Turnout Decline in a Transitional Democracy: Generational Replacement and Class Bias in Chile*

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Abstract

When electoral participation is low, typically it is also unequal. This paper studies the turnout decline and emergence of class bias in Chile in the post authoritarian period of 1988-2008. After returning to democracy from military dictatorship, turnout has systematically dropped in Chile, accumulating a total fall of 30 percent in two decades. We show, using both aggregate and individual data, that income is a robust explanatory variable in the decision to participate of the new electorate, with registration rates of those at the upper quintiles of income distribution more than doubling those in the lower ones. We content that institutions have an indirect effect over both decline and class bias. Chile undertook in the late 80s a "pacted transition", where democracy was agreed upon in exchange for the particular institutional framework designed by the militaries in order to "protect

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democracy". This protected democracy was based on agreements between the elites, and accordingly, had put weak and unequal incentives for political – and in particular electoral – participation.

1 Introduction

Electoral participation, amongst the most elementary forms of political participation, is essential to democracy. At the aggregate level, high participation is good for legitimacy of the political system as a whole, and its responsiveness to and accountability for citizens' demands, all of which are fundamental to the quality of democracy. But it also guarantees political equality between individuals. When turnout wanes, as it is convincingly argued in Lipjhart (1997), it is not balanced on what citizens are left asunder. In that case, the representative voter is no longer the representative citizen; and the emerging bias is most likely playing against the less privileged members of society.

In developed democracies exhibiting high electoral participation rates, as it is the case in most developed countries excluding the US, Switzerland, and to a lesser extent France (Przeworski (2009)), class bias is hardly observed. But a less favorable picture may lay bare in less advanced democracies where turnout is rather low. In this paper we consider the case of Chile, a democracy that has exhibited a systematic and steady decline in turnout rates for the last two decades. We provide evidence that the propensity to vote has been lower for the poorer classes as compared to the wealthier ones.

On the eve of the Chilean transition to democracy, when the 1988 referendum that was to end 17 years of military dictatorship was held, the electorate was near to universal. But ever since, turnout has decreased systematically from one election to another, leading to an actual record that is way below 60%. The size and persistence of the electoral shrink is exceptional, even after comparing it to turnout rates' evolution in other transitions and democracies sharing a similar historical and political background. The decline is structurally explained by the rate at which generational replacement in the electorate is taking place. An anomalous registration rule that makes registration voluntary but voting compulsory once registered, has led elder constituencies being locked-in voting. The fall, therefore, is driven by the rate of participation of younger cohorts, which has fallen precipitously throughout the period, causing altogether the aging of the registered citizens that make up the electorate.

Together with its decline, as it is commonplace elsewhere, we show that class bias emerged in the Chilean electorate. We show that income, after controlling for several variables found to be significant elsewhere in the literature on turnout, is a robust explanatory variable for turnout of the young¹. Young cohorts vote depending on their socio economic status: the wealthiest constituencies register at rates that more than double those of the poorest ones, with the difference closely mimicking that of the US (Nagler 2007), which is the prototypical example for unequal participation. Our evidence is built from running a battery of regressions for two different kinds of data sources, one aggregated at the county level for the last two Parliamentary elections of 2001 and 2005, and another from an individual survey carried out in 2006.

Our contention is that the underlying cause for poor participation of the young may be found in the particular way the transition was both designed and implemented, for it is only in its anomalous institutions that Chile can be singled out as a peculiar case from among the pack including countries that underwent similar political processes. Indeed, the Chilean one was a "pacted democratic transition", with the quitting from the dictatorship requiring the acceptance of several conditions imposed by the military to protect the Constitution of 1980 – enacted by Pinochet's advisors –, which in turn contained the new political order envisioned by General Pinochet: that of a "protected democracy" (see Siavelis 2000, Pastor 2004). The effect of this "protected democracy's" institutional design upon turnout is twofold. The direct one is related to the negative effect of the peculiar registration rule, already mentioned, and an electoral system seriously lacking of competition (namely, the binomial system), both of which conform to the idea, most stressed by the literature, that institutions matter for turnout. But there is another and more subtle role for institutions.

As Posner (1997 and 2006) or Olavarría (2003) convincingly argue, the outcome of the transition in Chile was to weaken traditional forms of political expression to the point where the channels through which citizens could make the political system responsive to their demands was exiguous if not null. Institutional arrangements limited public officials' accountability

¹The mentioned rule also casts a veil on the study of the relationship between low participation and class bias, as this cannot be assessed for the electorate as a whole in the Chilean case. Hence, the study of this relationship in the Chilean case must be done for the younger cohorts.

to their constituencies and citizens' opportunities to input in decision making. The dissatisfaction of the Chilean citizenship is therefore, along these lines, nothing but the expected outcome from the implementation of several institutional arrangements that had been strategically and purposefully designed by interested parties in the negotiation process that sealed the pacted transition.

Class bias is not surprising in a protected democracy. On one hand, the Chilean pacted transition was per se a negotiation between the elites. On the other, every transition needs to demobilize grass root support for more radical positions that can threaten the whole process's viability. The conditions for such a protected democracy, fit well with the desire of elites of both the right and the Concertación to depoliticize civil society in order to preserve macroeconomic and political stability². But again, the elitist character of the initial agreements became an impediment for further de-elitization.

In a nutshell, institutions are plausibly the main determinant for both the decline and class bias in Chilean electoral participation, but the effect that such institutions have on turnout goes beyond, and is not exclusive to, the one pointed out in the literature.

The paper is structured as follows. Section 2 describes turnout's decline during Chile's two decades of transition to democracy. Next section shows that the overall decline in electoral participation is explained by generational replacement. Section 4 discusses the methods for estimating class bias in the youngest cohorts, while section 5 presents the main findings. Last section concludes.

2 Turnout in Chile (1989-2008)

In 1988, after 15 years without regular elections³, Chileans massively attended the electoral polls, with the majority voting against the continuation in power of General Pinochet. In this "foundational election" turnout reached a ceiling of about 90%, which lies far ahead any precedented, and subsequent, record till present. The following year's Parliamentary and Presidential elections inaugurated the Chilean transition to democracy, and for the next two decades elections were regularly implemented. Throughout, electoral partic-

 $^{^{2}}$ Posner 1999

³The military dictatorship called for referendums in 1978 and 1980. However, as Navia (2004) points out, such elections were neither open nor transparent, at any rate.

ipation decreased sharply and steadily from one election to another, leading to an accumulated drop of nearly 30% by the end of the period.

Figure 1 shows the rate of electoral participation for the whole period. The continuous line displays turnout, defined here as the ratio between the number of votes and the voting age population (V/VAP). The linear decline⁴ shows a negative constant slope of 1.5% per year, implying an accumulated decrease of 30% in 20 years.





The sign of the deviations with respect to the linear trend is fully explained by the type of election. Turnouts above the trend coincide with the Presidential Elections of 1989, 1993, 1999, and 2005 (with two rounds in 1999, 2005) and the Parliamentary concurrent elections held in 1989, 1993, and 2005. Turnouts below the trend, on the contrary, coincide with the non-concurrent Parliamentary elections held in 1997 and 2001, and all Municipal(local) elections. This result is consistent with findings in the literature that show that turnout is increasing in both the election's salience (Franklin 1996) and concurrency (Norris (2004), Fornos et al (2004)).

But deviations from the tendency are very small (less that 1.5% on average), reflecting a significantly stable pattern. The reason for such stability

⁴With a goodness of fit of 97%.

may be found in the very peculiar Chilean electoral rule, according to which registration is voluntary, whereas voting is compulsory for life for those who decide to register. In order to separate both effects, it is useful to consider the following decomposition for turnout:

$$\frac{V}{VAP} = \frac{V}{R} \times \frac{R}{VAP} \tag{1}$$

with V being the total number of votes being cast at any particular election, VAP the voting age population and R the registered citizens.

The first term in the RHS of equation (1) is the fraction of registered citizens that actually vote. Even when voting is compulsory, this fraction is not equal to 1. But, compared to other countries, Chile has a strong level of enforcement of compulsoriness (see Payne et al 2003, or IDEA's web site), with the associated fines being dissuasive enough in practice⁵. Indeed, the V/R ratio has mildly decreased in the whole period, with the average nearing 90%.

The second term in the RHS of equation (1) is the fraction of eligible citizens that are registered, and who are therefore obliged by law to vote. This ratio is displayed in Figure 1, as the superior dashed line labelled R/VAP. As it is clear from the figure, this ratio has also been persistently decreasing. In this case, the linear decline⁶ has a negative constant rate of 1.3% per year and accumulates a total decrease of 24% in two decades. This, combined with the previous analysis of the evolution of V/R and R/VAP, leads to the conclusion that the decline in total turnout, V/VAP, is mainly driven by the fall in the number of registered citizens.

Figure 1 shows that Chilean turnout has been mightily decreasing during the transitional period. But, can we typify Chile as a case of "exceptional decline"?

Transitional democracies typically experiment successive and persistent downturns in electoral participation (O'Donell y Schmitter (1986)). The first

⁵Some scholars have correctly pointed out that fines are low (Huneuss 1998), non frequent (Cerda and Fuentes 2008) or even not applied (Navia 2004). But they are working notwithstanding. In the aftermath of the 2001 Election, three quarters of the non voting registered citizens went to the Electoral Office to "excuse" themselves, pledging some legal reason for not voting: either the loss of their identification papers, or being at least 200km away from the respective polling point the day of the election (Carlin 2006).

⁶With a goodness of fit of 99%.

democratic or "founding election" is a "moment of great drama" with everyone willing to participate. But voter turnout subsequently decreases, as the initial enthusiasm withers off. Chile's transition was not an exception to this rule, and indeed some scholars have explained the decline in turnout during the 90s along this argument alone. According to Navia (2004), the turnout rate of about 65% in 2001 is within the range of turnout rates observed in the last elections before the coup d'état in 1973, conjecturing from there that the decline during the young democracy's first decade was just the adjustment away from the founding election and back to precedented records⁷.

However, turnout continued decreasing for another decade, its drop going beyond the figures of the early 70s. Most importantly, there's no indication of a structural change leading to a flattening in the trend, as Figure 1 shows. Whether a equilibrium in the rate of participation exists or not in Chile, it has not been fathomed yet. All in all, regarding its political history, two decades of persistent decline in electoral participation is indeed a novel pattern in Chile.

Compared with other countries sharing similar political and historical backgrounds, the Chilean case is also outstanding. Latin American democracies undergoing transitions in the 80s and 90s exhibited a minor decrease in turnout after the recovery of democracy (two percent during the first four parliamentary elections, as found in Kostadinova and Power 2007). Also when compared with all Latin American countries during the same period, the Chilean turnout's accumulated fall of 30% is extremely high⁸. And even when the magnitude of the Chilean drop in participation resembles patterns more aligned to those observed in European post communist countries (see Kostadinova 2003), in most of these countries the decrease turned to be less pronounced after the first decade of transition, and nowadays seems to be converging⁹.

⁷Yet it is hard to say whether Chile had an equilibrium rate of turnout before 1973. The first massive electorate in Chile appeared just in 1964, and universal suffrage – although literacy requirements applied to a narrow sector of the population – dated from 1970. We cannot be sure, therefore, that turnout rate in the 60s was indeed "the modern rate" that Navia presumes.

⁸Only Costa Rica exhibits a similar trend: two decades of systematic and significant drop on political participation (from 85 to 55% between 1990 and 2006; see IDEA and Vargas Cullell 2007).

⁹Comparing the last two parliamentary elections for the 15 countries considered in Kostadinova (2003), we notice that the average decrease in turnout was 1 percent, with 8 out of 15 countries exhibiting increasing participation (own calculations).

We conclude that Chile exhibits an exceptional decline in voting turnout. This is true when both its historical record and similar transitional and non-transitional experiences worldwide are considered to assess its abnormal decline.

Low participation rates can bring as a consequence, apart from the intrinsic deterioration of democratic fundamentals, unequal participation rates among citizens (Lipjhart (1997)). But the peculiar Chilean registration rule already described creates a distinct pattern in turnout's evolution. Current elder generations who had massively registered to vote either in favor or against Pinochet in 1988, were kept locked-in the system ever since to present, as their registration obliged them to vote thereafter. Hence, turnout decline is the unmistakable outcome of lower registration rates among the younger cohorts. As the electoral drop is due to generational replacement of old-high-voting cohorts for young-low-voting ones, next section argues that class bias should be analyzed for the new eligible voters.

3 Decline by Generational Replacement

The generational structure of turnout in Chile is shown in the following table, where the total electorate is split into cohorts spanning a range of 5 years each. Table 1 pools individuals belonging to each cohort, and shows turnout for every other election every five years starting from 1989 (as there was no election in 1994, we use the closest 1993 election). We do not include the youngest voters, aged between 18 and 19, because we cannot track their cohorts¹⁰. Note that we pool individuals of all cohorts containing individuals who were aged 25 and above in 1989¹¹, as turnout for all these cohorts is high and stable throughout the whole period. In the table, we report the average turnout of this group.

¹⁰The data is not disaggregated at this level.

¹¹For instance, in the first election, this implies pooling all individuals age 25 or more. In the second, this implies pooling all individuals aged 30 or more. So on and so forth.

E 89		E 93		E 99		E 2004		Cohort	
Age	Turnout	Age Turnout	Age	Turnout	Age	Turnout	Turnout		
						20-24	17.4%	17.4%	
				20-24	33.0%	25-29	38.1%	35.6%	
		20-24	71.7%	25-29	66.7%	30-34	68.3%	68.9%	
20-24	93.4%	25-29	94.0%	30-34	92.2%	35-39	92.1%	93.0%	
25+	92.8%	30+	96.1%	35+	95.9%	40+	95.2%	94.9%	

Table 1. Generational Replacement in Chilean Turnout

Table 1 shows two salient features. First, we observe the strong "cohort effect" we already suggested. The youngest cohort – those aged between 20 and 24 years – keeps voting at about the same rate in the following elections (cohorts are horizontal lines in the table). Conversely, for every election all cohorts except the youngest one, voted at about the same rate as they did in the previous election. Secondly, for every election the youngest cohort is registering at a lower rate than the youngest cohort in the previous election. This is a "period effect" influencing only the younger generations but not the older ones, who are kept locked-in the system. Note also that age is hardly a predictor alone. For instance, for citizens aged within the 20-24 range the participation rate was above 93% in 1989 and less than 17% in 2004.

Recent literature (Blais et al 2004, Franklin 2004, Lyons and Alexander 2000 and Wass 2007) decompose turnout (as in table 1) into age, period and cohorts, using a APC model¹². In our case, when carrying out a standard APC regression, nearly all the variation is attributed to the cohort effect, with each new cohort having a negative and significant effect on turnout¹³. But the Chilean registration rule puts some qualification to the interpretation of such type of regressions.

The standard interpretation of the cohort effect is that new cohorts are intrinsically different; in particular less prone to vote than the older ones (Blais 2004). However, in our case we cannot disentangle this type of cohort effect from period effects. Compulsory voting creates an identification problem. As members of any particular generation that are already registered should keep voting for life, cohort effects may be taking place even when the

¹²An APC model is a regression with turnout as a dependent variable, and with period, age and cohort dummies as independent variables (imposing a restriction to solve the collinearity problem between all dummies).

¹³As we shall argue, APC regressions can be misleading in the current context. However, results can be provided by the authors upon request.

propensity to vote is equal across cohorts. To grasp some intuition for this identification problem, let's consider the following example built from figures in table 1. Assume that all individuals are identically prone to vote, and that due to some election-specific circumstances (that is, a period effect), had they been free to choose, they would have all participated at a 33% rate in the 1999 Elections, and at a 17% in the 2004 Election. However, because of the registration rule we know that only the youngest generations in each election can participate at such rates, with all the remaining cohorts obliged to at least reproduce their previous participation rate. Thus, this period-specific effect itself - absent any cohort effect - would have roughly reproduced table 1^{14} .

Yet, it is quite plausible that period and cohort effects coexist. The foundational election hypothesis gives grounds for the period effect. As for the second, many authors¹⁵ coincide in that a generational break (or more than one) emerged during the Chilean transition. Indeed, as current younger cohorts did not experience the military dictatorship of the 80s, nor the particular political climax that encircled the foundational election in 1988, they are naturally less politicized.

Overall, the current Chilean electorate presents a strong age bias and its shrinking is due to generational replacement. In that case, it is important to address what determines the decision to vote of the young. In this context, and bearing the same worries expressed in Lipjhart (1997), we are particularly interested in the new electorate's socio-economic profile. For the factors affecting the political participation of the new cohorts will affect gradually, by generational replacement, the actual composition of the whole electorate. Any observed change in turnout, or the lack of it, therefore, is likely to be explained by changes in the electorate¹⁶.

As a matter of fact, class bias cannot be adequately studied when the

¹⁴As we notice from the example, in order to see the effect upon the non registered members of each generation, identification requires a positive instead of a negative time effect.

¹⁵Carlin 2006 suggests that non-registration "is most clearly a product of shifting political cultural values among young, newly socialized Chileans". See the same paper for several references about this issue.

¹⁶Notice that the age bias in the electorate is generating an additional income bias, regarding the fact that younger constituencies have on average lower incomes than the older ones.

whole sample of voting individuals is considered. We see from the last column in table1 that in 2004 nearly all the citizens aged 35 and above were registered. Consequently, there should be no class bias among them. But what should not pass unnoticed is that precisely those citizens are overrepresented in the electorate (which is the generational bias referred to above), making overall class bias strongly biased towards zero when compared to that of the younger cohorts. To illustrate this, let's consider the following oversimplified example. Let's suppose that there are two groups of individuals: those with high (H) income, and those with low (L) income. Suppose that the H "type" agents always vote, whereas those belonging to the low type group participate at rate p^{17} . This is equivalent to having the whole population voting, but with each H type endowed with an additional (1/p) - 1vote. For instance, to have p = 1/2 (that is, having half of those belonging to the L group voting) is equivalent to an additional vote for all H types, with each H type having 2 votes. Now suppose that the bias is taking place only for a subgroup of society with dimension α (the youths), while there is no bias for the rest $(1 - \alpha)$ citizens (the olds). Then the additional vote for the H agents would be equal to $\alpha(1-p)/(1-\alpha(1-p))$, which depends on alpha. If p = 1/2 and $\alpha = 20\%$, as it is the case for the participation rate of those aged up to 30 in Chile, then the additional vote for the H types, would decrease in one order of magnitude, from 1 to 0.1.

Indeed all econometric analysis studying the relation between income and turnout is unable to show the existence of class bias when the whole of the Chilean electorate is considered. But such innocuousness is misleading. As Franklin (2004) summarizes "recent research has shown that elections that do not stimulate high turnout among young adults leave a 'footprint' of low turnout in the age structure of the electorate as many individuals who were new at those elections fail to vote at subsequent elections". The new cohorts not only encompass all the variance of the sample, but also the footprints that are laid upon them and that will significantly determine their future participation behavior.

There are some other reasons supporting the strategy to study younger cohorts in order to "explain" the evolution of Chilean turnout¹⁸. First, turnout is strongly persistent due to the compulsory voting rule, which can only be

¹⁷Here, to keep things simple, we interpret this as the fraction of people belonging to this group that always vote. Alternatively, one could interpret p as the probability that "any" individual in this group votes, but this would complicate our analysis unnecessarily.

¹⁸For the analysis of the whole electorate, see Cerda and Vergara 2008.

tackled by the implementation of dynamic panel regressions. Secondly, when considering the total eligible population, at least in the aggregate analysis of turnout per county, as done below, we cannot control for the fact that some voters, during the episode we consider, migrated from one county to another without moving their registration to their new destination with them. By neglecting this we would blur artificially the relationship between income and turnout (Navia, 2004): very poor counties exhibit high turnout rates (most above 1) when all eligible citizens are considered, which is mainly due to migration factors.

Next section estimates the socio-economic, demographic and political determinants of the youngest cohort's registration in the last decade in Chile.

4 Class Bias in the Youngest Cohorts: Data and Methods

In this section we explore the key drivers of turnout in the young. Our aim is to build evidence on whether key social and economic variables are statistically relevant in explaining turnout of the young after controlling for the other political, demographic, and/or institutional variables.

We proceed following two different approaches. First we use aggregate data at the county level for the last two Parliamentary elections of 2001, and 2005 (the latter being concurrent with a Presidential election). The county data allows us to combine official figures on actual registration with high quality information characterizing the social and economic background of the county. The drawback however is that being aggregate data, it is subject to concerns bearing from the *ecological fallacy*; that is, the wrong in drawing conclusions on individual behavior from aggregate evidence. In order to address this issue and provide results at the individual level, we use the Latin American Public Opinion Project (LAPOP) 2006 survey. This second approach not only allows us to check for the robustness of findings drawn from the aggregate data, but also to control for the important role that "disenchantment" might be playing in a transitional democracy as the Chilean one.

4.1 Data and Methods at the Aggregate Level

Our basic unit of analysis is the "comuna" or county, for the two Parliamentary elections of 2001 and 2005. In 2005, the election was concurrent with the Presidential one, but as we are interested in registered citizens, both simultaneous elections are considered as a single unit. In the following we exclude counties with less than 2000 adults . After implementing this filter we are left with 321 counties .

Our dependent variable is turnout of the young (to which we refer loosely as "young turnout" hereafter), defined here as the fraction of eligible individuals belonging to the 18-19 cohort that are registered. Information on the number of registered citizens by cohort is publicly released by the Servel, the Chilean Office of Electoral Affairs . Eligible voters (VAP) are demographic projections per county and cohort, for 2005, published by the Chilean National Institute of Statistics (Instituto Nacional de Estadísticas, INE). Even though data on the eligible population (all citizens aged 18 or more) might suffer from some measurement error, as it does not exclude neither foreigners nor citizens who have lost their citizenship (e.g. convicted felons), we expect the youngest cohort to be little affected by these factors.

As we discussed above, young turnout is quite low, averaging 13.4% and 14.4% across all counties for 2001, and 2005, respectively. However, it varies significantly from county to county, with participation rates ranging from 3.5% (La Pintana, incidentally among the poorest and most alineated counties of Santiago) to 75% (Sierra Gorda) in 2005, and from 1.3% in María Elena to 86% in Pozo Almonte, in 2001. The standard deviation is about 7.5% and 12%, respectively. For the econometric specification, we logit transform young turnout (*young_to*) to be a full range continuum variable, so our dependent variable Turnout (*TO*) is finally defined as

$$TO = \log\left(\frac{young_to}{1 - young_to}\right)$$

The statistical specification is described in the following equation

$$TO_{ij} = d_j + X'_{ij}\beta + \varepsilon ij \tag{2}$$

Where *i* denotes a county, *j* a region, X_{ij} a vector of socio-economic, political and institutional, and demographic variables, and d_j are regional dummies. Equation (2) is a cluster-specific model, where our concern is that important aspects of the counties vary across regions. Standard errors are clustered. This specification is equivalent to the estimation of a fixed effect (within) model by interpreting the region as an individual, and the counties as the time variable, in a panel data configuration.

Next we discuss several groups of explanatory variables to be considered as exogenous (RHS); this is done by revising empirical findings in the literature that support their inclusion¹⁹. Yet, for our main independent variable, the level of income, a previous comment is in order. Chile has a very strong social and economic segregation that is observable at the county level. That is, the different "comunas" are relatively well balanced within but exhibit stark differences between them. Indeed, this is in fact what enables us to carry out our study at the county level. If every county exhibited the same distribution than the one pooling all individuals in the country, there would be no exploitable heterogeneity across countries. Indeed, we observe that all measures of income dispersion, when we consider the population as a whole, are higher than those within counties²⁰.

Socio-economic variables

Except explicitly stated, the variables used to control for cultural and socioeconomic factors determining participation are obtained from the Encuesta de Caracterización Socioeconómica Nacional (Casen²¹). We consider each of them in turn.

Income. We expect income to be positively correlated to turnout although the empirical literature is not conclusive on this. Blais and Dobrynska (1998) and Endersby (2008) find the coefficient on income significant and positive for country regressions, whereas in Ashworth et al (2006) income is negatively correlated but not significant (they consider 2000's local elections in Belgium, reporting OLS coefficients). Income is negatively correlated and not significant in Fauvelle-Aymar et al (2008) for European Parliamentary elections; while median income is not significant in Bowler et al (2008) for

¹⁹In our revision of the empirical literature, we cite works that either carry out estimations at the country level or at the county (local) level.

²⁰The standard deviation of the mean income for all individuals in the population is 979 (in thousand of pesos), while the mean of the standard deviation of income across counties is 495.

²¹Casen is a comprehensive survey carried out every two or three years (1992, 1994, 1996, 1998, 2000, 2003, and 2006), containing rich information about socioeconomic variables of Chilean households. We use both Casen 2000 and 2006.

US local elections. As a measure of income we use the log-mean of household's total income. Our findings are robust to the use of the log-median of household's total income and the log of the mean per capita income per household.

Inequality. The expected sign for inequality is not clear-cut, though recent empirical works have tended to support a negative effect. In Geys (2006)'s revision of the empirical literature he concludes: "when regarding income inequality, 13 test results provide a significant negative sign compared to 6 significant positive and 13 insignificant ones". Ashworth et al (2006) reports a significant negative relation, and so does Geys and Heyndels (2006) for Flemish municipal elections. Power et al (2008) also find a negative effect of inequality on the rate of invalid ballots in Latin American countries. As a measure of income inequality we use the ratio of the 90th and 10th percentiles of households' total income and the standard deviation- mean ratio. Both measures of inequality fail to be significant in the majority of the specifications we consider.

Education. Studies such as Fauvelle-Aymar et al (2008) suggest a positive and significant effect of education on participation. Illiteracy rate is negative and significant in Blais and Dobrzynska (1998). We use two educational measures at the county level: years of schooling and the educational attainment of the head of household. In the first case we use the median and the mean at the county level. In the second we use the fraction of households in every county for which the household's head holds a diploma corresponding to tertiary education. This variable is not reported below, as it is significant for only a few cases.

To control for education of the young directly, we use the simple average of the mean scores in both math and language national proficiency tests at the county level from the Simce National Test. The results of the test in 2003 correspond to the same cohorts voting for the first time in 2005. Unfortunately, we do not have similar information for 2001, so we just use this variable as a control in the 2005 regressions. It should be noticed, however, that its effect is very strong - more than the one observed for the other educational variables described above -, for all specifications.

Rurality. We expect this variable to be positively related to participation. The argument borrowed from sociological theory is that urbanization leads to a weakening of interpersonal bonds, primary social structures and consensus on norms. Cities seem to be more individualistic. This is the result reported by Geys (2006), in which it is noticed that in 25 studies density has been used

as a proxy for rurality/urbanity. Even though density can reflect rurality in some instances (the correlation between them in our sample is about -37% and significant at the 1% level), we consider here a direct measure that has not been used for the literature so far: the fraction of households categorized as rural according to the Casen Survey. The inclusion of both variables will allow us to shed some light on whether using density alone is enough to control for ruralness or not. In our case, rurality is not significant when density is also included in the regression.

Demographic variables

Data on demographics are obtained from the INE (National Statistical Institute).

Population. Rational choice theory claims that the larger the population the lower the probability of any individual being pivotal in the election. Yet in Geys (2006) the author concludes that measures of concentration fail to support the idea that population concentration reduces turnout. This is confirmed in Endersby et al. (2008). Even though most empirical studies on turnout use the simple log of total population as a measure of size, we use the log of all registered individuals instead, as this in more in line with the underlying hypothesis on the pivotal voter.

Density. The role of density was already discussed for rurality. We define population density as the number of individuals aged 18 and above divided by the size of the $county^{22}$.

Other variables

Total adult turnout. Several studies include the lag of turnout as an explanatory variable for turnout in order to control for some inertia arising from the habit of voting or non-voting. These studies show that the estimation output is quite sensitive to its inclusion (see Franklin 2004). When it comes to our model, however, adding the lag of turnout of the young will not do, as this cohort is by definition at the start of the process leading to voting habit formation, if any. Instead, we consider the log transform of overall turnout (following the same principles applied to young turnout). This variable is intended to capture the effect that voting inertia that is county-specific may exert upon the young. This variable could also be interpreted as capturing voting habit formation that takes place through cultural transmission

 $^{^{22} \}rm Our$ qualitative findings do not change when the total population in the denominator is used instead.

from older to younger generations. The problem with its inclusion is that it may bring some estimation bias with it, as it is quite plausible that relevant omitted variables, residing thus in the error term, might be also important determinants of overall turnout. We address this problem by using an instrument for the logit of overall turnout. Further details will be discussed below.

Cost of Registration. Given that all counties are under the same institutional rule, we are implicitly controlling for the role of institutions. Yet, we have built a measure meant to capture some costs of participating that could be affected by decisions affecting the district size, which we consider as institutional. We include the number of local electoral offices per county at which citizens can register. This information is provided again by the Servel. From this information we build a measure of the "cost of registration", defined as the fraction between the product of the county's area (surface) and its population, divided by the number of local electoral offices²³. The intuition is that transportation costs increase with the county's size (surface), while waiting (queuing) costs increase with the number of eligible individuals that can eventually register. These costs are mitigated by the number of offices in each county, which are normally located in order to improve access to them from different areas within the county. We notice that when interpreting the coefficient for this variable, caution should be taken, as the effect of this variable on turnout cannot be easily disentangled from the direct effect that variables included in the computation of this variable and in the econometric specifications, have on turnout themselves (such as density and population).

Political variables. While the overall salience of the election remains constant for all citizens, the likelihood of winning the election can change across counties. We include one political variable: closeness of the election, measured as the absolute difference between the first majority and the second, in terms of vote share, at the district level. We expect closeness to be positively correlated to turnout. Blais and Dobrzynska (1998) find evidence confirming this, though from Geys (2006)'s review of the empirical literature it is hard to conclude this is the case. In Blais (2006) the author argues that, as predicted by rational choice theory, more people should vote when the election is close, which is confirmed in 27 of the 32 studies that have studied this relationship. But it is also remarked in this work how small the impact on turnout

²³The formulae is $CR = (Surf \times Pop)/N0$, with CR Cost of Registration, Surf Surface, *Pop* Population and N0 Number of local electoral offices

is, adverting on how the measures for closeness used in the literature might not be accounting for the plausibly highly non-linear relationship between closeness and turnout. In particular, closeness is arguably harder to measure in proportional representation systems, as opposed to plurality ones (this is also argued in Franklin 2004). Notwithstanding, we stress that we find no relation whatsoever between closeness and turnout of the young.

When possible, all previous variables will be included in the individuallevel regressions that we describe next.

4.2 Data and Methods at the Individual Level

Previous analysis relies on aggregate data. Here, we test individual behavior using the survey from LAPOP. The Americas Barometer performed by LAPOP is a survey of democratic public opinion carried out in Latin America every two years since 2004. Data for Chile first appeared in the 2006 survey, which includes 1500 respondents.

Turnout is a discrete variable built from the response to the question "Are you registered?", so we estimate a simple OLS model, but we correct the specification using Probit and Logit models. We include regional dummies in all regressions and cluster the errors by county. To deal with the youngest cohorts, we consider the sub-sample of all adults aged strictly less than 26 years, which makes about 200 individuals. When using the same definition as in the aggregate analysis per county, - that is youths between 18 and 19 years old -, it leaves us with too few observations to carry out the estimation.

To obtain a measure of the respondents' income we impute the simple average between the extreme values of the interval within which the respondent declares his/her family's overall income to be. The intervals are defined in the LAPOP's questionnaire. Education is measured as years of schooling. As a measure of ruralness, we define a binary variable taking value 1 if the respondent declares to have lived in the countryside during his childhood²⁴.

Additionally, the survey allows us to explore whether disenchantment is explaining turnout's variance. Two reasons make the study of the disenchantment hypothesis particularly appealing for the Chilean case. First, disenchantment has been singled out as a key candidate in explaining trends

²⁴The question is: "During your childhood, did you live in a small town (or village), or in a city instead?" Possible answers: 1) In the countryside; 2) In a small town or village; 3) in a city. We define our variable to take value 1 if the answer is 1) and zero otherwise.

in participation in all transitional democracies (see Pacek 1994, Pacek et al 2009, and Kostadinova 2003). Secondly, as pointed out in Blais et al (2004), disenchantment appears to be an important factor affecting participation of the young cohorts in developed democracies.

We include four variables intended to capture the citizens' political motivation and acceptance towards the system. First we include a measure of the level of interest in politics, a variable that takes value 1 if the respondent declares to be very much interested or mildly interested; and zero otherwise. A second variable is meant to capture the level of satisfaction in respect to democracy. This variable takes values from 1 to 4 (4 corresponding to a very disappointing perception of democracy). We define a dummy variable taking value 1 if the respondent responds 1 or 2 to this question, and zero otherwise. In addition, two binary variables measuring respect for institutions, and pride for the Chilean political system, respectively, are created. We also create interactive variables to control for non-linear terms appearing from the interaction between economic variables (income) and the level of interest, awareness and involvement in politics and public affairs in general. For example, one may argue that apathy (our first supplementary variable) is lower among the wealthier constituencies. In any case, we report the coefficients for these variables only when they are meaningful (statistically significant).

5 Empirical Results

As pointed out above, the main purpose of this work is to study the effect of income on participation. As we discuss in this section, young cohorts exhibit a strong class bias: the higher the individual's household overall income the larger is the probability that he/she will register to vote. This finding is robust under a battery of standard controls, either in aggregate or in the individual regressions.

5.1 Results at the Aggregate Level

Table 2 exhibits our results for 2001 and 2005. We note that even though some findings are not confirmed in both election-years, nothing fundamental seems to have changed between one election and another: most of the signs and magnitudes in the coefficients are the same, though their significance changes from one year to another.

		2001			2005	
	(1)	(2)	(3)	(4)	(5)	(6)
Log county income	0,264	0,651	-0,167	0,889	0,889	0,442
	(2.46)	(1.78)	(-0.78)	(5.03)	(4.06)	(2.06)
Logit turnout all	0,283	0,219	0,203	0,281	0,237	0,190
	(6.94)	(3.06)	(2.99)	(6.85)	(4.51)	(3.92)
Log registered		0,061	0,034		0,141	0,076
		(0.38)	(0.24)		(1.06)	(0.65)
Log registration costs		-0,094	-0,106		-0,088	-0,087
		(-0.78)	(-0.96)		(-1.19)	(-1.49)
Log density		-0,135	-0,182		-0,132	-0,118
		(-1.32)	(-1.84)		(-1.72)	(-1.92)
nequality		-0,005	0,003		0,021	0,020
(ratio 90th/10th)		(-0.46)	(0.32)		(1.17)	(1.19)
Ratio head of households			3,169			1,126
with tertiary diploma			(5.30)			(2.11)
Educational						0,004
proficiency of cohort						(2.48)
Region effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	266	266	266	286	270	270
R^2	0,16	0.52	0.58	0.52	0.58	0.59

Table 2 Determinants of Electoral Participation of the Young

Absolute t statistics calculated using robust errors are reported in parentheses.

The main result that we want to emphasize from table 2 is that income is positively correlated with turnout. This is true even after controlling for several variables that are highly correlated with income. The higher the log of mean income of the county, the higher the turnout of the young in the same county. During the 2005 electoral year this is a robust finding, whereas for 2001 income it is not significant when we include variables that control the educational level of the head of the household²⁵. Also interesting, is the fact that the estimated coefficients for income and their statistic significance are higher for the latest electoral year. This might indicate that a widening

 $^{^{25}}$ This is not surprising given the known strong correlation between these variables. In our sample the correlation of the natural logarithm of income with the fraction of head of households holding a tertiary diploma is 84% in 2001, and 79% in 2005. This evidence also points to class bias.

class bias through time is taking place (as it is the case for the US, see Nagler 2007).

The log of the registered population is not significant, under any specification. However, this variable is sensitive to the specification we pick, especially when it includes our measure of density. This comes as no surprise, however, if one takes into account the strong correlation between these two variables²⁶.

A very interesting finding, not explored elsewhere in the empirical literature using aggregate data, is that educational proficiency is significant, having as well the expected sign. So, even after controlling for income and other relevant variables, the higher the average scores of schools in the county, the higher the participation of the young. Unfortunately, this cannot be replicated for 2001, as the data is not available.

Neither rurality, nor the costs of registration or the closeness of the electoral outcome, seems to be important determinants of turnout among the young. For rurality and costs of registration, probably many of the effects that these variables have on turnout are already captured by other variables closely related, such as density, registered population, and total turnout.

Another important variable is overall turnout, which is positive and significant in all specifications and for both electoral years: counties exhibiting high participation rates tend to exhibit high turnout rates for the young, independently of their income level or other social variables characterizing them. Moreover, considering its magnitude, this variable is quite stable from one election to another, being slightly higher in 2005.

One possible cause for concern regarding the specifications considered in table 2 is that their coefficients might be biased due to the existence of endogeneity problems. Plausibly, an omitted variable residing in the error term and affecting turnout of the young, might also be affecting that of all adults in the county²⁷. If that were the case, one of the main assumptions supporting

 $^{^{26}}$ For example, the simple correlation between the log of density and the log of registered citizens is about 74%.

²⁷As an hypothetical example, suppose that the age of the candidates matters, in such a way that more young people (the very beginners) register the younger are the candidates on average in the respective district, with the opposite effect taking place with the old citizens. This omitted variable that indeed varies across counties, and correlated to both the turnout of the young and the old, will fall into de error term. The consequence being that the estimated coefficient for each of the explanatory variables will no longer be unbiased.

our estimation strategy, that is that the error term should be uncorrelated with the explanatory variables, would fail, implying our OLS estimator to be a biased one. To tackle this problem we carry out the estimation using an instrument for the logit of total turnout, which is the variable we regard as the most likely to be exposed to this type of problems.

For each sample, 2001 and 2005, we consider as an instrument the log transform of the fraction of the current adult population that by the time the referendum in 1988 was held was aged 18 and above. This translates into computing the fraction of adults that in 2001 were aged 31 or more, and in 2005 were aged 35 and above. While we expect this instrument to be uncorrelated with the error term, we observe that in both cases the instrument is highly correlated with the logit of overall turnout (the correlation is 58% in 2001 and 56% in 2005), fulfilling thereby two desirable conditions in any instrument, that is to have a strong correlation with the instrumented variable, and to have none with the error term in the model.

With this instrument we carry out the estimation using a two-stage least squares (2SLS) estimator. This procedure boils down to regressing the logit of total turnout on all exogenous variables in our model, including the instrument (stage one), and then using the estimates of the logit of turnout all from the first stage regression as a regressor in the plain OLS model including all exogenous variables (stage two). However, several specification tests fail to support this strategy and the underlying hypothesis that the logit of overall turnout is causing endogeneity problems. We consider this as additional evidence supporting both our estimation strategy and the specifications considered in table 2. This is also consistent with findings in Franklin (2004) when instrumenting the lag of turnout in a model for overall turnout.

To wrap up, income is decisive in explaining the electoral participation of the young, but is its magnitude meaningful? How much more income we need to increment turnout from, say, 10% to 20%? How sensitive is this relationship? As both income and turnout have been log-transformed, the interpretation of the coefficient of income requires some discussion.

Assume that a given county has a rate of turnout among the younger cohorts given by T. Then the rate of turnout for the same county (ceteris paribus) when income is multiplied by χ is equal to $\chi^{\beta}T(1 - T + \chi^{\beta}T)$, where β is the coefficient for income in table 2^{28} . To illustrate the difference,

²⁸Initial turnout in the county is $\log(T/(1-T) = \beta \log Y + X'\gamma)$ plus the error term, where X now notes the rest (other than income) covariates. If income is multiplied by χ ,

consider a county with young turnout equal to T = 15%, which is roughly the mean we find across counties. For $\beta = 0,65$ (column 2), a county with twice as much income ($\chi = 2$) would have turnout equal to 22%, and one with thrice as much income ($\chi = 3$) would have a rate equal to 26%. For $\beta = 1$ (columns 4 or 5, approximately), a county with $\chi = 2$ would have turnout equal to 25%, whereas for $\chi = 3$ turnout would be 32%. The ratio $\chi = 3$ has not been randomly chose, as it is approximately equivalent to the ratio of the mean of income of the first to the fifth quintile. Taking the average value for years 2001 and 2005, we can state our results as follows: for each young citizen registered to vote in the lowest quintile in Chile, there exist two young citizens registered in the highest quintile.

5.2 Results at the Individual Level

The results obtained from the individual data are presented in tables 3 and 4. In table 3 we show the estimation outcome of the models without considering the supplementary variables, whereas in table 4 we present various specifications including them.

Results are consistent to those found above. Note that we include regional dummies in all regressions and cluster the errors by county (comuna). Income and education matter, though education is not significant in the discrete choice models (logit and probit). On the more sociological dimension, the fact that the respondent lived in a rural background during his childhood seems to be important, and raises the chances of being registered, as sociological

then turnout T' is $\log(T'/(1 - T') = \beta \log \chi Y + X' \gamma$. Subtracting both equations we have an expression for T'.

theory would predict.

13	able 5		
Determinants of Electora	l Participat	tion of the You	ung
Lapop Survey (2006); Dep. vari	able: Logit	of turnout of t	he young
	OLS	Probit	Logit
Log income	0.075	0.266	0.438
	(4.07)	(4.59)	(4.48)
Rural background Childhood	0.231	0.750	1.272
	(3.30)	(4.25)	(4.46)
Schooling	0.015	0.042	0.079
	(1.72)	(1.43)	(1.63)
County effects	Yes	Yes	Yes
N obs	244	208	208
R-squared (Pseudo R-squared)	0.19	0.11	0.11

Absolute t statistics calculated using robust errors are reported in parentheses.

Because the findings do not change with the estimation procedure (probit, logit) we report only the logit results in the next table. As shown in table 4, only "respect for institutions" seems to be meaningful in explaining the propensity to participate. No interactive term proved to be significant. Most importantly, a direct measure of apathy does not seem to be important in

Table 4							
Electoral Participation of the Young and Disenchantment							
Lapop Survey (2006); Dep. variable: Logit of turnout of the young							
	(1)	(2)	(3)	(4)			
Income (Log)	0.431	0.415	0.430	0.429			
	(2.60)	(4.54)	(4.13)	(4.77)			
Rural background Childhood	1.132	1.336	1.263	1.254			
	(3.88)	(4.21)	(4.22)	(4.57)			
Schooling	0.000	0.078	0.061	0.080			
	(-0.01)	(1.70)	(1.81)	(1.58)			
Apathy	-0.623						
	(-1.54)						
Respect for institutions		0.490					
		(2.14)					
Satisfaction with democracy			0.092				
			(0.21)				
Pride for Chilean political system				0.319			
				(1.06)			
County effects							
N obs	158	208	200	207			
R-squared (Pseudo R-squared)	0.10	0.12	0.11	0.11			

determining the participation of the young.

Absolute t statistics calculated using robust errors are reported in parentheses.

6 Discussion and Conclussions

Low participation is, in practice, unequal participation. While both dimensions are not necessarily dependent, we observe that class bias is typically linked to a low level of turnout, being the US the prototypical example. Our paper shows the presence of low and unequal participation in the Chilean transition to democracy. First, we demonstrate the systematic drop of electoral turnout during the post-authoritarian period from 1989 to 2009, arguing that the Chilean one is an exceptional case of decline even when compared to other transitions. Second, we show that the electorate's new cohorts exhibit a strong class bias, with figures for this bias being only comparable to those found in the US for the whole electorate.

The determinants for the Chilean class bias in the new cohorts cannot, therefore, be separated from the causes of its electoral decline. Several authors coincide in pointing out the institutional arrangement of the postauthoritarian Chile as one of the main causes to the systematic disenchantment associated with electoral decline (see Posner 1999 and 2004, Olavarria 2003, Valenzuela et al 2006, Walter 2008). Interestingly enough, these authors describe the new Chilean democracy as an "elitist" and "exclusionary" one.

The most salient characteristic of the Chilean transition to democracy is the fact that it was completely contained in the institutional framework designed by the preceding dictatorship (see Valenzuela and Siavelis 1991). Chile undertook a "pacted democratic transition", with the quitting from the dictatorship requiring the acceptance of several conditions imposed by the military to protect the Constitution of 1980 – enacted by Pinochet's advisors -, which in turn contained the new political order envisioned by General Pinochet: that of a "protected democracy" (see Siavelis 2000, Pastor 2004)²⁹. The military set several authoritarian enclaves that remained long after the return of democracy, such as an extremely weak competitive electoral system that favored Pro-Pinochet right-wing parties (see Rahat et al 1998, Navia 2002 and Pastor 2004), the appointment of one fourth of the Senate, and the enactment that forbids the President from removing the armed forces's commander-in chief³⁰. The last two enclaves were only removed in 2005, after 15 years of democracy, but the electoral system and other enclaves haven't been modified yet.

While pacted agreements and concessions made democratization possible, they soon became impediments for further democratic reforms. The tight institutions designed by the military to protect democracy, created a non competitive – or protected – democracy³¹, with all agreements having to be negotiated with the minority encompassing the right-wing parties devoted to protect Pinochet's Constitution. Not surprisingly, the citizens' level of disenchantment increased systematically during the period, as several surveys show. For instance, according to the LatinoBarometro, Chileans' satisfaction with democracy drops from 75 to 25 percent during the first ten

²⁹Przeworski (1991) provides an enumeration of the conditions for the Chilean transition, which he uses as an example when illustrating the extreme requirements that can be asked in exchange for democracy during a transition.

³⁰As a matter of fact, General Pinochet remained as the head of the Army during the first 8 years of democracy, assuring the military's tutelage of the transition.

³¹Chilean democracy's lack of dynamism is evident. Two coalitions share the power in a type of bi-party system, with only one of them ruling office for four consecutive periods, and with the seats of the Congress frozen between coalitions since 1993.

years of democracy, with only a 10 percent of the respondents believing that democracy had been fully established in the country by 2000^{32} . As we have observed, political participation, and in particular electoral participation, decreased as well.

The conjecture that the institutions of this pacted democracy have been causing turnout decline, is supported by the fact that according to almost all other dimensions, Chile's democracy should have a high rate of political participation. Chile's democracy ranks high for its stability and robustness (Kostadinova and Power (2007), using Freedom House Index); it has a strong democratic legacy; even though being bicameral, the electoral system makes both cameras congruent, and therefore closer to unicameralism; elections are concurrent, relatively unfrequent and held during holidays, and the ballot is regarded as involving a simple consult, all of which should subside to some extent the overall costs of participating (Lipjhart (1997)); Chile exhibits a very stable and structured party system, that has shown to be resilient to the dictatorship's several efforts aimed at nullifying and vilifying the role of political parties (Valenzuela 1995); on more socio-economic grounds, Chile ranks as one of the wealthiest and more educated countries in Latin America, both of which should foster participation. Regarding the relationship that turnout may have with economic cycles, Chile exhibited a period of high and sustained economic growth at the beginning of the transition, underwent a serious economic crisis involving an increase in the rate of unemployment up to two digits after 1997, to end up recovering a moderate rate of growth from 2000 to present. In the whole period, however, turnout's rate of decline was perfectly constant³³.

We conclude that from all variables that can have a detrimental effect on turnout, Chile is only exceptional in its type of institutions, carefully designed to protect democracy from their own citizens. These institutions might affect directly and indirectly the rate of turnout.

The direct effect of institutions on turnout was seminally studied by Powell (1986) and Jackman (1987) for developed countries, and both Perez-Liñán (2001) and Fornos et al (2004) show their fundamental effect on turnout in Latin American democracies. In the Chilean case, the most obvious candidate for an institution harming turnout is the peculiar rule that obliges

 $^{^{32}}$ Figures are from Posner (1999). See Walter (2008) for several other data pointing in the same direction.

³³Business cycles have a mild effect, however, according to Cerda and Vergara (2008).

to vote for life once registered. Chilean citizens recognize that such imposition creates negative incentives for registration³⁴. Additionally, registration offices close three months before the election³⁵ and registration for the ballottage is therefore banned, which reduces the effect that the salience and closeness of the election may have on registration. A second institution that is directly reducing turnout is the electoral system, and in particular, the electoral district magnitude equal to two. While a small district magnitude is detrimental for participation, the Chilean binominal system (with the district size equal to 2) has the additional effect of providing a very low level of inter-list competition, creating alongside large entry-barriers for new parties. The lack of dynamism derived from the electoral system is a strong disincentive for voting.

But the institutions of the Chilean protected democracy have indirect effects as well. Posner (1997 and 2004) convincingly argues that the outcome of the transition in Chile was to weaken traditional forms of political expression to the point where the channels through which citizens could make the political system responsive to their demands was exiguous if not null. Institutional arrangements limited public officials' accountability to their constituencies and citizens' opportunities to input in decision making. The dissatisfaction of the Chilean citizenship is therefore, along these lines, nothing but the expected outcome from the implementation of several institutional arrangements that had been strategically and purposefully designed by interested parties in the negotiation process that sealed the pacted transition. As Olavarría (2003) summarizes "the data strongly suggest that the institutionalization of Chilean political parties into a network of exclusionary institutions designed to "protect" a restricted democracy has limited their representative capacity and led to a loss of legitimacy at the grass roots reflected in electoral withdrawal."

Class bias is not surprising in a protected democracy. On one hand, the Chilean pacted transition was per se a negotiation between the elites. On the other, every transition needs to demobilize grass root support for more radical positions that can threaten the whole process's viability. The conditions for such a protected democracy "fit well with the desire of elites of both the right and the Concertación to depoliticize civil society in order to preserve

 $^{^{34}}$ In the survey of Centro de Estudios Públicos 2004, 20% of the respondents indicate compulsory voting after registration as one of the main reasons for not being registered.

³⁵Indeed, the Chilean rule obliges citizens to register for an election before the candidates do in order to officially place their candidature.

macroeconomic and political stability." (Posner 2001). But again, the elitist character of the initial agreements became an impediment for further deelitization. Valenzuela et al (2006) compare Chilean transition to a "tale of strong elite agreements that bolster governance but then lead to decay amid their own tendency to alienate and shut out".

The pact between the elites thus institutionalized a conservative bias against political participation, and such bias has tended to be pervasive (see Karl 1990). Elite agreements replaced party mobilization: "parties have lost touch with their bases" (Valenzuela et al 2006)), disengaging them from their grassroots (Posner 2001). As Olavarría (2003) indicates "the authoritarian features cemented into the 1980 Constitution serve as a convenient administrative tool for political elites in that they limit popular representation and discourage participation." A natural outcome of such "elitization" of Chilean politics is to create better incentives for political participation for the citizens closer to the elite than for the rest of the population.

In a nutshell, institutions are plausibly the main determinant for both the decline and class bias in Chilean electoral participation, but the effect that such institutions have on turnout goes beyond, and is not exclusive to, the one pointed out in the literature.

Our previous analysis puts some warnings on simple and isolated institutional solutions designed to tackle these problems, such as the Law passed by the Chilean Congress in 2009 prescribing automatic registration, and making voting voluntary. While the initiative was brought about thanks to the correct recognition by the Chilean political class that some electoral engineering was needed in order to revert the fall in overall turnout, several caveats regarding political equality should also be addressed in such kind of proposals. A central question is whether class bias in the young can be extrapolated to the whole population. If so, the end of compulsoriness for those citizens already registered can seriously harm equal participation. And even if the older constituencies continue to vote customarily, the new rule is hardly reversing the different electoral incentives faced by the young constituencies across different social and economic classes. In our opinion, aside any recognition of the important role that a reform of the electoral rules may have on turnout, we need a deeper debate on whether having a "protected democracy" is convenient for fairer political participation.

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