. state GDP.

On average, richer states have higher intercepts and lower slopes than poor states (with the pattern especially clear outside of Mexico City, which is a clear outlier as the richest state, with voting patterns more typical of poorer areas).

The higher intercepts tell us that a voter of average income is more likely to support the conservative candidate if he or she lives in a richer state. Thus, the differences between rich and poor states are not simply aggregates of differences in individual incomes.

The slopes (see the right-hand side of 7) show that, similarly to the U.S. (see Figure 5 in Gelman et al. (2007)), income matters more in poorer states than in richer states. Poor voters in poorer states are expected to vote at higher rates for the PRD and PRI (the parties on the "left") than poor voters in richer states. This can be seen in Figures 4, 5, 6, where, proportionally, more of the poor voters support the PRD and PRI in Chiapas, Oaxaca, Zacatecas, Guerrero, and Tlaxcala, than in Chihuahua, Quintana Roo, Campeche, Nuevo Leon, and Mexico City.

Considering all three major parties, we have found a positive correlation between income and conservative voting. Moreover, this relationship is, on average, stronger in poorer states than in richer states. Surprisingly, this pattern is most evident in 1994 and 2000 with quite a bit of variation between states regarding the role of income in predicting the vote during the 2006 presidential election. This finding is puzzling because, going back to the discussion of the particular circumstances under which each election took place, the expectation would

[14] As noted earlier, we consider Mexico City as its own region in the multilevel model, thus allowing its intercept and slope to differ from what otherwise might be expected given its per-capita GDP.

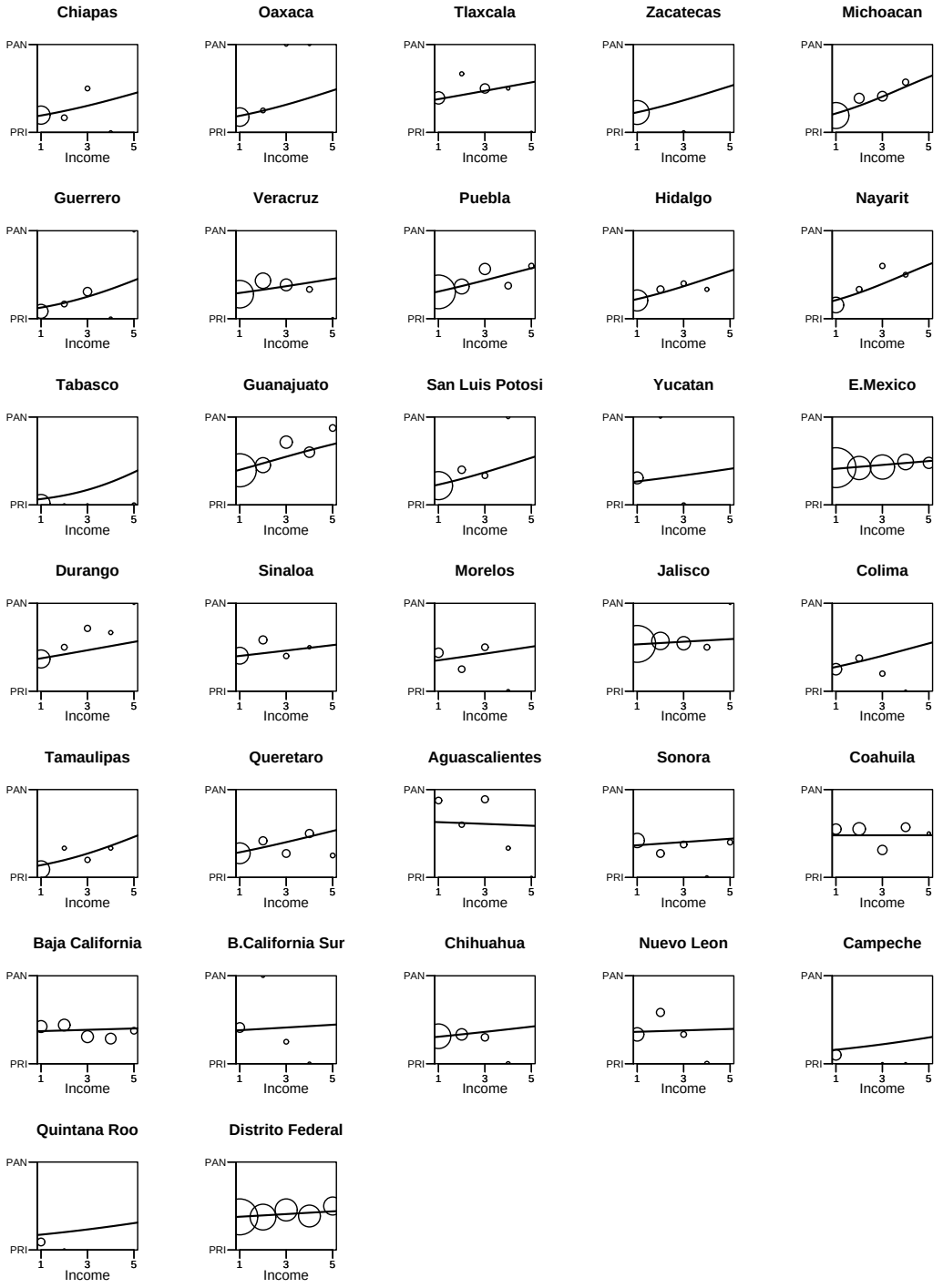

Figure 4: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income predicting vote choice: for the PAN compared to the PRI (excluding PRD) for the 1994 presidential election.

For each state, the dark and light lines show the estimated regression line (based on the posterior median of the coefficients). The circles show the relative proportion of individuals in each income category in the survey. The area of each circle is proportional to the number of respondents it represents.

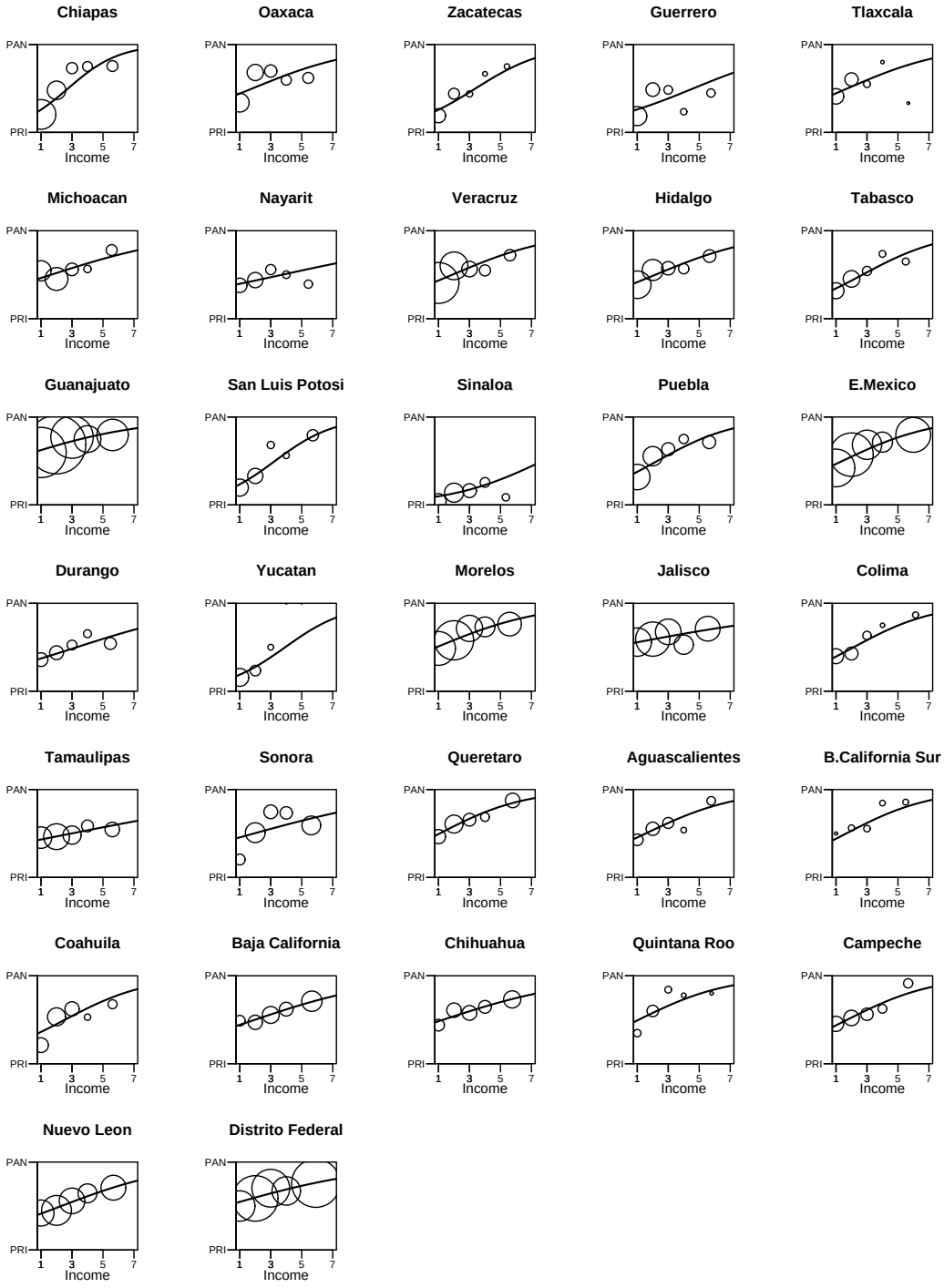

Figure 5: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income predicting vote choice: for the PAN compared to the PRI (excluding PRD) for the 2000 presidential election.

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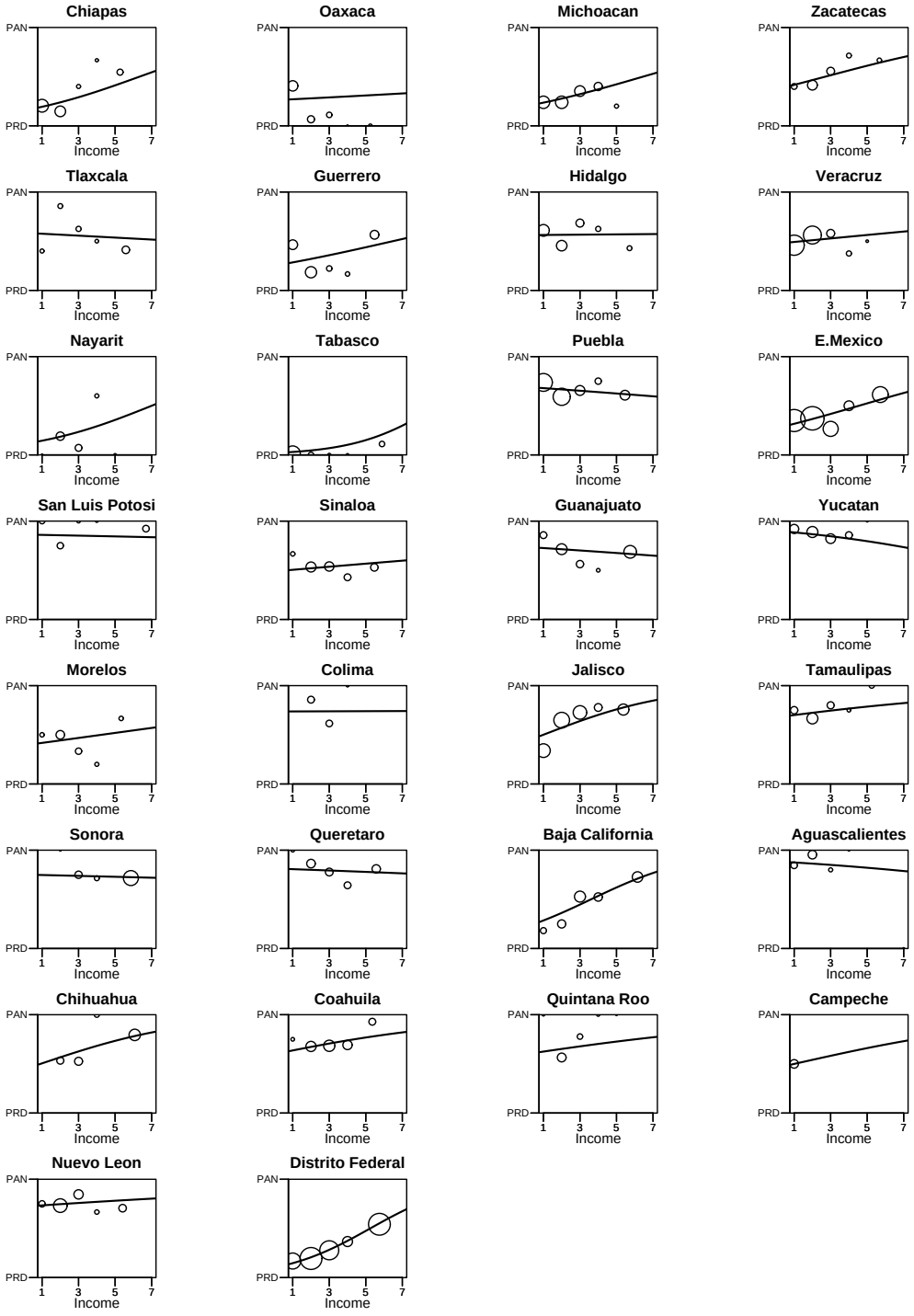
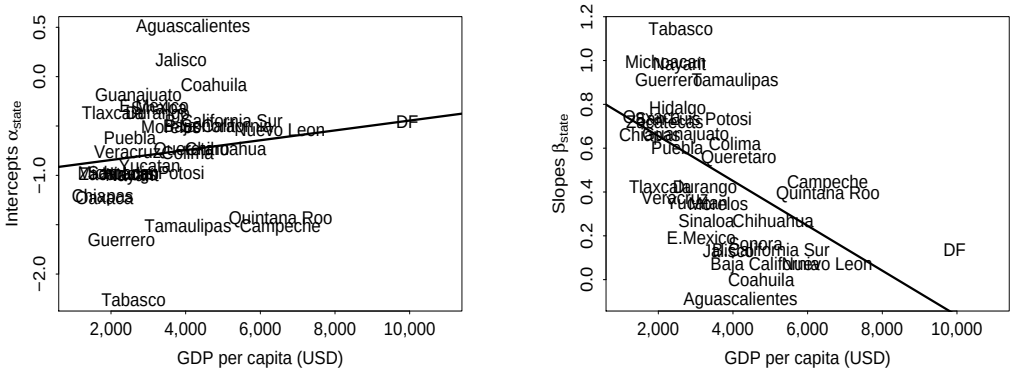


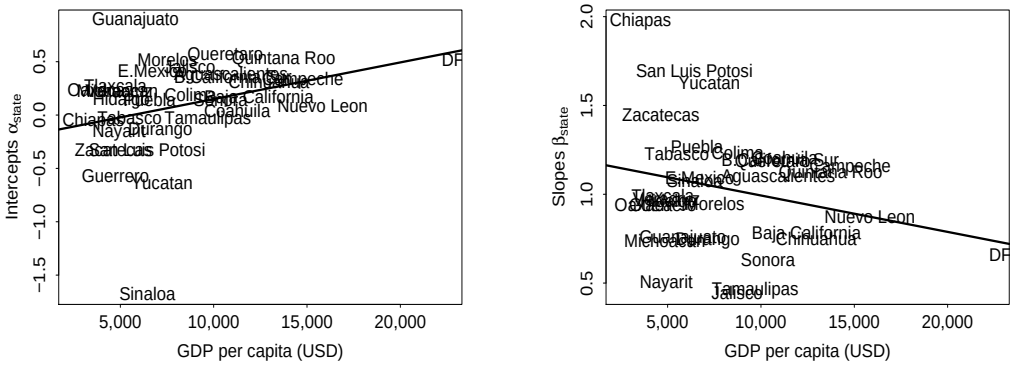
Figure 6: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income predicting vote choice: for the PAN compared to the PRD (excluding PRI) for the 2006 presidential election.

For each state, the dark and light lines show the estimated regression line (based on the posterior median of the coefficients). The circles show the relative proportion of individuals in each income category in the survey. The area of each circle is proportional to the number of respondents it represents.

1994 election:



2000 election:



2006 election:

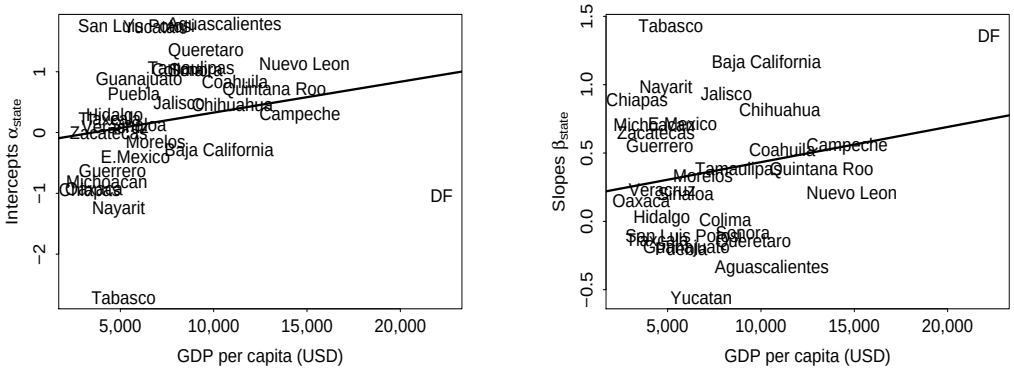


Figure 7: Estimated state intercepts α_j and slopes β_j for the 32 states including Mexico City plotted vs. state income by election year.

be the opposite: the role of income in predicting the vote in the 1994 and 2000 elections should be less important across states. In addition, the absolute levels of the slope are much higher for 1994 and 2000 in comparison to the 2006 election (compare the vertical axes of the two graphs in Figure 7), indicating that income is a stronger predictor of PAN vote than PRI/PRD vote. This is a subtlety of the multiparty system, in which the three major parties are not aligned on a single dimension.

5 Discussion

We have found the following patterns:

1. Rich states tend to support the conservative party (the PAN) at higher rates than poor states, an opposite pattern from that found in the United States. There are no definite or absolute regional partisan strongholds; that is, there is more variation between states and within regions than what current literature may suggest.

2. In all states, the PAN does better among higher-income voters, but poor voters in richer states tend to support the PAN at higher rates than poor voters in poorer states. That is, income is less important as a predictor in rich states than in poor states.

As previous studies have shown geography plays an important role in the socialization of voters and in the political activities undertaken by political parties (see for example Baybeck and McLurg 2005). The results of this paper suggest that, even after taking into account individual level characteristics, similar people in terms of income voted differently in different states.

These findings raise questions about the explanatory power of previous interpretations of voting patterns in Mexico's presidential elections such as the North v. South cultural divide. Why do rich states –particularly non-Northern states– tend to support the PAN at higher rates than poor states? And why rich voters in poorer states are more likely to vote for the PAN than rich votes in richer states? Answering these questions fully goes beyond the scope of this paper; however, based on our empirical results we venture some plausible explanations that may help frame future debates.

5.1 Why is the predictive power of income uneven across states?

The explanation for the weak effect of income as a predictor of PAN in certain states that relies on the difference in the North- South political culture does not seem to hold. As we

saw in Figures 4, 5, 6 income as a predictor of vote choice for the PAN does better in states that have been characterized as the models of the Northern entrepreneurial culture such as Coahuila, Chihuahua and even Nuevo León in certain elections than in Aguascalientes or Querétaro. In order to be able to answer the larger puzzle of the unevenness of income as a predictor across states, two sets of questions need to be addressed. First, those questions pertaining to the stronger performance of income as a predictor in poor states (Why do poor voters in poor states vote more for the leftist party and why do rich voters living in poor states are more likely to vote for the conservative party that in some rich states?). Second, those questions referring to the weaker effect on income on rich states. These questions should be addressed separately because whereas the stronger effect of income on vote choice in poor states is driven by both the rich and the poor, the weaker effect of income in many rich states is primarily driven by poor voters[15]. We can draw some analogies and interesting comparisons with the patterns found in the United States, where income is much more predictive of voting in poor states than in rich states (Gelman et al. 2007, Gelman et al. 2008) that may be useful for understanding these phenomenon.

5.2 Why is income a better predictor in poor states in Mexico?

One plausible explanation has to do with each state's unequal social and economic structures. Recent growth has not been shared equally by all social groups, economic regions or even states within them (OECD 2003, p.31). Poorer states in Mexico tend to be more unequal than richer states. The presence of high inequality may influence people in higher income brackets to become more conscious of their own "class" position in terms of income and interests and this might lead them to vote in favor of the PAN candidate.

The voting patterns that are observed in the poor states in Mexico can be explained in a similar manner than voting patterns in the poor states of the US. Poor states are concentrated in the Southern region and have similar characteristics: rural, poor and with a similar history derived from the fact that many Mexican poor Southern States concentrate the largest proportion of indigenous population. Similarly to what V.O. Key observed in 1949 in *Southern Politics* regarding the "black belt" elites, ethnicity has been a main source of unity for the rich and poor voters in Mexico's "indigenous belt". Social class as an ethnic cleavage coincides in most of Mexicos poor states. This *de facto* group membership will

[15]Comparing for example the wealthiest in Chiapas and the wealthiest or even middle income in states like Querétaro or Aguascalientes, the rich in the rich states are still more likely to vote for the PAN, even if the predictive power of income is weaker in Querétaro, Aguascalientes or a middle income state like Colima or San Luis Potosí.

translate into political cohesion, which would be more evident when group members have something real to loose (i.e. elites in the South had more to loose from the leftist policies the PRD candidate promised to implement in the 2006 election campaign if he became elected President. See Sears & Funk (1991)) In a similar vein, in terms of GDP per capita, poorer states on average, tend to be more rural and slightly more conservative than richer states. Individuals in poorer states especially the wealthy may be more conservative on average than those wealthy individuals in rich states who may be less conservative and more cosmopolitan, hence, the PAN electoral platform may be more appealing for rich voters living in poorer states than for rich voters living in more cosmopolitan richer states.

5.3 Rich states in Mexico, Rich states in the US

On average, the variation in slopes appears to be less in Mexico than in the United States: when it comes to income and voting, the poorer Mexican states look like the poorest states in the U.S. (e.g., Mississippi), whereas the richer Mexican states look like middle-income U.S. states (e.g., Ohio). Similarly to the US, voting patterns in rich states in Mexico tend to have less correlation with income. Yet, the comparison that was helpful between poor states in both countries does not offer any leverage in the case of rich states. These states are concentrated in the Northeast of the US, whereas the richest states in Mexico are from various regions. As we have noted the most wealthy states are not so concentrated in the North (DF, Quintana Roo, Aguascalientes, Querétaro, Campeche).

Even if we focused only on the region, there aren't many shared features the wealthiest regions of both countries. Mexican Northern states have more in common with US Southern states in terms of their tense relationship with the political center –Mexico City– than with the industrial North of the US. From the 1970's onwards, Northern elites in Mexico frequently complained about the political and economic oppression that was being exercised from the center. They complained about national redistribution schemes of the PRI, which extracted fiscal resources from the North and redistributed them in a manner that favored the industrial development of the Mexico City and its surrounding areas. The discontent of party members of this region grew stronger as they felt they had no autonomy, nor great support, from Mexico City party elites. It was in part as a result of these political and economic center-periphery tensions that high-income voters and politicians of this region broke-off from the PRI and joined the PAN; the party that from its beginnings advocated states rights and fiscal conservatism (Loaeza 1999). Perhaps, the only rich state in Mexico comparable to the US Northeastern rich states (in terms of a similar history and place in the

political system) would be Mexico City, the old industrial and urban heart of the country.

However, one interesting comparison between rich states in Mexico and in the US with regard to the characteristics of the voters responsible for weakening the effect or flattening the slope that relates income and vote choice is that in rich Mexican states such as Aguascalientes and Querétaro, particularly the former, income appears to be completely uncorrelated with vote preferences. In Connecticut this is explained by rich voters voting increasingly for the Democratic party. In Aguascalientes, the voters that seem to be driving this effect are poor voters voting for the conservative party. If most of the poor voters from rich states were concentrated in the North, perhaps we could use the polarization of Mexico hypothesis to explain it through a "regional political culture" type of explanation, but this leaves out half of the rich states. Moreover, these types of explanations are weakened by the fact that the predictive power of income on vote choice declined in the 2006 election with respect to the previous ones. Besides these two cases, overall, it remains puzzling why poor voters in many rich states who in previous elections had overwhelmingly preferred the PRI, in the 2006 elections voted for the conservative party. One plausible explanation may be given by Huber & Stanig (2007) who using comparative data show that poor voters may not vote for the party on the left, in this case the PRD, even though that this would potentially represent a benefit in terms of redistributive policies simply because they care much more about other social issues than about redistribution.

Overall, our analysis shows that richer states tend to support the PAN candidate at higher rates than poorer states. However, by applying multilevel modeling techniques we were able to show that there is much more variation between states than when they are collapsed in large regions. Moreover, while income is positively related with the PAN vote as previous analyses have shown, its impact seems to be stronger within poorer states than within medium and richer states. The question of "What's the matter with México?" can be narrowed down to "What's the matter with states like Querétaro, Aguascalientes and San Luis Potosí?". It is in these states where there are no obvious reasons or theories attempting an explanation of why poor voters prefer the PAN. This puzzle remains for future research to engage in as providing an explanation goes beyond the scope of this article. Nevertheless, the main aim as to examine the priors of the previous literature and provide the tools to engage in a dialogue with those who posit more historical-institutionalist explanations of the voting patterns has been fulfilled. The results and the methodological tool presented here should be useful for other researchers interested in examining existing hypotheses regarding these phenomenon in the more qualitative Mexican scholarship such

as the uneven collapse of the PRI's regime (Hernandez-Rodriguez 2003, **?**) a strong party identification of Conservative Catholics with the PAN (Moreno 2003) or the social forces related to the ascent of the PAN (Loaeza 1999).

Appendix A

1994

	Coef.Est	Coef.SE
Intercept	-0.69	0.19
Income	0.44	0.11
GDP	0.16	0.33
Income x GDP	-0.52	0.25
Number obs: 4,213	AIC=5,346	DIC=5,326

Table 1: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income predicting vote choice: for the PAN compared to the PRI (excluding PRD) for the 1994 presidential election.

	Coef.Est	Coef.SE
Intercept	-1.51	0.24
Income	0.03	0.13
GDP	0.14	0.31
Gender	-0.18	0.07
Age	-0.01	0.03
Education	0.30	0.04
Income X GDP	-0.43	0.24
Number obs: 4,164	AIC = 5,206	DIC=5,179

Table 2: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income, gender, age, and education predicting vote choice: for the PAN compared to the PRI (excluding PRD) for the 1994 presidential election.

2000

	Coef.Est	Coef.SE
Intercept	0.18	0.12
Income	0.99	0.09
GDP	0.53	0.22
Income X GDP	-0.27	0.22
Number obs: 24,584	AIC = 31,480	DIC= 31,460

Table 3: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income predicting vote choice: for the PAN compared to the PRI (excluding PRD) for the 2000 presidential election.

	Coef.Est	Coef.SE
Intercept	-0.61	0.14
Income	0.38	0.08
GDP	0.36	0.22
Gender	-0.18	0.03
Age	-0.01	0.00
Education	0.13	0.01
Urban	0.61	0.04
Income X GDP	0.01	0.19
Number obs: 24,446	AIC = 30,439	DIC=30,411

Table 4: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income, gender, age, education, and urban predicting vote choice: for the PAN compared to the PRI (excluding PRD) for the 2000 presidential election.

2006

	Coef.Est	Coef.SE
Intercept	0.21	0.25
Income	0.41	0.15
GDP	0.57	0.55
Income X GDP	0.30	0.37
Number obs: 3,709	AIC = 4,546	DIC= 4,526

Table 5: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income predicting vote choice: for the PAN compared to the PRD (excluding PRI) for the 2006 presidential election.

	Coef.Est	Coef.SE
Intercept	0.22	0.32
Income	0.34	0.16
GDP	0.55	0.56
Gender	0.26	0.07
Age	-0.01	0.00
Education	0.02	0.02
Urban	0.06	0.11
Income X GDP	0.35	0.37
Number obs: 3,661	AIC = 4,465	DIC= 4,437

Table 6: Estimated regression lines $\Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_{j[i]} x_i)$ of income, gender, age, education, and urban predicting vote choice: for the PAN compared to the PRD (excluding PRI) for the 2006 presidential election.

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