Checks and Balances and Nation Building: The Spanish Constitutional Court and Catalonia

Agustin Casas[*], Federico Curci[†] and Antoni-Italo De Moragas[‡§]

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Abstract

We examine whether judicial review can affect nation building by studying how the ruling of the Spanish Constitutional Court on the Catalan Constitution affected Catalan support of secession, which doubled in the 2010-2012 period. Our identification strategy relies on the fact that the ruling occurred amidst a public opinion survey. We find that the ruling led to a 20% increase in support for Catalan independence from Spain in 2010. In terms of mechanisms, we show that the ruling decreased identification with the Spanish national identity and trust in national institutions. We find that the ruling increased the intention to vote for Catalan nationalist parties and is associated with a long-lasting increase in electoral polarization in Catalonia.

JEL Classification: D02, O12, O17, K4.

Keywords: Checks and Balances, Judicial Reviews, Supreme Court, Nation Building, Ethnic identity.

1 Introduction

The power of courts to review law and policymaking in compliance with a constitution, which is referred to as judicial review, is one of the critical elements of checks and balances in liberal democracies (Hamilton, Madison and Jay, 1788; Hayek, 1960; Buchanan, 1974). Limiting the powers of the executive and legislative branches to act and pass laws that benefit themselves and the democratic majority they represent, judicial review ensures the protection of the rights and freedoms of minorities against the tyranny of the majority and preserves democracy (La Porta et al., 2004). The role of judicial review is particularly valuable in ethnically diverse countries, as it can provide an institutional solution to conflicts between ethnic groups, giving legal protection to minorities (Easterly, 2001).

Judicial review, however, entails a democratic legitimacy concern since it allows unelected judges to overrule the decisions of political majorities (Almendares and Le Bihan, 2015).[1] This concern acquires an additional dimension in decentralized and multiethnic countries where regional governments represent particular ethnic groups. In these countries, a national court can potentially overrule against a regional government's decision Citizens from the region might perceive such overrulings as unfavorable towards their ethnicity, and this perception can worsen confidence in national institutions.[2] In a context of low trust in institutions and weak nation building, can judicial reviews place political stability and nation building efforts at risk, ultimately leading part of the population to support secession?[3] While the previous literature has stressed the benefits of judicial reviews, it remains an open question whether judicial reviews can also have important backlash costs.

In this paper, we study how judicial review affects nation building and political stability in ethnically diverse countries, exploiting a unique case of judicial review against a regional constitution: the ruling of the Spanish Constitutional Court against the Catalan Constitution in 2006. This case is particularly well suited for our analysis for two reasons. First, the ruling occurred amid the fieldwork of a survey about political attitudes and behavior in Catalonia. Second, the ruling was followed by an abrupt increase in the support for independence of Catalonia that led to an unprecedented constitutional crisis in Spain.

We identify the effect of the ruling on the Catalan Constitution taking advantage of the concurrence of a survey with the decision of the Court. The timing of the verdict of the Constitutional Court generates a quasi-random assignment of respondents to the

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[1]The legal scholar Bickel (1986) referred to this tension as the "counter-majoritarian difficulty". This concern is increasing in importance as Hirschl (2008) documents that many countries are experiencing an increase in the judicialization of politics, i.e., the "delegation" of sensitive long-lasting political decisions to judges.

[2]This is consistent with studies showing that individuals who disagree ideologically with a decision taken by a court decrease their support towards that institution (see Nelson and Tucker, 2021, for a review).

[3]In this paper, we follow Alesina and Reich (2015) and define nation building as the "process which leads to the formation of countries in which the citizens feel a sufficient amount of commonality of interests, goals and preferences so that they do not wish to separate from each other".

treatment group; that is, we compare survey respondents with similar observable characteristics, interviewed before and after the ruling.[4] The advantage of this identification strategy is that the estimated effect of the ruling is not confounded by other important economic and political events, in particular, the Great Recession.

Spain is an ideal setting to study the effect of judicial reviews in ethnically diverse countries. Spain is a decentralized country, and some of its regions (Galicia, Basque Country, Catalonia) have their own language, culture, and, arguably, national identity, even to the point of having separatist movements.[5] Every region has the right to have a regional constitution. In 2006, the Catalan and Spanish parliaments approved a reform of the Catalan Constitution (the *Estatut*), which included a higher degree of decentralization and the recognition of Catalonia as a nation. In 2010, the text of the new constitution, endorsed by a large majority of Catalans in a referendum, was partially ruled unconstitutional by the Spanish Constitutional Court. Subsequently, between 2010 and 2012, support for Catalan independence increased from 23% of the population to a record high of 48% in June 2012. In 2017, a referendum of independence was held against the will of national authorities.

We first study how the ruling on the Catalan constitution determined a backlash, to the extent of causing an increase in the preference for secession from Spain in Catalonia. We find that support for a more autonomous Catalonia increased after the verdict of the Constitutional Court. In particular, support for independence increased by approximately 20%.[6] The effect of the ruling was especially stronger for those who were already attached to Catalan culture. The effect for those born from a Catalan father or who speak Catalan socially was more than twice as much as the average. We also find evidence of polarization for and against independence around a partisan cleavage: voters of the main centralist party (Popular Party) intensified their support against secession while the remaining citizens intensified their support for secession. We show that all these results are robust to several specification and robustness checks.[7]

We not only quantify the effect of the ruling but also explore the mechanisms behind it. The impact of the ruling was not limited to support of independence but also affected trust in institutions, national identity and intention to vote for Catalan nationalist parties. The

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[4]We rely on the fact that a computer randomly selected respondents to ensure our identification strategy: conditional on observable characteristics, the day on which a respondent was interviewed does not depend on their potential support for secession.

[5]According to the Spanish National Institute of Statistics (*INE*), 22.4% speaks another official Spanish language as their mother tongue (11.1% Catalan, 4% Valencian, 5.5% Galician, and 1.8% Basque). In Catalonia, 55.5% of the adult population are native Catalan speakers while in Galicia, 82.8% are Galician native speakers.

[6]Our baseline estimate suggests that the increase in support for independence was 5.2 percentage points. In the survey wave before the ruling of the Constitutional Court, Catalan independence was supported by 23% of respondents.

[7]Among the different checks we perform, we show that treatment and control observations are balanced among observable characteristics and do not present differences in non-response rates. We also discuss several pieces of evidence in favour of parallel pre-trends. We show that several falsification tests, using the same wave of the survey and other waves, cannot replicate our results. We provide an extensive discussion of all the evidence in favor of the identification strategy is present in Section 3.3.

institutions that were more hit by the ruling were those more associated with the functions of checks and balances. In particular, trust in courts decreased by 10%. Additionally, the satisfaction with democracy experienced a similar decrease. We show that the ruling was perceived as unfavorable by a portion of the population,[8] and, as a result, trust in national institutions and democracy decreased.

Democratic legitimacy can be important for cultivating a shared national identity. In fact, the ruling also had a significant impact on national identity. It increased the proportion of Catalans who identified as only Catalan and decreased the proportion of Catalans who identified as only Spanish. This increase in local identity over national identity can explain the increase in support for secession. Finally, the ruling also increased the willingness to vote for a Catalan nationalist party by 6 percentage points, showing that the change in national identity and support for secession was salient enough to have an impact on political behavior.

Among other potential mechanisms, we discard the possibility that our main effect is driven by economic (decentralization, fiscal benefits) channels. The magnitude of the impact of the ruling is particularly striking if we take into account that the ruling took place following the Great Recession and amidst the greatest Spanish economic crisis in the history of the nation's democracy (26.3% unemployment at the peak). The ruling decreased the saliency of economic problems: "the economy" was 11% less likely to be mentioned as the biggest problem of Catalonia after the ruling. Additionally, there was no change in the number of people reporting the Catalan financial system as the most important problem of Catalonia after the ruling.

While the short span of the survey allows us to identify the immediate effect of the ruling, it prevents us from estimating the long-term impact of the ruling of the Spanish Constitutional Court on tangible outcomes. To address this issue, we first show that, within the survey, the effect of the ruling does not disappear with time. More importantly, the effect of the ruling in 2010 has a long-lasting association with greater support for the political parties supporting Catalan independence. To perform this analysis, we exploit the 2015 elections, in which the pro-independence parties framed the elections as a plebiscite for secession. We find that the ruling is associated with an increase in electoral polarization in Catalonia. The effect of the ruling differs between municipalities that were historically more and less favorable to independence. We show that the ruling is associated with an increase in the vote share of pro-secession parties of 0.32 percentage points only in previously pro-independence municipalities.[9]

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[8]We find that the number of people reporting the Catalan Statute of Autonomy as the most important problem of Catalonia increased after the ruling.

[9]To conduct this exercise, based on the 2010 survey wave, we first predict which municipalities should have had the highest increase in support for independence due to the ruling by estimating the geographical heterogeneity of the effect of the ruling. Second, we use a difference-in-difference framework in which we compare, before and after the ruling, the change in vote share for independentist parties according to the level of the predicted change in support due to the ruling.

1.1 Literature review

This paper contributes to several areas of the literature. First, this paper contributes to the literature on checks and balances and the separation of powers. Since James Madison and Montesquieu, the separation of powers has been seen as a mechanism to restrain a person holding office. Similarly, La Porta et al. (2004) use cross-country evidence to show that judiciary checks and balances (in the form of judiciary independence and constitutional review) are associated with greater freedom. Additionally, checks and balances have been found to smooth political business cycles and result in greater public investment (Streb, Lema and Torrens, 2009; Keefer and Knack, 2007). Conversely, political economists have begun to highlight some of the costs of this institution such as making it easier to bribe politicians (Acemoglu, Robinson and Torvik, 2013) or slowing down the implementation of reforms (Gratton and Morelli, 2018; Forteza and Pereyra, 2019). We highlight a novel unintended consequence of the exercise of checks and balances. When checks and balances, in the form of judicial review, constrain the action of a subnational power that partially coincides with an existing ethnic cleavage, they can decrease trust in institutions and fuel a secessionist movement that places institutional stability at risk.

Second, we contribute to the specific literature on the effects of Supreme Court verdicts. The literature has mainly considered the effects on two outcomes: political attitudes and support for the court. Considering political attitudes, the previous studies show that judicial reviews legitimize majoritarian policies and interests, shifting public opinion toward the position taken by the court (Ura, 2014).[10] Conversely, studies that focus on support for the judiciary branch find evidence of a backlash effect. Approval of the Supreme Court is lower for individuals who disagree ideologically with the decision taken by the Court (Mondak and Smithey, 1997; Bartels and Johnston, 2013; Christenson and Glick, 2015; Ansolabehere and White, 2020; Nelson and Tucker, 2021).[11] We contribute to this literature by presenting the causal effect of a ruling on nation building and political stability, exploiting an identification that relies on an event that occurred during a survey instead of comparing between survey waves.[12] Moreover, while the existing literature focuses either on the effect of rulings on public opinion or the effect of rulings on trust in institutions, we reconcile these findings. We present evidence for a case in which a ruling

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[10]Ura (2014) provide evidence for the legitimacy theory in the long run, after a negative reaction in the short term, estimating the effects of liberal verdicts of the Supreme Court on liberal political attitudes of the public opinion. The legitimacy theory is consistent with Aksoy et al. (2020) who show that when same-sex relationship policies (weddings, adoptions, etc.) obtain legal recognition – through parliamentary or judiciary decisions – the attitudes toward sexual minorities improve. Hoekstra (2000) argues that, to have any influence on public opinion, salience is a requisite (either due to media coverage or being locally affected). Related to these studies, Hall and Ura (2015) finds that Supreme Court decisions are mostly congruent with elected officials, suggesting that reviews in the U.S. are majoritarian.

[11]This literature uniquely focused on the case of the U.S. Supreme Court. While they find that individuals with ideology not congruent with the Court's decision can backlash, overall, the support for the U.S. Supreme Court is stable over time.

[12]When discussed, the identification strategies in this literature are generally based on lagged preferences in public opinion or first differences. This approach can be problematic in the presence of omitted variables that cause, for instance, a change in opinions or secular trends.

backlashes both political attitudes and trust in institutions. Catalans reacted to a ruling limiting political decentralization by increasing their demand for further autonomy and decreasing trust in national institutions to the extent of supporting secession.

Third, this paper contributes to the literature on the determinants of nation building and identity formation. Shared collective experiences can increase nation building: for instance, military service (Caceres-Delpiano et al., 2020; Bagues and Roth, 2020) or national victories in sporting competitions (Depetris-Chauvin, Durante and Campante, 2020). In the latter paper, the authors exploit a similar identification strategy to that of our paper as national victories of African selections occurred during a survey.[13] Special attention in the literature has been devoted to the role of education and the use of languages in school. Bandiera et al. (2018) shows how the U.S. government adopted compulsory schooling laws as a solely nation-building strategy. Clots Figueras and Masella (2013) and Aspachs-Bracons et al. (2008) study the case of educational reform in Catalonia. These studies are closely related to ours as they find that the change in mandatory schooling from the Spanish to the Catalan (Basque) language had an effect on self-identification as Catalan (Basque) as well as on political preferences.[14] Fouka (2020) shows that foreign language prohibition in U.S. schools increased the sense of cultural identity of minority groups. In our paper, we identify a novel channel that backlashes national identity. Distrust in Spanish institutions, caused by a ruling of the Constitutional Court, increased Catalan identity and support for Catalan independence.

Fourth, our paper contributes to the literature on support for secession and its interplay with institutions. Part of the literature has focused on income distribution, public good provision, and, more generally, on the economic determinants of secessionism (Bolton and Roland, 1997; Acemoglu and Robinson, 2001; Collier and Hoeffler, 2006; Desmet et al., 2011).[15] Another part of the literature has stressed how institutions can impact secessionism. Alesina and Spolaore (1997) argue that democratization may cause an inefficiently large number of secessions. Decentralization is usually viewed as a mechanism to prevent secession. Spolaore (2010) argue that decentralization reduces the net benefit of secession due to the transfer of economic and political power to regional governments. We shed light on this issue by showing that an increase in support for independence can be triggered by a judicial review on decisions taken by a decentralized institution that had no effect on economic conditions.

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[13]Depetris-Chauvin, Durante and Campante (2020) find that people declare themselves to be more aligned with their national identity when the national team wins, which reduces conflict in the longer term. Another example of an event with nation building consequences is war. (Alesina, Reich and Riboni, 2017; Dell and Querubin, 2017; Dehdari and Gehring, 2020)

[14]For instance, those educated in Catalan are more likely to report voting for Catalan nationalist parties and to support Catalan independence.

[15]Bolton and Roland (1997) find that secessions occur when the income distribution varies between regions and the gains from unification are small. Desmet et al. (2011) associate the likelihood of secession to the trade-off between cultural heterogeneity and public good provision.

2 Institutional background

2.1 Form of government

After thirty-nine years of dictatorship under Francisco Franco's rule, a new Constitution was signed in Spain three years after the dictator's death. This Constitution, signed in 1978, establishes that the political form of the Kingdom of Spain is a parliamentary monarchy. According to the Constitution, Spain is divided into seventeen autonomous regions (called *Comunidades Autonomas*) and two autonomous cities. Within each region, there are provinces and subprovinces, also known as *comarcas*.[16]

The monarch is the head of state; however, in practical terms, his duties are ceremonial, and the president holds executive power. Regarding the legislative branch, Spain has a bicameral parliamentary system composed of the Congress of Deputies and the Senate. Deputies and Senators representing the provinces are elected by universal suffrage for a maximum of four years. Deputies elect the president for the duration of their mandate.[17]

The maximum authority of the judiciary branch is the Supreme Court, except for cases that refer to national and regional constitutions, which are handled by the Constitutional Court. The Constitutional Court is composed of twelve members. Formally appointed by the King, four members are nominated by the Congress, four by the Senate, two by the Government and two by the Judiciary branch.[18] No appeal may be brought against rulings of the Constitutional Court.

Since the return of democracy, the Spanish Government has alternated between two main national parties. Although both parties are moderate in economic and social terms, the Socialist Party (or *PSOE*) is center left while the Popular Party (or *PP*) is center right. From 1978 to 2010, these two parties dominated the Congress of Deputies and the Senate almost exclusively. After the 2008 Great Recession, which substantially affected Spain, two other parties emerged: *Podemos* and *Ciudadanos.* While the former has been a left-wing party since its inception, the latter is usually placed between PSOE and PP – according to the placement of political parties' surveys (done by the Spanish *Centro de Investigaciones Sociológicas*). In addition to national parties, regional parties have enjoyed a sizable presence in both chambers, which has occasionally allowed them to shift the majority of congress towards one of the main national parties.

The regions   Similar to the fifty states in the U.S., each region, or "Autonomous Community", in Spain has its own regional constitution or "Statute of Autonomy". Each of

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[16]While provinces are political units formed of many municipalities, comarcas are a geographical aggregation of municipalities. Many comarcas form a province.

[17]The names and attributes of the elected politicians do not coincide with other democracies: in Spain, Deputies have attributes that are similar to those of Senators in other countries (i.e., the U.S.), and in most parliamentary democracies, the president is typically referred to as the Prime Minister.

[18]Members appointed by the Congress and the Senate must have sixty percent approval. Constitutional Court members are formally appointed for a period of nine years and can be renewed by thirds every three years. More details about the composition of the Court's members who rule upon the Catalan Constitution are provided in the Appendix D.6.

these Statutes regulates the internal organization of the region (i.e., the regional Parliament and Government) and the relationship with the national State. Spain is not a federation; thus, the Autonomous Communities have less independence than American states. Thus, the extent of decentralization depends of the agreement through the national and regional institutional channels, which results in different regions having different responsibilities in the provision of public goods, tax collection and spending (which are otherwise handled by the National State).[19] In the case of Catalonia, the form of government closely mirrors the national one. The president of Catalonia is elected by the Catalan Parliament, whose members are elected in representation of the provinces with a mandate of four years.

The process of reform of the regional constitutions differs across regions. In Catalonia, reform requires a qualified majority of two-thirds of the Catalan Parliament, an absolute majority in the Spanish Congress and Senate and ratification by a majority of Catalan voters in a referendum. In addition to this process, as with any other Spanish law, the reform is subject to rulings of the Constitutional Court regarding its constitutionality.[20]

2.2 The ruling of the Constitutional Court on the Statute of Autonomy

The process of reform of the Catalan Constitution traces back to the Catalan elections of 2003, where all parties but the centralist PP promised to reform the Statute of Autonomy, which dated from 1979. In September 2005, the Catalan Parliament approved a reform by 89% of the votes that included more powers and new fiscal benefits for the Catalan government. The approved proposal was sent for review to Spain's Parliament, and after several amendments, the Spanish Parliament and the Spanish Senate approved the reform. On June 18, 2006, the final version of the text was approved in a referendum in Catalonia. The referendum resulted in 78.1% of voters supporting the reform, with a turnout of 48.9%.

The approved regional Constitution was challenged by the PP, and the case arrived at the Constitutional Court. The ruling of the Constitutional Court of Spain – which took place four years after the referendum and was released on June 28, 2010– affected forty-one of the two hundred twenty-three articles of the Statute. The court struck down fourteen articles and curtailed another twenty-seven. Among other things, the ruling interpreted that references to "Catalonia as a nation" in the preamble had no legal effect, rolled back the attempt to place the distinctive Catalan language above Spanish in the

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[19] Notably, one of the biggest differences concerns fiscal autonomy. While Basque Country and Navarre have fiscal autonomy, the rest of the Autonomous Communities, including Catalonia, share fiscal authority with the national state. Education, health and social services are among the most important competences that have been assumed by the Autonomous Communities over the years. According to Hansjörg, Junghun et al. (2016), in the last decades, Spain has gone from being one of the most centralized states to one of the most decentralized among OECD countries.

[20] According to the Spanish Constitution, the following subjects can lodge an appeal of unconstitutionality: the President of the Government, the Defender of the People, fifty Members of Congress, fifty Senators, the Executive body of a self-governing community and, where applicable, its Assembly.

region and ruled regional powers over courts and judges to be unconstitutional.[21] In the rest of the text, we refer to the ruling of the Constitutional Court on the Catalan Statute of Autonomy as *the Ruling.*

After this ruling, the majority of Catalan Parliamentary parties, trade unions and social organizations called for mobilization across the region, and a massive demonstration took place on July 10, 2010. This demonstration was led by a banner with the slogan "We are a nation. We decide".

2.3   The rise of secessionism

The rise of secessionism coincided with the Great Recession, which immersed Spain in a severe economic recession. In particular, amidst the Spanish economic crises, the growth in support for independence (see Figure 1) was not only massive but also sudden. The increase in the secessionist movement coincided with the ruling of the Constitutional Court. In the months following the Ruling and the peak of the crises, the support for independence increased from 26% in June 2010 to 48% in June 2012.[22]

[INTRO FIGURE 1]

The secessionist movement grew substantially, and since 2012, mass demonstrations have been organized every September 11th in commemoration of Catalonia's national day. Artur Mas was elected president of Catalonia in December 2010. He belonged to Convergence and Union (CiU), a right-wing Catalan nationalist coalition that had governed the region from 1980 to 2003 whose main faction (Democratic Convergence of Catalonia, CDC) had only formally transitioned to support independence in March 2012. Among the left-wing Catalan parties, there was Esquerra Republicana de Catalunya (ERC), which had unambiguously supported Catalan independence since 1989. Given the impossibility of holding a legal and binding self-determination referendum, Mas announced that the 2015 regional elections would be a *de facto* plebiscite for independence. Carles Puigdemont (from CiU) was elected president of Catalonia. In 2017, he held a referendum, which was declared illegal by the national authorities. Electoral violence ensued, independence was declared (and revoked) and many Catalan politicians were sentenced to prison.[23]

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[21]Other articles affected by the ruling center on the decentralization of bank regulations, the possibility of creating new taxes at the local level, and the need to participate in the national mechanism of solidarity only between autonomous communities *when every autonomous community conducts a similar fiscal effort.* The full ruling can be found here: https://boe.es/boe/dias/2010/07/16/pdfs/BOE-A-2010-11409.pdf.

[22]The proportion of respondents (of those who answered the question) who wanted Catalonia to become independent was 23% in April 2010, 26% in June 2010, and 48% in June 2012. The proportion of respondents (of all people interviewed) who wanted Catalonia to become independent was 22% in April 2010, 24% in June 2010, and 44% in June 2012. These statistics are based on data from the *Catalan Centre d'Estudis d'Opinió* (CEO). The Spanish *Centro de Investigaciones Sociológicas* (CIS) asks about the territorial preferences of Spanish citizens where the choice of secession is presented differently: "A state where autonomous communities could become independent states". The CIS data show similar patterns. Support for the secession option in Catalonia (of all people interviewed) increased from 22.9% in October 2010 to 41.4% in October 2012 and reached the maximum value of 46.1% in August 2015. In December 2017, the value was 36.4%.

[23]Interested readers can find a more detailed exposition of the events related to Catalan secessionism

3   Empirical strategy and data

3.1   Data

The main data source of this paper is a computer-assisted telephone survey run by the Catalan Public Opinion Center (the *Baròmetre d'Opinió Política* of the Catalan *Centre d'Estudis d'Opinió*), fielded between June 28 and July 10th, 2010. The order of the interviews is random: a computer randomly selects a number from a database and makes the call after each interview is finished.

The respondents are randomly sampled from inhabitants of Catalonia who are at least 18 years old in two stages (the first stratification is by province and size of municipality, and the second is by gender and age) to keep the sample representative according to the 2009 population census (*Padró de Població*). Additionally, each province is weighted such that the sample is representative of Catalonia.

From each of the two thousand respondents, we employ data including the time of the interview; individual socio-demographic characteristics (age, gender, sex, marital status); socio-economic characteristics (education, income, employment status); cultural identity (language spoken, national self-identification) and political attitudes (past voting behavior, intention to vote, preferred institutional relationship between Spain and Catalonia, trust in institutions, and self-assessed most important problems in Catalonia).

The main outcome variable of interest is the question regarding the preferred relationship between Catalonia and the Spanish central administration. The possible answers (in addition to "no answer" and "do not know") are coded into four categories. Ordered from less to more decentralization, the respondents can choose between Catalonia being a region with fewer competences, an autonomous community (the status quo), a state within a federal state or an independent country.[24] In the June 2010 survey, support for independence was 26%. The summary statistics for the independent variables and other dependent variables are discussed in Section 3.3 and Appendix B, respectively.[25]

For a falsification test and to investigate the long-term effects of the ruling of the Constitutional Court on the Catalan Statute of Autonomy, we use other waves of the same survey conducted by CEO. In particular, we collect the 25 waves between June 2006 and October 2012. We also analyze the electoral consequences of the Ruling in 2015. We use data on voting patterns for each electoral list running for the elections of the Catalan Parliament of 1999, 2003, 2006, 2010, 2012, and 2015 at the municipality level from the Ministry of Interior and Ministry of Public Administrations of Spain.

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after 2015 in Appendix A.

[24]The original wording for the first option is *regió* – which corresponds to the regional organization during the Franco regime that assigned less power to the regions than under the current system. Because we are using region to refer to Catalonia, we translated the word differently to avoid confusion.

[25]The full summary statistics can be found in Table 1 in Section 3.3 and Tables A.1 and A.2 in Appendix B. These tables report the summary statistics of the controls used in our regressions, the summary statistics of the dependent variables, and the summary statistics of the preferred institutional relationship between Spain and Catalonia according to past votes, respectively.

3.2 Econometric strategy

We are interested in estimating the effect of the Ruling on individual political attitudes (Y_i).[26] With that aim, we define the variable $Ruling_i$, which takes a value of one for all individuals interviewed after the Ruling was released and zero for all individuals interviewed before the Ruling, which was released at 7 pm on June 28th, 2010. Therefore, those interviewed before the Ruling was made public are assigned to the control group, and those interviewed after the Ruling are assigned to the treatment group. Let X_i be a vector of observable socio-demographic characteristics,[27] and GEO_i are dummies for the respondent's city population and geographical (comarcas) fixed effects.[28] We define ϵ_i as the residuals. We define the potential outcomes as $Y_i(0)$ and $Y_i(1)$ for the control and treated groups, respectively, and we estimate the following Model 1:

$$Y_i = \alpha_1 + \beta_1 Ruling_i + \gamma_1 X_i + GEO_i + \epsilon_i, \tag{1}$$

Our identification assumption is that the moment at which each respondent is interviewed is independent of the time at which the Ruling occurred; that is, we treat the timing at which the respondents were interviewed as random. In particular, we assume that the potential outcomes are independent of the timing of the interview. As we explain below, we address potential concerns about the structure of the fieldwork by adding controls and restricting our sample.

Although the order of the interviews is random, to avoid the possibility that people interviewed in the morning and afternoon are different, we restrict our sample to people interviewed before 7 pm.[29] Similarly, to control for potential imbalances in the characteristics of the people interviewed at different stages of the fieldwork, we restrict our sample to the first seven days of interviews.[30] This restriction leaves 227 observations in the control group and 1,050 observations in the treatment group (of the 1,773 observations interviewed after the Ruling).

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[26]We use different dependent variables: preferred institutional relationship between Catalonia and Spain, support for independence, trust in political institutions, intention to vote, cultural feelings and problems that are considered to be most important.

[27]The included controls are whether Catalan was the language of the interview; whether the respondent spoke only Catalan with family, at work, and with friends; whether the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; whether the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; the respondent's sex; whether the respondent is married; dummies for the respondent's education; dummies for the respondent's age; dummies for the respondent's income; and dummies for the respondent's employment situation.

[28]We use the smallest available geographical unit observation, that is, comarcas. Catalonia is divided into four provinces, and each province is divided into different numbers of comarcas, which include different municipalities. There are 42 comarcas in Catalonia. On average, a comarca has 179,000 inhabitants and a size of 764 squared km.

[29]Figure A.6b in Appendix D.2 shows that our results are robust when using respondents interviewed after 7 pm and using the full sample.

[30]The survey was conducted from June 28th, 2010 to July 8th, 2010. No interviews occurred on July 4th, 2010. We restrict our sample to June 28th to July 6th. Figure A.6a in Appendix D.2 shows the main results with longer windows across days, up to the full sample, and provides evidence of the robustness of our results.

In addition, we control for GEO_i and a battery of controls that are potentially related to how the fieldwork was organized. Therefore, for our estimations, we assume that conditional on individual and geographical characteristics, the treatment status is orthogonal to the potential outcomes, $\{Y_i(0), Y_i(1)\} \perp\!\!\!\perp Ruling_i | X_i, GEO_i$. The inclusion of comarcas fixed effects and individual characteristics enables comparison between different potential outcomes of people with similar characteristics inside the same geographical unit interviewed before and after the Ruling.[31]

Because similar unexplained factors might affect the dependent variable on a particular day, the errors ϵ_i can be correlated. Moreover, the sampling process is clustered at the province level, and each province is weighted such that the sample is representative of Catalonia. This sampling clustering can also create correlations of the errors at the province level. To limit these inference problems, we cluster the standard errors at province-day of the interview level.[32]

Moreover, we examine the heterogeneous effects of the Ruling on political attitudes. With that aim, we explore the interactions of $Ruling_i$ with other cultural, socio-demographic, and socio-economic variables. Section 4 reports separate estimations of Model 1 when each control, an element of vector X, is interacted with the variable $Ruling$.

3.3   Robustness of the identification strategy

In this section, we show that the sample is balanced, that there is compliance, and that anticipation and confounding events are mitigated. Moreover, we discuss additional threats to identification and some robustness exercises performed in the Appendix.

Balancing on observables

The structure of the fieldwork can create potential imbalances between the control and treated groups. Table 1 shows the summary statistics of the observed characteristics of the people interviewed (column (1)), the summary statistics of the people in our sample (column (2)), and the average preference for independence for people with specific characteristics (column (3)). Column (4) reports a balancing test to show the difference in observed characteristics for our treated and control groups.

[INSERT TABLE 1]

The people interviewed before and after the Ruling do not differ in observable characteristics except for some small differences in one category of income and age. Additionally, there appears to be more individuals interviewed from Barcelona (the only city with more than 1 million inhabitants). We include all these observable characteristics as controls in all our specifications. For our identification assumption, we require that after controlling

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[31]In Appendix D.3, we show that our results are robust when controlling for fixed effects at different levels from comarcas such as province and province times size of municipality fixed effects. In the same Appendix, we also show that the results are robust to the exclusion of geographical fixed effects.

[32]We devote Appendix D.9 to show the robustness of our results to other forms of standard errors.

for these variables, observed by both us and by the interviewers, the conditions of whether a person was interviewed before or after the Ruling can be considered to be as-if random.

Noncompliance

The estimated effect is downward biased in the presence of noncompliance, which might occur if people in the treatment group are unaware of the Ruling. The Ruling received extensive news coverage and was a top story for newspapers and TV news. Figure 2a reports Google trends for searches of the word "Estatut", with two peaks in 2005 and 2006 corresponding to the approval of the Statute by the Catalan Parliament and its referendum approval, respectively. Searches increased significantly again after the Ruling. Moreover, in Section 5, we show that the Ruling caused a significant increase in the number of respondents who consider the Statute of Autonomy to be the most important problem in Catalonia.

[INTRO FIGURE 2]

Anticipation events

Foreseeable events can produce potential biases if respondents who change their behavior due to anticipation effects self-select into the treatment or control group. We argue that the exact day of the Ruling was unforeseeable. The Popular Party appealed against the Catalan Statute of Autonomy in 2006, and only 4 years later did the Constitutional Court publish a final ruling. Although the respondents may have known that the Constitutional Court was meeting on June 28th, the exact day when the ruling would occur was unknown. As *La Vanguardia*, one of the main Catalan newspapers, reported on their front page on June 28th, "the Constitutional Court meets today with the objective of ruling during the week". Therefore, the fact that a ruling arrived at the end of June 28th was largely unpredicted. Confirming the absence of anticipation effects, we show in Figure 2b that the number of news stories about the Ruling remained relatively low during the weeks before June 28th, 2010, and only skyrocketed afterwards. Moreover, the two previous dates with more news about the Ruling were not related to any filtration of the content of the sentence.

Pre-trends

Our estimates could be biased in presence of pre-trends in our dependent variables. In fact, Figure 1 shows that there was a slow increase in the support for independence in Catalonia between 2006 and 2010, which was followed by a more abrupt increase after the Ruling. We provide a first piece of evidence against the presence of pre-trends comparing the evolution of the preference for more autonomy in Catalonia between different waves of the survey we exploit in this paper. We control for several observable characteristics to account for part of the time varying confounders between waves, and we regress the preference for more autonomy on survey dummies. We separate the sample in the wave

in which the Ruling happened between control and treatment observations. Figure 3a presents this event study and the estimated difference between each wave and our control observations in 2010. Several considerations emerges from the analysis of this figure. First, the absence in conditional changes in more autonomy before the Ruling suggests that pre-trends are unlikely to bias our estimates. Second, it is possible to observe an increase in more autonomy from the wave of the Ruling onwards. Third, this increase in more autonomy appears to be sustained in the waves after the Ruling. After September 2011, the preference for more autonomy increases even further.[33]

[INTRO FIGURE 3]

Unfortunately, this event study compares observations over periods of months. Our identification strategy allows us to improve this estimation by comparing observations very close in time. Hence, only a daily trend in the increase for secession could bias our estimates. This is unlikely to be the case for several reasons. First, the latent increase in support for independence shown in Figure 1 occurs over the course of several years. Second, Figure 3b uses the wave anterior to the Ruling of the same survey to show that during the days of the interviews, there was not a daily increase in the preference for more autonomy for Catalonia. Third, Figure 2 also shows that the amount of Google searches and news about the Ruling were constant in the months before the verdict. Fourth, in Appendix D.2, we show that our results are robust to considering unique observations in the day before and after the Ruling.

Even if our control observations are only in the first day of interviews and we cannot formally control for longer pre-trends, all the aforementioned evidence makes the presence of pre-trends unlikely in the days before the Ruling.

Confounding events

While we cannot completely discard the presence of collateral events triggered by the Ruling that could affect our treatment group, we do not observe any abnormal change in the number of news about the Ruling during the remaining days of the fieldwork of our survey.[34] As we can see in Figure 2b, there was a demonstration against the ruling on July 10th; however, the demonstration was after the interviews ended and therefore cannot affect our estimates. Additionally, active political propaganda was present in the years between the appeal and the final ruling. Since the previous propaganda affected both the treatment and control groups, this channel would not undermine the interpretation of the cause of the estimated effect but would stress the importance of the political channel.

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[33]Appendix E.3 studies the persistence of the effects of the Ruling across sample waves in a more extensive and systematic way.

[34]The sudden increase in support for Catalan independence coincides with other important economic and political events: the financial and banking crisis that began in 2008, several corruption scandals in Spain, and the change of parties in government from PSOE to a more centralist party, PP. However, no important event occurred during the interview period. Therefore, we can interpret our estimates as the effect of the Ruling, keeping fixed economic, political and/or social events.

Robustness and other potential threats

While the use of sudden events amidst a survey to identify exogenous changes on individual attitudes has become a standard identification strategy in event studies, some concerns about the identification strategy and robustness of the results may arise, even with a random treatment.[35] In Appendix D, we present the list of potential additional threats and provide several pieces of evidence in favor of our identification assumption.

In particular, in Appendix D.1, we show additional balancing and falsification tests using the same wave of the survey and other waves In Appendix D.2, we illustrate the robustness of our results to the use of other sample restrictions. Our results are also robust to controlling for fixed effects at different levels from comarcas (see Appendix D.3). We show that there is no significant difference in nonresponse rates before and after the Ruling and provide additional robustness evidence in Appendix D.4.[36] We rule out that our results are driven by other confounding events in D.5. Appendix D.6 discusses the potential political influence of political parties on the Ruling and provides evidence that our results are not driven by this channel. We extensibly discuss the credibility of the polling institution in Appendix D.7. In particular, the survey was conducted in the same period as similar waves in previous years. In Appendix D.8, we address the possible problems associated with econometric misspecification and present estimates using binary and discrete choice models. Finally, in Appendix D.9, we show the robustness of the inference of the results to different levels of clustering of the standard errors. Moreover, we show that the results are robust when we address two additional issues related to the sample: the different numbers of observations between treated and controls, and the small sample size.

4   Results

In this section, we present and discuss the effects of the Ruling on different outcomes. We first show the main effect of the Ruling on the preferred relationship between Spain and Catalonia. We then analyze how this effect is heterogeneous according to several individual characteristics, and we discuss to what extent the Ruling increased partisan polarization. In Section 5, we discuss the mechanisms behind the main effect.

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[35] A recent methodological paper (Muñoz, Falcó-Gimeno and Hernández, 2018) reviews the literature in which this strategy is used and typifies all the potential threats. Additionally, the authors highlight different practices to ensure the credibility of the estimates, addressing each of the identification issues.

[36] The only data available about non-responses are about whether a respondent decides to participate in the survey but does not respond to specific questions. The CEO does not provide information about how many people decide not to conduct the survey. Therefore, we cannot provide evidence of participation rate in the survey. Under the assumption that non-responses in the survey predict the decision to participate in the survey, the results shown in Appendix D.4 confirm that participation bias is not a crucial concern. Moreover, observations before and after the Ruling are balanced in terms of many observable characteristics, suggesting that it does not seem to be the case that there is a change in non-responses to the survey of particular categories of people.

Baseline effects: In Table 2, we show that the Ruling had a causal effect on support for more autonomy and, in particular, for independence. We first use as the dependent variable the institutional setting that the respondent prefers for the relationship between Catalonia and Spain. This variable takes the value from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than the status-quo), an Autonomous Community (status-quo), a federal state (more autonomy than the status-quo), or an independent state. We interpret higher values of that variable as greater desire for more autonomy. Column (1) shows that the unconditional effect of the Ruling on support for more autonomy in Catalonia was 0.15 points. Column (2) confirms the effect of the Ruling, controlling for individual characteristics and fixed effects at the comarca level. In this preferred specification, we estimate that the Ruling increased support for more autonomy in Catalonia by 0.13 points. In column (3), we repeat the same exercise with an ordered probit specification. Finally, in column (4), we use the same specification as that of column (2) but using a dummy variable if the respondent supports the independence of Catalonia as the outcome. We find that the Ruling increased support for independence by 5.2 percentage points. Since the support for independence in the survey before the Ruling was 23%, we estimate that the Ruling increased support for independence by more than 20%.

[INSERT TABLE 2]

We can also obtain an understanding of the magnitude of this increase if we compare the estimate with the yearly increase of support for secession during these years. Between 2006 and 2010, support for secession increased by only 1.4 percentage points per year.[37] Thus, the 5.2 percentage point increase in support for secession due to the Ruling was almost 4 times higher than the previous yearly increase.

Thus far, we have shown that the Ruling increased support for more autonomy and for independence in particular. We now study how the ruling affected the support for each of the different forms of government for Catalonia: independence, federal state, Autonomous Community, and region. This provides a better understanding of how preferences regarding the relationship between Catalonia and Spain changed. In Figure4, we report the marginal effects of the ordered probit described in column (3) of Table 2. Ordered from less to more centralization, Figure 4 shows that the Ruling provoked a shift in the preferences for more autonomy. In particular, the forms of government that imply higher autonomy (federal state and, especially, independence) gain support at the expense of the options with less autonomy such as region or Autonomous Community (the status quo).

[INSERT FIGURE 4]

Figure 5 summarizes how individual characteristics correlate with support for the preferred level of political autonomy of Catalonia.[38] Notably, in addition to the Ruling, the main variables with a significant effect on support for more autonomy are related to

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[37]Support for independence in July 2006 was 16%.

[38]The coefficients plotted in Figure 5 are also reported in a table format in Appendix C.1.

cultural factors, i.e., the respondents speak Catalan with friends or their mother was not born in another part of Spain. In addition to the cultural factors, we also find a positive statistically significant coefficient of being between 50 and 64 years old and being male.

[INSERT FIGURE 5]

Heterogeneous effects: Based on the previous results, we explore the heterogeneous effects of the Ruling depending on identity signs such as the use of the Catalan language socially and family heritage and other socio-demographic and socio-economic characteristics. The results are shown in Figure 6.[39]

[INTRO FIGURE 6]

Panel 6a presents the heterogeneity results along cultural variables. While the regions of birth of the respondent and his or her mother marginally affect the reaction to the Ruling, the father's place of birth appears to be more relevant. If the father was born in Catalonia, preference for more autonomy increases 0.53 points after the sentence while if he was born in another part of Spain, the Ruling has no effect. The effect of the Ruling among those speaking Catalan socially is 0.14 points larger than among those who do not (for which it increases by 0.08 points).

While cultural identity is a large determinant of the change in support for more autonomy, socio-demographic and socio-economic characteristics are also relevant. Panel 6b shows the heterogeneity results along socio-demographic variables. A differential effect is observed for older individuals (more than 64 years old) whose support for more autonomy changes by 0.5 points more than that of younger individuals. Panel 6c shows the heterogeneity results along socio-economic variables. The effect of the Ruling depends on income and education but not on employment status. For instance, those earning less than 1,000 euros and those without secondary education changed their attitudes toward independence the most: approximately 0.4 points. Despite being in a crisis period, whether the respondent is unemployed, self-employed or employed does not introduce heterogeneity into the effect of the Ruling.

Polarization: While Figure 4 suggests that the territorial preferences of Catalan citizens did not become more polarized after the Ruling, it does not rule out other partisan polarization mechanisms. Given that voters of the Popular Party had the lowest support for decentralization before the ruling, we study whether the Ruling increased the distance between the territorial preferences of Popular Party voters and those of other Catalans.[40,41] In Figure 7, we show that, among voters of the Popular Party, the Ruling

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[39]These results are also presented in a table format in Appendix C.2.

[40]If we regress support for region on having voted for the Popular Party in the last Catalan election in the previous wave of the survey, we obtain a coefficient of 0.18 (0.015 s.e.), which means that Popular Party voters were 18% more likely than the rest of voters to support the region choice. Summary statistics of the preferred institutional relationship between Spain and Catalonia by past vote are presented in Table A.2 in Appendix B.

[41]A discussion of the heterogeneous effect of the ruling on voters of the remaining parties can be found in Appendix C.3.

had a positive effect on their support for region and Autonomous Community (the most centralized choices) and a negative effect on support for a federal state and secession (the most decentralized options). Conversely, for voters of other parties, the Ruling increased support for secession and federal state and reduced support for region and Autonomous Community. In summary, the Ruling increased support for centralization by voters of the Popular Party and increased support for decentralization among other voters. This implies that the Ruling polarized the territorial preferences between voters of the Popular Party and the remaining Catalans.

[INSERT FIGURE 7]

5   Potential mechanisms

In this section, we examine the channels that could explain the effect of the Ruling on the change in support for more autonomy and, in particular, independence of Catalonia. We consider four possible mechanisms: economic, partisan, cultural, and institutional channel, which is mostly related to checks and balances.

Economic: Pundits and scholars alike argue that the Spanish economic crisis is one of the main culprits of the secessionist movement in Catalonia (Rico and Liñeira (2014) and references therein). The Spanish crisis, initially caused by the Great Recession and a local real estate bubble, peaked in early 2010 with the "Indignados" movement. With an average unemployment of 25% and a recession, it is claimed that Catalonia (among the richest region in Spain) desired fiscal independence due to the crises. This idea is consistent with Acemoglu and Robinson (2001)'s theory of institutional transitions, which argues that revolts prompting institutional change are likely to occur during recessions.

We test this channel indirectly using an open question about the "current problems of Catalonia". CEO coded the issues reported by the respondents into the following categories: the relationship between Spain and Catalonia (within this category, there is a subcategory that specifically refers to people mentioning the "Estatut"); the Catalan financing system; [42] and the economy.[43] Then, we analyze whether economic problems are reported to be the main problem of Catalonia.

Table 3 shows that the economy is unlikely to be the cause of the change in support for independence, as its importance decreases after the Ruling. The Ruling reduced the probability of reporting the economy as the main problem of Catalonia by 12 percentage points (column (1)). The likelihood of reporting fiscal federalism as the most important problem does not change (column (2)).

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[42]The survey administrators code references to centralized taxes into this category. The results corresponding to this subcategory must be interpreted carefully as there are only sixty-six individuals who reported this issue as a problem. Figure A.3 in Appendix C.4 shows that the financing system was not a salient issue in 2010.

[43]Economic problems include unemployment and low-quality employment, low wages, and the functioning of the economy.

[INSERT TABLE 3]

Moreover, the reported problems with the greatest effects are political: the relationship with Spain and the Catalan Constitution, in particular, the Statute of Autonomy. The percentage of people reporting the relationship between Catalonia and Spain as the main problem increased by 8 percentage points (column (3)). Between the specific institutional problems, the Statute was declared the biggest problem of Catalonia by 6 percentage points more after the Ruling (column (4)).[44]

We not only discard the economic channel but also argue that the Ruling decreased the salience of economic issues during a large recession.

Partisan: The partisan channel implies that the change in support for independence is mediated by voting behavior. One possible explanation is that the Ruling changed intention to vote for parties supporting secession, and as a result, voters embraced the issue for which a party stands ("demand-driven"). An alternative justification is that political parties react to the Ruling and attempt to influence voter preferences ("supply-driven").[45]

If the demand-driven channel was present, we would expect a change in support for Catalan nationalist parties (more sympathetic to secession) after the Ruling. In column (1) of Table 4, we examine the effect of the Ruling on intention to vote for the two main Catalan nationalist parties, ERC and CiU. We find that the Ruling increased the likelihood of expressing the intention to vote for a Catalan nationalist party by 6 percentage points. In Appendix C.5, we break down the partisan results by individual party, and we show that PSC, the Catalan section of the party holding the Spanish government, is the main party losing intentions to vote after the Ruling.[46] To further confirm that our results are not driven by sample unbalancedness, in column (2) of Table 4, we show that there are no significant differences in past votes for nationalist parties before and after the Ruling.

[INSERT TABLE 4]

We provide several pieces of evidence that are consistent with the absence of the second channel (supply-driven). First, if the supply-driven channel was present and parties were suddenly changing their behavior, when we estimate the effect of the Ruling at later days, we should observe a larger effect due to greater exposure to the new strategies. The results in Figure 8 rule out this hypothesis as the estimate of the effect of the Ruling is similar when estimated on the first day of the interviews or on the following days.[47]

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[44]Table A.6 in Appendix C.4 confirms this result considering whether the respondent mentioned one of those issues as a problem of Catalonia instead of whether it is the biggest problem.

[45]See for example, Dinas, Hartman and van Spanje (2016).

[46]We do not find a statistically significant change in intentional turnout.

[47]As the number of observations interviewed in each day is different, we use as probability the weight of the number of people interviewed on that specific day. Day 5 of the interviews is the day with the minor number of respondents in the sample as only 56 people were interviewed. In Appendix E.3, we provide evidence that the effect of the Ruling is persistent, even in posterior waves of the political survey. In Appendix D.2, we show additional evidence that the estimated coefficient of the Ruling does not increase as time passes after the survey. In fact, we show that when we have longer windows around the Ruling

Second, it is unlikely that political parties could credibly and homogeneously change and communicate their strategy from one day to the next. Indeed, none of the nonsecessionist parties formally embraced the independence cause until 2012.[48] Third, the primary public television channel (TV3) funded by the Catalan Government has played a controversial role in Catalan politics for its alleged support for the Catalan secessionist movement (Durán, 2018). We show in Appendix C.6 that Catalans who report being informed by TV3 do not react to the Ruling differently than the rest of Catalans.

[INTRO FIGURE 8]

National identity: The literature on secessions argues that identity is one, if not the main, determinant of "intention to secede".[49] Hence, we investigate whether self-identification with Spain, Catalonia, or both changes after the sentence. In the survey under consideration, the respondents can choose one among the following categories: they feel (i) only Spanish, (ii) more Spanish than Catalan, (iii) Spanish and Catalan alike, (iv) more Catalan and (v) only Catalan. Figure 9 shows the predicted values for the marginal effects of the Ruling for each possible respondent's self-identification, estimated using an ordered probit regression.[50] Notably, the effect of the Ruling is an increase in identification with Catalonia, i.e., categories (i) to (iii) decrease in favor of (iv) and especially (v). Self-identification as "only Catalan" increases by 2 percentage points and "more Catalan than Spanish" increases by 0.8 percentage points. By contrast, the Ruling decreases self-identification as "only Spanish", "more Spanish than Catalan", and "as Spanish as Catalan" by between 0.4 and 1 percentage points. Still, all the marginal effects are weakly statistically significant, and the effects on "Feel only Spanish" and "Feel more Catalan than Spanish" are statistically significant at a 5% level of significance, while the others are at 10% significance.[51]

[INSERT FIGURE 9]

These results are in line with our previous findings regarding the use of the Catalan language socially and its heterogeneous effects. Hence, there appears to be some support for an identity or cultural channel through which the Ruling exacerbated feelings of Catalan identity.

Institutional: In this section, we investigate whether the Ruling's effect on secession is associated with a distrust in institutions: executive, legislative and judiciary. We pay especial attention not only to trust in the courts but, more generally, to satisfaction with

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(by increasing the observations in the sample), we do not observe a larger effect of the Ruling.

[48] As reviewed in Section 2, CiU formally transitioned towards independentism in 2012.

[49] For instance, Sorens (2005) studies a cross-section of established democracies with secessionist parties and finds that "identity" variables are the most determinant of vote share. Additionally, he finds that affluence is another relevant factor, in line with our previously explored mechanism.

[50] Notably, since the reported self-identification is partly caused by the Ruling, it is an endogenous variable. Therefore, it should not be used as an explanatory variable for support of independence. This comment is simply a clarifying (and cautionary) note.

[51] In Appendix C.7, we show the OLS and ordered probit estimation of the effect of the Ruling on cultural identification.

democracy. In particular, we show a backlash of political attitudes toward institutions after the Ruling. Given the high support of the Statute of Autonomy inside Catalonia,[52] many Catalans might have seen the Ruling as unfavorable.[53] This factor could potentially decrease trust in institutions, in particular, the Constitutional Court. The delegitimization of institutions may have strengthened preferences concerning the topics on which the Court ruled. In the Catalan context, a lower level of trust in Spanish institutions could increase the desire for secession from a state that could be perceived as having unjust institutions. Although the reform of the Catalan Constitution was democratically approved by large majorities in the Spanish and Catalan parliaments and the referendum, its reform and appeal followed all procedural rules, the functioning of democracy as a whole may be questioned.

Table 5 shows the effect of the Ruling on the trust in national and regional democratic institutions. Trust is measured with an index that takes a value of 10 when there is maximum trust (0 for no trust). Columns (1) to (3) show that the Ruling caused distrust in the courts and the Spanish parliament, which were the active players in charge of the checks and balances.[54] Trust in the courts and in the Spanish parliament decreased because of the Ruling by 0.33 and 0.15 points, respectively. Notably, the executive branch was not affected. Moreover, columns (4) and (5) show that Catalan institutions were also not affected, confirming that the institutional accountability across branches of government may be a relevant channel. By contrast, the Ruling does not appear to have affected support for secession by limiting greater economic decentralization. In Table 3, we show that there is no increase in the number of people reporting the Catalan financing system as the most important problem of Catalonia.

[INSERT TABLE 5]

Similarly, it could be argued that satisfaction with democracy, as a whole, is affected. After all, most coefficients in the table go in the same direction (diminished trust), and the coefficients of trust in political parties and satisfaction with democracy are negative and significant. It is possible to observe in columns (6) and (7) that the Ruling led to a decrease of 0.25 points (out of 10) in trust in political parties and increased the proportion of people unsatisfied with democracy by 7 percentage points (that is, by more than 10%).

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[52]The reform of the Statute of Autonomy had the approval of 80% of Catalan voters in the 2006 referendum.

[53]In fact, in previous results in Table 3, we show that more Catalans reported the Catalan Statute of Autonomy as the most important problem of Catalonia.

[54]This finding is consistent with the previous literature. For instance, Ura and Wohlfarth (2010) show that voter support for checks and balances (and the separation of powers more generally) is reflected by simultaneous movement of trust in the legislative and judiciary branches. These results are independent of the alignment of preferences between these branches but, more generally, depend on trust in these institutions.

6 Persistence and voting outcomes

In this section, we estimate whether the change in individual support for independence and intention to vote due to the Ruling translated into political action in a persistent manner. The ideal case study is the 2015 Catalan elections that resulted in the presidency of Carles Puigdemont and the unilateral independence declaration. While in previous electoral processes, other cleavages (i.e., left-right, corruption-honesty) had a prominent role, the 2015 election was presented as a plebiscite for independence by the Catalan nationalist parties. In the 2015 Catalan election, the two main secessionist parties – CiU (centre-right) and ERC (centre-left) – presented a common list called "Junts pel Sí" and promised to declare the independence of Catalonia within 18 months if they obtained the majority of seats in Parliament. As expected, the stance for independence became the main cleavage of the electoral campaign. Turnout at the election hit a record of approximately 75%, more than 7 percentage points than that of the previous election, indicating that citizens considered the stakes to be high.

Despite the fact that our identification strategy does not allow us to study long-term effects, we can analyze whether the areas where citizens reacted more to the Ruling were also more likely to exhibit different voting behavior later. Using data from other survey waves, Appendix E.3 shows that the change in support for independence was persistent even after 2010. Given this evidence that the Ruling had permanent effects on the political preferences of Catalan citizens, we can explore how this affected the result of the 2015 elections. While it is difficult to claim causality, this exercise helps us understand how changes in preferences for independence transformed into voting outcomes in favor of parties campaigning on that issue.

Our procedure follows two steps. First, we estimate the aggregate effect of the Ruling by geographical area in 2010. Second, we predict which areas in Catalonia changed their preferences the most following the Ruling, and we use these predictions as explanatory variables for the 2015 elections.

Econometric methodology: We begin by estimating the heterogeneity of the effect of the Ruling across municipalities in Catalonia. Our survey is representative at the level of specific city population categories in each province;[55] therefore, we can predict marginal effects of the Ruling for each of these areas. We define ps as the suffix for each province size of the municipality combination and estimate Model 2, where $PROVI$ and $SizeMun$ are the province and size of the municipality fixed effects.

$$Y_i = \alpha_2 + \beta_2 Ruling_i + \gamma_2 X_i + PROVI \times SizeMun + \lambda_2 Ruling_i \times PROV_i \times SizeMun + u_i,$$

$$(2)$$

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[55]City populations are divided into six categories: less than 2,000, from 2,001 to 10,000, from 10,001 to 50,000, from 50,001 to 150,000, from 150,001 to 1,000,000, and more than 1,000,000 inhabitants.

We predict how each area changed their preferences by estimating the marginal effect of the Ruling in each province-size of the municipality combination ($\widehat{ME_{ps}} = \widehat{\beta_2} + \widehat{\lambda_2} \times PROVI_{i(p)} \times SizeMun_{i(s)}$).[56] We study the effect of the Ruling on the vote share of the three main Catalan nationalist parties that supported secession in 2015 (sum of the vote share of ERC, CiU and CUP, Vot_{ce}).[57] We estimate the correlation between voting behavior in the 2015 election and changes in preferences due to the Ruling by estimating Model 3:

$$Vot_{ce} = \alpha_3 + \tau_c + \psi_t Post2010_e + \phi_3 \widehat{ME_{ps}} \times Post2010_e + v_{ce}, \qquad (3)$$

That is, we estimate a difference-in-difference model to understand how the vote share for Catalan nationalist parties changed differently after the Ruling ($Post2010$) between places that were more or less affected by the change in support of independence. Model 3 includes fixed effects at the city level (τ_c) and considers the elections in 1999, 2003 and 2006 as pretreatment election periods (e). Our posttreatment period is the 2015 election. We report results for this regression in Table 6. We also use turnout rates, that is, the proportion of voters to potential voters, as a dependent variable.

This econometric strategy has several weaknesses, and, as a result, we do not interpret our results as causal. However, Appendix E.2 shows several evidence in favour of our strategy. First, municipalities in Catalonia could have different trends in their voting outcomes before the Ruling. We show evidence of parallel trends for voting shares in the pretreatment period. Second, the first stage presented in Model 2 might not be precisely estimated with a small sample. Hence, we show that our results do not vary if we also use observations from the previous wave of the CEO survey as controls. Third, Model 3 requires the estimation of the effect of a predicted regressor. We provide specific bootstrap standard errors for our two-stage procedure and show that our results are robust.

Results: We find that although the Ruling is not associated with overall changes in voting behavior, it might have generated electoral polarization across municipalities inside Catalonia. Columns (1) and (2) of Table 6 show that the overall after-2010 vote share for Catalan nationalist parties and turnout increased by 4.7 and 14.5 percentage points, respectively, disregarding the effect of the Ruling. The differential effect of the predicted effect of the Ruling after 2010 is not statistically significant.

[INSERT TABLE 6]

To study the polarization of voting behavior with respect to independence, we split the sample according to historical support for secessionist parties and consider those with

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[56]The results with the geographical heterogeneity of the effect can be found in section E.1 of the Appendix.

[57]Popular Unity Candidacy (CUP) is a left-wing party that also supports independence for Catalonia. They have run in Catalan elections only since 2012. Therefore, we impute their vote share before 2012 as 0. In Appendix E.2, we show that our main result from this section is robust to the exclusion of this party in the construction of the dependent variable. In 2015, we use the sum of the ERC and CiU vote share as the vote share of Junts pel Sí, the main pro-secession coalition.

historical support above the median. We use the votes for ERC in 1999 as a proxy for support for secession before the Ruling because it was the only secessionist party with parliamentary representation. Columns (3) and (4) show that the increase in vote share for Catalan nationalist parties depends on the historical support for secessionist parties, which is consistent with the sample split. That is, for places not affected by the Ruling, after 2010, the vote share for secessionist parties increased by 6.4 and 3 percentage points in places that were more or less historically secessionist, respectively.

The Ruling increased the vote share of secessionist parties in places where secessionist parties were historically stronger. In particular, a city that changed preferences for independence, as in our baseline estimate, by 5.2 percentage points, increased the vote share for secessionist parties by 0.32 percentage points more than a city with no change in preferences due to the Ruling. This effect is not explained by turnout.[58] On the contrary, we do not find a statistically significant coefficient of the predicted effect of the Ruling on vote share in historically less secessionist locations.

The aforementioned results indicate an increase in polarization after the Ruling. Conditioning on a secessionist effect of the Ruling, the vote share of secessionist parties increased in locations that were already supporting secession but did not change in the rest of Catalonia. In addition to this polarizing effect across locations, the Ruling had a polarizing effect within historically prosecession locations: secessionist parties obtained even larger shares in locations where the Ruling had the largest effect on support for independence.

7 Concluding remarks

In this paper, we exploit an unprecedented ruling on a subnational constitution to understand the unintended consequences of checks and balances. We show that the decision of the Constitutional Court to strike down and curtail some of the articles in the Catalan Constitution led to the emergence of a secessionist movement, which undermined nation building at the Spanish level and subsequently increased political instability in Catalonia and throughout the country.

Despite the massive and sudden increase in support for independence due to the Ruling, the decision alone cannot explain the majority of the increase from 23% to 48% that Catalonia experienced between 2010 and 2012. We estimate that the ruling was responsible for 20% of this increase. That is, while in our setup we rule out some channels (economic, partisan), we cannot rule out that these channels played a role in the aftermath of the Ruling. Further research should be conducted to investigate the possible

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[58]The results of turnout, splitting the sample according to previous support for secessionist parties, can be found in Appendix E.2. Additionally, the Appendix provides evidence of voting flows between secessionist parties and that the Ruling particularly favoured CiU at the expense of PSC. These findings closely mirror the results found in Appendix C.5 using intention to vote in our survey, giving further credit to the possibility of linking our survey data with voting outcomes in later years. In Appendix E.2, we also estimate that after 2010, the marginal effects of the Ruling changed according to all the distribution of previous shares of parties' pro-secession votes instead of splitting our sample.

role of parties and political actions in exploiting this change in political attitude towards independence to shed light on the influence of voters' political attitudes on parties' campaigns.

While our evidence does not question the relationship between sound institutions and the preservation of economic and political freedoms, growth and stability, it does show that even strongly institutionalized countries may face a difficult path to consolidation of the state. This is more evident when counter-majoritarian decision-making bodies – e.g., the Constitutional Court – result in outcomes that are considered negative by a large group of the population. Moreover, if people can gather around a defined identity, collective action around the issue ruled upon may be detrimental to the construction of a shared national identity. Even though the Spanish federalist structure is particularly appealing for studying this mechanism,

More generally, our setting highlights a tension between judiciary review and democracy, i.e., the main critique of the judicialization of politcs (Hirschl, 2008). On the one hand, the separation of powers isolates the judiciary branch from majoritarian tides. On the other, as counter-majoritarian institutions, they may not be equipped to make certain determinant policy-making or political decisions. Thus, another take-away of this study is the importance of the legitimacy of the Court when it rules against a decision have been vetted not only through the majority of the Parliament but also by a referendum. We believe that these two facts might have amplified the perception of the decision being unfavorable and should be taken into account when defining the functioning of judicial review.

Our results stress that inclusive institutions per se might not be sufficient to prevent the awakening of ethnc conflicts. In fact, we show that trust in institutions and national identity are crucial and complementary components of well-functioning institutions. In our case study, the regeneration of the Catalan nationality (as opposed to the Spanish nationality) and distrust in national institutions increased due to the Ruling and prompted otherwise relatively dormant support for Catalan independence. Notably, the effects are estimated during the Great Recession, a period in which trust in institutions was already particularly low. While these circumstances do not invalidate our results, further research should aim to replicate this analysis in periods of economic upturn.

In line with Acemoglu, Robinson and Torvik (2013) and Gratton and Morelli (2018), our evidence could be interpreted as pessimistic for developing countries with extractive institutions. Without a separation of powers, or when checks and balances could be weakened by popular will, democratic stability can be threatened. Moreover, our results may also serve as a cautionary tale for well-established democracies with inclusive institutions. In the context of economic crisis, massive migration and rising populism, new identitarian cleavages may become more salient. If such cleavages are somehow constrained by checks and balances, there is a possibility of backlash and a deepening of those identities: overcoming them may also become a new challenge for strong democracies.

Finally, our results also show that national identity is more malleable than what

is usually assumed. While the construction of national identities is typically thought to be a long and slow process (Weber, 1976), we show that the ruling of the Spanish Constitutional Court changed the national identification of thousands of Catalans in only a few days. This has relevant policy implications. While nation building could decrease rapidly, policy makers could also improve the common feeling of national identity in a short period of time.

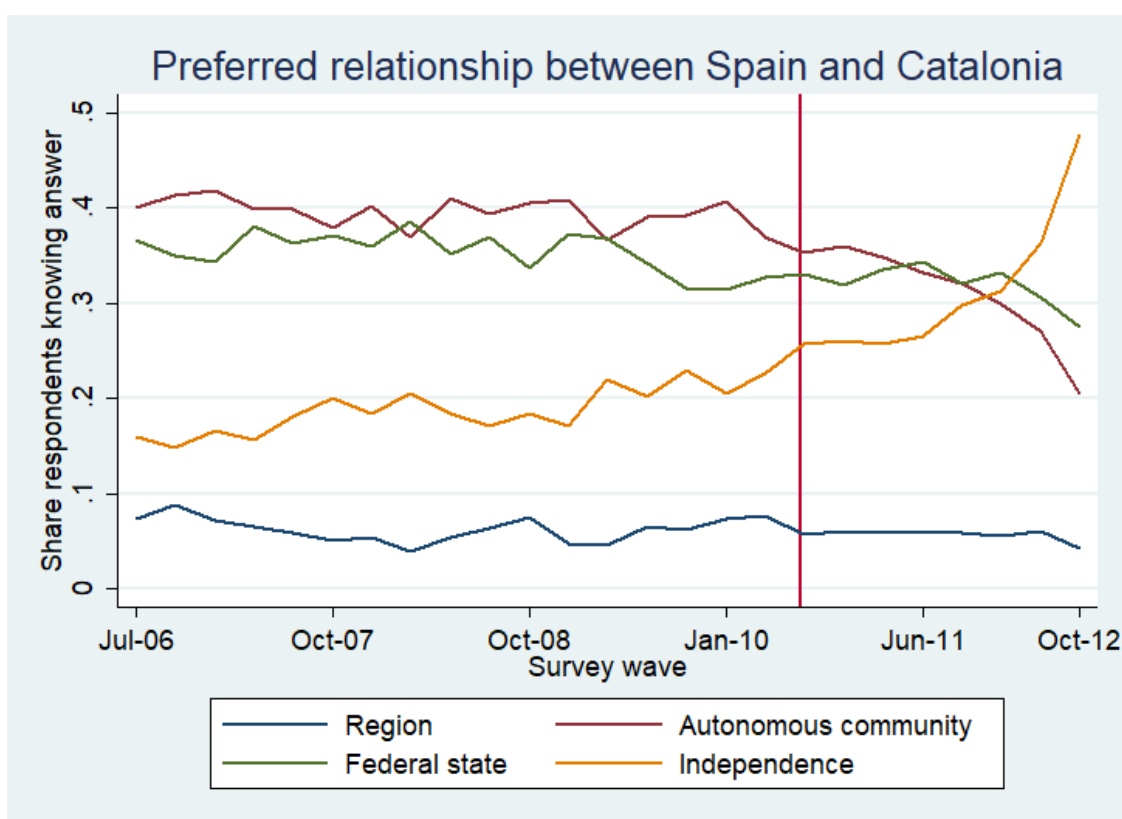## 7.1 Figures and Tables

7.1.1 Figures

Figure 1: Time series of the support for independence in Catalonia

Share of respondents (omitting people who either did not know the answer or did not give a answer) preferring one particular situation about the relationship between Catalonia and Spain. The possible answers are i) Catalonia to be a region inside Spain (*Region*), and then having less autonomy then the status quo, ii) Catalonia to be an Autonomous Community inside Spain (*Autonomous community*), then having the same autonomy as the status quo, iii) Catalonia to be a federal state inside Spain (*Federal state*), then having more autonomy than the status quo, iv) Catalonia to become an independent state (*Independence*). Red vertical line indicates June 2010, the time of the Ruling. Data source: *Baròmetre d'Opinió Política* of the Catalan *Centre d'Estudis d'Opinió*.
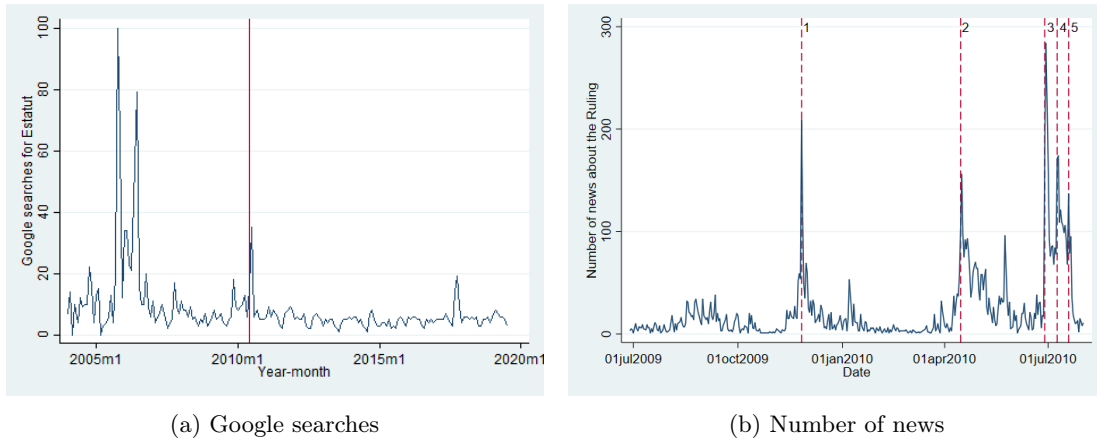
(a) Google searches

(b) Number of news

Figure 2: Time series of Google searches and news related to the Ruling

Panel 2a. Source: Google Trends for searches for the word "Estatut". Searches in Catalonia only. Red line: June 2010. Maximum value normalized to 100.

Panel 2b. Source: Factiva. We collected all the news containing the words "Estatut" and "Tribunal Constitucional" between June 28th, 2009, and July 22nd, 2010, in Spain. The vertical lines correspond to the following dates and events, Event 1, November 27th, 2009: joint editorial of 12 Catalan newspapers about a possible ruling of the Constitutional Court. Event 2, April 15th, 2010: meeting of the Constitutional Court to discuss about the Ruling. Event 3, June 28th, 2010: Ruling. Event 4, July 9th, 2010: demonstration against the Ruling. Event 5, July 19th, 2010: release of the complete Ruling with all the individual votes and comments of the judges of the Constitutional Court.
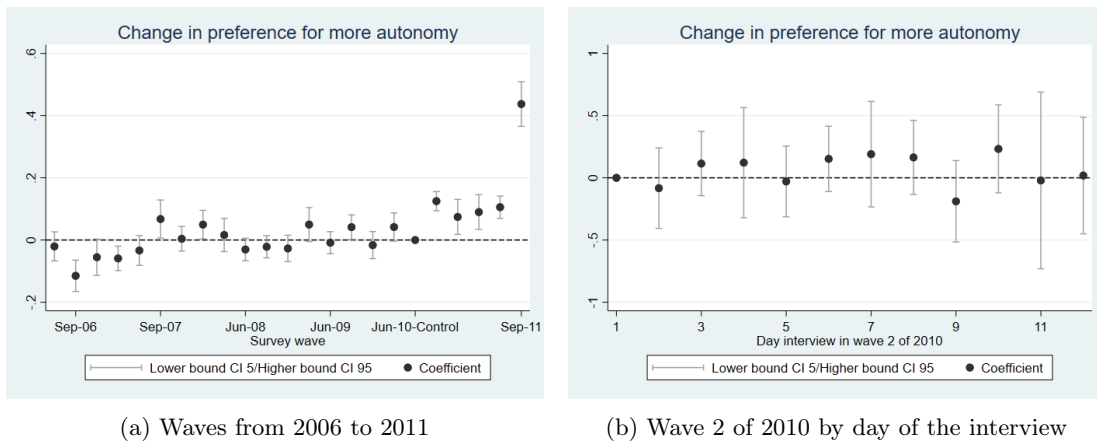
(a) Waves from 2006 to 2011

(b) Wave 2 of 2010 by day of the interview

Figure 3: Pre-trends analysis

Panel 3a reports the estimated coefficient of the effect of the survey wave on *More autonomy* using waves from 2006 to 2011. Coefficients obtained regressing *More autonomy* on dummies for the survey wave, the interaction between *Ruling* and the day of the interview, individual controls and comarcas fixed effects. The omitted category is the observations from interviews in the third wave of 2010 before June 28th at 19:00. Standard errors clustered at province-survey wave level.
Panel 3b reports the estimated coefficient of the effect of the day of the interview on *More autonomy* using the second waves of 2010. The omitted category is the first day of interview. Robust standard errors.
More autonomy: variable that takes values from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than status-quo), Autonomous Community (status-quo), federal state (more autonomy than the status-quo), or independent state, respectively. Controls: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education; dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. All unanswered or unknown answers coded as missing values. *Lower-Upper Bound CI 95*: lower and upper bounds of 95% confidence interval.
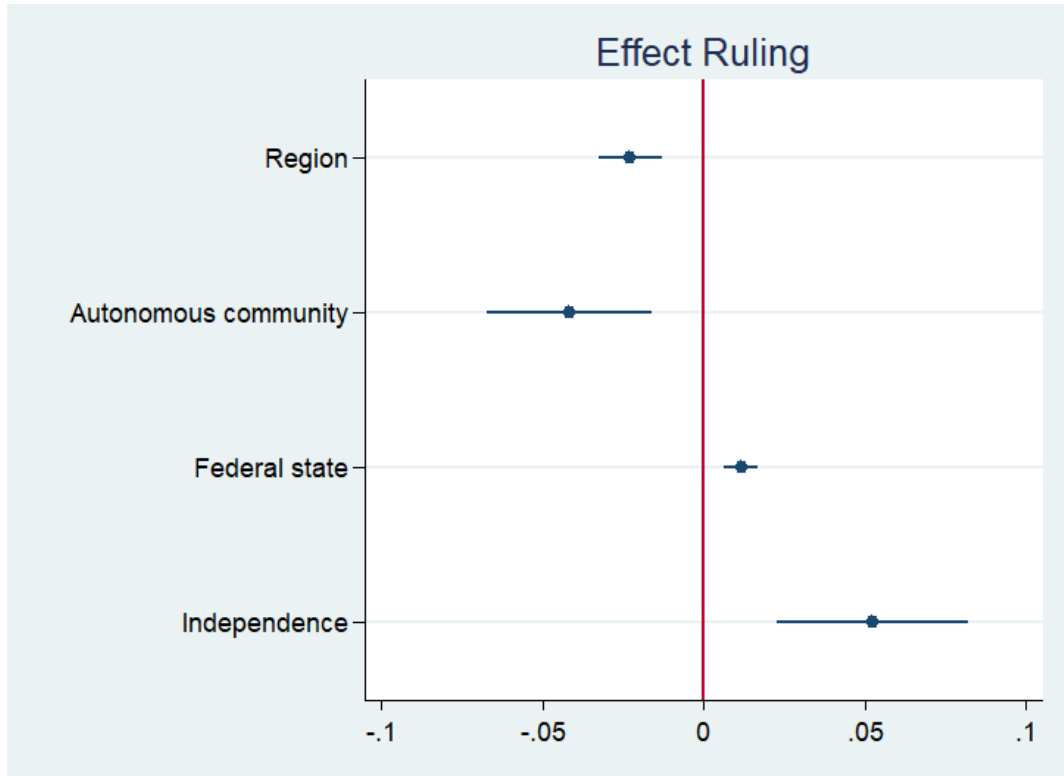
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Figure 4: Marginal effects of the Ruling on each preferred relationship between Spain and Catalonia

This figure plots the marginal effect of *Ruling* on the four options for the preferred relationship between Spain and Catalonia, estimated in column (3) of Table 2. Each point refers to the estimated coefficient of the effect of *Ruling* on one specific value of the variable *More autonomy* and each line refers to the 95% confidence interval. The marginal effects are estimated after regressing, by Ordered Probit, *More autonomy* on *Ruling*, all the controls and comarca fixed effects. *More autonomy*: variable that takes values from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than status-quo), Autonomous Community (status-quo), federal state (more autonomy than the status-quo), or independent state, respectively. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. *Controls*: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (*educ.*); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors are clustered at the province-day of the interview level.
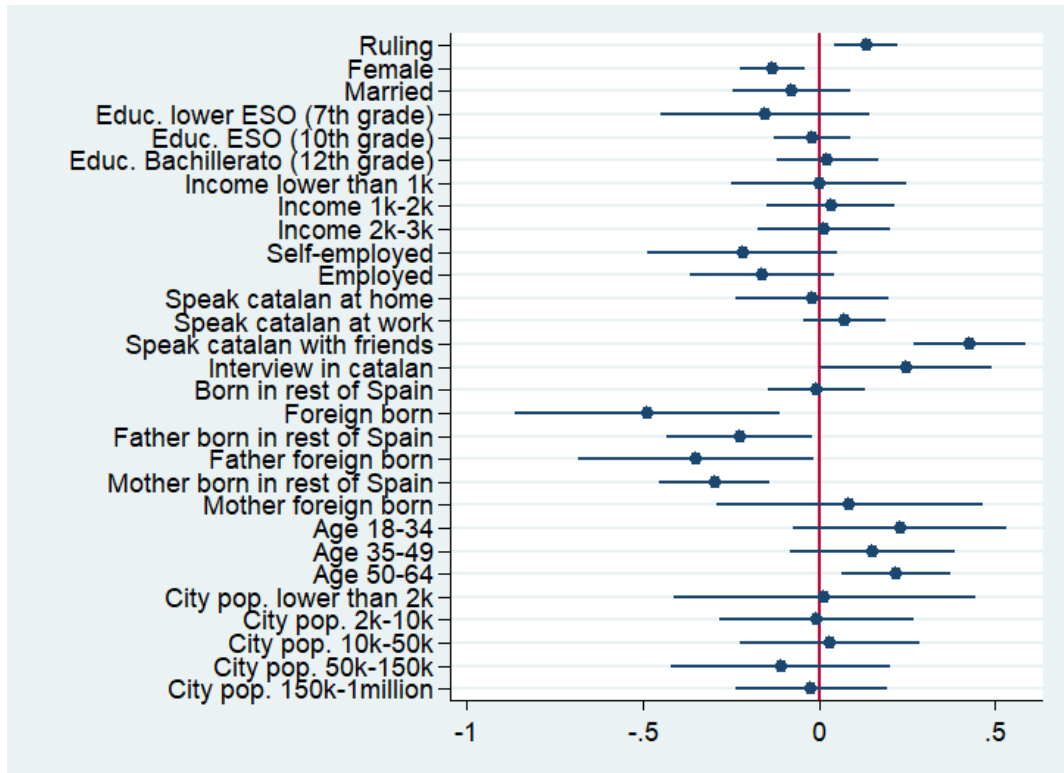
Figure 5: Effect of the controls on the preferred relationship between Spain and Catalonia

This figure plots all the coefficients of the controls included in column (2) in Table 2. Each point refers to the estimated coefficient of each control and each line refers to the 95% confidence interval. OLS estimates obtained after regressing *More autonomy* on *Ruling*, all the controls and comarca fixed effects. *More autonomy*: variable that takes values from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than status-quo), Autonomous Community (status-quo), federal state (more autonomy than the status-quo), or independent state, respectively. *Ruling*: dummy taking 1 for all observations interviewed after June 28th 2010 at 19:00, and 0 otherwise. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors are clustered at the province-day of the interview level.
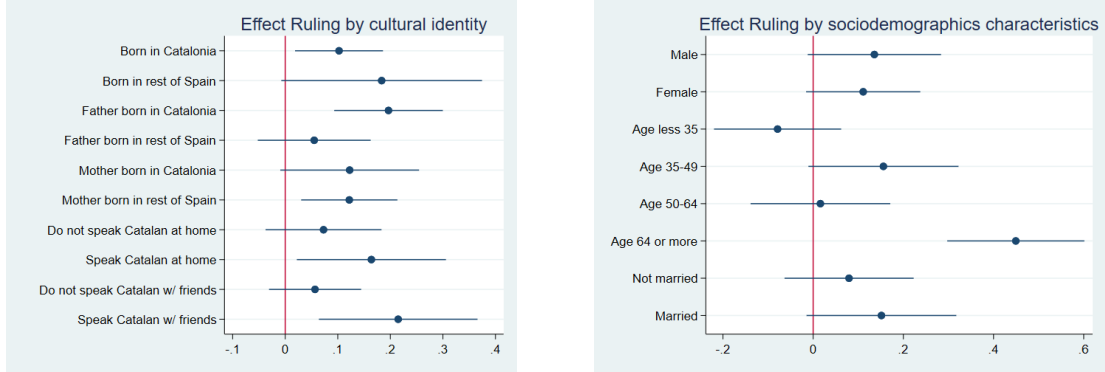
(a) Heterogeneity with respect to cultural identity variables.

(b) Heterogeneity with respect to socio-demographic variables.
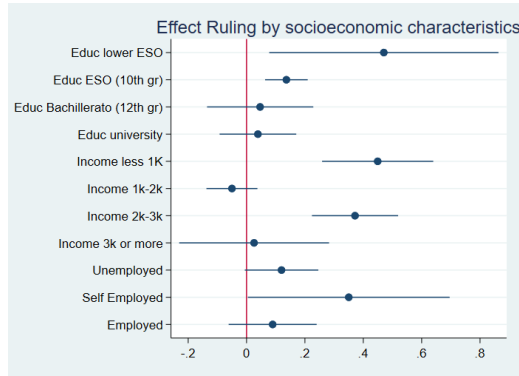
(c) Heterogeneity with respect to socio-economic variables.

Figure 6: Heterogeneity of the effect of the Ruling on preferred relationship between Spain and Catalonia according to cultural, socio-demographic and socio-economic variables

The figure reports the coefficients in Table A.4 of Appendix C.2. Each point refers to the estimated coefficient of the interaction between *Ruling* and the corresponding variable and each line refers to the 95% confidence interval. OLS estimates obtained after regressing *More autonomy* on *Ruling*, interaction of *Ruling* and the variables under consideration, all the controls and comarca fixed effects. *More autonomy*: variable that takes values from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than status-quo), Autonomous Community (status-quo), federal state (more autonomy than the status-quo), or independent state, respectively. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. Probability weights used. All unanswered or unknown answers coded as missing values. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors clustered at province-day of the interview level. The interaction coefficient of the omitted category is the estimate of the effect of *Ruling* in Table A.4.
Panel 6a refers to the coefficients in columns (1) to (5) of Table A.4. Heterogeneity with respect to *Born in Catalonia* and *Born in rest of Spain* corresponds to column (1) of Table A.4. *Father born in Catalonia* and *Father born in rest of Spain* corresponds to column (2). *Mother born in Catalonia* and *Mother born in rest of Spain* corresponds to column (3). *Do not speak Catalan at home* and *Speak Catalan at home* corresponds to column (4). *Do not speak Catalan w/ friends* and *Speak Catalan w/ friends* corresponds to column (5). We do not report the coefficients of respondents, fathers and mothers born abroad in Panel 6a as they are imprecisely estimated. These estimates can be found in Table A.4 and Figure A.1 in Appendix C.2.
Panel 6b refers to the coefficients in columns (6) to (8) of Table A.4. Heterogeneity with respect to *Male* and *Female* corresponds to column (6) of Table A.4. *Age less 35*, *Age 36-49*, *Age 50-64*, and *Age 64 or more* corresponds to column (7). *Not married* and *Married* corresponds to column (8).
Panel 6c refers to the coefficients in columns (9) to (11) of Table A.4. Heterogeneity with respect to *Educ lower ESO*, *Educ ESO (10th gr)*, *Educ Bachillerato (12th gr)*, and *Educ university* corresponds to column (9) of Table A.4. *Income less 1k*, *Income 1k-2k*, *Income 2k-3k*, and *Income 3k or more* corresponds to column (10). *Unemployed*, *Self Employed*, and *Employed* corresponds to column (11).
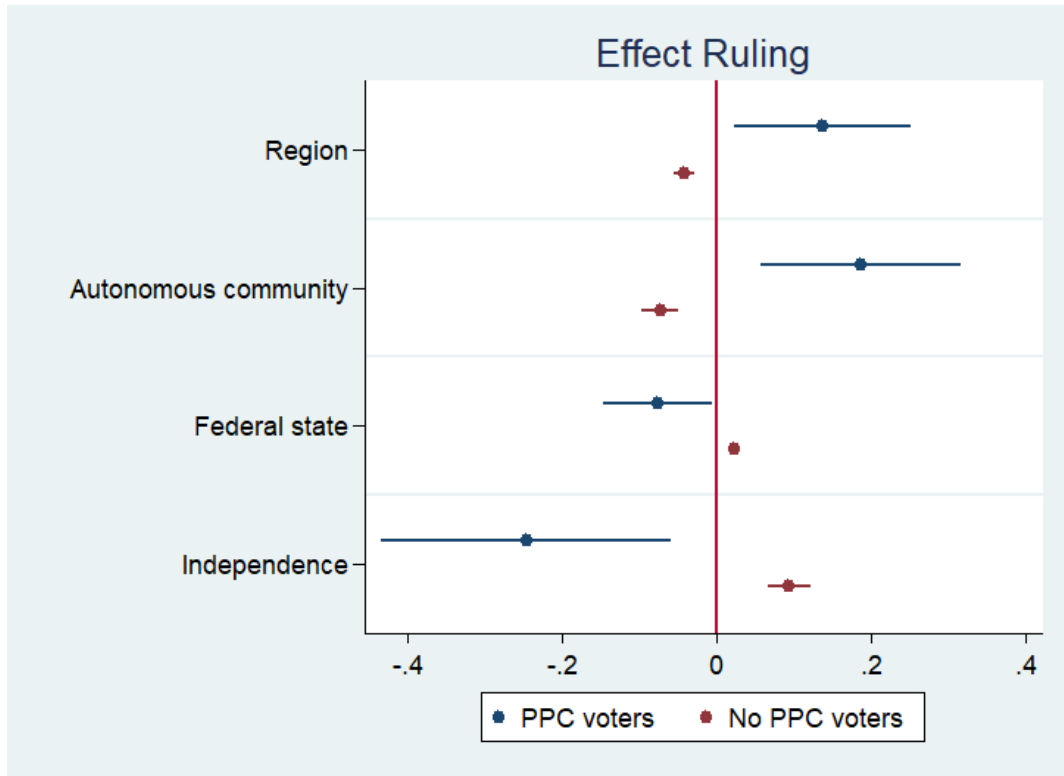
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Figure 7: Heterogeneities of the effect of the Ruling on each preferred relationship between Spain and Catalonia according to past vote

This figure plots the marginal effects of *Ruling* on the four options for the preferred relationship between Spain and Catalonia, estimated in column (2) of Table A.5 in Appendix C.3. Each point refers to the estimated coefficient of the effect of *Ruling* on one specific value of the variable *More autonomy* and each line refers to the 95% confidence interval. Blue points and lines refers to respondents who votes for Partido Popular Catalán (*PPC voters*) at the Catalan Parliament elections of 2006, and red points and lines for the other voters (*No PPC voters*). The marginal effects are estimated after regressing, by Ordered Probit, *More autonomy* on *Ruling*, *Past vote PPC*, the interaction between *Ruling* and *Past vote PPC*, all the controls and comarca fixed effects. The marginal effect for *PPC voters* is computed as the sum of the marginal effect of *Ruling* and the marginal effect of *Ruling x Past vote PPC*. *More autonomy*: variable that takes values from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than status-quo), Autonomous Community (status-quo), federal state (more autonomy than the status-quo), or independent state, respectively. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. *Past Vote PPC*: dummy taking 1 if the interviewed voted for Partido Popular Catalán (PPC) at the Catalan Parliament elections of 2006, and taking 0 if the interviewed voted for Convergència i Unió (CiU), Esquerra Republicana de Catalunya (ERC), Partido de los Socialistas de Cataluña (PSC), or Iniciativa per Catalunya Verds-Esquerra Unida i Alternativa (ICV-EUiA) (if the interviewed cannot vote, did not vote, conducted a blank or null vote, or voted another party this variable is coded as missing.). *Controls*: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (*educ.*); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors are clustered at the province-day of the interview level.
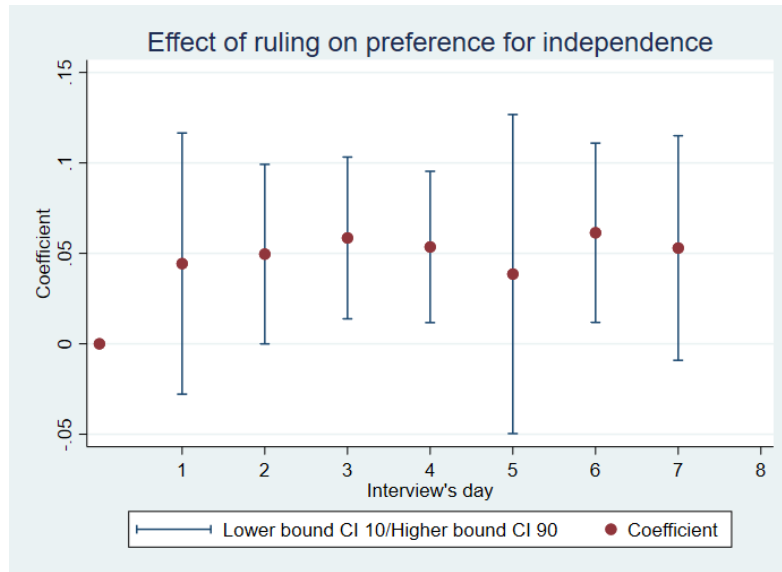
Figure 8: Heterogeneity of the effect of Ruling on support for independence by day

The graphs report the estimated coefficient of the effect of the Ruling interacted by the day of the interview. Coefficients obtained regressing dummy reflecting the respondent's preference for Catalonia to become an independent state on *Ruling*, the interaction between *Ruling* and the day of the interview, individual controls and comarcas fixed effects. The coefficient equals 0 in the day before the ruling took place. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. Controls: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education; dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. All unanswered or unknown answers coded as missing values. *Lower-Upper Bound CI 90*: lower and upper bounds of 90% confidence interval. Given that the number of interviewed people varies by day, each observation is weighted by the number of observations interviewed in that particular day. Sample of people interviewed before 19:00 in the first seven days of interviews. Standard errors clustered at province-day of the interview level.
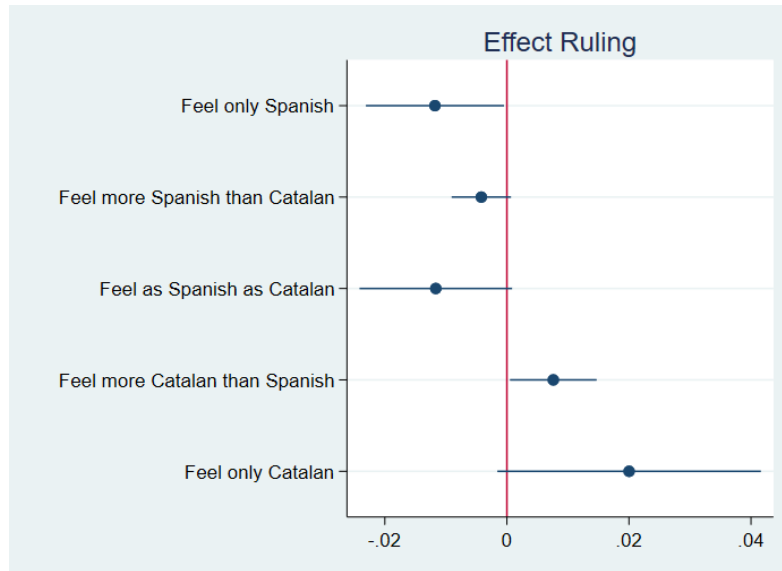
Figure 9: Effect of the Ruling on national identity

This figure plots the marginal effect of *Ruling* on the five options for national identification in column (2) of Table A.8 in Appendix C.7. Each point refers to the estimated coefficient of the effect of *Ruling* on one specific value of the variable *Feeling Catalan* and each line refers to the 95% confidence interval. The marginal effects are estimated after regressing, by Ordered Probit, *Feeling Catalan* on *Ruling*, all the controls and comarca fixed effects. *Feeling Catalan*: variable taking 5 values according to which national group the interview feel to belong. The variable takes value 1 if the interviewed feels only Spanish, 2 if the interviewed feels more Spanish than Catalan, 3 if the interviewed feels as Spanish as Catalan, 4 if the interviewed feels more Catalan than Spanish, and 5 if the interviewed feels only Catalan. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. *Controls*: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (*educ.*); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors are clustered at the province-day of the interview level.

7.1.2 Tables

Table 1: Main summary statistics and mean difference before and after Constitutional Court ruling

Variable	Mean	Mean sample	Mean indep.	Pre-post
Interview in catalan	0.71	0.69	0.33	-0.06
Speak catalan at home	0.48	0.47	0.40	-0.05
Speak catalan at work	0.27	0.25	0.33	-0.02
Speak catalan with friends	0.41	0.40	0.44	0.00
Born in Catalonia	0.75	0.72	0.32	-0.02
Born in rest of Spain	0.22	0.26	0.10	0.02
Foreign born	0.03	0.02	0.13	0.00
Father born in Catalonia	0.47	0.44	0.40	-0.04
Father born in rest of Spain	0.51	0.54	0.15	0.05
Father foreign born	0.02	0.02	0.12	-0.01
Mother born in Catalonia	0.46	0.45	0.42	-0.02
Mother born in rest of Spain	0.51	0.53	0.13	0.02
Mother foreign born	0.03	0.02	0.11	0.00
Female	0.52	0.57	0.25	-0.04
Married	0.60	0.62	0.24	-0.06
Educ. lower ESO	0.09	0.09	0.23	-0.01
Educ. ESO	0.29	0.34	0.26	-0.06
Educ. bachillerato	0.31	0.29	0.29	0.06
Educ. university	0.31	0.28	0.24	0.02
Income lower 1k	0.14	0.15	0.33	0.02
Income 1k-2k	0.37	0.39	0.27	-0.06
Income 2k-3k	0.28	0.27	0.19	0.07*
Income 3k or more	0.21	0.19	0.27	-0.03
Self-employed	0.09	0.08	0.26	0.00
Employed	0.41	0.38	0.25	-0.04
Unemployed	0.50	0.54	0.27	0.04
Age 18-34	0.26	0.18	0.31	0.01
Age 35-49	0.28	0.30	0.25	0.06
Age 50-64	0.23	0.28	0.23	-0.13***
Age 64 or more	0.23	0.24	0.27	0.06*
City pop. 0-2000	0.05	0.05	0.40	0.00
City pop. 2001-10000	0.14	0.14	0.32	-0.01
City pop. 10001-50000	0.26	0.26	0.28	-0.02
City pop. 50001-150000	0.20	0.22	0.27	0.03
City pop. 1500001-1000000	0.12	0.12	0.20	-0.08**
City pop. 1000000 or more	0.22	0.21	0.19	0.08**

Mean: mean of the reported variable. *Mean sample*: mean of the reported variable in the sample of people interviewed before 19:00 and in the first seven days of interview. *Mean indep.*: proportion of people favouring Catalonia to become an independent state from Spain with the reported characteristic in the sample considered. *Pre-post*: t-test of the difference in reported variable for respondents in the sample considered interviewed before and after the ruling of the Constitutional Court, obtained regressing the reported variable on the variable *Ruling* on the sample considered using probability weights. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. Average preference for secessionism: 0.26. *** p<0.01, ** p<0.05, * p<0.1

Table 2: Effect of the Ruling on the preferred relationship between Spain and Catalonia

VARIABLES	(1) More autonomy	(2) More autonomy	(3) More autonomy	(4) Independence
Ruling	0.153**	0.133***	0.211***	0.0518**
	(0.0577)	(0.0431)	(0.0723)	(0.0207)
Observations	1,199	960	960	960
R-squared	0.004	0.339		0.241
Comarca FE	NO	YES	YES	YES
Controls	NO	YES	YES	YES
Estimation	OLS	OLS	O-Probit	OLS
Average y	2.79	2.79	2.79	0.26

More autonomy: variable that takes values from 1 to 4 if the respondent prefers Catalonia to be a region (less autonomy than status-quo), Autonomous Community (status-quo), federal state (more autonomy than the status-quo), or independent state, respectively. *Independence*: dummy reflecting the respondent's preference for Catalonia to become an independent state. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. *Comarca FE*: comarca fixed effects. *Controls*: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (*educ.*); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. *Average y*: mean of dependent variable. *O-probit*: ordered probit estimation. The table reports the coefficient estimates of the ordered probit regression, while the marginal effects are shown in Figure 4. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors clustered at province-day of the interview level. All the reported estimates are also presented in Table A.3 in Appendix C.1.

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

Table 3: Effect of the Ruling on perceived problems

VARIABLES	(1) Probl (Most): eco-lab	(2) Probl (Most): financing	(3) Probl (Most): Cat-Esp	(4) Probl (Most): estatut
Ruling	-0.122**	0.00962	0.0814***	0.0660***
	(0.0476)	(0.00708)	(0.0198)	(0.0170)
Observations	970	970	970	970
R-squared	0.101	0.098	0.113	0.127
Comarca FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS
Average y	0.64	0.01	0.08	0.06

Probl (Most): eco-lab: dummy taking 1 if the interviewed mentions the unemployment, job insecurity, the functioning of the economy, or the low level of wages as the most important problem of Catalonia. Probl (Most): financing: dummy taking 1 if the interviewed mentions the Catalan financing system as the most important problem of Catalonia. Probl (Most): Cat-Esp: dummy taking 1 if the interviewed mentions the relationship between Spain and Catalonia as the most important problem of Catalonia. Probl (Most): estatut: dummy taking 1 if the interviewed mentions the Catalan Statute of Autonomy (estatut) as the most important problem of Catalonia. Ruling: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. Comarca FE: comarca fixed effects. Controls: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (educ.); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. Average y: mean of dependent variable. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors clustered at province-day of the interview level. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Effect of the Ruling on intention to vote for Catalan nationalist parties

VARIABLES	(1) Vote	(2) Past vote
Ruling	0.0608***	0.0428
	(0.0166)	(0.0392)
Observations	595	672
R-squared	0.280	0.212
Comarca FE	YES	YES
Controls	YES	YES
Estimation	OLS	OLS
Average y	0.54	0.47

Vote: dummy taking 1 if the interviewed has the intention to vote for Convergència i Unió (CiU) or Esquerra Republicana de Catalunya (ERC) at the next elections for the Catalan Parliament, and taking 0 if the interviewed intends to vote for another party (if the interviewed cannot vote, intends not to vote, or to conduct a blank or null vote this variable is coded as missing.). *Past vote*: dummy taking 1 if the interviewed voted for Convergència i Unió (CiU) or Esquerra Republicana de Catalunya (ERC) at the Catalan Parliament elections of 2006, and taking 0 if the interviewed voted for another party (if the interviewed cannot vote, did not vote, or conducted a blank or null vote this variable is coded as missing.). *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. *Comarca FE*: comarca fixed effects. *Controls*: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (*educ.*); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. *Average y*: mean of dependent variable. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors clustered at province-day of the interview level.

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

Table 5: Effect of the Ruling on the trust to democratic institutions

VARIABLES	(1) Trust: Courts	(2) Trust: Gvt Esp	(3) Trust: Parl Esp	(4) Trust: Gvt Cat	(5) Trust: Parl Cat	(6) Trust: Parties	(7) Insatisfaction democracy
Ruling	-0.327**	-0.218	-0.154**	0.0168	-0.00471	-0.248**	0.0658**
	(0.139)	(0.129)	(0.0610)	(0.0920)	(0.0838)	(0.118)	(0.0298)
Observations	961	991	973	996	971	987	989
R-squared	0.088	0.096	0.090	0.080	0.084	0.067	0.091
Comarca FE	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Average y	3.96	3.60	4.05	4.62	4.90	3.57	0.60

Trust: X: variable reporting how much the interviewed trust the following institutions from 1 to 10: courts (*Courts*), Spanish Government (*Gvt Esp*), Spanish Parliament (*Parl Esp*), Catalan Government (*Gvt Cat*), Catalan Parliament (*Parl Cat*), and political parties (*Parties*). *Insatisfaction democracy*: dummy taking 1 if the interviewed has small or no satisfaction with the functioning of the democracy, and taking 0 if the interviewed is enough or very satisfied. *Ruling*: dummy taking 1 for all observations interviewed after June 28th, 2010, at 19:00, and 0 otherwise. *Comarca FE*: comarca fixed effects. *Controls*: dummy reflecting whether Catalan was the language of interview; the respondent spoke only Catalan with family, at work, with friends; the respondent was born in Catalonia, the rest of Spain or outside Spain; the respondent's father was born in Catalonia, the rest of Spain or outside Spain; the respondent's mother was born in Catalonia, the rest of Spain or outside Spain; respondent's sex; the respondent is married; dummies for respondent's education (*educ.*); dummies for respondent's age; dummies for respondent's income; dummies for respondent's employment situation; dummies for respondent's city population. *Average y*: mean of dependent variable. All unanswered or unknown answers coded as missing values. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors clustered at province-day of the interview level. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Voting results in 2015

VARIABLES	(1) Share Indep.	(2) Turnout	(3) Share Indep.	(4) Share Indep.
Post 2010	0.0472***	0.145***	0.0641***	0.0299***
	(0.00260)	(0.00171)	(0.00343)	(0.00375)
Post 2010 X M.E. Ruling	0.0197	-0.00779	0.0621***	-0.0347
	(0.0163)	(0.0106)	(0.0209)	(0.0244)
Observations	3,784	3,784	1,900	1,884
R-squared	0.887	0.825	0.765	0.904
City FE	YES	YES	YES	YES
Sample	All	All	ERC-99 P50+	ERC-99 P50-
Estimation	OLS	OLS	OLS	OLS

Share Indep.: variable equal to the total number of votes for Convergència i Unió (CiU) and Esquerra Republicana de Catalunya (ERC) as a fraction of the total number of people who voted in the municipality for the election years 1999, 2003 and 2006; for the election year 2015 *Share Indep.* equals the total number of votes for Junts pel Sí (JxSí) and Candidatura d'Unitat Popular (CUP) as a fraction of the total number of people who voted in the municipality. *Turnout*: variable equal to the total number of people who voted as a fraction of the total number of people who can vote in the municipality. *M.E. Ruling*: marginal effect of the Ruling on support for independence estimated in the municipality. Using the CEO June 2010 survey *M.E. Ruling* is the heterogeneous effect of the Ruling according to the city size of the municipality and the province in which it belongs, after controlling for individual controls and dummies for the size of the municipality interacted with dummy at province level. We have matched the value for *M.E. Ruling* to each municipality using the number of potential voters in 2010. *City FE*: municipality fixed effects. *Sample: All*: all municipalities in Catalonia. *Sample: ERC-99 P50+*: municipalities in Catalonia in which the vote share of Esquerra Republicana de Catalunya in the Catalan elections of 1999 was higher than the median in Catalonia. *Sample: ERC-99 P50-*: municipalities in Catalonia in which the vote share of Esquerra Republicana de Catalunya in the Catalan elections of 1999 was lower than the median in Catalonia. Election years used: 1999, 2003, 2006, and 2015. Robust standard errors. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

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