Political Effects of State-led Repression: The Chilean Case[*]

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Abstract

In this paper I study the impact of state-led repression during the Chilean dictatorship (1973-1990) on contemporary individual political preferences and behavior. I collected a unique dataset in Chile where I surveyed subjects who experienced repression and built a matching group with comparable socio-economic characteristics that did not experience repression. I compare the political preferences and behavior of the repressed relative to the non-repressed before and after repression. I find several robust results: first, repressed people do not differentially change their interest in politics or their political orientation on a left-right scale. Second, the repressed do change their behavior; I find that repression leads to a fall in the participation of the repressed in political parties and unions relative to the non-repressed. Lastly, the repressed increased their participation in human rights organizations.

1   Introduction

Though states may often fulfill their Hobbesian task of preventing a "war of all against all" they have also frequently turned their powers against their own citizens. Indeed, all states in recorded history have repressed their own citizens and some have done so with extreme brutality and a mass death toll. State repression is one of the pervasive features of modern authoritarian regimes which use it to come to power and maintain themselves (see e.g. Acemoglu and Robinson 2001; 2006). They also utilize it to implement their political projects and attempt to leave an enduring legacy. As Andre Gunder Frank put it in his "First Open Letter of Milton Friedman and Arnold Harberger" the two Chicago economists advising the military government of General Augusto Pinochet in Chile

> *"you say the wage is still 'above the level of equilibrium'. Perhaps the equilibrating artists you trained to serve the Military Junta in Chile can help it equilibrate the wage still better on the points of its bayonets."* (Frank 1976, 888)

For example, the dictatorships which emerged in the Southern Cone of Latin America in the 1970s, in Argentina, Chile and Uruguay had an agenda of permanently rolling back left-wing political programs and undermining the power of organized labor (Drake 1996; Foxley 1983). They did this by violently repressing the left and the unions.

Yet despite the pervasiveness of repression, its consequences and potential legacies and its importance for political science, fundamental questions about its impact have yet to be addressed. This is particularly the case at the individual level. For example, how does the experience of repression or perhaps the fear of being repressed influence an individual's political preferences or behavior? If it does, to what extent does the impact linger over time or is it transitory?

The main contribution of this paper is to conduct such an individual level investigation of the consequences of state led repression. To do so I analyze a unique micro dataset which I collected in Chile in 2012. I first constructed a random sample of 203 people from the

"The National Commission on Political Imprisonment and Torture" or Valech Report [1] who had been repressed, arrested and/or tortured, during the military dictatorship between 1973 and 1990 [2] I then constructed a control group of 193 subjects by matching those repressed with others who were not repressed but have similar characteristics. I then administered a survey to both groups. The first section consisted of retrospective questions about political preferences and behavior (interest in politics, political ideology, political participation) both retrospectively at the time of the Unidad Popular (UP) Government, which was overthrown by the military coup of September 11, 1973, and again today. There were also questions about people's socio-economic status (occupation at the time, household income, educational level) again retrospectively in 1973 and today. The second section covered the years of the dictatorship and asked about the specifics of the repression experienced (age of first detention, number of detentions, places where detained, the organization that detained them, outcome after detention - went into hiding, exile or freedom, etc.).

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[1]This commission, created 13 years after the transition to democracy, produced a first report in 2004 and a revised report in 2011. These reports are known the Valech Report, 2004 and 2011.

[2]I argue that a person was repressed based on the guidelines used in the Valech Report. This Report classifies subjects as repressed when they built a case for their political repression which demonstrated that they were imprisoned or tortured for political reasons and included the date and place of detention, length of detention, repressive organism that detained him/her and if tortured while detained. From this variables, it is possible to say that people were repressed in different ways and in fact Davenport (2007) wrote an important paper on how this concept requires significant desegregation. However, when I estimated the econometric models taking into account different characteristics of the repressive event such as whether they were tortured or not, or the length of repression, the results mirrored the ones I found with the basic distinction between repressed and non-repressed and this is why I continue with this simple definition through the paper.

The main questions of interest in this paper are: how did repression influence individuals' political preferences and political participation? To think about the potential mechanisms and channels it is very useful to start with a simple theoretical framework which sees people's preferences as being formed by socialization as part of their identity. Agents of socialization are parents and peers. During this process people also acquire political preferences and beliefs. This model of identity formation and socialization is consistent with a great deal of evidence about people's political choices and behavior (e.g. Green, Palmquist and Schickler 2002). Models of identity formation and its consequences have been formalized mathematically by Akerlof and Rachel (2010), Bisin et al. (2011), and Bénabou and Tirole (2011).

This model makes several robust predictions about the likely consequences of repression on individual's political preferences and behavior. First, once a person's preferences, or perhaps ideology, is determined early in life (usually between the ages of 10 and 20) it is fixed and changes little [3]. This suggests the following hypothesis:

Hypothesis 1: *Repression will not change people's political preferences*

However, there is a difference between your preferences and the way that you express your preferences. For example, you might be a left wing person but whether or not you take part in political activities in order to express your beliefs, such as join a political party, take part in a political campaign or engage in protests and demonstrations, depends on the costs and benefits of these activities. If, for instance, behaving in a left wing way, by joining a left wing political party, risked repression, then you might not do this while at the same time maintaining your left-wing political identity. If this happened it would be a form of what

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[3]This leaves open the question of the impact of repression on individuals undergoing socialization, e.g. between the ages of 10 and 20. While I do have such people in my sample, the fact that they were repressed signifies generally that they were already active in politics and had likely acquired their political preferences. Therefore, the issue of the impact of repression on people undergoing socialization does not really influence my results.

Kuran (1995) called "preference falsification". How long would this preference falsification last? In the Chilean case, a naive intuition might be it would vanish as soon as democracy returned in 1990. Yet, my field work and the academic research suggests that it may persist much longer. This is for three reasons: i) the psychological literature suggests enduring consequences of repression. ii) even after 1900 the institutionalized power of the military and the former dictator president Pinochet led many Chileans to worry that repression would recur, iii) the experience of repression may have permanently undermined trust in and the legitimacy of the state in Chile.

From this discussion I hypothesize that:

Hypothesis 2: *Repression will lead people to disengage from political life, participating less in any way which risks further repression. This disengagement will endure to the extent that people perceive the risks to be persistent.*

Ultimately it is an empirical question the extent to which repression has enduring effects.

Put simply, I would expect the repressed, relative to the non-repressed to be less likely join a political party or a trade union and less prone to take part in a political campaign or engage in protests and demonstrations. However, they will not become more left-wing or right-wing due to the experience of repression, or change their levels of interest in politics.

These are the main hypotheses I will investigate in this paper. I wish therefore to estimate the causal effect of being repressed on key measures of political preferences and participation. Before describing my results and how they relate to the hypotheses it is important to discuss some of the empirical challenges involved. Estimating these causal effects is difficult because it is endogenous who is repressed. For example, in my data those who were repressed are significantly more interested in politics and more likely to participate in political demonstrations and strikes. There is therefore clear selection into the repressed group. This implies that an empirical strategy which simply compares the current outcomes of the repressed and non-repressed groups will not estimate the causal effect of being repressed, at least in the absence of an instrumental variable.

I use several empirical strategies for dealing with this challenge to causal inference and conduct several robustness tests. These strategies are made feasible by the fact that I collected retrospective data for both repressed and non-repressed and I am therefore able to move beyond the cross-sectional differences today. The first model I estimate uses a difference in differences strategy, that compares the political participation of the repressed relative to the non-repressed before and after repression took place. This strategy will estimate the casual effect of being repressed if there is an unobservable which is common to the repressed group and if there are parallel trends prior to treatment. However, since I have a panel I can use an even more powerful approach than this which is to use individual fixed effects. Instead of comparing a person to the group I can compare him/her to himself/herself over time. In this case even if there are individual specific unobservables, they will be controlled for by the fixed effects and this will enable me to estimate the causal effect of being repressed. While, the repressed are clearly different from the non-repressed, it is plausible that these differences are fixed unobservables related to people's ideology or perhaps upbringing. If this is the case these unobservable differences can be controlled for with fixed effects leaving the estimated regression coefficients unbiased.

I find several robust results which are very consistent with Hypotheses 1 and 2. First, repressed people do not differentially change their interest in politics or their political orientation on a left-right scale. Second, while the repressed were and are more politically active in the sense of being more likely to be a member of a political party or movement as a consequence of repression, their participation fell by 15 percentage points relative to the non-repressed. This implies a 40% decrease in participation in these organizations relative to their 1973 level for the subjects who were repressed. For the case of membership of unions, being repressed caused a decrease of 18 percentage points which is equivalent to a fall of 48% relative to their 1973 level. However, an interesting finding is that people who experienced repression seem to substitute into other forms of political participation, such as human rights groups since I find a positive and statistically significant effect of repression on the

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probability that a person belongs to a human rights organization. In particular, repressed subjects increase their participation in these organizations by 14 percentage points. Finally, repressed subjects also reduced their reliance on newspapers as a source of information. As a robustness exercise I also estimated a model using propensity score matching and the results generally hold.

Though I cannot directly investigate the parallel trends assumption for my main sample, since I did not collect information on the repressed prior to 1973, I did asked questions about their parents, specifically the educational attainment of their parents in 1973. I show that educational attainment for repressed and non-repressed families does not follow differential trends prior to 1973 which gives confidence that the parallel trends assumption holds (see Online Appendix).

These econometric results are consistent with repression by the dictatorship having created an environment of fear which influenced the willingness of the repressed to participate in politics. On the other hand the fact that in my data people's political preferences do not change as a result of repression is very consistent with the identity model. I show that my results are not being driven simply by the fact that repressed happened to be more left-wing and the institutions of Chilean society have moved in a generally more conservative direction. I also show that the political consequences of repression I find cannot be explained by the modernization hypothesis, since repressed people actually became more educated.

Even though the individual political consequences of state repression are of enormous importance for comparative politics they have not been investigated systematically before in political science. Karl and Schmitter (1991), Linz and Stepan (1996) and O'Donnell (1994) have argued that the type of dictatorship that a society has, leaves a legacy for future democracies. O'Donnell (1994) for example argued that democratization in Latin America in the 1980's created a type of low quality democracy he called delegative democracy. This literature is related to a broader literature in historical institutionalism which has emphasized path dependent legacies working primarily through institutional structures, (e.g. Thelen

1999, Pierson and Skocpol 2004, and Siavelis 2000, Frank 2005 and Londregan 2007 for the Chilean case). This research differs from my own because its focus is on legacies working through institutions, not individual behavior and it is not focused on repression as a channel via which legacies are created.[4]

The most prominent instance of research on institutional legacies of authoritarian regimes is in the literature on the transition from socialism in Eastern Europe. In a seminal paper Jowitt (1992) argued that Leninism, would cast a long shadow over the institutional and social dynamics of the post-communist world. Hanson (1995) identified four main channels via which such legacies could operate: ideological, political, socioeconomic and cultural. Mechanisms included antipathy towards capitalism or liberal values at the individual level, inherited socioeconomic or cultural cleavages, persistent groups, elites or informal institutions (see Kitschelt et al. 1999, Grzymala-Busse 2002, the essays in Ekiert and Hanson 2003, and also Howard, Tismaneanu and Sil 2006). Most relevant Pop-Eleches and Tucker (2011) and Pop-Eleches and Tucker (forthcoming)) and Bernhard and Karakoç (2007) using micro-data find significant lasting effects of communist dictatorship on preferences and political behavior. This research is closer to my own in that it develops hypotheses about how authoritarianism can leave a legacy through its impact on individual behavior, even if many of the hypotheses are very specific to the legacy of the Soviet Union. Nevertheless, none of this research emphasizes the legacies of repression and none of it uses the type of micro evidence that I collected. For example, neither the World Values Survey nor the other data that Pop-Eleches and Tucker (2011) use has information on repression or the differential impact of Soviet policies on different individuals.

Also related is the study of Balcells (2010) who examined the relationship between victimization during the Spanish Civil War and political ideology, arguing that people's preferences tend to move in the opposite direction from the preferences of those who repressed them. Her

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[4]Roniger and Sznajder (1999) is a partial exception but the mechanisms on which they focus and their research design is completely different from this paper.

findings are consistent with mine in that they leave open the possibility that, for example, repression by right-wing groups was targeted against left-wing people. This is precisely what I find.

My results diverge the ones found in the recent studies of Bellows and Miguel (2009), Blattman (2009) and Bateson (2012), who find that civil war or crime victimization leads to a greater political participation. [5]. There are two main reasons why my findings challenge those of these studies. The first one is that the results for these is about "random violence by other actors different from the state. The actors in my research are victims of the state and it is very significant when the state uses violence against its own citizens. There is also a significant methodological difference between these papers and my study since they all use only the cross-sectional variation. In the cross-section my data also suggests a positive correlation between repressed and political participation for example. Yet this is not true when I use the within variation, a strategy which allows me to control for unobservable individual differences. I elaborate more on this in the section where I discuss my empirical strategy.

2 Political Imprisonment and Torture in Chile under the Dictatorship

2.1 Case Study Evidence

A large amount of case study evidence and my field work illustrate some of the consequences of repression which complements my interpretation of the econometric evidence. In this section I will give examples of some testimonials from the victims, psychologists who treated them and extracts of some interviews I conducted. This evidence strongly suggests that repression indeed has long lasting effects as per hypothesis 2.

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[5]These papers and related to a broader psychological literature on post-traumatic growth (see Tedeschi and Calhoun (2004); 2007; Cann et al. (2010) and Linley and Joseph (2004)

What was the impact of repression? María Irma Alvarado was detained in June 1974 by the DINA, often called the "Chilean Gestapo" (Constable and Valenzuela 1991, 91). She was imprisoned in Puerto Montt where she remained isolated in a cell, beaten, had a powerful light shone in her eyes and was deprived of sleep. She developed pneumonia and did not receive any medical care. While sick she was kicked to the point where she lost consciousness and bled from her eyes, ears and nose. Reflecting in 2006 on the impact of this experience she noted

> "the consequences of the experience of repression are several...I have blackouts; I have a hard time remembering names and situations from that time. I feel distrust and insecurity; lack of self-esteem and a feeling of guilt for the pain I caused to my family and my daughter...Several times I wished I had died...there are periods when I isolate myself...and just the thought of living this experience throws me into despair" (Kunstman and Torres 2008, 55)

Alvarado's reaction to being repressed and tortured is very common in the testimonies of the victims of the Chilean dictatorship collected in the book "Cien Voces Rompen el Silencio" (100 Voices Break the Silence) Kunstman and Torres 2008. These persistently record the long-running traumatic psychological effects that were the typical consequences of repression.

Rosa Prenafeta, working on agrarian reform in the Ministry of Public Works noted

> "They destroyed our professional careers and changed dramatically the quality of our life, generating a permanent anguish...the dictatorship turned our life project into shit" (Kunstman and Torres 2008, 428-429).

This assessment of the reaction of people to state repression is born out by the psychological literature on the phenomena. Chilean psychologists Lira and Castillo note "Political repression, experienced as the real possibility of being killed...reduces subjects to reclusion, exclusion and to total submission...subjects enclose themselves while they stay threatened;

they do not expose...The way to defend themselves is going into hiding, staying paralyzed and fearful..." (Lira and Castillo 1991, 70) (See also Almarza 1994, 7).

These reflections capture the most common assessments by psychologists of the impact of repression. For example, Becker et al. (1990) note that repression created "chronic fear. Fear, which is normally a defensive action against a specific external or internal threat, became a permanent component of everyday personal and social life. It [fear] became a generalized inhibitory factor in both psychological processes and social interaction. Instead of diminishing the threat, it embedded the threat in people's minds" (Becker et al. 1990, 137) [6]

Importantly this fear endured after the recreation of democracy in 1990 (in particular Barbera 2009). The theme of fear as a response to the dictatorship also runs through the social science literature as well (e.g.Constable and Valenzuela 1991, 140-165; Silva 1999 and Politzer 2001).

During fieldwork I had the opportunity to ask subjects about the persistence of fear and their perception of how repression changed the way they engaged in politics today. One of my subjects was a psychologist who worked in the Valech Reports I and II. She evaluated around 300 subjects who had been repressed by the dictatorship, and by 2013 she worked with an organization which gives psychological counseling to these subjects. In the context of the persistence of fear she told me how she had a patient coming to her in a terrible state

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[6]See also the evidence presented in Weinstein 1987, Dominguez et al. 1994, Lira and Weinstein 1984, Martínez, Tironi and Weinstein 1990. Other research by psychologists on the long-run impact of repression, for example in the former Soviet Union and Eastern Europe (Gailienè 2005), Argentina (Kordon 2005), Central America (Pereira 1987), or comparatively (Bermann 1994) finds very similar things. Scholars working within the Freudian tradition have even linked political persecution to subsequent paranoia (see Lira and Castillo 1991 and Berke et al. 1998). Agger and Jensen 1996 and Ritterman 1991 are further studies of some of the psychological effects of repression in Chile.

of angst soon after the right-wing presidential candidate, Sebastián Piñera, won the 2009 elections. The patient was seeking protection since she was convinced that the triumph of the right meant that the military or intelligence forces were going to come after her.

During an interview I conducted with a subject who used to be a militant in the Communist Party and was detained in the Estadio Nacional, the person expressed a great concern about the events of 1973 happening again. I asked the person in a naive way: "How come? Do you think this can happen again?", the person told me:

> "Yes, of course, while the armed forces keep their power they are capable of doing this again...and I have a terrible fear...The students are getting organized and protesting but they have no idea what they are getting into. I have a terrible fear for them and all the suffering they are exposing themselves to since they will be subject to terrible treatment by the Carabineros"[7] [8].

Of course, psychologists see a selected sample of people, those who seek counseling and help, but this evidence and the evidence from my own field work is consistent with hypothesis 2. These cases illustrate how the experience of repression and the trauma associated with it still influence the political activities of the repressed today.

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[7]Interview with member of the Association of Former Political Prisoners in the Metropolitan Region.

[8]Other important testimonials of repression during the dictatorship are Álvarez 2003, Valdés 1996, Teillier 2003, Bronfman and Johnson 2003 and Reszczynski, Rojas and Barceló 2013. I also consulted a collection of recorded testimonials, called "Proyecto Cien Entrevistas" in the Museo de la Memoria in Santiago <http://www.museodelamemoria.cl/colecciones/audiovisuales/proyecto-cien-entrevistas/> and other testimonials gathered in the archive of the Museum Villa Grimaldi.

3 Data

3.1 Survey

To examine the impact of repression on political behavior I constructed a dataset of 396 individuals some of whom experienced repression during the dictatorship and others who did not. To collect the data I hired the firm Ekhos I+C, an experienced and highly qualified survey firm. The population for the survey were subjects living in the Metropolitan Region of Santiago where 50% of Chileans live and where around 43% of the victims of repression who are recorded in the Valech Report resided at the moment when they were detained.

The first step was to find people who experienced repression during the military dictatorship. I did this using the Valech Report. This report contains a list of 38,254 acknowledged victims in an annex with their first names and paternal and maternal last names along with their National Identification Number (the acronym in Spanish is RUN), which is the equivalent of the Social Security Number in the U.S.[9]. I drew a random sample of a total of 3,800 repressed subjects. Then, I matched their information with the white pages and a database that is used for commercial purposes called Equifax, with the goal of finding people who were still alive, lived in the Metropolitan Region and had contact information (telephone and/or address). I was left with a total of 1,080 subjects who could potentially be contacted. However, when the Ekhos team called these people we realized that not all of the information was up to date, correct and that some of the numbers were out of service. Therefore from these 1,080 subjects I was left with a total of 346 subjects who were successfully contacted. Once they were reached, the subjects were told the reason we were contacting them and the nature of the study and its objectives. From the 346 successfully contacted, 203 agreed to participate in the study [10] The remaining 143 subjects refused to participate in the survey giving the following reasons: a) No specific reason 40 (28%) b) For mental health reasons or

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[9]This list is exclusive of the 3,197 people who were killed by the dictatorship listed in the Rettig Report

[10]All of these 203 subjects completed 100% of the questionnaire and this would imply a

distrust 33 (23%) c) Not interested in the study 29 (20%) d) Interested but do not have time 21 (14%) e) They are too old or ill 10 (7%) f) Other reasons, Children or wife did not allow the interview, or changed their minds about participating once the surveyor met with them without giving a reason - 10 (7%). Since there is a concern about the potential bias created by the fact that subjects who accepted might be different from subjects who refused to take part in the survey, I compared the characteristics of the individuals who agreed to participate in my study with the average characteristics of those recorded in Chapter 7 of the Valech Report, which contains the profile of all the victims. The only comparable characteristics were gender, age at the moment of first detention and the names of the political parties or movements that the people belonged to before they were detained. The Online Appendix contains these comparisons which show how the distribution of these characteristics are very similar between the population of the Valech Report and my sample.

The fact that my sample is quite similar to that contained in the Valech Report alleviates concerns that the endogenous agreement to take part in the survey will create bias in the econometric estimations. In this context it is also important to note that a large proportion of the subjects refused to take part on the grounds of not wanting to remember this traumatic experience or living through it again with their family. This probably indicates that people who decided to participate are less traumatized than those who refused to participate and therefore my results are likely underestimating the effects of repression on people's behavior.

Once all the surveys for the repressed adults were gathered, I constructed a profile of each repressed individual based on their characteristics such as age, gender, levels of education, income, neighborhood, etc. I then constructed the control group by searching using information from the 2002 Census for observationally identical people who had not been repressed. The surveyors of Ekhos I+C went to the field with the profile they had to match and were assigned the census tracts that had the largest probability of finding a match according to the census. This process involved a degree of trial and error until an appropriate person was

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response rate of 58.6%.

located and agreed to participate in the study.

The total number of surveys I conducted was 396 (203 repressed subjects and 193 non-repressed subjects).

3.2 Descriptive Statistics

Panel A of Table 1 provides descriptive statistics of the variables that I used to construct the matching sample in 2012 and Panel B contains the descriptive statistics of the socio-economic variables in 1973 that are used in the econometric estimations.

In both panels, column (1) displays the means for subjects who were repressed and column (2) reports the means of the same variables for the non-repressed. In both panels we can see that subjects in the two groups are very much alike in terms of their individual socio-economic characteristics. The last row of Panel A, for example, reports the means of an income scale variable where the subjects are asked to place their households on a scale of 1 to 10 where 1 represents the poorest households and 10 the richest ones in 2012 in Chile. This is a simple way of measuring income when people do not want to report exact levels of income. On the scale, the repressed report a value of 5.08 while the non-repressed report an average of 4.91. I conducted a difference in the means test where the null hypothesis is that these means are the same for the two groups. Column (3) displays the p-value associated with the test of difference in the means (t-test). In order to reject the null hypothesis, the p-value associated with the test of difference in means has to be smaller than 0.05 (which is the threshold commonly used). In this case, this p-value is 0.25 (p>0.05), therefore you cannot reject the hypothesis that the means in the household income scale between the repressed and non-repressed are the same. Column (3) of Panel A also shows that we cannot reject the hypothesis that the means of age, gender and occupations with medium levels of skills are the same. However, it also shows that there are differences in the means with respect to the years of education since on average repressed subjects have 1.7 more years of education and the p-value associated with the test is p<0.05. There is also evidence that shows that

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Table 1: Descriptive Statistics of Socio-Economic Characteristics

Panel A: Socio-Economic Characteristics in 2012			
Variables	Mean Repressed (1)	Mean Non-Repressed (2)	p-value (3)
Age	64.502	65.503	0.333
Female	0.236	0.295	0.185
Years of Education	14.030	12.326	0.000
High skilled occupation	0.362	0.238	0.009
High-Mid skilled occupation	0.043	0.033	0.638
Mid skilled occupation	0.553	0.575	0.680
Low skilled occupation	0.032	0.127	0.001
Household Income (1 poorest- 10 richest)	5.084	4.911	0.251
Panel B: Socio-Economic Characteristics in 1973			
Variables	Mean Repressed (1)	Mean Non-Repressed (2)	p-value (3)
Age	25.502	26.544	0.315
Years of education	11.744	10.762	0.009
Working	0.695	0.710	0.695
High skilled occupation	0.138	0.094	0.172
High-Mid skilled occupation	0.049	0.026	0.229
Mid skilled occupation	0.468	0.443	0.615
Low skilled occupation	0.034	0.120	0.001
Primary sector	0.059	0.068	0.727
Secondary sector	0.153	0.120	0.342
Tertiary sector	0.665	0.578	0.075
Household Income (1 poorest- 10 richest)	4.202	4.275	0.685

In Panel A and B, column (1) reports the mean values for the repressed subjects and column (2) contains the mean values of the non-repressed subjects. Column (3) contains the p-value associated with the test in the difference in the means of the repressed and non-repressed. Panel A contains the socio-economic characteristics if the subjects in 2012. The variable Age corresponds to the age the subjects reported at the moment of the interview. The variable Female is a dummy that takes the value of 1 when the subject is a female and 0 otherwise. The number of years of education was estimated depending on the highest level of education the subjects achieved at the moment of the interview. The variables of the levels of occupation: high, high-mid, mid and low skilled are the result of recoding a variable that contains 11 categories that follow the classification of occupations of the International Labour Organization. The variable Household Income is a scale that goes from 1 to 10. The subject is asked to place her household on a scale of 1 to 10 where 1 are the poorest households and 10 the richest ones in 2012 in Chile. Panel B contains the socio-economic characteristics of the subjects in 1973. These are statistics that were built based in retrospective questions, meaning the values for 1973. The definition is the same as in Panel A for years of education, household income, occupational level. The variable Working is a dummy that takes the value of 1 if the subject was working in 1973 and 0 otherwise. The variables Primary, Secondary and Tertiary are recoded based on the International Standard Industrial Classification of All Economic Activities - ISIC. Initially the firms were coded in a more disaggregated way following ISIC.

there is a larger proportion of subjects with occupations with higher levels of skill in 2012 and a smaller proportion of subjects in the category with the lowest level of skill.

Panel B provides the descriptive statistics for the main socio-economic variables that I gathered at the individual level for the period of the UP government in 1973. These are the key variables that I will control for in the econometric estimations in the following section. Again, when they are asked to place themselves on an income scale from 1 to 10 in August of 1973 in Chile, the repressed report a value of 4.20 while the non-repressed report an average of 4.27. The p-value associated with the test for the difference in means is 0.68 which implies that we cannot reject the hypothesis that the means are the same. Therefore, there is not a statistically significant difference between the income levels reported by the two groups. Next, consider whether or not people were working and if they were, what type of sector they were working in 1973. These are potentially important determinants of people's political preferences or participation. I therefore constructed a dummy that takes the value of 1 if subjects were working in August 1973 and 0 otherwise (this category would include people who were mainly students or people who were too young to have become part of the labor force). In Table 1, Panel B, we observe that 69% of people who were repressed were working in 1973 whereas 71% of the non-repressed were working. Again, there is no statistical difference between these proportions (the p-value associated with the test in difference in means is 0.69 p>0.05). Panel B in Table 1 also reveals that there are two dimensions in which the repressed were significantly different from the non-repressed. Non-repressed people tended to undertake low-skilled occupations more than the repressed while the repressed had on average one extra year of education.

Table 2 provides descriptive statistics for the main dependent variables of interest.

Columns (1) and (2) show the means of the different variables for the repressed and the non-repressed during the UP government. Column (3) displays the p-value associated with the difference in means test. Columns (4) and (5), display the mean values of the variables for the repressed and non-repressed during the period after the dictatorship, and

Column (6) contains the p-values for the difference in means test. The first point that this table illustrates is that people who were repressed were and are overall more interested and engaged in politics than the non-repressed. They were and are more likely to participate in strikes, political campaign or political demonstration and they were and are more likely to belong to a political party. The repressed, were and are also systematically more left-wing than the non-repressed. The second feature that comes out from this table is that for both groups, interest in politics and political engagement fell between the period of the UP government and the period after the dictatorship. For example, during the UP government on average, repressed people scored 3.28 on a scale from 1 to 4 where 1 represents not interested in politics and 4 represents very interested in politics. After the dictatorship, this average for the repressed fell 10% to 2.98. For the non-repressed, the mean of this variable during the UP was 2.41 and this also fell significantly to 2.04 after the dictatorship. The same pattern can be observed for whether or not a person belonged to a political party. For the period of the UP, about 54% of the repressed belonged to a political party while only 12% of the non-repressed did so. After the dictatorship, these numbers fell to 32% for the repressed subjects and around 6% for the non-repressed.

When we examine membership in unions for the period of the UP government, we observe that 37% of the repressed subjects participated in these organizations while around 15% of the non-repressed did. After the dictatorship, this proportion becomes smaller and the value for the repressed is approximately 19% while for the non-repressed is 16% and the p-value associated with the test in difference in means is 0.41 (p>0.05), meaning that there is not a statistically significant difference. Similar patterns can be observed for variables that tell about people's engagement in politics, for example if people read the newspapers, discussed politics with friends and family or participated in strikes or political demonstrations. One last feature of Table 2 which is of interest is that while many features of political participation seem to have fallen, there is no change in people's ideological position between the period of

Table 2: Descriptive Statistics of Political Outcomes

	During UP Government		
Variables	Mean Repressed	Mean Non-Repressed	p-value
	(1)	(2)	(3)
Interest in Politics (1 Not 4 Very)	3.281	2.410	0.000
Ideological Position (1 Left 10 Right)	2.964	4.683	0.000
Belonged to a Political Party	0.537	0.124	0.000
Belonged to a Union	0.369	0.155	0.000
Belonged to a Human Rights Organization	0.044	0.010	0.040
Read Newspapers (1 Never - 3 Always)	2.600	2.341	0.001
Talked about Politics with Friends	2.541	1.994	0.000
Talked about Politics with Family	2.292	1.896	0.000
Donated Money for Political Activity	0.400	0.073	0.000
Participated in a Strike	0.520	0.232	0.000
Participated in Political Campaign	0.602	0.189	0.000
Participated in Political Demonstrations	0.829	0.288	0.000
	After Dictatorship		
Variables	Mean Repressed	Mean Non-Repressed	p-value
	(1)	(2)	(3)
Interest in Politics (1 Not 4 Very)	2.985	2.041	0.000
Ideological Position (1 Left 10 Right)	2.901	4.665	0.000
Belonged to a Political Party	0.320	0.057	0.000
Belonged to a Union	0.192	0.161	0.413
Belonged to a Human Rights Organization	0.182	0.010	0.000
Read Newspapers (1 Never - 3 Always)	2.355	2.349	0.940
Talked about Politics with Friends	2.245	1.818	0.000
Talked about Politics with Family	2.271	1.880	0.000
Donated Money for Political Activity	0.379	0.042	0.000
Participated in a Strike	0.276	0.047	0.000
Participated in Political Campaign	0.458	0.063	0.000
Participated in Political Demonstrations	0.589	0.127	0.000

Note: Columns (1) to (3) contain the means of the variables for the Unidad Popular government, 1970 to 1973. Columns (4) to (6) contain the means of the period After the Dictatorship, 1990 to 2012. Columns (1) and (4) report the means of the subjects who were repressed and columns (2) and (5) for the non-repressed. Columns (3) and (6) are the p-values associated with the test in the difference in the means of the repressed and non-repressed. The variable Interest in Politics takes values from 1 to 4 where 1 is Not at all interested, 2 A bit interested, 3 Somewhat interested and 4 is Very interested. The variable Ideological Position takes values from 1 to 10, for this variable the subjects were asked to place themselves in a scale from 1 to 10 where 1 represents a left-wing position and 10 a right-wing position. Belonged to a Political Party, Union and Human Rights Organization are dummies that take the value of 1 when the subjects report to have belonged to any of these organizations and 0 otherwise. The variables Reading Newspapers, Talked about Politics with friends and family vary from 1 to 3, where 1 represents that the subject never read newspapers or talked about politics, 2 sometimes and 3 always. The variables donated money for a political activity, participated in a strike, political campaign and political demonstrations are dummy variables that take the value of 1 if the subject was engaged in any of these activities and 0 otherwise.

the UP government and after the dictatorship.[11]

4 Empirical Model and Results

4.1 Empirical Model

The descriptive statistics show that the repressed are systematically different from the non-repressed. This makes a cross-sectional comparison of the behavior of the repressed and non-repressed a very unattractive strategy for recovering the causal effect of repression. To deal with the problem that the repressed differ systematically from the non-repressed ex-ante, I use two econometric strategies. The first is to use a difference in differences model,

[11]There may be problems associated with the use of retrospective questions since there may be systematic bias in people's answers. For example, since 1973 was a very politicized moment in Chilean society, it is possible that this will lead people to over-exaggerate their answers to some questions leading to a kind of "mean reversion" in the answers to questions. However, Deaton (1997) argues that in fact, it is in precisely such situations such as migration or death of child that recall questions are the most accurate in single interviews that aim to construct panel data. Therefore, the salience of the moment may also help people to accurately remember just exactly what they were doing at that time. This is particularly relevant since most of the most interesting results come not from variables asking for people's subjective evaluation of preferences or events in 1973 or today, but from clean cut yes-no questions such as whether the person was a member of a political party or a trade union in 1973. The answers to this question seem unlikely to be influenced by some type of recall bias and the salience of 1973 may facilitate getting a correct answer. Though it is true that 1973 was a very political moment, it is also true that there is a widespread recognition in Chile that the excess politicization of the era had disastrous consequences for the country. This would tend to create the opposite bias, meaning people would underestimate the extent to which they were interested in politics in 1973.

where I compare the average value of the dependent variables between the repressed and the non-repressed groups before and after the dictatorship. This strategy will estimate the casual effect of being repressed if there is an unobservable governing selection into the repressed group which is common to the group and the parallel trends assumption holds. The equation I estimate is the following:

$$y_{i,t} = \beta_0 + \beta_1 \cdot Repressed_i + \beta_2 \cdot Post_t + \beta_3 \cdot Repressed_i \cdot Post_t + \boldsymbol{X_i'} \cdot \boldsymbol{\gamma} + \varepsilon_{i,t} \qquad (1)$$

where $y_{i,t}$ is the value of a political outcome for individual i at time $t=1973$ and $t=$ *after 1990*. $Repressed_i$ is an indicator variable which takes the value of 1 if the individual was repressed during the dictatorship, $Post_t$ is a dummy that takes the value of 1 for the period after the dictatorship and captures the trend effect for the people in this survey; $Post_t \cdot Repressed_i$ is an interaction term that takes the value of 1 in the period after the dictatorship if individual$_i$ was repressed during the dictatorship. The coefficient associated with this interaction, β_3 is the parameter of interest since this is the term that captures the effect of repression and is the parameter that shows the difference in differences. Even though I do have time varying controls such as education and income, I do not include them since the post dictatorship values are outcomes and this could lead to the "bad control" problem (see Angrist and Pischke 2009, 64-68) [12] For this reason I estimate this model using $\boldsymbol{X_i}$ which is a vector of covariates for 1973, which includes household income scale, years of

[12]The bad control problem occurs when you control for an outcome variable in between the treatment and the ultimate dependent variable in which you are interested. For example, imagine that being repressed leads an individual to be less educated. If the more educated people are, the more they participate in politics, this negative effect on education will be a channel via which repression influences participation. By including education in the regression it would therefore underestimate the effect of repression on political participation.

education, labor force participation status, levels of skill and sector of the economy in which the individual worked. $\varepsilon_{i,t}$ is the error term representing all omitted factors.

To address omitted factors that can influence the outcome at the individual level I also estimated models that include individual fixed effects. In this specification I am comparing the individual to him or herself over time and even if there are unobservable individual specific characteristics, they will be controlled for by the fixed effects and this will enable me to estimate the causal effect of being repressed. The equation I estimated is:

$$y_{i,t} = \beta_0 + \beta_2 Post_t + \beta_3 Repressed_i \cdot Post_t + \boldsymbol{X_i'} \cdot \boldsymbol{\gamma} \cdot Post_t + \eta_i + \varepsilon_{i,t} \tag{2}$$

Where the variables are as defined before after equation (1) and where η_i is the individual fixed effect. The presence of individual fixed effects implies that I cannot estimate the effect of time invariant individual characteristics captured in the vector $\boldsymbol{X_i}$, such as gender. Moreover, as discussed above, I do not want to include time varying covariates because of the "bad control" problem. My solution in this problem in equation 2, is to interact the pre-repression covariates with a time dummy (Result tables show this estimation with and without the interaction of the controls in 1973 with the $Post_t$ dummy).

As a robustness check, I also used a third econometric technique, the method of propensity score matching which I combined with the difference in differences model. With this method, I compare the differences in the outcomes between the repressed and non repressed individuals based on their probability of being repressed. I first estimated the propensity score of being repressed using a Probit model in which the dependent variable is the $Repressed_i$ indicator variable and the independent variables are the socio-economic characteristics in 1973. I then estimated the difference and differences model by assigning a different weight to the data based on the estimated propensity score of being repressed. For those subjects who were not repressed I assigned a weight of

$$w = \hat{\lambda}/(1 - \hat{\lambda}) \tag{3}$$

where $\hat{\lambda}$ is the estimated propensity score, and I assigned

$$w = 1 \tag{4}$$

for those who were repressed. All the results hold under this specification.[13]

It is important to remember that the propensity score matching method assumes that the outcome of being repressed depends exclusively on the observable characteristics of the subjects. However, since I have information for the same subject available for two periods, combining the propensity score matching method with the difference in differences strategy allows me to take into account potential non-observables.

4.2 Results

Tables 3 to 8 contain the results for the different dependent variables. The results for the first specification are in columns 1 and 2. Column (1) starts with the simplest model which does not include any covariates, column (2) includes all the socio-economic covariates such age, gender and labor force participation in 1973, how skilled was the job undertaken in 1973 and dummies for the economic sector in which the individual was working in 1973; column (3) contain the result of the second specification with individual fixed effects. Column (4) reports the estimation including individual fixed effects plus the interaction of the covariates

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[13]I also estimated the effect of being repressed with the propensity score matching using the command *psmatch2* in Stata. In this specification, the dependent variable is the difference of the outcome between 2012 and 1973. The propensity score is built with the same socio-economic characteristics as above and the matching was conducted using the matching algorithm of the nearest neighbor. In this specification, repression has the same effects as in the main difference in differences model and the results hold for the following dependent variables: participation in political parties and unions and human rights organizations. However, they do not hold when the dependent variable is read newspapers.

with the $Post_t$ dummy. Finally, column (5) contains the estimation with the propensity score matching estimator. Tables 3 to 8 have identical structure.

Table 3 contains the results where the dependent variable is *Interest in Politics$_{i,t}$*.

Table 3: Interest in Politics
Dependent Variable: Interest in Politics$_{i,t}$

	Difference in Differences				PSM
	(1)	(2)	(3)	(4)	(5)
Repressed$_i$	0.871***	0.758***			
	(0.130)	(0.122)			
Post$_t$	-0.368***	-0.387***	-0.385***	0.064	0.069
	(0.132)	(0.126)	(0.094)	(0.460)	(0.476)
Post$_t$· Repressed$_i$	0.073	0.092	0.093	0.135	0.099
	(0.175)	(0.162)	(0.133)	(0.142)	(0.139)
Socio-economic variables	NO	YES	NO	NO	NO
Fixed Effects	NO	NO	YES	NO	NO
Fixed Effects and X· Post$_t$	NO	NO	NO	YES	YES
Observations	728	728	728	728	728
R-squared	0.147	0.278	0.809	0.812	0.811

Note: Columns (1) to (4) report the results of the difference in differences models and Column (5) is the estimation using the propensity score matching. The dependent variable, Interest in Politics, takes values from 1 to 4 where 1 is not at all interested, 2 A bit interested, 3 Somewhat interested and 4 is Very interested. The socio economic covariates are: age, a female dummy, household income scale (1 poor - 10 rich), years of education, working dummy, levels of skill and sector of the economy in which the individual worked in 1973. Robust standard errors in parentheses;.***p<0.01, **p<0.05, *p< 0.1

The question on the survey asked the subjects the following for the Unidad Popular period: "During the time of the UP Government (1970/1973), How interested were you in politics?" and for the present the subject was asked: "Nowadays, how interested are you in politics?" The answers ranged in the following way: Not at all (1), Very little (2), Somewhat (3) and Very Interested (4). The first finding of interest is the statistically significant coefficient on the *Repressed$_i$* indicator variable. In column (1) β_1 equals 0.871 with a standard error of 0.13, so that it is highly significant. Looking at the next column (2) this finding is highly robust to the addition of all the covariates and there is little change in either the estimated coefficient or the standard error. In column (3) when I include individual fixed effects I

cannot independently estimate the effect of time invariant individual characteristics. This finding illustrates, as Table 2 suggested, that the repressed people are significantly more interested in politics that the non-repressed. The second main finding in the table is that while in the initial columns the interest in politics of everyone, repressed and non-repressed, falls significantly after the dictatorship, this effect in fact is non-robust. The evidence for this is the estimated coefficient on the $Post_t$ dummy. If we look across the different specifications, although the value of this coefficient is negative and significant at the 1% level this is not so when the controls are interacted with the $Post_t$ dummy or when I estimate the model using the propensity score matching. The other aspect that this table shows is that there is no differential impact of repression on interest in politics. For example, in column (1), β_3 is equal to 0.073 with a standard error of 0.175 and therefore statistically indistinguishable from 0. At least in this dimension, while the repressed are more interested in politics, before and after the dictatorship, being repressed does not systematically change this difference.

In Table 4 the dependent variable is the *Ideological Position*$_{i,t}$ of the individual. Subjects were asked to classify themselves on a spectrum from 1 to 10 where 1 is the most left-wing position and 10 the most right-wing position for both periods of time. The coefficient for the $Repressed_i$ indicator variable in columns (1) and (2) shows how subjects who were repressed are more left-wing than the non-repressed subjects. The sign of β_1 is negative and statistically significant even when I include the full set of covariates in column (2), then β_1 takes a value of -1.642 with a standard error of 0.274. The main point of interest in this table, however, is that neither the coefficient on the $Post_t$ dummy nor on the $Post_t$ and $Repressed_i$ interaction are close to statistically significant. This means that there was no significant change in the ideological orientation of either the repressed or the non-repressed. The quantitative effects are also very small since the change in ideological position for the repressed is 2% and for the non-repressed is 0.3%. So, even though people seem to be less interested in politics, their ideological position did not change. This evidence is partially consistent with the conclusions of Valenzuela and Scully (1997) where they documented how

Table 4: Ideological Position

	Difference in Differences				PSM
Dependent Variable: Ideological Position$_{i,t}$					
	(1)	(2)	(3)	(4)	(5)
Repressed$_i$	-1.719***	-1.642***			
	(0.265)	(0.274)			
Post$_t$	-0.018	-0.035	-0.038	-0.153	-0.167
	(0.298)	(0.301)	(0.184)	(0.675)	(0.701)
Post$_t$· Repressed$_i$	-0.045	-0.059	0.120	0.006	-0.011
	(0.351)	(0.351)	(0.230)	(0.237)	(0.247)
Socio-economic variables	NO	YES	NO	NO	NO
Fixed Effects	NO	NO	YES	NO	NO
Fixed Effects and X· Post$_t$	NO	NO	NO	YES	YES
Observations	671	671	671	671	671
R-squared	0.137	0.156	0.877	0.885	0.887

Note: Columns (1) to (4) report the results of the difference in differences models and Column (5) is the estimation using the propensity score matching. The dependent variable, Ideological Position, takes values from 1 to 10 where 1 a "left-wing" position and 10 is a "right-wing" position. The socio economic covariates included are: age, a female dummy, household income scale (1 poor - 10 rich), years of education, working dummy, levels of skill and sector of the economy in which the individual worked in 1973. Robust standard errors in parentheses;***p<0.01, **p<0.05, *p< 0.1

the first elections after the dictatorship in 1990 had voting patterns highly similar to those seen prior to September 11, 1973. From this fact, they concluded that Chilean electoral choices were relatively unaltered by the military experience because the cleavages between right, center and left persisted through the dictatorship. The results from Table 4 seem to be consistent with aggregate voting patterns not changing after the dictatorship. However, my more general findings are not consistent with a conclusion that the dictatorship left no long-lasting impact on Chilean politics. This is because they show that while people's ideological preferences might not have changed, their behavior did.

In Table 5 the dependent variable is a dummy for whether or not the subject *Belonged to a Political Party$_{i,t}$*.

Table 5: Political Party

	Difference in Differences				PSM
Dependent Variable: Belonged to a Political Party$_{i,t}$					
	(1)	(2)	(3)	(4)	(5)
Repressed$_i$	0.413***	0.384***			
	(0.042)	(0.041)			
Post$_t$	-0.067**	-0.067**	-0.067***	0.163	0.158
	(0.029)	(0.028)	(0.024)	(0.107)	(0.111)
Post$_t$· Repressed$_i$	-0.149***	-0.149***	-0.149***	-0.136***	-0.126**
	(0.056)	(0.054)	(0.047)	(0.049)	(0.050)
Socio-economic variables	NO	YES	NO	NO	NO
Fixed Effects	NO	NO	YES	NO	NO
Fixed Effects and X· Post$_t$	NO	NO	NO	YES	YES
Observations	792	792	792	792	792
R-squared	0.181	0.247	0.719	0.729	0.725

Note: Columns (1) to (4) report the results of the difference in differences models and Column (5) displays the estimation using the propensity score matching. The dependent variable, Belonged to a Political Party, takes values of 1 when the subject reports to having belonged to a political party or movement and 0 otherwise. The socio economic covariates included are: age, a female dummy, household income scale (1 poor - 10 rich), years of education, working dummy, levels of skill and sector of the economy in which the individual worked in 1973. Robust standard errors in parentheses; ***p<0.01, **p<0.05, *p< 0.1

This model can therefore be interpreted as a Linear Probability Model. We see here again, from the first row, that repressed subjects are systematically more politicized than

non-repressed people. In Table 3 we saw that repressed people were systematically more interested in politics. Here, we see that they are systematically more likely to belong to a political party. In column (1) β_1 is equal to 0.413 with a standard error of 0.042 and highly significant. This finding is completely robust to the addition of covariates. The main finding of this table however, is the significant coefficient on the interaction term of the $Post_t$ and $Repressed_i$ indicator variables. For example, in column (1) β_3= -0.149 (s.e. = 0.056) and statistically significant at the 1% level. The coefficient is robust across all specifications. So, the probability of belonging to a political movement fell around 15 to 14 percentage points depending on the econometric model. However the absolute decline of participation in political movements for the repressed is 40% which is a large quantitative effect. This shows that while participation in political parties fell generally after the dictatorship, it fell even more for the repressed relative to the non-repressed.[14]

In Table 6, I turn to *Membership of a Trade Union*$_{i,t}$, the dependent variable is a dummy that takes the value of 1 when the subject reports belonging to a trade union either in period t.

The results here to some extent mirror and to some extent contrast with the findings so far. The first row reflects the systematic finding that the repressed are different from the non-repressed. Here, they are systematically more likely to be members of a trade union. However, the Table gives no evidence of a general trend towards de-unionization after the dictatorship. This can be seen from the second row, where the coefficient on the $Post_t$ dummy is not statistically different from 0 in any specification. Nevertheless, the third row, shows that there was a differential effect on the repressed. In column (1) for example, we see that β_3= -0.183 (s.e.=0.058) and significant at the 1% level. This negative effect is very

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[14]Note that even though β_3 does not change across the first three specifications, it's standard error and the R-squared of the regression does. The fact that the value of β_3 does not change is plausibly related to the fact that the matching of repressed and non-repressed subjects was done very well in the field.

Table 6: Labor Unions

	Difference in Differences				PSM
Dependent Variable: Belonged to a Union$_{i,t}$					
	(1)	(2)	(3)	(4)	(5)
Repressed$_i$	0.214***	0.192***			
	(0.043)	(0.041)			
Post$_t$	0.005	0.005	0.005	0.281***	0.256**
	(0.037)	(0.037)	(0.031)	(0.107)	(0.115)
Post$_t$· Repressed$_i$	-0.183***	-0.183***	-0.183***	-0.193***	-0.189***
	(0.058)	(0.056)	(0.050)	(0.051)	(0.053)
Socio-economic variables	NO	YES	NO	NO	NO
Fixed Effects	NO	NO	YES	NO	NO
Fixed Effects and X· Post$_t$	NO	NO	NO	YES	YES
Observations	792	792	792	792	792
R-squared	0.045	0.106	0.631	0.685	0.678

Note: Columns (1) to (4) report the results of the difference in differences models and Column (5) displays the estimation using the propensity score matching. The dependent variable, Belonged to a Union, takes values of 1 when the subject reports to having belonged to a union and 0 otherwise. The socio economic covariates included are: age, a female dummy, household income scale (1 poor - 10 rich), years of education, working dummy, levels of skill and sector of the economy in which the individual worked in 1973. Robust standard errors in parentheses; ***p<0.01, **p<0.05, *p< 0.1

robustly estimated and unaltered by the addition of covariates or the strategy in column (3) of using individual fixed effects to focus on the within variation and in fact it becomes even larger (-0.195) once the interaction of the $Post_t$ dummy and the covariates are included in column (4). These results are also robust when the estimation is done with the sample being weighted by the propensity score of being repressed. In Column (5) the coefficient on the interaction is -0.189 (s.e.=0.053). Thus, the results in this table suggest that being repressed, differentially reduced people's participation in trade unions by at least 18 percentage points. The absolute fall for the repressed was 48%, which is quite a large quantitative effect, while for the non-repressed it is 3% relative to their 1973's level.

Table 7 examines a very different type of group membership or participation. The previous two tables suggest that repressed people reduced their participation in political parties and unions relative to the non-repressed. Could it be that they instead substituted into other types of membership or participation?

This is actually suggested by some of the testimonial evidence. For example, a relevant testimony is that of Lucía González, who was a member of the MIR, one of the most radical political movements. She was detained in December of 1973 and taken to Regimiento Buin where she was tortured. She went into exile in July 1974 and returned to Chile in 1979 and she describes how "During the four and a half years of exile in Montreal...we organized a Chilean resistance group to denounce [human rights abuses]" and when she was back in Chile "In the decade of the 80's I worked in the Committee of Defense of People's Rights, where I deepened my socio-political commitment." (Kunstman and Torres 2008, 256)

I investigate this issue by looking at whether or not individuals *Belonged to a Human Rights Organization*$_{i,t}$.

The results show that while repressed people on average are more likely to be members of human rights organizations, the effect of being repressed accentuates this tendency. For example, in column (1) of Table 7 the estimated coefficient on the repressed dummy is positive and significant at the 5% level showing that indeed the repressed were more likely to

Table 7: Human Rights Organizations

Dependent Variable: Belonged to Human Rights Organization$_{i,t}$

| | Difference in Differences | | | | PSM |
	(1)	(2)	(3)	(4)	(5)
Repressed$_i$	0.034**	0.034**			
	(0.016)	(0.016)			
Post$_t$	-0.000	-0.000	0.000	-0.068	-0.068
	(0.010)	(0.010)	(0.007)	(0.070)	(0.071)
Post$_t$· Repressed$_i$	0.138***	0.138***	0.138***	0.147***	0.137***
	(0.032)	(0.032)	(0.030)	(0.032)	(0.030)
Socio-economic variables	NO	YES	NO	NO	NO
Fixed Effects	NO	NO	YES	NO	NO
Fixed Effects and X· Post$_t$	NO	NO	NO	YES	YES
Observations	792	792	792	792	792
R-squared	0.086	0.105	0.614	0.625	0.630

Note: Columns (1) to (4) report the results of the difference in differences models and Column (5) displays the estimation using the propensity score matching. The dependent variable, Belonged to a Human Rights Organization, takes values of 1 when the subject reports to having belonged to a human rights organization and 0 otherwise. The socio economic covariates included are: age, a female dummy, household income scale (1 poor - 10 rich), years of education, working dummy, levels of skill and sector of the economy in which the individual worked in 1973. Robust standard errors in parentheses; ***p<0.01, **p<0.05, *p< 0.1

be members of human rights organizations. More interesting are the results in the third row. In column (1) β_3= 0.138 (s.e.=0.032) and highly statistically significant. This means that repression increases the probability of a subject's participation in human rights organizations by around 14 percentage points. Calculating the quantitative effects, it is possible to say that repressed subjects increased their participation in these organizations by 313%. This effect is again very robustly estimated as the other 4 columns illustrate. This shows that while the repressed may have been more likely to be members of human rights organizations during the UP government, the experience of repression caused them to participate even more in such organizations, compared to the non-repressed, after the dictatorship.

Table 8 examines a different type of question; to what extent do people read newspapers. Given that my interest is comparing the early 1970's, a period where few people in Chile had a television, to today, it is most comparable over time to examine *Newspaper Readership$_{i,t}$*.

Table 8: Newspapers

| | Dependent Variable: Read Newspapers$_{i,t}$ | | | | |
| | Difference in Differences | | | | PSM |
	(1)	(2)	(3)	(4)	(5)
Repressed$_i$	0.259***	0.172**			
	(0.080)	(0.078)			
Post$_t$	0.007	0.004	-0.037	0.419	0.428
	(0.082)	(0.079)	(0.064)	(0.289)	(0.308)
Post$_t$· Repressed$_i$	-0.253**	-0.243**	-0.181**	-0.172*	-0.179*
	(0.110)	(0.105)	(0.092)	(0.097)	(0.095)
Socio-economic variables	NO	YES	NO	NO	NO
Fixed Effects	NO	NO	YES	NO	NO
Fixed Effects and X· Post$_t$	NO	NO	NO	YES	YES
Observations	729	729	729	729	729
R-squared	0.020	0.125	0.738	0.746	0.735

Note: Columns (1) to (4) report the results of the difference in differences models and Column (5) displays the estimation using the propensity score matching. The dependent variable, Read Newspapers, takes values from 1 to 3, where 1 is Never read newspapers, 2 sometimes and 3 always. The socio economic covariates included are: age, a female dummy, household income scale (1 poor - 10 rich), years of education, working dummy, levels of skill and sector of the economy in which the individual worked in 1973. Robust standard errors in parentheses; ***p<0.01, **p<0.05, *p< 0.1.

The dependent variable is coded on a scale from 1 to 3 with 1 recording that the person never reads a newspaper and 3 that the person reads newspapers every day. Interestingly, the estimations show no general trend in the propensity to read newspapers over time. The coefficient on the $Post_t$ dummy is never statistically different from 0. The first row illustrates that compared to the non-repressed, the repressed are far more likely to read a newspaper. Just as my findings show that the repressed are more interested in politics, more likely to be members of a political party or a trade union and more likely to belong to a human rights organization they are also more likely to read newspapers. Nevertheless, the estimated coefficient on the interaction of the $Post_t$ and $Repressed_i$ shows that the effect of being repressed, reduces the propensity to read newspapers by about 20%. However, this effect is only significant at the 10% level when I control for the interactions between the $Post_t$ dummy and the socio economic covariates and it is not significant when I weight the sample using the propensity score of being repressed.

All in all the results presented in these tables are consistent with Hypotheses 1 and 2 presented in the introduction. I found robust evidence that while people's political preferences are not changed by repression their behavior is. In particular they are less interested in politics and participate less in activities, such as belonging to a political party, that could risk repression. Interestingly, they do seem to substitute into other activities like human rights organizations which are safer and less overtly political but which perhaps help to compensate.

5   Conclusion

In this paper I study the impact of state-led repression at the individual level for the case of Chile during the military dictatorship between 1973 and 1990. I conceptualized the impact of repression through the lens of a model of political preferences and behavior which sees them as being part of one's identity, formed at an early age via socialization. This allowed

me to make some simple predictions about the likely impact of repression, summarized by Hypotheses 1 and 2 in the introduction. I look at different political outcomes such as interest in politics, ideological position, membership of political parties, unions and human rights organizations and the frequency with which people read newspapers to acquire information. Estimating the causal effect of repression is challenging because the incidence of repression is endogenous. I use several econometric techniques, difference in differences, individual fixed effects and propensity score matching to overcome this challenge to causal inference.

I find several robust results. First, repressed people do not differentially change their interest in politics and there is no significant change in the political orientation on a left-right scale of either group. Second, while the repressed were and are more politically active in the sense of being more likely to be a member of a political party or movement as a consequence of repression their participation fell relatively to the non-repressed by about 15 percentage points, this represents a fall of about 40% relative to their initial level. I also found that the effect of repression was to reduce the participation in unions. The decline for the case of union membership was 18 percentage points which represents a 48% decrease from the initial level. There is also evidence that could support the hypothesis that people shift their political activism to other arenas since I find that repressed subjects increase their participation in human rights organizations by 14 percentage points. Finally, I find that people reduced their reliance of newspapers as a source of information though this is not robust once the left-right distinction is made. I argued that all of these results are very consistent with Hypotheses 1 and 2.

To my knowledge this is the first study in comparative politics that seeks to understand the social and political consequences of state-led repression at the individual level. State repression is one of the tools that modern authoritarian regimes use to shape society and implement their political projects when in power. Its impact on people's behavior and preferences is a very likely channel by which authoritarian regimes may leave enduring legacies. The results presented in this paper do show that repression changed political behavior and

even though democracy returned to Chile in 1990, subjects who were victims of the military and intelligence agencies have not recovered from their traumatic experiences. These findings imply that repression can have implications for the quality of democracy.

My research in this paper has focused on estimating the causal effect of repression and meeting challenges to the internal validity of the estimates. It is important to recognize that the sample of people that I surveyed is not necessarily representative of the Chilean population in general, nor the cohort to which they belong. This poses a challenge of external validity but it does not create bias in the estimates.

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