

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 the exercise of checks and balances 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. We show that the increased support of the secessionist cause cannot be explained by the economic crisis or the political parties' strategies. Although cultural factors are a mediating mechanism, the diminished trust in institutional channels of accountability represents the main mechanism behind our result.

JEL Classification: D02, O12, O17, K4.

Keywords: Institutions, Checks and Balances, Supreme Court, Nation-Building, Ethnic identity, Conflict, Trust.

*CUNEF and INARBE. E-mail: acasas@cunef.edu

†CUNEF. E-mail: federico.curci@cunef.edu

‡CUNEF. E-mail: antoni.demoragas@cunef.edu

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1 Introduction

Multicultural democracies are a phenomenon present in most countries of the world.¹ Immigration, colonial heritage and the construction of multinational states has prompted the formation of countries with different degrees of ethnic, linguistic and regional cleavages. This diversity may have negative politico-economic implications, such as lower levels of public good provision, social cohesion and growth (Easterly and Levine, 1997, Alesina, Baqir and Easterly, 1999, Alesina et al., 2003, Easterly, Ritzen and Woolcock, 2006, and Desmet, Ortuño-Ortín and Wacziarg, 2016). To address these problems, countries have promoted nation building and fostered common national identity by means of various tools, ranging from compulsory education to military service, or even forced suppression of local identities (Alesina and Reich, 2015).²

The combination of ethno-linguistic cleavage and extractive institutions (à la Acemoglu and Robinson, 2012)³ is likely to jeopardize nation building through the emergence of subnational conflict. In particular, the lack of institutions to prevent abuses of executive and legislative powers against minority groups may be responsible for civil wars and ethnic cleansing, especially in developing countries.⁴ On the contrary, inclusive institutions promote democratic stability, growth and the protection of economic and political freedom (Acemoglu, Johnson and Robinson, 2001, and Acemoglu et al., 2019). In this context, it has been argued that institutions facilitate nation building (Alesina and Reich, 2015).⁵

In this paper we ask whether nation building efforts can also be undermined in multiethnic countries with inclusive institutions. One classic example of such an institution is the separation of powers, i.e., “checks and balances”, which are meant to prevent those abuses by making power-holders accountable, avoiding the tyranny of the majority and making conflicts between ethnic groups less likely. Furthermore, checks and balances restrain the power of subnational authorities in countries where power is decentralized within the states, possibly reflecting the existing ethnic-linguistic cleavage. Even in consolidated democracies, checks and balances may result in decisions that seem unfavorable

¹According to Alesina et al. (2003), the average number of ethnic groups per country in the world is 4.71, and only 23% of countries in the world have more than 90% of their population composed uniquely by members of the same ethnic group.

²In 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".

³Extractive institutions concentrate the power in the hands of a few without constraints or checks and balances. In particular, they “...provide no checks and balances against abuses of power.” (page 690). On the contrary, inclusive institutions place constraints and checks and balances on power holders.

⁴Extensive literature is reviewed in Blattman and Miguel (2010).

⁵Many previous studies use nation building and state building interchangeably (Alesina and Reich, 2015). An additional argument for the link between state capacity and nation building is provided by (Alesina, Reich and Riboni, 2017) for the case of warfare. As shown in Besley and Persson (2009) and Gennaioli and Voth (2015), wars give rise to state building because states need to create effective institutions to tax the population to fund military spending. (Alesina, Reich and Riboni, 2017) argue that in this context, governments provide common goods and nation building policies to make the population accepting of the war.

to one specific group, which can erode the trust in those institutions and exacerbate the existing cleavage. This backlash may undermine nation building efforts.

In particular, in this paper we study whether the exercise of checks and balances may generate a backlash against nation building efforts in multiethnic countries. We study the case of Catalonia in Spain, where the support for Catalan independence more than doubled in the aftermath of an important and unprecedented ruling about the constitutionality of the Catalan Statute of Autonomy. Spain provides an interesting setting to explore how even sound institutions, in particular, rulings of a Supreme Court, influence nation building and political stability for several reasons. Spain is a multilingual country with historically significant ethno-linguistic cleavages and secessionist movements.⁶ Franco's dictatorial regime attempted to homogenize the population by, among other things, the prohibition of local languages in public administration, schools and universities (Preston, 2007). After his death in 1975 and the subsequent reinstatement of a democratic regime, Spain is now the fourth largest economy in Europe, with a strong index of democratization.⁷ Notably, in its constitution, Spain recognized the rights of its different "nationalities" to form regional governments and use languages different from Spanish. In 2006, the Catalan and Spanish parliaments approved a reform of the Catalan Constitution (the *Estatut*) which included – among other fiscal benefits– a higher degree of decentralization. The text of the new Constitution, endorsed by a referendum in Catalonia where almost eighty percent of the voting population voted yes, was partially ruled unconstitutional by the Spanish Constitutional Court in 2010. Subsequently, between 2010 and 2012, support for Catalan independence increased from 23% of the population to a record high of 48% in June 2012. After 2012, the secessionist movement grew significantly, and in 2017, the president of Catalonia called for an independence referendum, which was declared illegal by the national authorities. As a consequence of the referendum, electoral violence ensued, independence was declared (and revoked) and many Catalan politicians were sentenced to prison.

In this paper, we provide causal evidence on how rulings of supreme courts that are perceived as unfavorable along an ethno-linguistic cleavage can spur a secessionist movement and decrease nation building. Identification of this effect is particularly challenging since the sudden increase in support for Catalan independence coincides with other important economic and political events, in particular, the Great Recession.⁸ We exploit a

⁶According to data from the 2016 Survey on the Participation of Adult Population in Learning Activities conducted by the Spanish National Institute of Statistics (*INE*), 89.8% of the adult population in Spain speaks Spanish as their mother tongue and 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. Basque, Catalan and Galician nationalism emerged between late XIXth and early XXth centuries.

⁷According to the 2018 Economist Intelligence Unit's Democracy Index, Spain is considered to be a "full democracy", with an index of 8.08/10, ranking number 19 in the world. Spain has also consistently obtained the ranking of "Full Democracy" according to the polity scores granted by the *Center for Systemic Peace*, obtaining the maximum grade for democracy (10 out of 10) and the lowest for autocracy (0 out of 10) since 1982.

⁸The Spanish financial and banking crisis was particularly severe. Real GDP growth in 2009 was -3.6%, the unemployment rate skyrocketed to 26.3% in 2013, and one of the largest banks, Bankia, was

survey design to identify the effect of the ruling on the Catalan Constitution. The timing of the verdict of the Constitutional Court, which occurred during the survey, generates a quasi-random assignment of respondents to the treatment group; that is, we compare survey respondents, with similar observable characteristics, interviewed before and after the ruling. Our identification assumption is that, conditional on observable characteristics, the day on which a respondent was interviewed does not depend on their potential support for secession.⁹

Following this strategy, we investigate whether the Court’s decision affected the support of Catalans for independence. We show that the ruling of the Spanish Constitutional Court regarding the contents of the Catalan Constitution created or ignited an otherwise dormant support for Catalan independence. As a result of this verdict, support for independence increased by approximately 20%.¹⁰ The magnitude of the increase in support for secession after the ruling is almost four times higher than the previous yearly increase. We show that 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 those who speak Catalan socially was twice as much as the average. Moreover, we 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.

We not only quantify the effect of the ruling but also explore the mechanisms behind it. We show that there are two channels through which the ruling affected the support for independence: institutional and cultural identity. Regarding the former, trust in institutions of checks and balances, in particular, trust in courts, decreased by 10%. Additionally, the satisfaction with democracy experienced a similar decrease. We argue that the ruling was perceived as unfavorable by a portion of the population,¹¹ and as a result, trust of national institutions and democracy decreased.

Regarding the identity channel, after a perceived unfavorable ruling at the national level, Catalans were less associated with the national identity. The increase in local identity, over national identity, can explain the increase in support for secession. We provide evidence for this channel, as we show that after the ruling, respondents increased their reports of being identified as Catalans by 20%. By comparing the institutional and

nationalized in 2012. Spain also suffered considerable corruption scandals during that period: the *Nóos* case accused the son-in-law of the then-Spanish king of fiscal fraud, the *Bárceñas* and *Gürtel* cases accused the Popular Party and some of its party members of benefiting from an illegal kickbacks-for-contracts scheme, and the *Púnica* case accused politicians of the same practice. In 2011, there was also a change of parties in government from the Socialist Party to a more centralist party, the Popular Party.

⁹We rely on the fact that a computer randomly selected respondents. We include additional observable characteristics and impose sample restrictions to mitigate the concerns of nonrandom selection into the survey. We discuss our identification strategy in detail in Section 3.2.

¹⁰Our 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.

¹¹We find that the number of people reporting the Catalan Statute of Autonomy as the most important problem of Catalonia increased after the ruling.

cultural channels, we provide suggestive evidence that the increase in feeling Catalan is mediated by the institutional mechanism.

Among other potential mechanisms, we discard the possibility that our main effect is driven by economic (decentralization, fiscal benefits, etc.) or partisan channels. Following the Great Recession, and amidst the greatest Spanish economic crises in democracy (26.3% unemployment at the peak), “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. We discard the partisan channel, as we show that the ruling did not change intention to vote for any party.

While the short span of the survey allows us to identify the immediate effect of the ruling, it prevents us from using the same strategy to estimate the long-term impact of the ruling of the Spanish Constitutional Court and its effects on tangible outcomes. To address these issues, 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.¹²

1.1 Literature review

This paper contributes to several areas of the literature. The first is the literature on nation building and identity formation, which highlights the reasons for which a government may want to homogenize the population and promote nation building. Alesina and Reich (2015) and Alesina, Giuliano and Reich (2019) argue that nondemocratic regimes have incentive to foster nation building when the threat of democratization could overthrow the establishment. Alesina, Reich and Riboni (2017) provide different reasoning for the case of nations at war. Countries have incentive to homogenize the population as a way to motivate the population to enroll in the army and instill patriotism.

Another strand of the literature focuses on policies and events that can boost nation building. Particular attention 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 pure nation-building strategy. Clots Figueras and Masella

¹²In order to conduct this exercise, we first predict, based on the 2010 survey wave, 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 Diff-in-Diff 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.

(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 Spanish to Catalan (Basque) language had an effect on self-identification as Catalan (Basque) and also on political preferences. For instance, those educated in Catalan are more likely to report voting for Catalanist parties and to support Catalan independence. In our paper, we provide a different reason to explain the increase in Catalan secessionism. Distrust in Spanish institutions, caused by a ruling of the Constitution Court, increased Catalan identity and support for Catalan independence. Fouka (2019) shows that foreign language prohibition in U.S. schools increased the sense of cultural identity of minority groups. In our paper, we also identify a cultural backlash, though the cause is not the implementation of a policy but its reversal through a ruling.

Other notable determinants of nation building are wars and conflicts (Dehdari and Gehring, 2018, Dell and Querubin, 2017 and Alesina, Reich and Riboni, 2017) and other shared collective experiences, such as national victories in sport competitions (Depetris-Chauvin, Durante and Campante, 2018). We exploit an identification strategy similar to the one used in Depetris-Chauvin, Durante and Campante (2018), as they exploit the fact that national victories of African selections occurred during a survey.¹³

We contribute to the literature on nation building by studying an unexplored determinant of the failure of nation building linked to the system of checks and balances in states where power is decentralized. In particular, nation building is undermined when national institutions make decisions that are perceived to be unfavorable by a specific group. Our results underline the crucial importance of trust in institutions for successful nation building.¹⁴

Second, our paper contributes to the literature on support for secession. In addition to cultural issues, economic and institutional arrangements may affect the prevalence of secession movements.¹⁵ Bolton and Roland (1997) find that secessions occur when the income distribution varies between regions and the gains from unification are small. Trade and market integration may result in demand for increased regional independence (Feinstein and Casella, 2002). Alesina and Spolaore (1997) argue that democratization may cause an inefficiently large number of secessions. Similarly, 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. Nonetheless, the greater availability of resources may also increase the probability of success (if attempted).

Desmet et al. (2011) associate the likelihood of secession to the trade-off between cultural heterogeneity and public good provision. More generally, the economy may affect

¹³Another paper exploiting sudden events amidst a survey to identify exogenous changes on individual attitudes is Jakiela and Ozier (2019).

¹⁴Similarly, Almagro and Andrés-Cerezo (2019) argue that homogenization attempts can also be constrained by the emergence of political unrest, electoral competition and historical conditions.

¹⁵As argued in Sorens (2005), there are few systematic empirical analyses of cross-country determinants of secession.

the existence and prevalence of secessionist movements within a single state (Collier and Hoeffler, 2006; Acemoglu and Robinson, 2001) and can also increase the demand for withdrawal of a state from a supranational political and economic union, as in Fetzer (2019), who study the relationship between austerity measures and Brexit. We shed light on this issue by showing that the increase in support for independence in Catalonia due to the ruling of the Spanish Constitutional Court was not mediated by a change in economic conditions but by a decrease of trust in national institutions and democracy.

Third, this paper contributes to the literature on checks and balances and separation of powers. Since James Madison and Montesquieu, separation of powers has been seen as a mechanism to restrain a person holding office. For instance, the tyranny of the majority can be avoided by a judge who declares an expropriating law or decree to be unconstitutional. 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. Using cross-sectional data, Streb, Lema and Torrens (2009) show that checks and balances smooth political business cycles, and Keefer and Knack (2007) argue that limited checks and balances – among other things– result in greater public investment “as a vehicle to increase rent-seeking”.

On the other side of the coin, political economists have begun to highlight the trade-offs of this type of accountability. For instance, Acemoglu, Robinson and Torvik (2013) argue that checks and balances decrease the politicians’ rents, which makes lobbying easier: it is less expensive for the elite to bribe politicians. Hence, voters may want to eliminate (or weaken) such measures. Gratton and Morelli (2018) and Forteza and Pereyra (2019) argue that these mechanisms may slow the implementation of reforms and, therefore, growth.¹⁶ We highlight a novel unintended consequence of the exercise of checks and balances. When judicial reviews constrain the action of a subnational power that partially coincides with an existing ethno-linguistic cleavage, they can decrease trust in institutions and fuel a secessionist movement that puts institutional stability at risk.

Finally, we contribute to the literature on the effects of Supreme Court verdicts on political attitudes. Two theories explain the effect of courts on public opinion. The legitimacy theory (Ura, 2014, and Stoutenborough, Haider-Markel and Allen, 2006) argues that public opinion shifts toward the position taken by the court.¹⁷ Hoekstra (2000) argues that, to have any influence on public opinion, salience is a requisite (either due to media coverage or being locally affected). The opposite theory (called “thermostatic”) refers to public opinion backlash against the ruling made by the Supreme Court. The results of our paper provide additional evidence for this theory. Mondak and Smithey

¹⁶Some scholars have also studied the interaction of vertical and horizontal accountability. Persson, Roland and Tabellini (1997) argue that checks and balances between the executive and legislative branches provide information to voters to exercise their vertical accountability. A more “negative” type of complementarity arises in Alesina and Rosenthal (2000), who argue that these two branches may interact to cause polarization of party policies.

¹⁷The legitimacy theory is consistent with Aksoy et al. (2020) and Ofosu et al. (2019), 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.

(1997) summarize the literature and argue that Supreme Court decisions are mostly congruent with public opinion and that influence the support of the institution, especially those that are incongruent. Finally, they argue that trust in the institution “regenerates” over time. Overall, these studies show a positive correlation between public opinion and Supreme Court decisions.¹⁸ We contribute to this literature by presenting the causal effect of a ruling on political attitudes, exploiting an identification that relies on an event that occurred during a survey. 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 influences both political attitudes and trust in institutions.

The remainder of this paper is organized as follows: Section 2 discusses the institutional background in detail. Section 3 explains the econometric strategy and the data. In Section 4, we present the main results and the mechanisms behind them. We discuss the long-term effects of the ruling on political outcomes in Section 5. Finally, we conclude in Section 6.

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 year 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*.¹⁹

The monarch is the head of state, but, 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 are elected by universal suffrage for a maximum of four years, in representation of the provinces. Deputies elect the president for the duration of their mandate.²⁰

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

¹⁸When 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 a change in opinions, for instance.

¹⁹While provinces are political units formed of many municipalities, *comarcas* are a geographical aggregation of municipalities. Many *comarcas* form a province.

²⁰The names and attributes of the elected politicians do not coincide with other democracies: Deputies in Spain have similar attributes to Senators in other countries (i.e., the U.S.), and the president is typically named Prime Minister in most parliamentary democracies.

Court. The Constitutional Court is composed of twelve members. Formally appointed by the King, four are nominated by the Congress and four by the Senate, two are nominated by the Government and two by the Judiciary branch.²¹ No appeal may be brought against ruling of the Constitutional Court.

Since the return of democracy, the Spanish Government has alternated between two main national parties. While 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 creation, 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 occasionally has allowed them to shift the majority of congress towards one of the main national parties.

The regions Similarly 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 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 confederation, so the Autonomous Communities have less independence than do 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 otherwise are handled by the National State). 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 any other Spanish law, the reform is subject to rulings of the Constitutional Court regarding its constitutionality.²²

²¹Members 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 ruled upon the Catalan Constitution are in Appendix C.6.

²²According 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.

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, by 89% of the votes, a reform 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. The final version of the text was approved in a referendum in Catalonia on June 18, 2006. 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 28th 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 region and ruled regional powers over courts and judges to be unconstitutional.²³ 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) has been not only massive but also sudden. Among other things, such 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 2012.²⁴

²³Other articles affected by the ruling center on decentralization of bank regulations, the possibility to create new taxes at the local level, and the need to participate in the national mechanism of solidarity between autonomous communities only *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>.

²⁴The share of respondents (of those asked the question) who prefer that Catalonia becomes independent was 23% in April 2010, 26% in June 2010, and 48% in June 2012. The share of respondents (of all people interviewed) who prefer Catalonia to become independent was 22% in April 2010, 24% in June 2010, and 44% in June 2012. These statistics use data from the *Catalan Centre d'Estudis d'Opinió* (CEO). The Spanish *Centro de Investigaciones Sociológicas* (CIS) asks a question on the territorial preferences of Spanish citizens, where the choice of secession is presented differently: “A state where autonomous

[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 governed the region from 1980 to 2003, whose main faction (Democratic Convergence of Catalonia, CDC) 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.²⁵

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 28th 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.

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 have data about 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, self-assessed most important problems in Catalonia), among other characteristics.

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%.

²⁵The interested reader can find a more detailed exposition of the events related to Catalan secessionism after 2015 in Appendix A.

The main outcome variable of interest is the question regarding the preferred relationship between Catalonia and the Spanish central administration. The possible answers (besides “no answer” and “don’t know”) are coded into four categories. Ordered from less to more decentralization, 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.²⁶ In the June 2010 survey, support for independence was 26%. Summary statistics for the independent variables and other dependent variables are discussed in Section 3.3 and Appendix B, respectively.²⁷

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.

3.2 Econometric strategy

We are interested in estimating the effect of the Ruling on individual political attitudes (Y_i).²⁸ 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,²⁹ and GEO_i are dummies for the respondent’s city population and geographical (comarcas) fixed effects.³⁰ We define ϵ_i as the residuals. We define the potential outcomes as $Y_i(0)$ and $Y_i(1)$ for the control and

²⁶The 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. Since we are using region to refer to Catalonia, we translated the word differently to avoid confusion.

²⁷The 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 summary statistics of the controls used in our regressions, summary statistics of the dependent variables, and summary statistics of the preferred institutional relationship between Spain and Catalonia according to past vote, respectively.

²⁸We use different dependent variables: preferred institutional relationship between Catalonia and Spain, trust in political institutions, intention to vote, cultural feelings and problems that are considered to be most important.

²⁹The 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 respondent’s education; dummies for respondent’s age; dummies for respondent’s income; and dummies for respondent’s employment situation.

³⁰We 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.

treated groups, respectively, and estimate the following Model 1:

$$Y_i = \alpha_1 + \beta_1 Ruling_i + \gamma_1 X_i + GEO_i + \epsilon_i, \quad (1)$$

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 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.³¹ 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.³² 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).

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.³³

Because similar unexplained factors might affect the dependent variable on a particular day, the errors ϵ_i can be correlated. To limit this inference problem, we cluster standard errors at the level of the day of the interview.

Moreover, we also examine 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 $Ruling$.

³¹Figure A.3 in Appendix C.2 shows that our results are robust when using respondents interviewed after 7 pm and using the full sample.

³²The 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.2 in Appendix C.2 shows the main results with longer windows across days, up to the full sample, and provides evidence of the robustness of our results.

³³In Appendix C.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, even without the inclusion of geographical fixed effects.

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 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]

People interviewed before and after the Ruling do not 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 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 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 front-page news of newspapers and TV news. Figure 2 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 4.1, we show that the Ruling caused a significant increase in the number of respondents that consider the Statute of Autonomy to be the most important problem in Catalonia.

[INTRO FIGURE 2]

Anticipation and confounding 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. The first meeting of the Constitutional Court for the final

ruling occurred on June 28th. Although respondents may have anticipated a ruling in the coming weeks, the exact day 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. Google searches about the Catalan Statute of Autonomy, as shown in Figure 2, skyrocketed after the ruling occurred, confirming the absence of anticipation effects.

We cannot discard completely the presence of collateral events triggered by the Ruling that could affect our treatment group. For example, a demonstration against the Ruling was convoked on July 10th, 2010; however, this demonstration was after the interviews ended and therefore cannot affect our estimates.³⁴ 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.³⁵

The sudden increase in support for Catalan independence coincides with other important economic and political events: the financial and banking crisis that began 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.

3.3.1 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.³⁶ In Appendix C, we present the list of potential additional threats and provide several pieces of evidence in favor of our identification assumption.

In particular, in Appendix C.1 we show additional balancing tests. In Appendix C.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 C.3). We show that there is no significant difference in nonresponse rates before and after the Ruling and provide additional robustness evidence in Appendix C.4. We rule out that our results are driven by other confounding events in C.5. In addition, we show different falsification tests using the same wave of the survey and other waves. Appendix C.6 discusses the potential political influence of political parties on the Ruling

³⁴The last day of interviews was July 8th, 2010.

³⁵In Section 4, we rule out this potential mechanism, as it is not reflected in changes in voting or sympathy toward parties.

³⁶A 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 credibility of the estimates, addressing each of the identification issues.

and provides evidence that our results are not driven by this channel. Finally, in Appendix C.7, we address the possible problems associated with econometric misspecification and present estimates using binary and discrete choice models, as well as different levels of clustering of the standard errors (including bootstrapped s.e. and interactions of day of the interview with different regional definitions).

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 support for independence. 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 4.1, we discuss the mechanisms behind the main effect.

Baseline effects: We first show in Table 2 that the Ruling had a causal effect on support for independence. Column (1) shows that the unconditional effect of the Ruling on support for independence in Catalonia was 4.5 percentage 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 independence in Catalonia 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 increase in support for secession due to the ruling – 5.2 percentage points – was almost 4 times higher than the previous yearly increase.

We now compare the effect of the Ruling across different forms of government for Catalonia: independence, federal state, Autonomous Community (status-quo), and region (less autonomy). The results are reported in columns (2) to (5) of Table 2 and graphically in Figure 3. Ordered from less to more centralization, Figure 3a shows a cascade effect in which “Region” loses support to all other possibilities. In fact, after the Ruling, 3.4% fewer respondents prefer Catalonia to be a region, while there is no significant effect of the Ruling on preferring Catalonia to be an Autonomous Community (status quo) or a federal state within Spain.³⁸

[INSERT FIGURE 3]

³⁷Support for independence in July 2006 was 16%.

³⁸A possible explanation for these results is that people who previously preferred Catalonia to be a region now prefer Catalonia to be an Autonomous Community or a federal state within Spain, while people who previously preferred Catalonia to be an Autonomous Community or a federal state now prefer Catalonia to be an independent state.

Figure 3b summarizes how individual characteristics correlate with support for independence, as is also shown in column (2) of Table 2. Notably, besides the Ruling, the main variables with a significant effect on support for independence are related to cultural factors, i.e., the respondents speak Catalan with friends or their mother is not born in the rest of Spain. We also find a statistically significant coefficient at the 10% significance level of having a monthly net income of less than 1,000 euros per month.

Heterogeneous effects: Based on the previous results, we explore heterogeneous effects of the Ruling, depending on identity signs, such as the use of the Catalan language socially and family heritage, among other socio-demographic and socio-economic characteristics. The results are shown in Table 3 and, graphically, in Figure 4.

[INTRO TABLE 3]

[INTRO FIGURE 4]

Columns (1) to (5) of Table 3 present all the heterogeneity results along cultural variables. While the regions of birth of the respondent and his/her mother do not affect the reaction to $Ruling_i$, the father's place of birth appears to be relevant. If the father was born in Catalonia, support for independence increases 11 percentage points after the sentence, while if he was born in the rest of Spain, the Ruling has no effect. The effect of $Ruling_i$ among those speaking Catalan socially is 13 percentage points larger than among those who do not.

While cultural identity is a large determinant of the change in support for independence, socio-demographic and socio-economic characteristics are also relevant. Columns (6) to (8) of Table 3 show the heterogeneity results along socio-demographic variables. A differential effect is observed for older individuals (more than 50 years old), whose support for independence changes by 20 percentage points more than that of the youth, and for married people (13 percentage points). Columns (9) to (11) of Table 3 show the heterogeneity results along socio-economic variables. The effect of $Ruling_i$ 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 20 percentage points. Despite being in a crisis period, whether the respondent is unemployed, self-employed or employed does not introduce heterogeneity into the effect of $Ruling_i$.

Polarization: While Figure 3a suggests that the territorial preferences of Catalan citizens did not become more polarized after the Ruling, it does not rule out other possible polarization mechanisms. Given that before the Ruling voters of the Popular Party were voters with lower support for decentralization,³⁹ we study whether the Ruling increased

³⁹If 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 are presented in Table A.2 in Appendix B.

this divide. In Table 4, we show that the Ruling increased the distance between the preferred State organization of voters of the Popular Party and that of the remaining Catalans.⁴⁰ Among voters of the Popular Party, the Ruling had no effect on support for secession and actually increased support for region. Moreover, voters of the Popular Party also decreased their support for a federal state. Nonetheless, for voters of other parties, the Ruling increased support for secession and reduced support for region. In summary, the Ruling increased support for centralization of voters of the Popular Party and increased support for decentralization among other voters.

[INSERT TABLE 4]

4.1 Potential mechanisms

In this section, we examine the channels that could explain the effect of the Ruling on the change in support for independence. We consider four possible mechanisms: economic, partisan, cultural, and institutional channel, which is related mostly 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 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,⁴¹ and the economy.⁴² Then, we analyze whether economic problems are reported to be the main problem or a problem at all.

Table 5 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 Catalan financing system is more often reported as a problem as a consequence of the Ruling, but the intensity does not change; that is, the likelihood of reporting fiscal federalism as the most important problem does not change. Moreover, the reported problems with the greatest effects are

⁴⁰A discussion of the heterogeneous effect of the ruling on voters of the remaining parties can be found in Appendix D.

⁴¹The survey administrators code references to centralized taxes into this category. The results corresponding to this subcategory must be interpreted carefully since there are only sixty-six individuals who reported this issue as a problem. Figure A.10 in Appendix E.1 shows that the financing system was not a salient issue in 2010.

⁴²Economics problems include unemployment and low-quality employment, low wages, and functioning of the economy.

political: the relationship with Spain and the Catalan Constitution, in particular, the Statute of Autonomy.

[INSERT TABLE 5]

We can not only discard the economic channel but also argue that the Ruling decreased the salience of economic issues during a large recession. Table 5 shows that the Ruling reduces the probability of reporting the economy as a problem by 9 percentage points (column (4)) and reduces the probability of the economy being reported as the main problem by 12 percentage points (column (8)).

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 on which party stands for (“demand-driven”). An alternative justification is that political parties react to the Ruling and attempt to influence voter preferences (“supply-driven”).⁴³

If the demand-driven channel was present, we would expect a change in support for secessionist parties after the Ruling. In Table 6, we examine the effect of the Ruling on intention to vote, past vote and proximity to the two main Catalan nationalist parties, ERC and CiU. None of the coefficients is economically or statistically significant; hence, we can discard the demand-driven partisan channel.

[INSERT TABLE 6]

We provide several pieces of evidence 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 5 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.⁴⁴ 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 2012.⁴⁵ Third, if these strategies were successful to be, we might observe an increase in the intention to vote for parties promoting them. However, as shown in Table 6, we do not observe any increase in the intention to vote or proximity towards any Catalan nationalist party.

[INTRO FIGURE 5]

⁴³See for example, Dinas, Hartman and van Spanje (2016).

⁴⁴In Appendix G, we provide evidence that the effect of the Ruling is persistent, even in posterior waves of the political survey. In Appendix C.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 take longer windows around the ruling (by increasing the observations in the sample), we do not observe a larger effect of the Ruling.

⁴⁵As reviewed in Section 2, CiU transitioned formally towards independentism in 2012.

Cultural identity: The literature on secessions argues that identity is one, if not the main, determinant of “intention to secede”.⁴⁶ Hence, we investigate whether self-identification with Spain, Catalonia, or both changes after the sentence. 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. Coded from 1 to 5, we call this variable “Feeling Catalan”. The average effect of the Ruling on this variable is 8 percentage points, as reported in column (1) of Table 7.⁴⁷ Figure 6 and column (2) of Table 7 show the predicted values for the effect of the Ruling for each possible respondents’ self-identification, estimated using an ordered probit regression. Notably, the effect of the Ruling is an increase in cultural identification with Catalonia, i.e., categories (i) to (iii) decrease in favor of (iv) and especially (v). Self-identification as “only Catalan” increases 2 percentage points and “more Catalan than Spanish” increases 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.

[INSERT TABLE 7]

[INSERT FIGURE 6]

These results are in line with our previous findings regarding the use of Catalan language socially and its heterogeneous effects. Hence, there appears to be 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 mediated by distrust in institutions: the executive, legislative and the judiciary. We pay especial attention not only to trust in courts but, more generally, to satisfaction with 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,⁴⁸ many Catalans might have seen the Ruling as unfavorable.⁴⁹ This factor could potentially decrease trust in institutions, in particular, the Constitutional Court. The delegitimization of institutions may have strengthened preferences on 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 in the referendum and its reform

⁴⁶For 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.

⁴⁷Notably, 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 just a clarifying (and cautionary) note.

⁴⁸The reform of the Statute of Autonomy had the approval of 80% of Catalan voters in the 2006 referendum.

⁴⁹In fact, in previous results in Table 5, we show that more Catalans reported the Catalan Statute of Autonomy as the most important problem of Catalonia.

and appeal followed all procedural rules, the functioning of democracy as a whole may be questioned.

Table 8 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 courts and the Spanish parliament, which were the active players in charge of the checks and balances.⁵⁰ Trust in courts and in 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 through limiting greater economic decentralization. In Table 5, 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 8]

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. 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%).

Comparing the mechanisms: The analysis in this section indicates that the economic and partisan channels do not explain the effect of the Ruling on independence.⁵¹ Similarly, we find evidence of the positive effect of the Ruling on Catalan identity and on distrust in the institutional channels of horizontal accountability across branches. One would like to categorically answer which factor was the most determinant of the final effect on support for independence.

Constrained by the limitations of our case study, we argue that the institutional channel may have been dominant. Table 9 provides correlational evidence: while the effect of the Ruling on trust in the court is unaffected when controlling for the index of Catalan feelings, the opposite is not true. That is, the effect of the Ruling on Catalan feelings disappears, in terms of statistical significance, when trust in the court is taken into account. Under the strong assumption of trust in institutions being a good control in column (5) of Table 9, we could say that the Ruling has only an indirect effect on cultural identity, mediated by trust in institutions. That is, changes in trust in institutions due

⁵⁰This finding is consistent with 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.

⁵¹Furthermore, in Appendix E.2, we discuss and rule out an alternative mechanism, that is, the role of Catalan television.

to the Ruling affect the way that Catalans feel about their identity.⁵²

[INSERT TABLE 9]

5 Persistence and voting outcomes

In this section, we estimate whether the change in individual support for independence translated into political action in a persistent manner. The ideal case study is the 2015 Catalan elections, which were presented as a plebiscite for independence by the Catalan nationalist parties. 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.⁵³ 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.

In the 2015 Catalan election, the two main secessionist parties (CiU and ERC) presented a common list called “Junts pel Si” and promised to declare the independence of Catalonia within 18 months if they obtained the majority of seats in Parliament. Unsurprisingly, 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.

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,⁵⁴ 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.

$$Y_i = \alpha_2 + \beta_2 Ruling_i + \gamma_2 X_i + PROVI \times SizeMun + \lambda_2 Ruling_i \times PROV_i \times SizeMun + u_i, \quad (2)$$

⁵²Additional analysis of the relative importance of each of the mechanisms is provided in Appendix E.1, where we replicate the results in Table 9 by additionally controlling for how much people considered the Catalan financing system to be a problem.

⁵³Using data from other survey waves, Appendix G 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.

⁵⁴City 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 ($\widehat{ME}_{ps} = \widehat{\beta}_2 + \widehat{\lambda}_2 \times PROVI_{i(p)} \times SizeMun_{i(s)}$).⁵⁵ 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}).⁵⁶ We estimate the correlation between voting behavior in the 2015 election and changes in preferences due to the Ruling by estimating Model 3:

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

That is, we estimate a Diff-in-Diff 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 for 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 10. Although we do not interpret our results as causal, Appendix F shows evidence of parallel trends for voting shares in the pretreatment period. We also use turnout rates, that is, the proportion of voters to potential voters, as a dependent variable.

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 10 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 10]

To study polarization of voting behavior with respect to independence, we split the sample according to historical support for secessionist parties and look at those with historical support that is 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, 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 and less historically secessionist, respectively.

The Ruling increased the vote share of secessionist parties in places where secessionist

⁵⁵The results with the geographical heterogeneity of the effect can be found in section F of the Appendix.

⁵⁶Popular Unity Candidacy (CUP) is a left-wing party that also supports independence of Catalonia. They have run in Catalan elections only since 2012. Therefore, we impute their vote share before 2012 as 0. In Appendix F, 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.

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 did a city with no change in preferences due to the Ruling. This effect is not explained by turnout.⁵⁷ 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.

6 Concluding remarks

In this paper, we exploit an unprecedented ruling on a subnational constitution to understand the unintended consequences of checks and balances on nation building in states with ethno-linguistic cleavages. 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, etc.), 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 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. In particular, we have shown that counter-majoritarian bodies of decision – e.g., the Constitutional Court – may result in outcomes that can be considered negative by a large group of the population. As a consequence, when these groups can gather around a defined identity, collective action around the issue ruled upon may be detrimental to the construction of a shared national identity.

⁵⁷The results of turnout can be found in Appendix F. Additionally, the Appendix provides evidence of voting flows between secessionist parties.

The Spanish setting is particularly appealing for studying this mechanism because power is decentralized within the state, and this decentralization coincides with existing ethno-linguistic cleavages. However, we expect this mechanisms to apply in other contexts, even without a clear geographical divide, when a specific group can easily identify themselves as being commonly hurt. Along the process, we took an agnostic view of the legal competence of the court, and we argue that what is fundamental is that the decision is perceived as unfavorable by some group.

Another take-away of this study is the importance of the legitimacy of the Court when it rules against a decision that had been legitimized not only through the majority of the Parliament but also by a referendum. One may ask if the reaction would have been the same if none of the members of the Court was out of term or if the Court had intervened before the ratification of the ruling in 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 failures of nation building and awakening of ethno-linguistic 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 one) and distrust in national institutions increased due to the Ruling and prompted an 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 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 raising populism, new identitarian cleavages may become more salient. If these cleavages are somehow constrained by checks and balances, there is a possibility of backlash and deepening of those identities: overcoming them may become a new challenge of strong democracies as well.

6.1 Figures and Tables

6.1.1 Figures

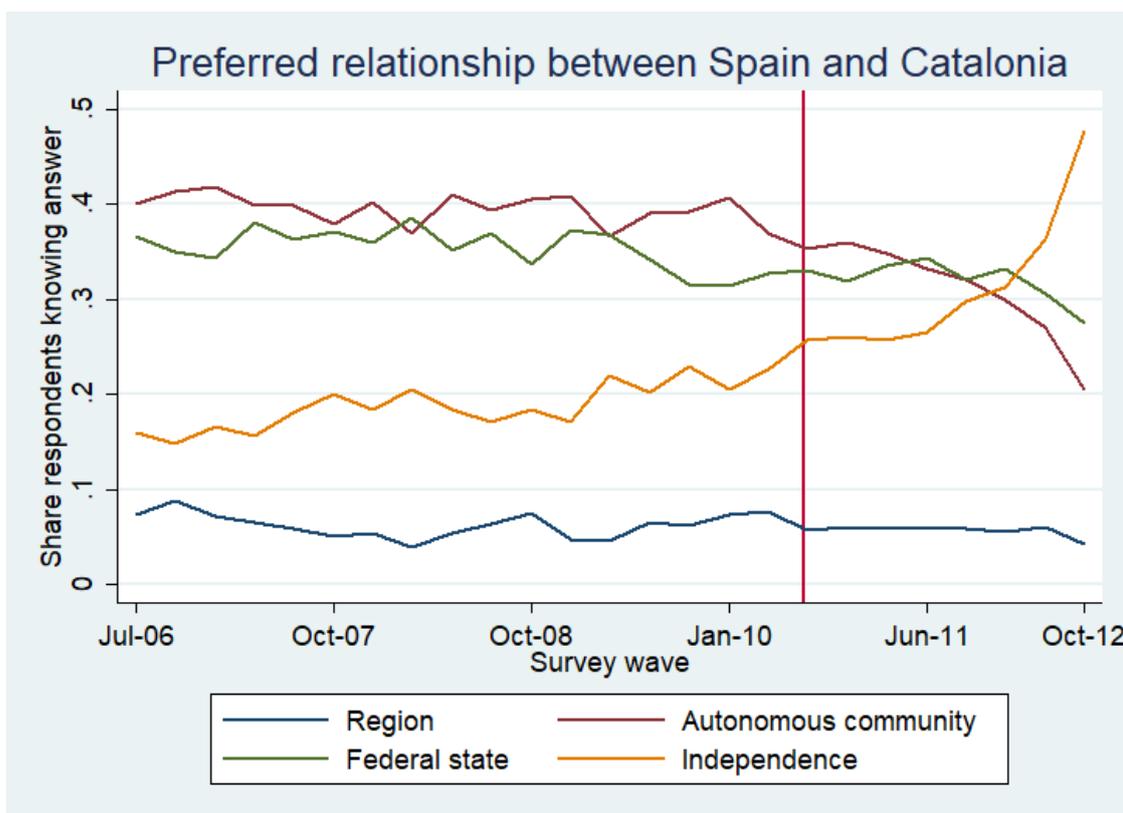


Figure 1: Time series of the support for independence in Catalonia

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 than 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*.

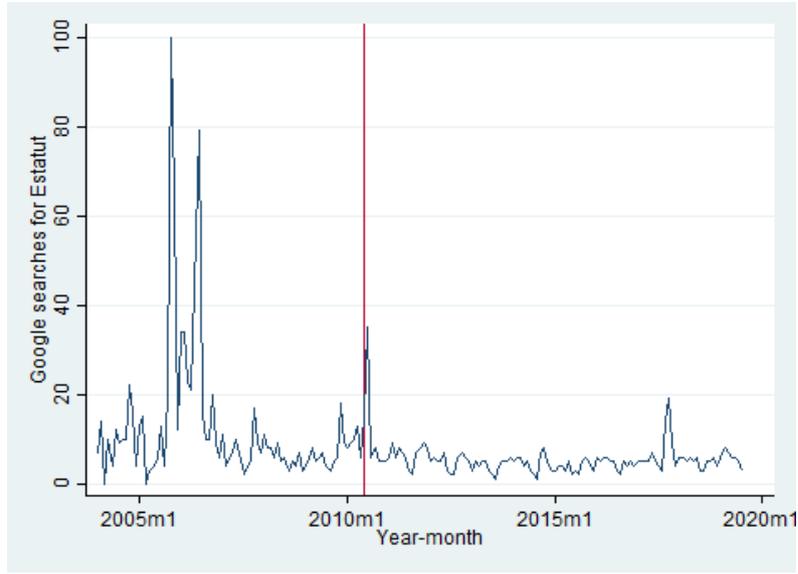
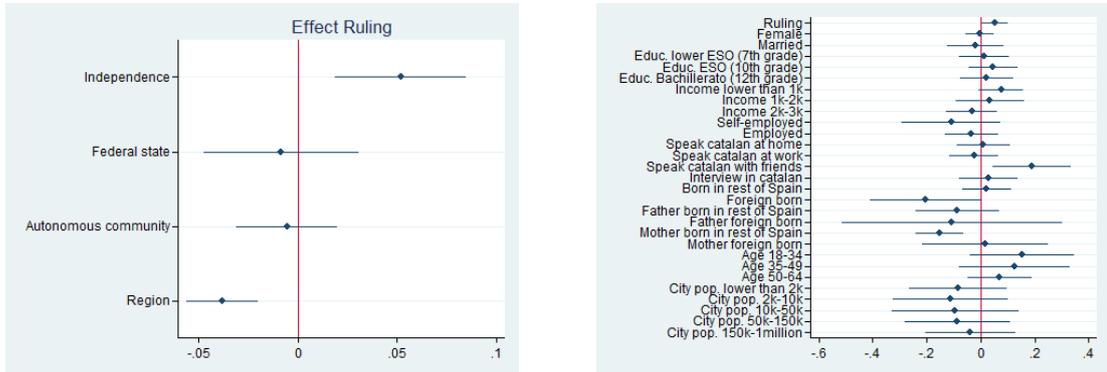


Figure 2: Google searches for the word "Estatut"

Source: Google Trends. Searches in Catalonia only. Red line: June 2010. Maximum value normalized to 100.

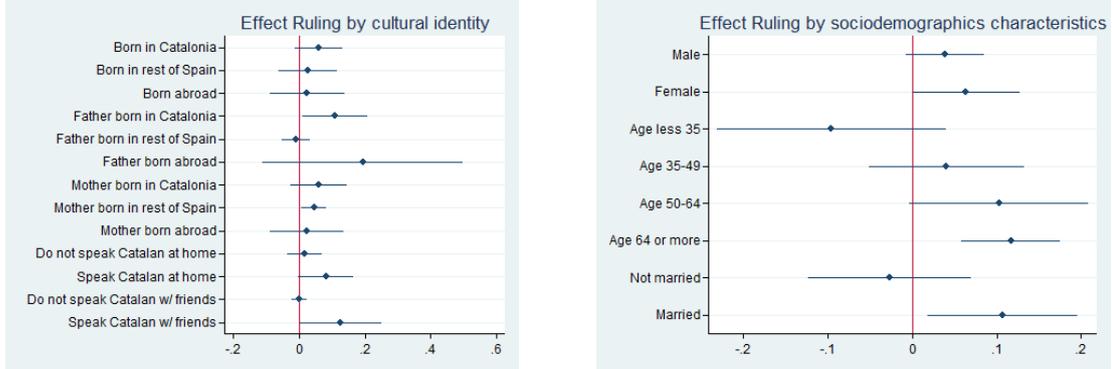


(a) This figure plots the coefficient of *Ruling* on the four dependent variables in columns (2) to (5) in Table 2.

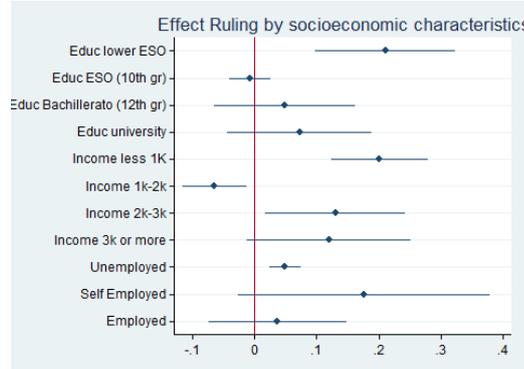
(b) This figure plots all the coefficients of the controls included in column (2) in Table 2. The dependent variable is *Independence*.

Figure 3: Main result: preferred relationship between Spain and Catalonia

Both panels plot the outcomes of Table 2. Panel 3a refers to the coefficient of *Ruling* regressed on all the controls and comarca fixed effects. Panel 3b refers to the coefficient of each control when *Ruling* is regressed on all the controls and comarca fixed effects. *Independence*: dummy reflecting the respondent's preference for Catalonia to become an independent state. *Federal state*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as a federal state. *Autonomous community*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as an autonomous community (status quo). *Region*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as a region (lower autonomy than status quo). *Ruling*: dummy taking 1 for all observations interviewed after June 28th 2010 at 19:00, and 0 otherwise. *Educ.*: years of education. *City pop.*: city population. *Income*: net monthly income in Euros. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors are clustered at the day of the interview.



(a) Heterogeneity of the effect of *Ruling* interacted with the corresponding variables representing cultural identity on *Independence*. (b) Heterogeneity of the effect of *Ruling* interacted with the corresponding socio-demographic variables on *Independence*.



(c) Heterogeneity of the effect of *Ruling* interacted with the corresponding variable socio-economic variables on *Independence*.

Figure 4: Heterogeneities of the main result

The figure reports the coefficients in Table 3 and refers to the coefficient corresponding to the effect on *Independence* of the interaction of *Ruling* and all the variables, controlling for all the individual controls and comarca fixed effects. *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. Probability weights used. Sample of people interviewed before 19:00 and in the first seven days of interviews. Standard errors clustered at day of the interview level. Panel 4a refers to the coefficients in Columns (1) to (5) of Table 3, where Column (1) of Table 3 corresponds to the variables in the 1st, 2nd and 3rd rows of Figure 4a, Column (2) to the 4th, 5th and 6th rows, Column (3) to the 7th, 8th and 9th rows, Column (4) to the 10th, and 11th rows, and Column (5) to the 12th, and 13th rows. Panel 4b refers to the coefficients in Columns (6) to (8) of Table 3, where Column (6) of Table 3 corresponds to the variables in the 1st, and 2nd rows of Figure 4b, Column (7) to the 3rd, 4th, 5th and 6th rows, Column (8) to the 7th, and 8th rows. Panel 4c refers to the coefficients in Columns (9) to (11) of Table 3, where Column (9) of Table 3 corresponds to the variables in the 1st, 2nd, 3rd, 4th rows of Figure 4b, Column (10) to the 5th, 6th, 7th, and 8th rows, Column (11) to the 9th, 10th and 11th rows. The interaction coefficient of the omitted category is the estimate of the effect of *Ruling* in Table 3.

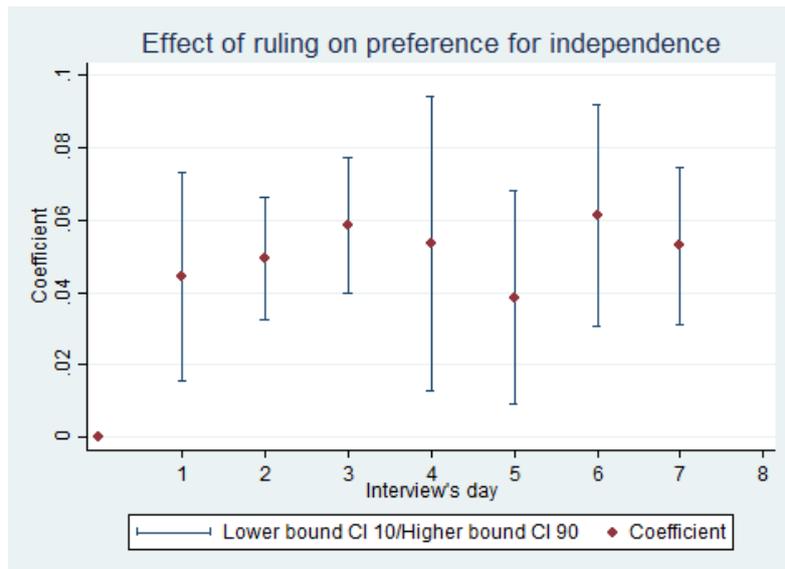


Figure 5: Heterogeneity of the effect of Ruling on support for independence by day

The graphs reports 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. *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 day of the interview level.

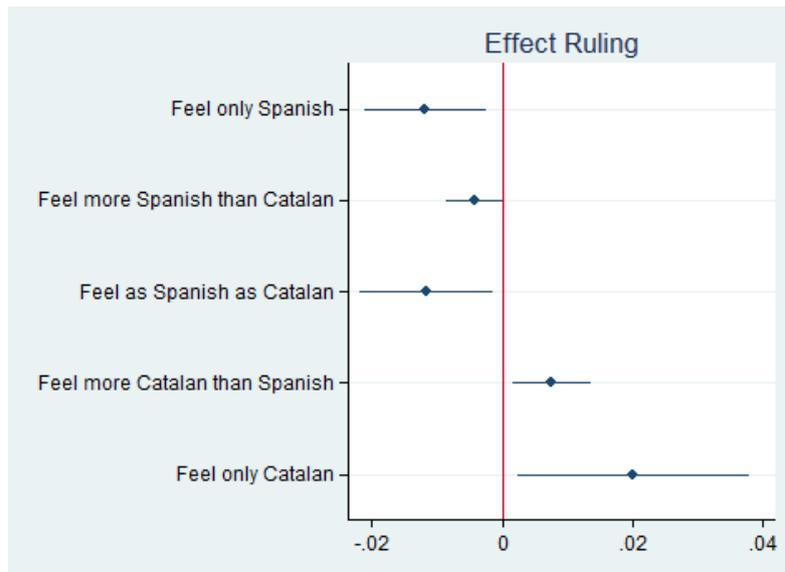


Figure 6: Cultural results

Blue dots and lines represents the estimated marginal effect of Ruling obtained from Table 7 between the lower and upper bounds of 95% confidence interval. The dependent variable is *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. The marginal effects has been found after regressing by Ordered Probit the variable reflecting the cultural identity on *Ruling*, individual controls, and comarcas fixed effects. *Ruling*: dummy taking 1 for all observations interviewed after June 28th 2010 at 19:00, and 0 otherwise. The controls included are 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; and dummies for respondent's employment situation; dummies for respondent's city population. All unanswered or unknown answers coded as missing values. Sample of respondents interviewed in the first seven days of interviews and before 19:00. Standard errors clustered at day of the interview level.

6.1.2 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: Main result: preferred relationship between Spain and Catalonia

VARIABLES	(1) Independence	(2) Independence	(3) Federal state	(4) Autonomous community	(5) Region
Ruling	0.0447*** (0.0103)	0.0518** (0.0200)	-0.00833 (0.0236)	-0.00548 (0.0155)	-0.0380** (0.0109)
Female		-0.00352 (0.0211)	-0.107** (0.0395)	0.0909** (0.0255)	0.0192 (0.0252)
Married		-0.0188 (0.0431)	-0.0398 (0.0382)	0.0576 (0.0419)	0.00100 (0.0271)
Educ. lower ESO (7th grade)		0.0119 (0.0377)	-0.0845 (0.0664)	-0.0190 (0.0863)	0.0917 (0.0563)
Educ. ESO (10th grade)		0.0466 (0.0364)	-0.0653 (0.0614)	-0.0308 (0.0482)	0.0494 (0.0338)
Educ. Bachillerato (12th grade)		0.0226 (0.0402)	-0.00849 (0.0488)	-0.0281 (0.0502)	0.0140 (0.0216)
Income lower than 1k		0.0750* (0.0332)	-0.161** (0.0539)	0.0973 (0.0962)	-0.0113 (0.0585)
Income 1k-2k		0.0343 (0.0515)	-0.0840 (0.0583)	0.0979 (0.0682)	-0.0482 (0.0281)
Income 2k-3k		-0.0331 (0.0380)	0.0471 (0.0802)	0.0174 (0.0836)	-0.0314 (0.0183)
Self-employed		-0.109 (0.0746)	0.0278 (0.0498)	0.0546 (0.105)	0.0269 (0.0331)
Employed		-0.0337 (0.0398)	-0.0566 (0.0513)	0.0520 (0.0763)	0.0384 (0.0320)
Speak catalan at home		0.00989 (0.0406)	-0.0249 (0.0509)	0.000418 (0.0612)	0.0146 (0.0234)
Speak catalan at work		-0.0248 (0.0366)	0.108** (0.0334)	-0.0708 (0.0797)	-0.0129 (0.0405)
Speak catalan with friends		0.190** (0.0587)	0.00414 (0.0450)	-0.151* (0.0667)	-0.0433 (0.0362)
Interview in catalan		0.0295 (0.0447)	0.150** (0.0449)	-0.142*** (0.0247)	-0.0377 (0.0348)
Born in rest of Spain		0.0218 (0.0367)	-0.0637 (0.0347)	0.0559 (0.0392)	-0.0140 (0.0297)
Foreign born		-0.203* (0.0843)	0.0479 (0.192)	0.0266 (0.133)	0.129 (0.159)
Father born in rest of Spain		-0.0869 (0.0630)	-0.0112 (0.0430)	0.0584 (0.0387)	0.0397* (0.0188)
Father foreign born		-0.107 (0.167)	-0.0890 (0.271)	0.151 (0.171)	0.0452 (0.0962)
Mother born in rest of Spain		-0.152*** (0.0366)	0.0142 (0.0547)	0.130*** (0.0322)	0.00719 (0.0272)
Mother foreign born		0.0177 (0.0956)	0.0252 (0.157)	-0.0180 (0.137)	-0.0249 (0.0991)
Age 18-34		0.152 (0.0791)	-0.147** (0.0454)	0.0679 (0.0655)	-0.0728 (0.0460)
Age 35-49		0.126 (0.0843)	-0.115 (0.0712)	0.00453 (0.0595)	-0.0150 (0.0445)
Age 50-64		0.0710 (0.0490)	-0.00140 (0.0752)	0.00888 (0.0321)	-0.0784 (0.0485)
City pop. lower than 2k		-0.0843 (0.0742)	0.106 (0.139)	0.0569 (0.185)	-0.0786 (0.0507)
City pop. 2k-10k		-0.114 (0.0870)	0.146 (0.0776)	0.0433 (0.107)	-0.0752 (0.0459)
City pop. 10k-50k		-0.0947 (0.0957)	0.138 (0.123)	0.0372 (0.125)	-0.0806 (0.0458)
City pop. 50k-150k		-0.0870 (0.0797)	0.0541 (0.125)	0.0445 (0.112)	-0.0116 (0.0372)
City pop. 150k-1million		-0.0387 (0.0685)	-0.00190 (0.0847)	0.0970 (0.0672)	-0.0564 (0.0611)
Observations	1,199	960	960	960	960
R-squared	0.002	0.241	0.134	0.232	0.125
Comarca FE	NO	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS	OLS
Average y	0.26	0.26	0.33	0.35	0.06

Independence: dummy reflecting the respondent's preference for Catalonia to become an independent state. *Federal state*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as a federal state (higher autonomy than the status quo). *Autonomous community*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as an autonomous community (status quo). *Region*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as a region (lower autonomy than status quo). *Ruling*: dummy taking 1 for all observations interviewed after June 28th 2010 at 19:00, and 0 otherwise. *Educ.*: years of education. *City pop.*: city population. *Income*: net monthly income in Euros. *Comarca FE*: comarca fixed effects. *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 day of the interview level. All the reported estimates are also presented in Figure 3. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Main results: heterogeneities according to past vote

VARIABLES	(1) Independence	(2) Federal State	(3) Autonomous Community	(4) Region
Ruling	0.0731*** (0.0196)	0.0426 (0.0406)	-0.0531 (0.0399)	-0.0626*** (0.0167)
Past vote PPC	0.0116 (0.102)	0.200* (0.0827)	-0.0396 (0.0953)	-0.172*** (0.0425)
Ruling X Past vote PPC	-0.0921 (0.189)	-0.426** (0.149)	0.193 (0.126)	0.325*** (0.0765)
Observations	640	640	640	640
R-squared	0.295	0.202	0.335	0.204
Comarca FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS
Average y	0.26	0.33	0.35	0.06
Average y PPC	0.04	0.11	0.60	0.25
M.E. Ruling PPC	-0.019	-0.383	0.140	0.262
s.e.	0.194	0.156	0.100	0.074

Independence: dummy reflecting the respondent's preference for Catalonia to become an independent state. *Federal state*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as a federal state. *Autonomous community*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as an autonomous community (status quo). *Region*: dummy reflecting the respondent's preference for Catalonia to be part of Spain as a region (lower autonomy than status quo). *Ruling*: dummy taking 1 for all observations interviewed after June 28th 2010 at 19:00, and 0 otherwise. *Comarca FE*: comarca fixed effects. *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. *Average y*: mean of dependent variable. *Average y PPC*: mean of dependent variable for people who voted PPC. *M.E. Ruling PPC*: marginal effect of the Ruling for people who voted PPC on the dependent variable, computed as the sum of the estimate of the effect of *Ruling* and the estimate of the effect of *Ruling x Past vote PPC*. *s.e.*: standard error of the estimate of *M.E. Ruling PPC*. 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 day of the interview level. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Problem results

VARIABLES	(1) Probl: Cat-Esp	(2) Probl: estatut	(3) Probl: financing	(4) Probl: eco-lab	(5) Most: Cat-Esp	(6) Most: estatut	(7) Most: financing	(8) Most: eco-lab
Ruling	0.129*** (0.0198)	0.107*** (0.0205)	0.0185** (0.00756)	-0.0877*** (0.0187)	0.0814*** (0.0194)	0.0660*** (0.0134)	0.00962 (0.00586)	-0.122*** (0.0294)
Observations	970	970	970	970	970	970	970	970
R-squared	0.170	0.163	0.107	0.093	0.113	0.127	0.098	0.101
Comarca FE	YES	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Average y	0.22	0.16	0.04	0.80	0.08	0.06	0.01	0.64

Probl (Most): Cat-Esp: dummy taking 1 if the interviewed mentions the relationship between Spain and Catalonia as one of the main problems (the most important problem) of Catalonia. *Probl (Most): estatut*: dummy taking 1 if the interviewed mentions the Catalan Statute of Autonomy (*estatut*) as one of the main problems (the most important problem) of Catalonia. *Probl (Most): financing*: dummy taking 1 if the interviewed mentions the Catalan financing system as one of the main problems (the most important problem) of Catalonia. *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 one of the main problems (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 day of the interview level. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Voting results

VARIABLES	(1) Vote: CiU	(2) Vote: ERC	(3) Past vote: CiU	(4) Past vote: ERC	(5) Proximity: CiU	(6) Proximity: ERC
Ruling	0.0475 (0.0310)	0.0132 (0.0193)	0.0348 (0.0346)	0.00799 (0.0298)	0.0336 (0.0954)	0.0145 (0.0859)
Observations	595	595	672	672	995	991
R-squared	0.210	0.188	0.161	0.174	0.084	0.182
Comarca FE	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS	OLS	OLS
Average y	0.44	0.10	0.32	0.15	2.90	2.41

Vote: CiU (ERC): dummy taking 1 if the interviewed has the intention to vote for *Convergència i Unió*, CiU, (*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: CiU (ERC)*: dummy taking 1 if the interviewed voted for *Convergència i Unió*, CiU, (*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). *Proximity: CiU (ERC)*: variable taking 5 values according to how close the interviewed feel with respect to *Convergència i Unió*, CiU, (*Esquerra Republicana de Catalunya*, ERC). The variable takes value 1 if the interviewed feels very far, 2 if the interviewed feels far, 3 if the interviewed feels nor far nor close, 4 if the interviewed feels close, and 5 if the interviewed feels very close. *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 day of the interview level.

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

Table 7: Cultural results

VARIABLES	(1) Feeling Catalan	(2) Feeling Catalan
Ruling	0.0767* (0.0374)	0.101** (0.0436)
Observations	987	987
R-squared	0.420	
Comarca FE	YES	YES
Controls	YES	YES
Estimation	OLS	O-Probit
Average y	3.50	3.50
M.E. only Esp		-0.012
s.e. only Esp		0.005
M.E. +Esp than Cat		-0.004
s.e. +Esp than Cat		0.002
M.E. as Esp as Cat		-0.012
s.e. as Esp as Cat		0.005
M.E. -Esp than Cat		0.008
s.e. -Esp than Cat		0.003
M.E. only Cat		0.020
s.e. only Cat		0.009

Feeling Catalan: variable taking 5 values according to which national group the interviewee feel to belong. The variable takes value 1 if the interviewed feels only Spanish (*Only Esp*), 2 if the interviewed feels more Spanish than Catalan (*+Esp than Cat*), 3 if the interviewed feels as Spanish as Catalan (*As Esp As Cat*), 4 if the interviewed feels more Catalan than Spanish (*-Esp than Cat*), and 5 if the interviewed feels only Catalan (*Only Cat*). *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. *M.E. X*: marginal effect of the Ruling on the value X of the dependent variable, obtained after an Ordered Probit (*O-Probit*) estimation. *s.e. X*: standard error of the estimate of *M.E. X*. These marginal effects are also reported in Figure 6. 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 day of the interview level. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Trust results

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** (0.0993)	-0.218 (0.135)	-0.154** (0.0472)	0.0168 (0.0980)	-0.00471 (0.0693)	-0.248* (0.106)	0.0658* (0.0329)
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 day of the interview level. *** p<0.01, ** p<0.05, * p<0.1

Table 9: Mechanisms and mediation: institutions and culture

VARIABLES	(1) Trust: Courts	(2) Trust: Parl Esp	(3) Trust: Parties	(4) Insatisf: demo.	(5) Feeling Cat.	(6) Feeling Cat.	(7) Feeling Cat.	(8) Feeling Cat.
Ruling	-0.287* (0.119)	-0.131* (0.0614)	-0.228* (0.109)	0.0737* (0.0322)	0.0455 (0.0387)	0.0989** (0.0358)	0.0797** (0.0317)	0.0797* (0.0362)
Feeling Catalan	0.0814 (0.119)	-0.103 (0.0902)	0.0595 (0.132)	0.00451 (0.0134)				
Trust courts					0.0101 (0.0149)			
Trust Spanish parliament						-0.0158 (0.0140)		
Trust political parties							0.00910 (0.0203)	
Insatisfaction democracy								0.0150 (0.0442)
Observations	942	953	967	969	942	953	967	969
R-squared	0.093	0.088	0.080	0.087	0.422	0.419	0.421	0.417
Comarca FE	YES	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES	YES
Estimation	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS

Trust: X: variable reporting how much the interviewed trust the following institutions from 1 to 10: courts (*Courts*), Spanish Parliament (*Parl Esp*), and political parties (*Parties*). *Insatisf/action 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. *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 more Catalan than Spanish (*Only Esp*), 2 if the interviewed feels more Spanish than Catalan (*Only Cat*), 3 if the interviewed feels as Spanish as Catalan (*As Esp, As Cat*), 4 if the interviewed feels more Catalan than Spanish (*-Esp than Cat*), and 5 if the interviewed feels only Catalan (*Only Cat*). *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; 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 day of the interview level. *** p < 0.01, ** p < 0.05, * p < 0.1

Table 10: Voting results in 2015

VARIABLES	(1) Share Indep.	(2) Turnout	(3) Share Indep.	(4) Share Indep.
Post 2010	0.0472*** (0.00260)	0.145*** (0.00171)	0.0641*** (0.00343)	0.0299*** (0.00375)
Post 2010 X M.E. Ruling	0.0197 (0.0163)	-0.00779 (0.0106)	0.0621*** (0.0209)	-0.0347 (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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