

Pension Benefits and Social Cohesion

by

Cristina Gabriela Andronescu

B.A. Mount Holyoke College (2011)

M.A. Georgetown University, School of Foreign Service (2013)

Submitted to the Department of Political Science in partial fulfillment of
the requirements for the degree of

MASTER OF SCIENCE IN POLITICAL SCIENCE at the
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEPTEMBER 2016

©2016 Cristina Gabriela Andronescu. All rights reserved.

The author hereby grants to MIT permission to reproduce and to distribute publicly paper and electronic copies of this thesis document in whole or in part in any medium now known or hereafter created.

Signature of Author: Signature redacted

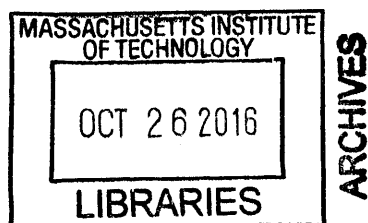
Department of Political Science
September 1, 2016

Certified by: Signature redacted

Teppei Yamamoto
Alfred Henry and Jean Morrison Hayes Career Development Associate Professor

Accepted by: Signature redacted

Ben Ross Schneider
Ford International Professor of Political Science
Chair, Graduate Program Committee





77 Massachusetts Avenue
Cambridge, MA 02139
<http://libraries.mit.edu/ask>

DISCLAIMER NOTICE

Due to the condition of the original material, there are unavoidable flaws in this reproduction. We have made every effort possible to provide you with the best copy available.

Thank you.

The images contained in this document are of the best quality available.

The impact of social protection expansion on social cohesion: evidence from Bolivia

Cristina Andronescu

August 31, 2016

Abstract

How does the expansion of social protection programs to the poor in developing democracies affect social cohesion? I address this question by examining Bolivia's central government run, non-contributory pension program, Renta Dignidad. Using a regression discontinuity design as well as a novel difference-in-discontinuities design, I find that recipients of pension benefits are overall more likely to display increased support for the central government and that in provinces where both territorial tensions and class tensions are most acute, support for the central government is significantly greater. This is consistent with a theoretical argument that expansion of social protection to the poor can mitigate opposition on active dimensions of social conflict that intersect the socio-economic dimension.

1. Introduction

In recent years, developing countries around the world have instituted programs aimed at reducing poverty by improving access to the state provided social safety net. Countries as diverse as Indonesia, Korea and South Africa have pledged to expand access to health insurance and social security to all citizens or provide vulnerable groups with financial support. In Latin America, in particular, state-funded social programs requiring no previous contribution on the part of benefit recipients have seen an unprecedented expansion relative to both state-run and private contributory schemes. From Brazil to Argentina, to Colombia and Mexico, countries in the region have implemented non-contributory social protection programs addressing a variety of social risks and ranging in design from functioning as integral components of the institutional structures of established social protection schemes (e.g. Argentina's moratorium pension scheme, Chile's *Pension Basica Solidaria*) to being parallel to these structures (e.g. Mexico's *Progresa*, *70 y mas*, Brazil's *Bolsa Familia*, Bolivia's *Renta Dignidad*, etc.). The common feature shared by all these programs has been the incorporation of low-income populations previously excluded from either private or state-run contributory schemes.

Previous scholarly accounts of this phenomenon have focused, on the one hand, on providing explanations for the adoption of social protection programs aimed at the poor and marginalized (Brooks 2015, Carnes and Mares 2014, 2015, forthcoming, Garay 2015, etc.). Other studies have examined effects of these programs on the electoral behavior of recipients (e.g., Baez, Camacho, Conover and Zárate 2012, De La O, 2013, Licio, Rennó and Castro, 2009, Linos, 2013; Manacorda, Miguel and Vigorito, 2011; Zucco, 2013). These studies are informative about the domestic and international factors that led to the expansion of social programs as well as the potential benefits to incumbents. However, they leave important questions still unresolved. In particular,

the effects of expanding social protection to low-income policy outsiders on social cohesion have remained largely unexamined in the literature. How do programs integrating the poor into the social safety net affect relations between various social groups? How do these programs impact recipients' sense of common identity or institutional trust?

This paper seeks to take a first step toward addressing these questions. I propose a theoretical argument that considers new, low-income, formerly policy-outsider benefit recipients as embedded in intersecting dimensions of social conflict. I argue that program benefits can act to mitigate opposition on active dimensions of social conflict that intersect the socio-economic dimension.

I test this argument in the context of Bolivia's non-contributory pension program for individuals aged 60 and over, *Renta Dignidad*, over the period from the program's enactment in 2008, to 2014. Marked by socio-economic and territorial tensions, Bolivia is an advantageous case to examine. On the one hand, the East- West geographic divide, delineated the fault line of an embittered and at times violent territorial dispute over autonomous executive power in the East, leading up to 2008. At the same time, income disparities became increasingly acute, particularly in the Eastern provinces. In addition, the *Renta Dignidad* program extended pension benefits to a chronically underserved and poor population. In 2007 in Bolivia, retirement benefits based on contributions covered only 15 percent of the retirement age population, one of the lowest coverage rates for contributory pensions in the world. Moreover, of the population aged 60 and over in 2009, 54 percent lived below the moderate poverty line of 2 dollars per day (Rofman, Apella, Vezza). *Renta Dignidad* thus provided pension benefits for the first time for a majority of impoverished elderly.

Studying recipients' preference responses to incorporation into the state's social protection policies is likely to pose problems of omitted variable bias and reverse causality. To overcome these challenges, I adopt a regression discontinuity framework and leverage the discontinuity created by the eligibility age threshold of 60 for entry into the

Renta Dignidad program. Comparing preferences of Bolivians just old enough to qualify for the program to the preferences of Bolivians just young enough not to qualify enables me to identify the effect of receiving benefits. Where data availability permits, I combine a regression discontinuity with a difference in differences design into a "difference-in-discontinuities" design, leveraging data before and after *Renta Dignidad* implementation in 2008. This strategy allows me to increase the precision of my estimates.

I find that benefit recipients' allegiance toward the national government, the *Renta Dignidad* provider, strengthens. Across the country, receiving program benefits increases approval of the central government, on average, by 5 percentage points and intent to vote for the national incumbent party in upcoming elections by 12.5 percentage points. Among recipients facing pressure to support Eastern provinces' quest for autonomous government, the pension benefits' effect on allegiance central government is amplified. Recipients express 7.7 percentage points higher approval of the national government and 18.9 percentage points greater intent to vote for the national incumbent party or its candidates. Among cross-pressured *Renta Dignidad* recipients, trust in provincial government representatives, leading efforts to formulate and demand autonomous Eastern government and identity, decreases by 9 percentage points.

Overall, the findings suggest that incorporating low-income cross-pressured individuals into the state's safety net can have a dampening effect on these individuals' demands of the state on other dimensions of social conflict. These results thus fit well with the body of literature highlighting the stabilizing effect of crosscutting social cleavages (Lipset 1959, Lipset and Rokkan 1964, Mutz 2002, Dunning and Harrison 2010, Selway 2011, Gubler and Selway 2012 etc.). But, they also call attention to the potential for political instrumentalization of low-income policy outsiders and of the timing of critical social protection expansions. Empirically, the study is one of the first

in the political science literature to use a difference-in-discontinuities design¹.

The paper proceeds as follows. In the following section I discuss the theoretical perspectives and expectations guiding the research. In section 3, I detail the Bolivian context, while in sections 4 and 5, I present the data, research design and estimation strategy. In sections 6 and 7, I present the main effect estimates and briefly discuss possible mechanisms. Finally, I conclude by discussing the implications of the findings.

2. Social protection, cross-cutting cleavages and social cohesion: theory and expectations

Sociological research on social cohesion has described the concept as a multidimensional phenomenon, with manifestations at individual, group and community levels (Bollen and Hoyle 1990, Drescher et al. 1985, Evans and Jarvis 1980, Hagstrom and Selvin 1965, Mudrack 1989, Piper et al. 1983, Whelan and Maitre, 2005; Vergolini, 2011 etc.). Some recurring operationalizations of the concept have included: a sense of belonging and common identity (including national and other forms of identity), interpersonal and institutional trust, shared norms and values, civic cooperation, active civic participation or law abiding behavior (Putnam 2001, 2007, Green and Janmaat 2011 etc.). In this study, I focus on the way in which expansion of social protection affects individuals' prioritization of identities and interests, in particular regional and socio-economic, the resulting group behavior and its political implications.

The link between policies of social protection and social cohesion has been amply discussed within body of literature on welfare state development. The basic logic underlying this link rests on the inherent inequalities produced by functioning markets in society. To alleviate these inequalities and the social discord resulting from unequal

¹In the economics literature, the working paper by Grembi, Nannicini and Troiano (2012) uses and formally describes the identifying assumptions that underpin this design. This study differs from theirs in that the identifying assumption for the standard regression discontinuity design seems plausible here, whereas in their study it is not.

access to resources, the state to steps in and provides social protection and welfare to those who would otherwise not have equal access. A large number of within country and cross-national empirical studies provide supportive evidence for this link, showing that income inequality is highly negatively correlated with several measures of social cohesion ranging from interpersonal to institutional trust to civic cooperation (Green et al., 2006; Knack and Keefer, 2007; Wilkinson and Pickett, 2009 etc.).

But, social policies themselves have also been found to enhance or diminish social cohesion and solidarity. In a foundational account focused on developed democracies, Esping-Anderson (1990) describes how the extent of coverage of different social protection regimes, conditions of eligibility and level of benefits of social policy, can produce ostracization and stigmatization in certain segments of the population, or in contrast, feelings of equality and solidarity. Social policy targeting can also amplify group awareness, creating stigmatization and dissolving social solidarity (Kumlin and Rothstein 2009). In a similar vein, McEwen (2001, 2005) argues that when a state assumes the role of provider of social protection and security, citizens are less likely to embrace divisive, regional identities.

Expanding social protection to former policy outsiders is thus likely to have an impact on the way these new social policy beneficiaries interact both with the state and in their relations with other social groups. However, despite the unprecedented expansion of social protection programs in the developing world in recent years, only a handful of studies consider the impact of non-contributory programs on outcomes related to social cohesion, primarily civic participation and interpersonal relations (e.g. Attanasio et al. 2008, Chong et al. 2009, Vera Soares et al. 2010). The impact of social protection programs on recipients identity and group behavior remain largely unaddressed.

Identity and interest lie at the center of the body of work emphasizing the role of societal cleavage structures for social cohesion. In their classic account, Lipset and

Rokkan (1967) place identity markers such as class or territory at the basis of aggregation and representation of societal interest, thereby delineating dimensions of social conflict (cleavages). A large number of studies, moreover, argue that when members of the same group on a particular dimension of conflict are part of different categories of interest or identity on a second dimension of social conflict, the competing interests on one dimension can weaken commitment to the interests on the other dimension. (Lipset 1959, Lipset and Rokkan 1964, Dahl 1982, Mutz 2002, Dunning and Harrison 2010, Selway 2011, Gubler and Selway 2012 etc.).

I argue here that we can expect *Renta Dignidad* recipients to behave in a similar way. In Bolivia, one dimension of conflict has been territorial, between the resource rich departments of the East (Pando, Beni, Santa Cruz and Tarija), collectively known as the *media luna* departments and the mountainous Western provinces. The cross-cutting dimension of conflict has been rooted in the income disparities, particularly wide between *media luna* department's industrial and landowning rich and its poor. The desired outcome in the *media luna* provinces, full executive and administrative autonomy, entailed the cessation of the use of taxes on hydrocarbon revenue produced in the provinces for the purposes of provision of *Renta Dignidad* benefits to the elderly, low-income in large majority. For most Eastern department *Renta Dignidad* recipients the interests promoted by their territorial allegiance and those promoted by their socio-economic position were therefore largely incompatible.

We can expect then that if receipt of benefits from the pension program succeeded in making low-income recipients' socio-economic identity more salient, as the literature predicts, they will act to protect those interests. If the strength of their allegiance to their newly activated socio-economic identity is greater than that of their regional allegiance, we can expect cross-pressured individuals to show the greatest impetus to protect their socio-economic interest. I surmise we can expect cross-pressured individuals to be most willing to expend effort to protect their competing socio-economic

interest as a means to offset pressure to act against their socio-economic interest on a dimension of weaker allegiance. Moreover, if cross-pressured recipients' allegiance on the territorial dimension has become weaker, we can expect to see a decrease in support to political actors representing their interest on the territorial dimension, such as political institutions of regional self-government.

To test these theoretical predictions, I formulate the following hypotheses:

H1: Receipt of *Renta Dignidad* benefits will have a positive effect on support for the central government, the political actor that, as program provider, represents recipients' interest on the socio-economic dimension.

H2: The effects of receiving pension benefits on support for the central government will be larger among *Renta Dignidad* recipients in the four *media luna* departments, the cross-pressured recipients.

H3: Among *media luna* program benefit recipients there will be a decrease in trust in their departmental government, the political actor that represents cross-pressured recipients' interest on the territorial dimension ².

3. Background on Bolivia

The drive for autonomy in Bolivia's Eastern departments has been a phenomenon that developed gradually over the past twenty years. Over this period, the erosion of influence at the national level for the predominantly white and economically liberal *media luna* elites in these hydrocarbon rich departments has gradually increased the appeal of autonomy from Bolivia's central government. In the past, Eastern elites, especially from the department of Santa Cruz had exerted great influence on the national government either through policy or by inciting change, as they had done through involvement in the coup against left-leaning president Juan José Torres or the civic strikes that led to the ouster of military dictator Garcia Meza (Sandoval 2003, 97).

²I choose trust as a measure of commitment and support for data availability reasons

Since the mid 1990s, however, several societal changes began to erode the power of Eastern elites. First among these changes, were the decentralization laws adopted in 1994 and 1995 under president Sanchez de Losada. For fear of territorial disintegration, sparked by the example of the former Yugoslavia, these laws were specifically aimed at municipalities, rather than departments, and directed large automatic transfers toward them with the aim of making these municipalities independent of provincial authorities. Moreover, the 1995 law relegated elected provincial representative assemblies to the status of "provincial councils", to be indirectly elected by municipal councils and whose members would act as representatives of the central government at the provincial level, rather than representatives of their own provincial government. These developments led Santa Cruz's civic committee, the Pro-Santa Cruz Committee (provincial civic organization which has been at the forefront of regional politics ever since the outlawing of provincial elections in 1952) to adopt autonomy as its goal (Eaton 2007, 80-81).

A further development that increased the appeal of autonomy for Eastern departments, has been the rise of the indigenous parties, which was facilitated by the new found political significance of municipal elections, and of victories in these elections. This moreover happened at a time when traditional parties, like the *Accion Democratica Nacionalista* led by Santa Cruz native, Hugo Banzer did not perform well in national elections. Brought to the national scene by multiple victories in municipal elections, Morales' indigenous party *Movimiento al Socialismo* (MAS), by contrast, performed unexpectedly well in the presidential elections of 2002, coming in a close second, and earned considerable representation in Bolivia's Congress (Eaton 2007, 82). In this context, Eastern elites' fears that they will be inadequately represented in Bolivia's national government, potentially for the long term, escalated, leading the Pro-Santa

Cruz to state that "it now doubted whether Santa Cruz would stay within Bolivia" (Eaton 2007, 83).

Tensions escalated further in July 2004 when, under pressure from MAS a referendum was held and approved by Bolivian voters, calling for increased government control of the gas industry. As a result, in May 2005, the Congress passed a law increasing the tax on new gas fields to 50 percent and required contract renegotiations under less favorable terms. At the same time, in 2004, the Pro-Santa Cruz Committee collected 500,000 signatures for an autonomy referendum and led a civic strike to pressure the government to hold the referendum. The political elites of the Eastern departments also began to mobilize citizens along broader, department transcending lines, reviving the old labels of *cambas*, lowlanders, and *collas*, highlanders, to help shape a common identity and delimit it from a designated antagonist. The narrative linking and defining the two identities was one of exploitation of the *cambas* by the *collas*. In April 2005, interim President Carlos Mesa agreed to institute elections for department prefects and, in June 2005, to hold a nationwide referendum on autonomy (Eaton 2007, 82-83).

The gradual loss of political influence for Eastern elites reached a critical phase after the elections of December 2005, when left-wing MAS became the first majority party since Bolivia's return to democracy in 1982. Traditional parties of the right had been channels *par excellence* for gaining representation and exerting influence at the national level for the Eastern elites. Defeated from the national scene, they now retreated to their strong holds in the Eastern departments where they had still been able to win election for department prefects in all *media luna* departments. Meanwhile, at the center, the newly inaugurated president Evo Morales was seeking to recentralize authority and control over natural resources in the central government.

Morales pursued this agenda by first nationalizing the hydrocarbon industry in May 2006. He then went on to strongly oppose the referendum on autonomy that his predecessor, Carlos Mesa, had arranged for July of the same year. A proponent of constitutional reform that would allow indigenous people to become owners of any fallow lands on the large estates of Eastern departments, Morales urged voters to reject the autonomy proposal, which he states would only benefit 'oligarchic groups' (Washington Post 2006, LA Times 2006). Despite low turnout (Gallup 2008) the referendum nevertheless succeeded in the department of Pando, Beni, Santa Cruz and Tarija, the departments which had become strongholds of Morales' opponents.

The Renta Dignidad program arose in this context, when, in October 2007, Morales announced a 70 percent reduction in departmental revenues from Bolivia's hydrocarbon tax (*Impuesto Directo a los Hidrocarburos* or IDH) to allocate to social spending on non-contributory pensions.³ Initially, the reduction in revenue was planned to affect not only department budgets but also those of municipalities and universities and was intended to uphold the limited noncontributory pension program Bonosol, which had been paid with various interruptions due to lack of funds since 1997 and which had become insolvent. However, against concerted protests from student groups, municipalities and political and economic leaders in the *media luna* departments, Morales decided to reduce only departmental revenues and create a new non-contributory pension program named Renta Dignidad by extending the benefit to all individuals aged 60 and above and raising the value of the benefits to 2400 bolivianos per month for those without any pensions (almost 90% of the elderly population (Bosch et al. 2013))

³Morales' election platform of 2005 focused primarily on control of natural resources and strengthening indigenous rights. Although the platform and the 2006 governing program also included reduction of poverty and inequality among its goals, it formulated broad objectives such equitable distribution of income and improvements in health services, education or sanitation. (Viceministerio de Inversin Publica y Financiamiento Externo 2009, Gaceta Oficial de Bolivia 2007). Later on, however, the focus in this area shifted toward programs directed at distinct segments of the population such as the Bono Juacinto Pinto for new mothers or the Renta Dignidad pension program.

and 1800 bolivianos (approx. 26 dollars) per month for those receiving other pension payments. The earmarking of the IDH revenue, which would amount to 30% of the budget of the pension fund (Eaton 2014), and the creation of the *Renta Dignidad* were adopted in by the national legislature in November 2007.

Morales' attempts to consolidate the power of the central government continued in late November 2007, when the Bolivian Constitutional Assembly approved the text of a draft constitution supported by the president, in the absence of the opposition, who decided to boycott the proceedings. Adopted without the two thirds of the total number of Assembly member necessary for ratification, the text made provisions to limit large land holdings and granted autonomy rights to indigenous communities but withheld autonomy rights for the departments (Andean Information Network 2007, Eaton 2007).

The measures to centralize control of the hydrocarbon industry and the revenues it produced, deeply antagonized elites of the *media luna* departments, where over 80% of Bolivia's gas and oil deposits lie. The 2006 nationalization brought increased skepticism of the economic trajectory on which the country as a whole was embarking and fear that foreign direct investment would be compromised in the future. Given the close ties between the domestic firms of the *media luna* departments and transnational corporations (Eaton 2007, 94), such a prospect constituted an important threat to the economic vitality of the departments. The expectation of increased revenue streams for the departments from the hydrocarbon tax on the newly nationalized industry, however, served to mitigate some of these concerns initially (Bolivia Information Network Bulletin No.4 2006).

The reduction in departmental revenues from taxation of hydrocarbon production and the land reform measures adopted in the new text of the constitution delivered a

direct threat to business interests. *Media luna* political elites, prefects and civic committees, had strong ties to, or directly overlapped with big business elites and large landowners ⁴, who vehemently condemned the central government's initiatives as attempts to weaken the power of departments and as "revealing the absolute failure of the [central] government's economic policies and of the poorly named nationalization of the hydrocarbons" (EnerNews 2007). Moreover, they declared the ratification of the new constitution text illegal, called for a state of 'mobilized resistance', organized road blockages, hunger strikes, protest marches, threatened to take over central government buildings, and in late December 2007 declared autonomy from the central state by unilaterally adopting autonomy statues in the four *media luna* departments. In these charter documents the *media luna* prefects and civic committees called for the elevation of departmental prefects to the role of governors, separate legislatures, police forces, independent regulation of taxation and landownership, oversight of public expenditures and in the case of Santa Cruz, authority to negotiate foreign treaties (Friedman-Rudovsky 2008, Heger and Chang 2008, Bolivia Information Forum Bulletin No.5 2007).

Media Luna elites' interests in keeping revenue from hydrocarbon and agribusiness in their own departments, protecting big business from incurring the costs of redistribution and the partly ethnically motivated aversion toward inhabitants of the Eastern Departments ⁵, however, were not shared by the entire population of the departments. For the lower classes, indigenous minorities and the urban and rural poor concerns such as securing basic utilities and sanitation or sufficient resources for adequate nutrition, clothing, medicines were the central considerations. Indeed, to ward off the perception

⁴ as for example in the case of the Committee pro Santa Cruz leader Branco Marinovic, PODEMOS party Senator Ortiz or Deputy Franco, the leadership of the MNR, the core party of the coalition supporting former president Sanchez de Losada, himself a businessman, etc. (Fairfield 2015)

⁵ Unlike in the rest of Bolivia, indigenous populations in the *media luna* departments are a minority ranging from 15.7% in Tarija to 37.5% in Santa Cruz (INE 2007)

that they were merely seeking to protect their own, narrow economic interests, *media luna* political and economic elites adopted a variety of tactics, ranging from acts of violence against opposing indigenous groups to co-opting non-elite allies, such as labor leaders or indigenous leaders, in order to boost the legitimacy of their autonomy agenda (Eaton 2007, 90).

The Renta Dignidad program aimed to help improve living conditions of the elderly, who in Bolivia, are overwhelmingly among the lower classes and the poor. These demographics along with urban workers, peasant farmers, the indigenous peoples and immigrants from other parts of the country had formed Morales' core constituency in the *media luna* departments in the 2005 election (Bolivia Information Forum Special Edition Bulletin 2007). To the impoverished elderly, the program provided an important and easily accessible benefit, which increased their capacity to secure basic necessities such as food, clothing or medicine. The sole eligibility criterion is having reached the age of 60 years of age while bureaucratically, the only requirement defined was a request to be entered in the register of program beneficiaries and the program was accompanied by a strong publicity campaign.⁶ By 2012, the program covered 835,422 elderly citizens, or 91% of the population over 60 (Ministry of Planning and Development 2013).

4. Research design

To test the hypotheses outlined in the theoretical section, I use a regression discontinuity design, leveraging the discontinuous assignment of benefits for individuals aged below 60 and individuals aged 60 and above. In addition, for variables that were

⁶recipients were also provided with several options for receiving the cash payment: they could collect the payments through a local bank, or in remote areas through authorized local army facilities, or they could arrange to have the money delivered at home.

collected both before and after 2008, I exploit the variation in time around the year 2008, the year in which the *Renta Dignidad* program was implemented⁷, by combining the standard regression discontinuity with a difference-in-differences in a difference-in-discontinuities design.

The intuitions behind the two designs are straightforward. The standard regression discontinuity design (RD) allows us to estimate the average effect of receiving payments from the *Renta Dignidad* program within a particular window around the program's age eligibility cutoff of 60 years of age, in the period after the beginning of year 2008. The difference in discontinuities design estimates the local average treatment effect in the period before 2008 as well as in the period leading up to 2008, for the years in which data is available, and then subtracts the effect estimate calculated for the period before program implementation from the effect estimate obtained for the period during which the Bolivian government began to make payments through the *Renta Dignidad*.

More formally, in the standard RD design, treatment for individual i , D_i (whether a Bolivian citizen receives *Renta Dignidad* pension payments) is assigned by the forcing variable, X_i , which measures age in years scaled by subtracting the eligibility age cutoff of 60 ($X_i = age_i - 60$). The forcing variable is centered around the scaled eligibility cutoff, X_c , of 0. D_i is a dummy variable taking the value 1 for individuals receiving pension payments and 0 otherwise.

$$D_i = \begin{cases} 1, & \text{if } X_i \geq 0 \\ 0, & \text{if } X_i < 0. \end{cases} \quad (1)$$

However, since in the data, we do not directly observe whether individuals receive payments, but only whether they are 60 years old or above, D_i can be interpreted as

⁷Payments from the *Renta Dignidad* started in February 2008

encouragement to treatment, and the effect as an intent to treat effect (ITT). The effects reported are therefore underestimates, although since by 2012 the take up rate was already 91% ⁸, the (ITT) estimates are close estimates of the average treatment effects among *Renta Dignidad* payment recipients.

Using potential outcomes notation, $Y_i(1)$ and $Y_i(0)$, represent potential support for the central government for individual i in year t , under treatment and control. The estimand of interest is $\tau = E[Y_i(1) - Y_i(0)]$, however $E[Y_{it}(1)|D_i = 0]$ and $E[Y_i(0)|D_i = 1]$ remain unobserved. We can overcome the fundamental problem of causal inference, nevertheless, under the assumption of continuity of potential outcomes at the threshold and estimate the quantity of interest by taking the difference in means above and below the threshold.

$$\begin{aligned} \tau_{RD} &= E[Y_i(1) - Y_i(0)|X_i = x] = \\ &= \lim_{x \downarrow X_c} E[Y_i(1)|x = X_c] - \lim_{x \uparrow X_c} E[Y_i(0)|X_i = x] \end{aligned}$$

The key assumption of the RD design is that potential outcomes are continuous around the threshold, or more concretely, that there are no systematic differences between individuals just above or just below 60 year of age. One might question this assumption if individuals were to have *precise* control over their age or systematically misrepresent their age after 2008, in order to receive *Renta Dignidad* payments. Since the data used in the analysis represent a random sample of individuals selected to participate in a general public opinion survey run for a non-Bolivian research university, which neither affects receipt of program payments, nor includes questions about the program beside one item in year 2014, there is no reason to believe that after 2008

⁸Non-compliance is one-sided. The probability that individuals aged 60 or older would not receive program payments is greater than 0, particularly in the early days of the program, as intended recipients were gradually registered in the database of program beneficiaries. Since beneficiaries had to be registered in order to receive payments and had to present identification in order to be registered in the database, the probability that an individual younger than 60 years of age is negligible.

respondents would begin misrepresenting their age to interviewers, with the goal of qualifying for benefits from the *Renta Dignidad* program. Moreover, one might also question identifying assumption if there were any policies with an age eligibility threshold of 60 years of age. To my knowledge, there are no such policies to be accounted for in the present case.

Although the identifying assumption is not testable, individuals who are just above and just below the age threshold should have similar baseline characteristics, such as for example similar socioeconomic background, and find themselves on one or the other side of the threshold due to chance rather than deliberate self-sorting. A testable empirical implication of the assumption, then, is that, within a small window of the age threshold, age and baseline characteristics should be continuous. An additional testable implication is that pre-treatment covariates should be balanced around the threshold. A histogram of the forcing variable shown in Figure 1 in Appendix 1 shows no obvious signs of sorting. A further McCrary test (McCrary 2008) presented in Figure 2 also shows no evidence of a discontinuity in the density function of the sorting variable around the threshold. In addition, balance tests of baseline covariates shown in Table 1 further suggest that pre-treatment covariates are well-balanced around the age cutoff.

Estimating the average treatment effect around the threshold requires choosing the functional form of the regression on both sides of the cutoff as well as choosing the bandwidth, h , or the amount of data around the cutoff to be used in the estimation. I present results using a standard local linear estimator with triangular kernel weighting of the form

$$\operatorname{argmin}_{\alpha, \beta} \sum_{i=1}^n K\left(\frac{X_i}{h}\right) (Y_i - \alpha - \beta_1 D_i - \beta_2 X_i - \beta_3 D_i X_i)^2$$

where Y_{it} is the outcome of interest for individual i , in year t , D_i is a treatment indicator taking the values of 1 for individuals 60 years old or older and 0 otherwise, X_i is the forcing variable, scaled age, and $K(\cdot)$ is the triangular kernel smoothing function.

Because the highest level of granularity at which I observe the age variable is the year of age, I follow Cepaluni and Hidalgo (2016) and Lee and Card (2008) and estimate the local linear regression on my collapsed data set, which I obtain by aggregating the outcome variables by the year of age. To select the optimal bandwidth, I rely on the algorithm developed by Calonico, Cattaneo and Titiunik (2014) and compute standard errors using their robust standard errors estimator.

In addition, I show robustness to an ordinary least squares (OLS) linear model with different slopes on either side of the threshold. I employ the following model for the OLS estimates:

$$Y_i = \alpha + \beta_1 D_i + \beta_2 X_i + \beta_3 D_i X_i + \gamma_t + \epsilon_i$$

where γ_t is a year (survey) fixed effect, ϵ_i is an error term with conditional mean 0 and the remaining variables are defined as above. Since I pool repeated crosssections for each available year, there is likely a time structure. To account for the possibility that individual error terms are correlated within each survey period, I cluster the standard errors at the year level.

Using the same notation as for the standard RD design, in the difference in discontinuities design (diff-in-disc), treatment is still assigned by the forcing variable, but is

described by the following function:

$$D_i = \begin{cases} 1, & \text{if } X_i \geq 0 \text{ and } t \geq 2008 \\ 0, & \text{if } X_i < 0 \text{ and } t \geq 2008 \\ 0, & \text{if } X_i \geq 0 \text{ and } t < 2008 \\ 0, & \text{if } X_i < 0 \text{ and } t < 2008 \end{cases} \quad (2)$$

Defining $post_i$ as an indicator variable taking the value 1 if the calendar year is greater than 2008 and 0 otherwise, we can rewrite the treatment indicator as $D_i \cdot post_i$. The estimand of interest is $\tau = E[Y_i(1) - Y_i(0) | t \geq 2008] - E[Y_i(1) - Y_i(0) | t < 2008]$, where $Y_i(1)$ and $Y_i(0)$ are potential outcomes of interest (i.e. support for the central government) under treatment and control, but again $Y_i(1) | D_i = 0$ and $Y_i(0) | D_i = 1$ remain unobserved in either period before and after 2008. Under the identifying assumption(s), we can however calculate the quantity of interest by taking the difference between the difference in means above and below the age threshold after 2008 and the difference in means above and below the threshold before 2008

$$\begin{aligned} \tau_{diff-in-disc} = & \left(\lim_{x \downarrow X_c} E[Y_i(1) | X_i = x, t \geq 2008] - \lim_{x \uparrow X_c} E[Y_i(0) | X_i = x, t \geq 2008] \right) - \\ & \left(\lim_{x \downarrow X_c} E[Y_i(1) | X_i = x, t < 2008] - \lim_{x \uparrow X_c} E[Y_i(0) | X_i = x, t < 2008] \right) \end{aligned}$$

Alternatively, we can think of the difference in discontinuities design as discontinuity in differences (disc-in-diff) and estimate it by first subtracting the outcome values before 2008 from the outcome values after 2008 for the same years of age, and then calculating a standard regression discontinuity effect on the differenced data. Denoting $diff^+$ as the raw differences on the treated side of the cutoff between outcome values after and before 2008 by unique value of the forcing variable (i.e. year of age), and $diff^-$ the raw differences on the untreated side of the cutoff between outcome values

after and before 2008 by unique value of the forcing variable, the discontinuity in differences estimator can be written as

$$\tau_{disc-in-diff} = \lim_{x \downarrow X_c} E[diff^+ | X_i = x] - \lim_{x \uparrow X_c} E[diff^- | X_i = x]$$

Intuitively, the equivalence between the difference in discontinuities and the discontinuity in differences estimators arises from the fact that the third term in the difference in discontinuities estimator can be written as adding averaged negative values of the outcome and the second and fourth term becomes positive after removing parentheses, which then allows us to use the associative property of addition and group together terms with the same denominator. Appendix 2 shows this more formally and in doing so adds a missing element to the discussion by Grembi, Nanicini and Troiano (2014).

Grembi et al.(2014) derive two identifying assumptions for the difference in discontinuities estimator. A first assumption is requires that the effect of any confounder policy on the potential outcomes in the case of non-treatment be constant over time. In our context, for instance, 59 year olds should differ in the same way from 60 year olds if they were not receiving payments through the Renta Dignidad program. A second assumption requires that the effect of any confounder policy violating the continuity of potential outcomes across the threshold be the same in the case of treatment and non-treatment.

They note however that since the first assumption is a version of the standard continuity of potential outcomes assumption, when the standard RD assumption is likely to hold, the difference on discontinuities estimator can be treated as a robustness check on the standard RD, necessitating no further assumptions. The added robustness arises from the fact that the added difference in differences subtracts off any random differences that may occur between individuals below and above 60 years of age, and

accounts for the possibility that pre-2008 levels of support for the central government might be predictive of post-2008 support. Thus the difference on discontinuities increases the precision of estimates obtained through a standard RD approach.

As in the case of the standard RD design, I present results using local linear regression with triangular kernel weighting and automated bandwidth selection algorithm as developed by Calonico, Cattaneo and Titiunik (CCT) as well as OLS linear models. I implement the local linear estimator, by using the discontinuity in differences approach. I fit the OLS difference in discontinuity models using the following specification

$$Y_i = \beta_0 + \beta_1 D_i + \beta_2 X_i + \beta_3 D_i X_i + \beta_4 post_i + \beta_5 X_i post_i + \beta_6 D_i post_i + \beta_7 D_i post_i X_i + \epsilon_i$$

where the coefficient β_6 represents the treatment effect and variables are described as above. I compute standard errors using Calonico, Cattaneo and Titiunik's robust estimator in the local linear specification and cluster standard errors at the year level in the OLS specifications.

5 Data

The data for this paper comes from the AmericasBarometer surveys collected every two years in March-April by the Latin American Public Opinion Project (LAPOP) across Latin America. The AmericasBarometer consists of repeated cross-sections of nationally representative stratified probability samples collected every two years across Latin America and the Caribbean and records public opinion on various political and socio-economic topics. For Bolivia, the survey is collected over the years 1998 through 2014.

I operationalize support for the central government using two measures: approval of the government and intent to vote for the central government incumbent's party or candidate. Thus, the first dependent variable is based on a survey item asking the following question: "Speaking in general about the current government, would you say the work done by President (name) is...".⁹ The response options represent a five point scale, including "very good", "good", "neither good nor bad", "bad", "very bad" as categories. The variable ranges from 0, the lowest value, corresponding to "very bad", to 1, the highest value corresponds to "very good".

The second dependent variable stems from a survey item asking respondents "If elections were held this week, what would you do?". The available response options are "I would not vote", "I would vote for the candidate or party of the current president", "I would vote for a candidate or party different from that of the current government", and "I would go vote, but I would turn in a blank or void vote". I code the variable equal to 1 if the respondent selects the option indicating intention to vote for the candidate or party of the current president and 0 otherwise.

Trust in departmental government, the third dependent variable, is based on item asking respondents "To what extent do you trust in the departmental government (former prefecture)?", measured on a seven point scale. The variable's highest value, 1, indicates "a lot of confidence" whereas the lowest value, 0, indicates "no confidence". An item asking the respondents' age in years serves as the running variable.

⁹Bolivia is a presidential democracy in which the president serves as the head of the executive.

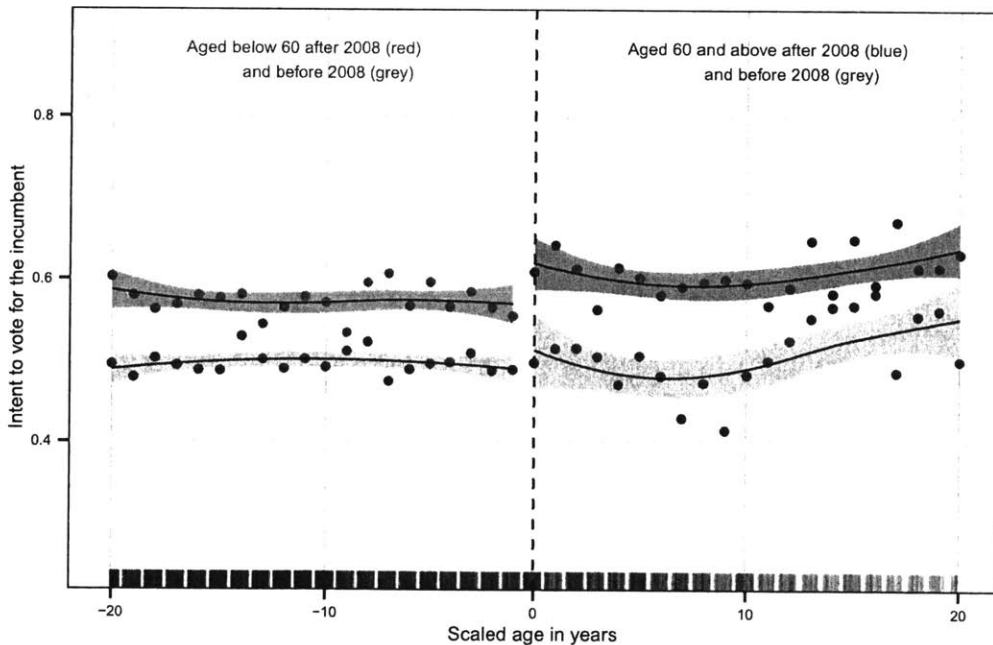
6. Results

Table 1 presents the RD and difference-in-discontinuities estimation results for the three hypotheses formulated in section 3. The outcomes of interest are the two measures of support for the central government: approval of the government and intent to vote for the party or candidate of the national incumbent in upcoming elections. Models 1 and 2 test the hypothesis that receiving payments through the *Renta Dignidad* program should have a positive effect on individuals' support for the central government across the country. Model 1 shows that on average payment benefit recipients are approximately 5 percentage points more likely to express higher approval of the central government than non-recipients. The effect is significant at the 99% confidence level. I test the robustness of the effect to various bandwidths, as depicted in Figure 5 in Appendix 3, and find consistently significant effects. Within the optimal bandwidth the effect in the linear ordinary least square specification is not significant. I present here the effect estimated by fitting the regression line on the entire dataset. The magnitude varies within a tenth of a percentage point from that obtained within the optimal bandwidth and the effect is significant at the 99% confidence level and robust to the addition of higher order terms. Tables 3 and 4 in Appendix 3 present two types of placebo checks. The first aims to identify whether 59 and 60 year olds differ in different ways before and after 2008. I use the data from the pretreatment period and assume that the treatment occurred in years 2006, 2004 and 2002. The second placebo check seeks to determine whether there are generational differences that could engender spurious effects. I assume that the cutoff ages and encouragement to treatment occur at various arbitrary age thresholds. With one exception, both placebo tests yield estimates that do not reach conventional levels of statistical significance. The significant estimate obtained when the age cutoff is fictitiously placed at 59 years of age is nevertheless small, and may be a result of individuals' anticipation of entering

the program. If this is the case however, this should make it harder to detect an effect at the "true" cutoff of 60.

Figure 1 below visually depicts the relationship between average approval for the government and year of age. Approval jumps up at the cutoff for individuals surveyed beginning 2008. Added data for individuals surveyed before 2008 shows that there is no discernible increase in mean approval around the cutoff, during this period. The treatment effect identified in Model 1 is the difference between the jumps at the threshold.

Figure 1: Effect of receiving payments from the *Renta Dignidad* program on approval of the central government.

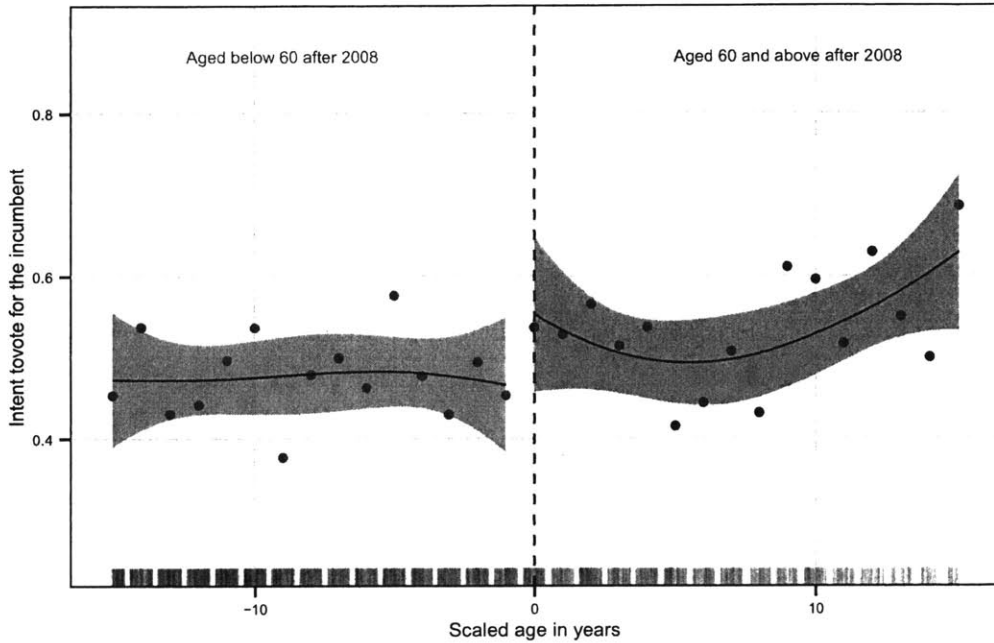


Model 2 shows that recipients of *Renta Dignidad* payments are more likely to chose to vote for Morales' party or its candidates. Specifically, receiving program payments has an effect of approximately 10 percentage points on recipients' intent to vote for

the national incumbent party or its candidates. The effect is significant at the 99% confidence level. In the ordinary least squares specification, the effect is in the expected direction, but loses significance once standard errors are clustered at the year level. Figure 6 in Appendix 4 shows the robustness of the effect to alternative bandwidths. The effect is consistently significant for larger bandwidths, except for the only smaller bandwidth for which there is sufficient data to estimate an effect. This is, likely, due to the scarcity of the data around the threshold. Indeed, for bandwidths smaller than that there are too few observations for the CCT algorithm to compute any RD estimates. As an additional robustness check, I ran a series of placebo tests, using various age eligibility cutoffs (Table 5 in Appendix 4). All but one placebo checks fail to identify a statistically significant effect. The test at the age cutoff of 65 is significant, however the effect is in the opposite direction than expected.

Figure 2 presents visually the relationship between the intent to vote for the incumbent central government and years of age. The effect identified in model 2 is the discontinuous jump at the threshold in intent to vote for the central government incumbent.

Figure 2: Effect of receiving payments from the *Renta Dignidad* program on intent to vote for the central government incumbent.



Taken together, Models 1 and 2 provide corroborating evidence for the hypothesis of overall higher support of the central government among *Renta Dignidad* payment recipients. Both measures of support for the central government show positive significant effects and while there is some concern about robustness to alternative specifications, the RD and diff-in-disc designs, the estimates' robustness to alternative bandwidths and the failure of most placebo checks warrant a causal interpretation of the effect of *Renta Dignidad* program payments on shoring up support for the central government among program payment recipients across Bolivia.

Models 3 and 4 test the hypothesis that the effect of receiving payments through the *Renta Dignidad* program on support for the central government will be larger in Beni, Pando, Santa Cruz and Tarija, the departments that have taken bold steps toward autonomy and threatened to secede. To test this prediction, I split my sample

and estimate the effect program payments on approval of and intent to vote for the central government incumbent or its candidates in the *media luna* departments. Model 3 finds a positive and statistically significant effect on approval of the central government. Specifically, *Renta Dignidad* payment recipients in the *media luna* departments are approximately 7.7 percentage points more likely to express higher approval of the central government than non-recipients. The effect is approximately 2.7 percentage points larger than the effect obtained averaging over all Bolivian departments and is significant at the 99% confidence level. As in previous models, I test the robustness of the effect to alternative bandwidths. I find consistently significant effects but only for the bandwidths larger than the optimal bandwidth (Figure 7 in Appendix 5). However this is likely again a matter of power since the algorithm computes effects for only two smaller bandwidths before being left with too few observations to compute any effect. The effect is robust to the linear OLS specification, which finds an approximately 10 percentage point effect significant at the 90% confidence level, within the optimal bandwidth. I also ran placebo tests for alternative age cutoffs (Table 6 in Appendix 5). Except for the placebo test at the age cutoff of 70, which finds a significant effect but in the opposite direction than expected, all other test fail to find significant effects. In addition, I estimate the effect in the remaining departments, and test whether the difference in effects in the two regions is significant by means of z-test of difference in coefficients, which divides the difference between the two coefficients by the square root of the sum of the squared standard errors. The point estimate in the non-*media luna* departments is close to 0, at 0.0068 and not statistically significant, but the 7 percentage point difference between the two coefficients very narrowly misses significance at the 90% confidence level ($p < 0.1031$).

Model 4 finds a positive and statistically significant effect on *media luna Renta Dignidad* recipients' intent to vote for the central government incumbent. Program

payment recipients are approximately 18.9 percentage points more likely to choose to vote for Morales' party and its candidates. The effect is approximately 6 percentage points larger than the corresponding effect estimated on all Bolivian departments and is significant at the 90% confidence level. Testing for robustness to different bandwidths, I find that the effect is robust at the 90% confidence level only to several bandwidths that are larger than the optimal bandwidth (Figure 8 in Appendix 6). Within the optimal bandwidth, the OLS linear specification finds a significant effect of similar magnitude. Running placebo tests to see whether there are significant effects at alternative cutoffs, I find only one test that yields an effect that is significant at the 90 percent confidence level, but which is in the opposite direction than expected (Table 7 in Appendix 6). I also estimate the effect of the program in non- *media luna* departments and find an effect of approximately 2.9 percentage points, which is not statistically significant. The 16 percentage point difference between the coefficients estimated in the two regions is significant at the 90% confidence level ($p < 0.0972$). The heterogeneity of the effect is consistent with the theory that benefit recipients' loss aversion is accentuated by political instability.

Together, models 3 and 4 offer solid corroborating evidence for the hypothesis that the effect of receiving pension payments from the *Renta Dignidad* program will be greater in the *media luna* departments. On both measures of support for the central government, the effects are substantively larger than those obtained from the models estimated on all departments in Bolivia and significant, albeit at different confidence levels. The effects are also robust to alternative specifications and withstand a series of placebo checks.

Finally, model 5 tests the hypothesis that *media luna* political elites, adversaries and detractors of Morales' policies, should lose some of their credibility in the eyes of *Renta*

Dignidad payments recipients in these departments. Model 5 finds a negative effect of receiving pension payments on recipients' trust on the departmental government, but the effect is only weakly significant at the 90% confidence level. The effect is also only robust to one additional bandwidth (Figure 9 in Appendix 7) and in the linear OLS specification, the effect is not significant. The placebo tests I ran, however do not detect any significant effect at age cutoffs other than 60 years of age (Table 8 in Appendix 7). Model 5 thus provides some evidence in support hypothesis 3, but the evidence is not robust. Testing the effect of program payment receipt in the non-*media luna* departments I find that for local recipients in these departments recipients trust in the departmental government actually increases by approximately 3.8 percentage points, though the estimate is not statistically significant. The approximately 5.4 percentage points difference between the coefficient estimated in the two regions is statistically significant at the 90% confidence level ($p < 0.0536$). This evidence lends further credibility to the hypothesis that allegiances of program recipients in the *media luna* departments were funneled toward the central government, away from a narrow, regional focus promoted by regional leaders and that these leaders and their agenda may end up suffering as a consequence.

Table 1: Effect of receipt of *Renta Dignidad* pension payments on approval of support or the central government

Ind. Var.: Receipt of program payments	H1 Approval	H1 Vote incumbent	H2 Approval	H2 Vote incumbent	H3 Trust dept. gov't
Local linear regression					
Disc in diff	0.0509***		0.0772***		
RD		0.1257***		0.1891*	-0.0967*
St. error	0.0185	0.0352	0.0235	0.1076	0.0557
CCT Bw	Yes	Yes	Yes	Yes	Yes
Sample	full	full	<i>media luna</i>	<i>media luna</i>	<i>media luna</i>
N	71	77	68	72	73
OLS linear models					
Diff in disc	0.0234***		0.1041*		
RD		0.1049		0.1601*	-0.0641
Year FE	Yes	Yes	Yes	Yes	Yes
CCT Bw	No	Yes	Yes	Yes	Yes
St. error	0.0070	0.0766	0.0608	0.0956	0.0509
Sample	full	full	<i>media luna</i>	<i>media luna</i>	<i>media luna</i>
N	27055	1253	1497	570	4713

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Notes: CCT robust standard errors for the local linear specifications. Cluster robust standard errors (at the year level) for OLS specifications. N in local linear specifications represents the number of average outcome values by unique year of age.

7. Mechanism

In the previous section, we have reviewed evidence corroborating the hypotheses outlined at the theoretical section of the study. In that section, I have briefly pointed out a potential mechanism that can explain the greater magnitude of the effect of *Renta Dignidad* benefits among cross-pressured recipients: increased motivation generated by pressure to act in conformity with group membership on a dimension which goes against the recently reinforced socio-economic interests of recipients, as territorial based autonomy would entail the loss of a major source of financing for the *Renta Dignidad* program. In this section, I provide suggestive evidence for this mechanism.

Before turning to the discussion of the result, I briefly consider two alternative mechanisms that might otherwise explain the higher support for the central government in the *media luna* departments. First, support might be higher in these departments

if recipients were overall poorer than elsewhere in Bolivia. This circumstance might in turn lead them derive greater utility from the benefit and express their greater satisfaction through attitudes toward the central government. This is however not the case here. While the elderly are overwhelmingly among Bolivia's poor, the *media luna* departments are Bolivia's richest and most economically vibrant. Even counting in the indigenous minorities and migrants from the highlands, there is no reason to believe that the elderly in these regions are more economically disadvantaged than their counterparts in the other departments.

Alternatively, higher support in the Eastern departments might occur if support for the central government in the remaining departments was already very high prior to the establishment of the program, so that a 'ceiling effect' would prevent it from rising even higher. Nevertheless, this argument does not have empirical support in the data. Examining approval rates for the incumbent president for those below 60 year olds in the *media luna* and the remaining departments shows that they are evenly balanced at 0.5145 and 0.5057 respectively over the years prior to 2008.

Turning to the proposed mechanism, I run a brief quantitative test to check whether *media luna* recipients perceive receipt of *Renta Dignidad* benefits as being in their personal economic interest. The ideal survey item for this test would ask a questions along the lines "Do you believe the *Renta Dignidad* program furthers your personal economic interests?". However, due to the unavailability of such an item, I rely on the closest related item available, which asks "How would you describe your economic situation in general?" with response options "Very good", "Good", "Neither good, nor bad (regular)", "Bad" and "Very bad". While this item does not directly test *media luna* recipients' perceptions of economic interest regarding the *Renta Dignidad*, if recipients rate their economic situation better than non-recipients, we might surmise under the identifying assumption that receiving benefits from the program leads to these differences, and that since *Renta Dignidad* benefits lead recipients to perceive

their personal economic situation as significantly better they might also perceive the program as contributing to their economic situation and consider it as furthering their economic interest.

Model 6 in Table 2 presents the results of this test. It below shows that program payment recipients in the Eastern departments are more likely to rate their personal economic situation higher than non-recipients. Specifically, recipients are approximately 9.5 percentage points more likely to rate their economic situation higher than non-recipients. The effect is significant at the 95% confidence level and is consistently robust to larger bandwidths (Figure 10 in Appendix 8). The linear ordinary least squares specification also finds a positive effect of similar magnitude that is highly significant. I also run placebo tests at alternative age cutoffs and none of the tests finds a significant effect (Table 9 in Appendix 8). To check how the effect in the non-*media luna* departments compares, I test the effect of program payment receipt on perceptions of economic well-being in those departments. I find that program payment recipients are only approximately 2.1 percentage points more likely to rate their economic situation higher than non-recipients. The 7.4 percentage point difference between Eastern and Western departments is also significant at the 90% confidence level ($p < 0.0516$). In sum the test provides evidence that cross-pressured recipients rate their economic situation as better than non-recipients, yet the results cannot be interpreted as evidence supporting the proposed mechanism without further assumptions.

Table 2: Effect of receipt of *Renta Dignidad* on individual perceptions of personal economic situation

Ind. Var.: Receipt of program payments	Perceived economic well-being
Local linear regression	
RD	0.0954**
CCT Bw	Yes
St. error	0.0394
Sample	<i>media luna</i>
N	69
OLS linear models	
RD	0.0705
CCT Bw	Yes
Year FE	Yes
St. error	0.0165
Sample	<i>media luna</i>
N	518

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Notes: CCT robust standard errors for the local linear specifications. Cluster robust standard errors (at the year level) for OLS specifications. N in local linear specifications represents the number of average outcome values by unique year of age.

8. Conclusion

Since Lipset’s first formulation, social science research has often pointed out the role that cross-cutting play in enhancing social cohesion by diffusing tensions across intersecting dimensions of social conflict. In this study, I have assessed whether expanding social protection to low-income policy outsiders can activate new recipients’ allegiance to class interests to the extent that these interests act to mitigate opposition on cross-cutting dimensions of social conflict of which the new policy insiders are a part. Using a regression discontinuity framework to evaluate political preferences of recipients of Bolivia’s non-contributory pension program *Renta Dignidad*, I provide strong evidence for this argument. Program benefit recipients increase their support for the central government, the political actor that represents their interest on the socio-economic dimension. Cross-pressured recipients’ newly activated allegiance to socio-economic interest outweighs, but is in conflict with their allegiance to regional interests and they

display higher support for the central government than non-cross-pressured recipients. At the same time, cross-pressured recipients' allegiance to regional interest is weakened and they display decreased trust in their departmental governments, the political actors representing cross-pressured recipients' interest on the territorial dimension.

The results presented above show thus that the expansion of social protection to the marginalized poor can have important consequences for a country's social cohesion. It is useful, however, to note that the result obtained here is contingent on a couple of factors. First, the strength of existing allegiances on the dimension intersecting the socio-economic dimension is significant. It may be that the boost in allegiance on the socio-economic dimension is not strong enough to mitigate commitment on the intersecting dimension, if this second commitment is very strong. Future research should examine which cross-cutting dimensions are likely to elicit strong enough commitments to withstand strengthened commitment on the socio-economic dimension. Second, results obtained above also depend on effectiveness of the non-contributory program extended to a new constituency. The relative value of the benefits to recipients level of income, the number of individuals whom the program will cover, the extent to which the program alleviates recipients poverty will likely determine the strength of commitment on the socio-economic dimension, that incorporation into the program will elicit and its potential to offset competing commitments. The nature of the program benefit will likely have a similar effect if cash is preferred to in kind assistance or vice versa. Careful consideration of these factors remains a task for future research.

Finally, the results of this paper can be seen from both an optimistic and a more cynical perspective. On the one hand, expanding social protection to incorporate previously excluded poor can have a stabilizing effect on a country's social landscape. The darker side of the coin, however, is that whenever the potential for impact on new policy insiders becomes palpable, there lurks the possibility that the policy initiative be subordinated to strategic political leaders' other goals.

References

- Andean Information Network. 2007. "Bolivian Constitutional Assembly Approves Text, Referendums Pending". <http://ain-bolivia.org/2007/12/bolivian-constitutional-assembly-approves-text-referendums-pending/>
- Attanasio, Orazio, Luca Pellerano and Sandra Polánia Reyes. 2009. "Building Trust: Conditional Cash, Transfers And Social Capital". *Fiscal Studies*. 30(2): 139-177.
- Baez, Javier E., Adriana Camacho, Emily Conover, Roman A. Zárate. 2012. "Conditional cash transfers, political participation, and voting behavior" *World Bank Policy Research Working Paper*
- Bollen Kenneth A. and Rick H. Hoyle. 1990. "Perceived Cohesion: a Conceptual and Empirical Examination". *Social Forces* 69:479-504.
- Bolivia Information Forum. 2006. "Bolivia Information Forum Bulletin No.4, November 2006". <http://www.boliviainfoforum.org.uk/inside-page.asp?section=6>
- Bolivia Information Forum. 2006. "Bolivia Information Forum Bulletin No.5, February 2007". <http://www.boliviainfoforum.org.uk/inside-page.asp?section=6>
- Bolivia Information Forum. 2007. "Bulletin Special Edition December 2007". <http://www.boliviainfoforum.org.uk/news-detail.asp?id=114>
- Brooks, Sarah M. 2015. "Social Protection for the Poorest: The Adoption of Antipoverty Cash Transfer Programs in the Global South". *Politics and Society* 43(4): 551-582.
- Carnes, Matthew and Isabela Mares. Forthcoming. "Redefining Who's 'in' and Who's 'out': Explaining Preferences for Redistribution in Bolivia". *Journal of Development Studies*.
- Carnes, Matthew and Isabela Mares. 2014. "Coalitional realignment and the Adoption of Non-Contributory Social Insurance Programs in Latin America." *Socio-Economic Review* 12 (4): 695-722.
- Carnes, Matthew and Isabela Mares. 2015. "Explaining the 'Return of the State' in Middle-Income Countries: Vulnerability, Income, and Preferences for Social Insurance in Latin America". *Politics and Society* 43(4): 525-550
- Calónico, Sebastian, Matias Cattaneo, Rocio Titiunik. 2014. "Robust Nonparametric Confidence Intervals for Regression Discontinuity Designs." *Econometrica* 82(6):

2295-2326.

- Cepaluni, Gabriel and Daniel Hidalgo. 2016. "Compulsory Voting Can Increase Political Inequality: Evidence from Brazil". *Political Analysis* 24(2)
- Chong, Alberto, Hugo Ñopo and Vanessa Ríos. 2009. "Do welfare programs damage interpersonal trust? Experimental evidence from representative samples for four Latin American cities". Inter American Development Bank, Research Department, Working Paper 668.
- Crabtree, Steve and Jesus Rios. 2008. "Bolivia's Class Divisions Play Out in Autonomy Push". <http://www.gallup.com/poll/107425/bolivias-class-divisions-play-autonomy-push.aspx>
- Dahl, Robert Alan. 1982. *Dilemmas of Pluralist Democracy: Autonomy vs. Control*. New Haven, CT: Yale University Press.
- De La O, Ana Lorenna. 2013. "Do conditional cash transfers affect electoral behavior? Evidence from a randomized experiment in Mexico." *American Journal of Political Science* 57(1): 1-14.
- Drescher Stuart, Gary Burlingame and Addie Fuhriman. 1985. "Cohesion: an Odyssey in Empirical Understanding". *Small Group Behaviour* 16: 3-30.
- Dunning, Thad and Lauren Harrison. 2010. "Cross-cutting Cleavages and Ethnic Voting: An Experimental Study of Cousinage in Mali". *American Political Science Review*. 101(1): 21-39.
- Eaton, Kent. 2007. "Backlash in Bolivia: Regional Autonomy as a Reaction against Indigenous Mobilization". *Politics and Society* 35 (1).
- Eaton, Kent. 2014. "Recentralization and the Left Turn in Latin America: Diverging Outcomes in Bolivia, Ecuador and Venezuela," *Comparative Political Studies* 47(8).
- EnerNews. 2007. "Bolivia: Oposicion Enfrenta a Evo Morales Por Impuesto a Hidrocarburos". <http://www.enernews.com/nota/198692/bolivia-oposicion-enfrenta-a-evo-morales-por-impuesto-a-hidrocarburos>
- Esping-Andersen, Gosta. 1990. *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.
- Evans, Nancy J. and Paul A. Jarvis. 1980. "Group cohesion: a review and re-evaluation". *Small Group Behavior*. 11:359-77.

- Fairfield, Tasha. 2015. *Private Wealth and Public revenue in Latin America. Business Power and Tax Politics*. Cambridge: Cambridge University Press.
- Friedman-Rudovsky, Jean. 2008. "Portrait of a Bolivian Conflict". <http://www.pbs.org/frontlineworld/election2008/2008/10/bolivia-a-country-divided.html>
- Garay, Candelaria. Forthcoming. *Including Outsiders: Social Policy Expansion in Latin America*. Cambridge: Cambridge University Press
- Green, Andy and Jan Germeen Janmaat. 2011. *Regimes of Social Cohesion: Societies and the Crisis of Globalization*. New York: Palgrave Macmillan.
- Green, Andy, John Preston and Jan Germeen Janmaat. 2006. *Education, Equality and Social Cohesion*. Basingstoke: Palgrave.
- Grembi, Veronica, Tomasso Nannicini and Ugo Troiano. 2012. "Policy Responses to Fiscal Restraints: A Difference-in-Discontinuities Design". *CESifo Working Paper Series*.
- Gubler, Joshua R. and Joel Sawat Selway. 2012. "Horizontal Inequality, Crosscutting Cleavages and Civil War." *Journal of Conflict Resolution*. 56(2): 206-232.
- Heger, Boris and Jack Chang. 2008. "Sporadic Violence in Bolivia as Province Approves Autonomy". <http://www.mcclatchydc.com/news/nation-world/world/article24482746.html>
- Instituto Nacional de Estadísticas Bolivia. Censo 2007.
- Knack, Stephen and Phillip Keefer. 1997. "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation", *Quarterly Journal of Economics*, 112(4): 1251-788.
- Kumlin Staffan and Bo Rothstein. 2005. "Making and breaking social capital. The impact of welfare state institutions". *Comparative Political Studies*, Vol. 38(4): 339-365.
- Lee, David S. and David Card. 2008. "Regression discontinuity inference with specification error". *Journal of Econometrics* 142(2):655-674.
- Licio, Elena Cristina, Lucio R. Rennó, and Henrique Carlos Castro. 2009. Bolsa Família e voto na eleição presidencial de 2006: Em busca do elo perdido *Opinião Pública* 15(1): 31-54.
- Lipset, Martin S. 1964. "The changing class structure and contemporary European

- politics." *Daedalus* 92(Winter): 271?296.
- Lipset, Martin S. 1960. *Political Man*. Garden City, N.Y.: Doubleday.
- Lipset, Martin S. 1959. "Some social requisites of democracy: economic development and political legitimacy." *American Political Science Review* 53(March): 69?105.
- Lipset, Martin S. and Stein Rokkan (eds.) 1967. *Party Systems and Voter Alignments: Cross-National Perspectives*. New York: Free Press.
- Manacorda, Marco, Edward Miguel and Andrea Vigorito. 2011. Government transfers and political support. *American Economic Journal: Applied Economics*, 3(3), 1-28.
- McCrary, Justin. 2008. "Manipulation of the Running Variable in the Regression Discontinuity Design: A Density Test". *Journal of Econometrics* 142(2): 698-714
- McDonnell, Patrick J. 2006. "Apparent Double Blow for Morales". *Los Angeles Times*. <http://articles.latimes.com/2006/jul/03/world/fg-bolivia3>
- McEwen, Nicola. 2001. "The Nation-building Role of State Welfare in the United Kingdom and Canada", in Keating, Michael and Trevor Salmon (eds.) *The Dynamics of Decentralization: Canadian Federalism and British Devolution*. Montréal and Kingston: McGill-Queens University Press.
- McEwen, Nicola. 2005. *Nationalism and the State: Welfare and Identity in Scotland and Quebec*. Brussels: Presses interuniversitaires européennes/Peter Lang.
- Ministry of Planning and Development. 2013. *El Impacto de la Renta Dignidad. Política de Redistribución del Ingreso, Consumo y Reducción de la Pobreza en Hogares con Personas Adultas Mayores*. http://www.udape.gob.bo/evaluaciondeimpacto/12_Documento_Impacto%20Renta%20Dignidad.pdf.
- Mutz, Diana C. 2002. "The Consequences of Cross-Cutting Networks for Political Participation". *American Journal of Political Science*. 46(4):838-855.
- OECD. 2014. *Pensions at a Glance: Latin America and the Caribbean*. OECD Publishing. http://dx.doi.org/10.1787/pension_glance-2014-en
- Putnam, Robert D. 2007. "E Pluribus Unum: Diversity and Community in the Twenty-first Century". *Scandinavian Political Studies*. 30(2): 137?174.
- Putnam, Robert D. 2001. "Social Capital: Measurement and Consequences". *Canadian Journal of Policy Research*. 2001(2): 41: 51.

- Roffman, Rafael, Ignacio Apella and Evelyn Veza (eds.) 2013. *Más allá de las Pensiones Contributivas*. Buenos Aires: Banco Mundial.
- Sandoval, Carmen Dunia ed. 2003. *Santa Cruz: Economía y Poder (1952-1993)* La-Paz: Fundación PIEB.
- Selway, Joel Sawat. 2011. "Cross-Cuttingness, Cleavage Structures and Civil War Onset." *British Journal of Political Science*. 41(1): 111-138.
- Veras Soares, Fabio, Rafael Perez Ribas and Guilherme Issamu Hirata. 2010. "Impact evaluation of a rural conditional cash transfer programme on outcomes beyond health and education." *Journal of Development Effectiveness*. 2(1): 138-157.
- Vergolini, Loris. 2011. "Does Economic Vulnerability Affect Social Cohesion? Evidence From A Comparative Analysis." *Canadian Journal of Sociology*, Vol. 36(1): 1-21.
- The Washington Times. 2006. "Bolivia's Morales Suffers Setback". <http://www.washingtontimes.com/news/2006/jul/2/20060702-114343-5637r/?page=all>
- Wilkinson, Richard and Kate Pickett. 2009. *The Spirit Level: Why More Equal Societies almost always Do Better*. London:Allen Lane.
- Whelan Christophher and Betrand Maitre. 2005. "Income, Deprivation and Economic Strain in the Enlarged European Union". WP164, Economic and Social Research Institute (ESRI).
- Zucco, Cesar. 2013. When payouts pay off: Conditional cash transfers and voting behavior in Brazil 2002-10. *American Journal of Political Science*, 57(4): 810-822.

Appendix 1

Figure 3: Histogram of the forcing variable for the period after 2008

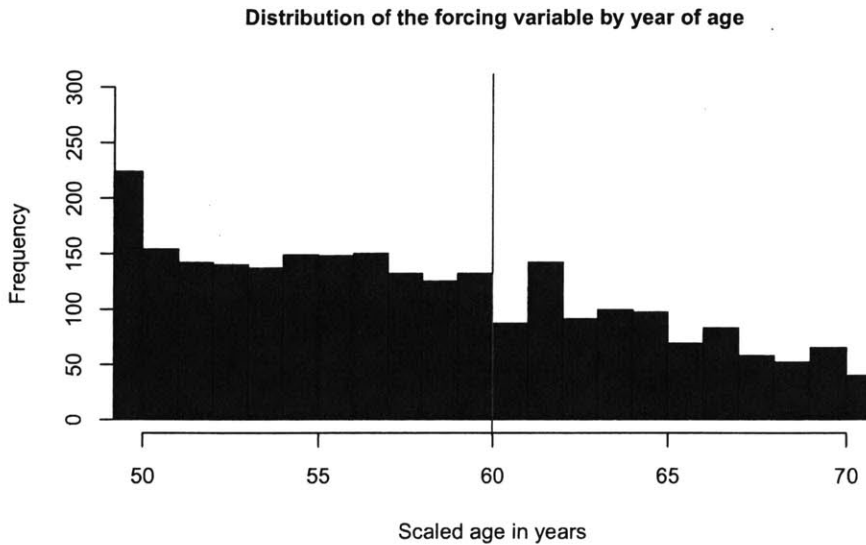
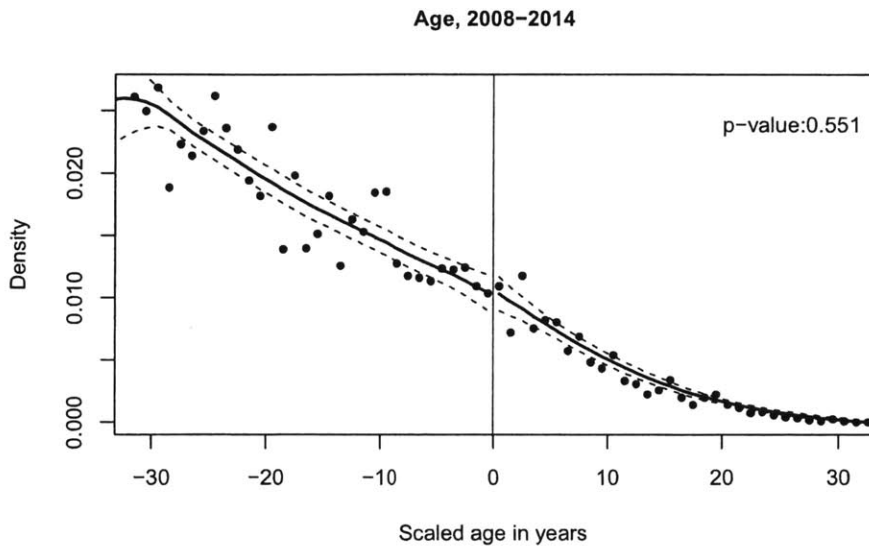


Figure 4: Mcrary density plot of the forcing variable for the period after 2008



The following table presents difference in means estimates and p-values from t-tests on a set of covariates including gender, primary education, high school, ethnicity, marital status and wealth computed within a 1 year window. None from the p-values for the differences in means reaches values less than 0.1.

Table 3: Balance on covariates after 2008

	Diff-in-Means	p-value
gender	-0.0191	0.7600
primary	0.0510	0.4105
high school	0.0351	0.5173
married	-0.0335	0.5826
ethnic	0.0348	0.5162
wealth	0.0325	0.3533

Appendix 2

Denoting Y^+ as the averaged outcome values for each unique value of the forcing variable on the treated side of the threshold, in the treatment period, Y^- as the averaged outcome values for each unique value of the forcing variable on the untreated side of the threshold, in the treatment period, \tilde{Y}^+ as the averaged outcome values for each unique value of the forcing variable on the treated side of the threshold, in the period preceding treatment, \tilde{Y}^- as the averaged outcome values for each unique value of the forcing variable on the untreated side of the threshold, in the period preceding treatment, h_1 as the number of unique values of the forcing variable on the treated side of the threshold, h_2 as the number of unique values of the forcing variable on the untreated side of the threshold, i as a particular unique value of the forcing variable, $diff^+$ as the raw differences on the treated side of the cutoff between outcome values after and before 2008 by unique value of the forcing variable, and $diff^-$ the raw differences on the untreated side of the cutoff between outcome values after and before 2008 by unique value of the forcing variable we can rewrite the difference in discontinuities estimator

$$\begin{aligned} & (\lim_{x \downarrow X_c} E[Y_i(1)|X_i = x, t \geq 2008] - \lim_{x \uparrow X_c} E[Y_i(0)|X_i = X_c, t \geq 2008]) - \\ & (\lim_{x \downarrow X_c} E[Y_i(1)|X_i = x, t < 2008] - \lim_{x \uparrow X_c} E[Y_i(0)|X_i = x, t < 2008]) = \\ & \left(\frac{\sum_{i=1}^{h_1} Y_i^+}{h_1} - \frac{\sum_{i=1}^{h_2} Y_i^-}{h_2} \right) - \left(\frac{\sum_{i=1}^{h_1} \tilde{Y}_i^+}{h_1} - \frac{\sum_{i=1}^{h_2} \tilde{Y}_i^-}{h_2} \right). \end{aligned}$$

Expanding the summations, we can write,

$$\begin{aligned} & \left(\frac{Y_1^+ + Y_2^+ + \dots + Y_{h_1}^+}{h_1} - \frac{Y_1^- + Y_2^- + \dots + Y_{h_2}^-}{h_2} \right) - \\ & \left(\frac{\tilde{Y}_1^+ + \tilde{Y}_2^+ + \dots + \tilde{Y}_{h_1}^+}{h_1} - \frac{\tilde{Y}_1^- + \tilde{Y}_2^- + \dots + \tilde{Y}_{h_2}^-}{h_2} \right). \end{aligned}$$

Removing parentheses, we can write,

$$\frac{Y_1^+ + Y_2^+ + \dots + Y_{h_1}^+}{h_1} - \frac{Y_1^- + Y_2^- + \dots + Y_{h_2}^-}{h_2} + \frac{-\tilde{Y}_1^+ - \tilde{Y}_2^+ - \dots - \tilde{Y}_{h_1}^+}{h_1} + \frac{\tilde{Y}_1^- + \tilde{Y}_2^- + \dots + \tilde{Y}_{h_2}^-}{h_2}.$$

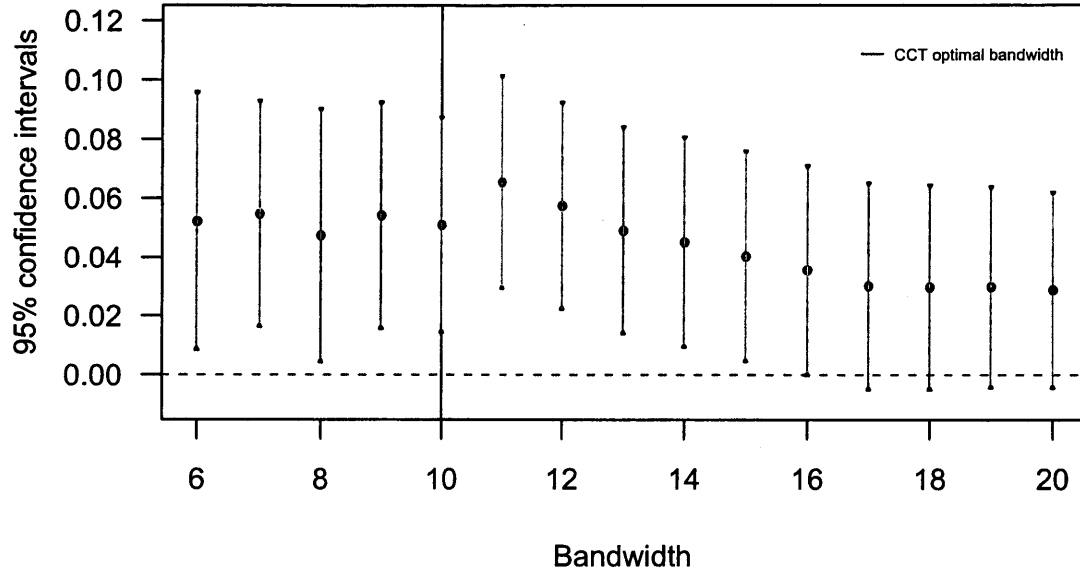
Grouping together like terms and factoring out the negative sign for the terms sharing the h_2 denominator, we can write,

$$\frac{(Y_1^+ - \tilde{Y}_1^+) + (Y_2^+ - \tilde{Y}_2^+) + \dots + (Y_{h_1}^+ - \tilde{Y}_{h_1}^+)}{h_1} - \frac{(Y_1^- - \tilde{Y}_1^-) + (Y_2^- - \tilde{Y}_2^-) + \dots + (Y_{h_2}^- - \tilde{Y}_{h_2}^-)}{h_2} = \frac{\sum_{i=1}^{h_1} diff^+}{h_1} - \frac{\sum_{i=1}^{h_2} diff^-}{h_2} = \lim_{x \downarrow X_c} E[diff^+ | X_i = x] - \lim_{x \downarrow X_c} E[diff^- | X_i = x],$$

our disc-in-diff estimator.

Appendix 3

Figure 5: Sensitivity of model 1 to alternative bandwidths



Note: For bandwidths smaller than 6 years, there are too few observations to compute an effect on the basis of Calonico et al.'s algorithm

Table 4: Placebo check for Model 1, with treatment in years before 2008

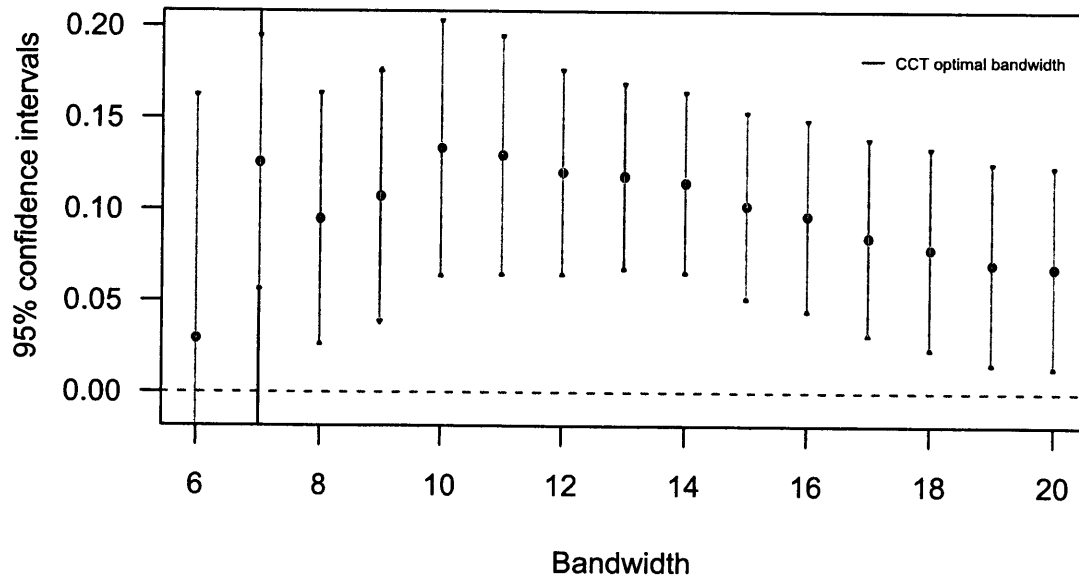
	Estimate	p-value
2006	0.0599	0.3381
2004	0.0044	0.9231
2002	-0.0180	0.6057

Table 5: Placebo tests for Model 1 at various cutoffs of the forcing variable

	Estimate	p-value
50	-0.0150	0.3828
54	-0.0068	0.5423
55	-0.0029	0.8180
57	0.0045	0.7305
59	0.0166	0.0431**
64	0.0241	0.1121
70	-0.0185	0.4690

Appendix 4

Figure 6: Sensitivity of model 2 to alternative bandwidths



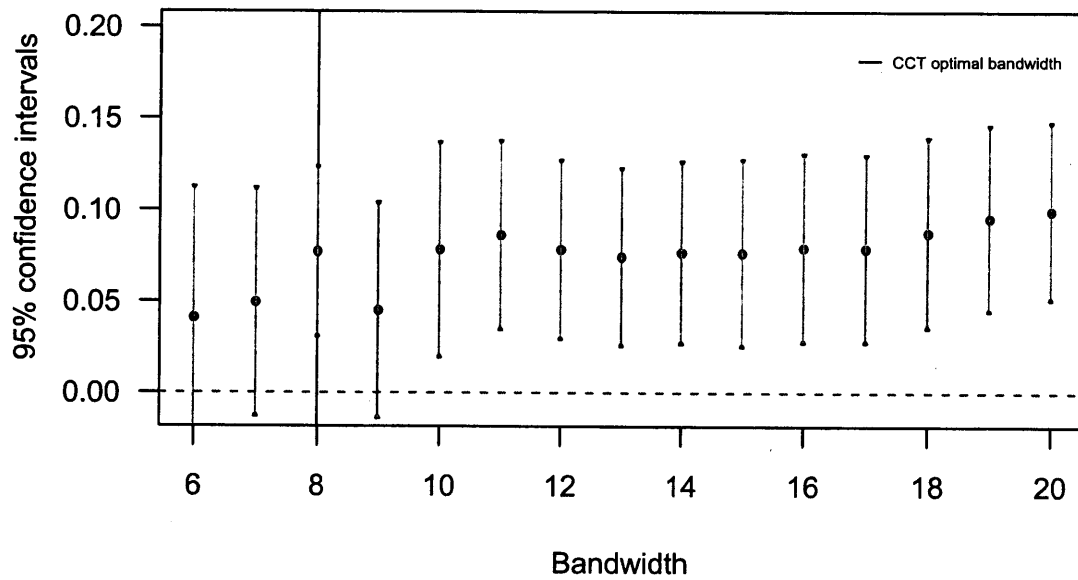
Note: For bandwidths smaller than 6 years, there are too few observations to compute an effect on the basis of Calonico et al.'s algorithm

Table 6: Placebo tests for Model 2 at various cutoffs of the forcing variable

	Estimate	p-value
50	-0.0120	0.8585
54	-0.0130	0.8141
55	0.0428	0.5137
57	0.0045	0.7305
59	-0.0428	0.4673
65	-0.1492	0.0000***
70	-0.0009	0.9944

Appendix 5

Figure 7: Sensitivity of model 3 to alternative bandwidths



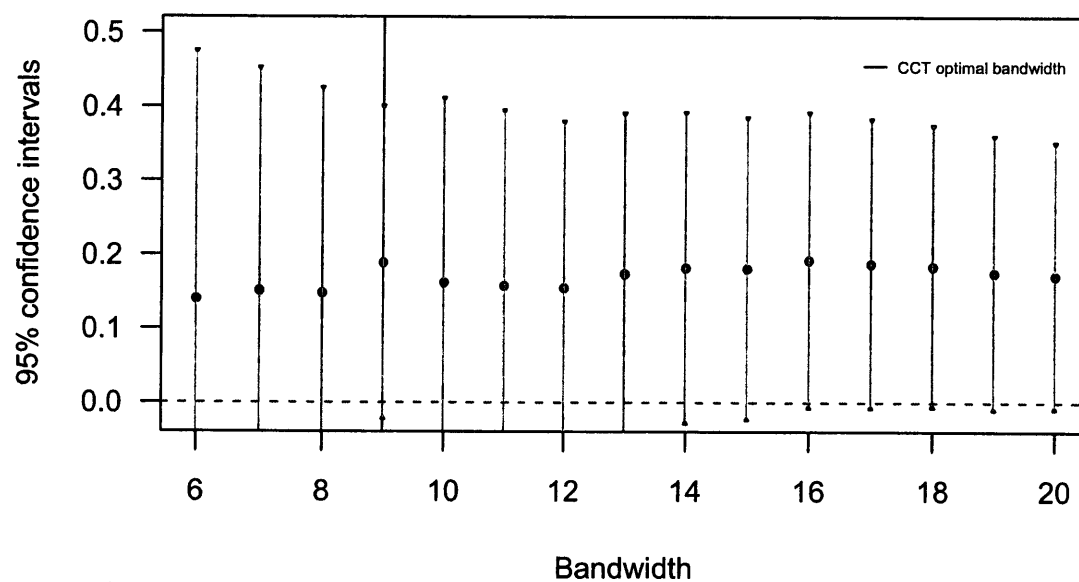
Note: For bandwidths smaller than 6 years, there are too few observations to compute an effect on the basis of Calonico et al.'s algorithm

Table 7: Placebo tests for Model 3 at various cutoffs of the forcing variable

	Estimate	p-value
50	-0.0213	0.4740
54	-0.0203	0.2675
55	-0.0131	0.3547
57	0.0099	0.6683
59	0.0393	0.1311
64	0.0123	0.7730
70	-0.1035	0.0006***

Appendix 6

Figure 8: Sensitivity of model 4 to alternative bandwidths



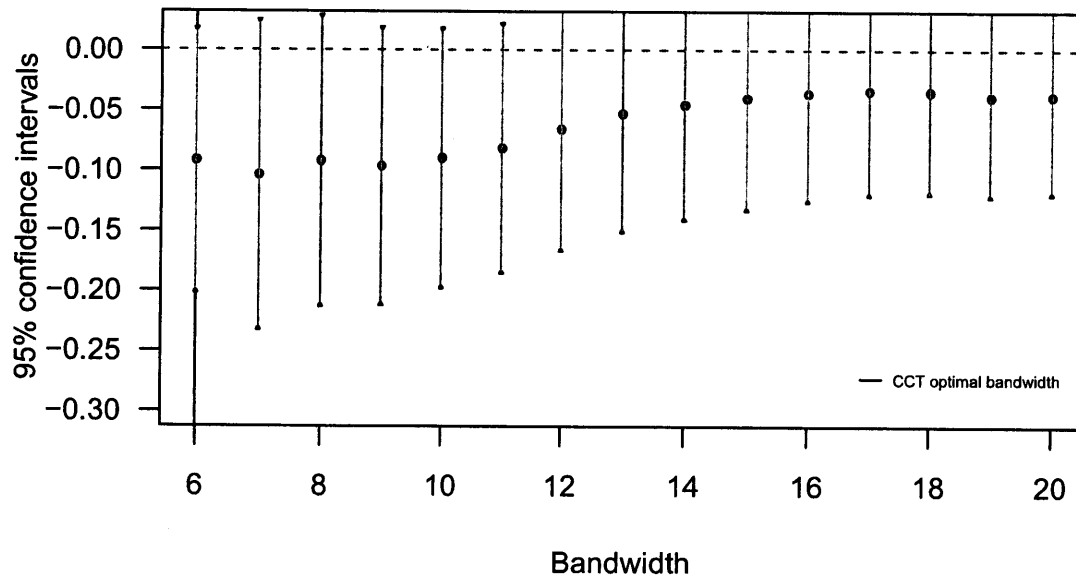
Note: For bandwidths smaller than 6 years, there are too few observations to compute an effect on the basis of Calonico et al.'s algorithm

Table 8: Placebo tests for Model 4 at various cutoffs of the forcing variable

	Estimate	p-value
50	0.0460	0.6154
54	-0.1433	0.0610*
55	-0.0382	0.5218
57	-0.0166	0.7151
59	0.0758	0.4516
65	-0.1931	0.4277
70	-0.1078	0.5897

Appendix 7

Figure 9: Sensitivity of model 5 to alternative bandwidths



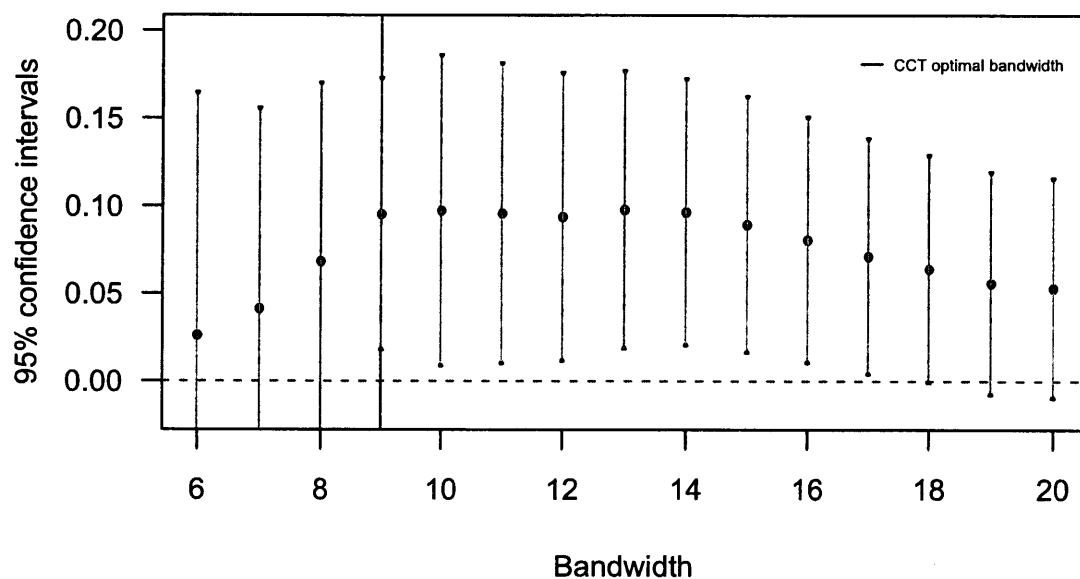
Note: For bandwidths smaller than 6 years, there are too few observations to compute an effect on the basis of Calonico et al.'s algorithm

Table 9: Placebo tests for Model 5 at various cutoffs of the forcing variable

	Estimate	p-value
50	0.0655	0.1420
54	0.0167	0.8424
55	0.0024	0.9580
57	0.0130	0.7151
59	-0.0467	0.7785
65	-0.0529	0.5721
70	0.1031	0.1744

Appendix 8

Figure 10: Sensitivity of model 6 to alternative bandwidths



Note: For bandwidths smaller than 6 years, there are too few observations to compute an effect on the basis of Calonico et al.'s algorithm

Table 10: Placebo tests for Model 6 at various cutoffs of the forcing variable

	Estimate	p-value
50	0.0391	0.2641
54	-0.0021	0.9326
55	-0.0050	0.8820
57	-0.0398	-0.0398
59	0.0296	0.5012
65	-0.0739	-0.5017
69	-0.0429	0.5583