Why Do Rich Regions Secede? Text Analysis of Catalonia and Scotland 1999-2017

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Introduction

There are currently 55 active secession movements around the world, all with varying levels of success and influence (Griffiths 2016). The success of many of these movements is not surprising given their historical greivances, like in Iraqi Kurdistan which held an independence referendum in 2017. That is, it is not difficult to see why secessionists would take significant governmental power in regions with long histories of ethnic tension (Wimmer 2008), security dilemmas (Posen 1993) and poverty (Fearon and Laitin 2003). f

However, the biggest surprise has come from movements in regions like Catalonia and Scotland, and before them areas like Quebec and, to a lesser extent, Flanders. These places are the exact opposite: they are rich, relatively affluent (compared to other ethnic groups), non-deprived and democratic (RRANDD). That is, they are a major puzzle for the political science literature which often argues that secession happens for the exact opposite characteristics.

Similarly, they present an important phenomenon distinct from violence and protest actions: demands for secession by the regional government. This is often understudied in the literature but is important for a number of reasons. Firstly, governmental secession has a lot of significance for international relations and has more legitimacy, especially compared to armed groups. And second, because it has the potential to lead to violence later on. While the 2017 referendum in Catalonia has thankfully not killed anyone-not counting the over 800 injured (Dearden 2017)-it is possible to see how these kinds of demands can escalate into more violence in the future.

To address these issues, this paper will use a computational text analysis of the regional parliaments of

Scotland and Catalonia, to argue that funding, as an attempt to co-opt regional elites is what modulates secessionist demands. It further tests for alternative hypotheses using an instrumental variables approach.

Literature Review

The literature on ethnic conflict is empirical and theoretically rich yet it has trouble explaining the key question: why do certain relatively affluent, democratic and (as defined by the literature) non-deprived, minority regional governments want to secede? As will be explored in some detail, certain cases like Scotland, and Catalonia are glaring "false negatives" since the literature would predict that their governments would not try to make separatist demands, and yet they do. Likewise, the literature focuses more on violence and protests rather than the demands for secession. This latter point is problematic since, as a field, it overlooks the creation of secessionist claims which could be a precursor to violent conflict later on. Thus, this review will seek to cover the major theories on secession in politcal science and why they do not explain variation in these cases.

Opportunity

Broadly speaking, the opportunity literature argues that civil conflict is driven by conditions that allow rebels to exist in the first place (Sobek 2010). Most famously, these opportunities include state weakness (Fearon and Laitin 2003), low national income and high natural resources (Collier and Hoeffler 2002), geographic concentration of an ethnic group (Weidmann 2009; Morelli 2013), and irregular politics (Gleditsch and Ruggeri 2010). These opportunities are applicable for all rebel movements and all kinds of civil conflict, including secession (Boyle and Englebert 2006).

This theory inadequately explains certain cases of rebellion for a number of reasons. Firstly, this paper is looking to explain the demands for secession, rather than violence or even protest. Since demands are fundamentally speech acts (more specifically, speech acts by government officials), they do not necessitate special conditions to allow them to happen-the way conditions might be required for rebels to exist-it is much less applicable for this paper. Put simply, while a rebel group might need a favorable environment to exist, recruit, launch attacks and so on; a government official only needs media or a public forum to make a

secessionist claim.

Secondly, even if the literature was concerned with demands rather than violence, none of the explanations fit these cases because the secessionist regions are in countries that lack these opportunities. To start, both countries are high income, strong states that have not had irregular politics or transitions close to when secessionism was occurring. The closest to this latter theory is Spain's transition to democracy in 1979 but that transition happened long before the recent movement for secession. In sum, this literature and its theories do not explain my cases.

Relative deprivation

Relative deprivation argues that ethnic groups rebel or try to secede when they are systemically oppressed by other ethnic groups in the country. Beginning with Ted Gurr (1970) and Donald Horowitz (1985), this literature observes many different kinds of grievances ranging from wealth inequalities with other ethnic groups (Cederman et al. 2011) as well as discrimination and systemic violence by the state (Horowitz 1981). Perhaps the most pertinent to this paper is Horowitz's (1981) examples in which richer minorities attempt to separate from the state. He has argued that "advanced" (relatively wealthier) ethnic groups only pursue separatism immediately following "serious collective violence" such as massacres by the state (200). That is, they are only motivated by serious violence to start their own state. However, this does not explain separatism in these regions.

Firstly, all of these regions are wealthier than the average so it is not a case of ethnic wealth inequality. Secondly, only systematic violence is said to provoke wealthier groups to try to form their own state. As of the last few decades, there clearly have not been systemic massacres in Scotland or Catalonia. That is not to say that these regions do not have legacies of systematic violence: the case of Spain under Franco is explicitly mentioned by Horowitz as an example (1981). However, these regions would need to secede as an immediate response to violence, which was not observed since the transition to democracy in 1979 in Spain and for centuries in the case of Scotland. In sum, the relative deprivation does not explain variation in these regions since they lacked deprivation.

Relational-Materialist

Another important theory is the relational-materialist hypothesis proposed by Robert Hale. For Hale (2008), ethnic regions are motivated towards decentralization but, if independence is seen as leading to a better economy, and the state is not likely to use violence to stop it, then regions will engage in secession. As Hale notes, minorities are worried about a situation where "the [r]egion is [economically] worse off... than would most likely be the case if the [r]egion were instead an independent state encountering no resistance on the part of [the center's] authorities," (65-66). This is different from the relative deprivation literature in that the only "deprivation" is the potential of a smaller economy under incorporation with the state. Likewise, it is not interested in fiscal distribution, but rather economic conditions as a whole (Hale 2008, Chapter 8). Finally, it is perhaps one of the few literatures that studies the demands for secession rather than just activism or violence.

However, this theory is problematic when applied to the cases of interest. Hale (2008) modelled the theory on the break-up of the Soviet Union and Yugoslavia, which was a clear instance when many regions would benefit economically if they became independent. However, it is not clear that the regions this paper would be economically better off if they were independent. In fact there is quite a lot of evidence to the contrary: studies of Scotland and Quebec (both of which were allowed independence per Hale's theory) found that they would be worse off economically even under favorable trade terms in the case of Scotland (Grady et al. 1992; Armstrong and Ebell 2014). A similar study of Catalonia found that, under favorable trade conditions, independence would make no difference on its economic output (Pons-Benaiges 2017). In sum, economic motivations cannot explain these cases since most estimates suggests could be worse off with independence.

Fiscal Appeasement

The fiscal appeasement literature looks at subnational funding of regions (minority or otherwise) but it asks the opposite question: why do states fund regions in a particular way? In this work, the possibility of secession is one answer among many. Daniel Triesman largely started the literature with a 1996 paper on Russia that begins by asking, "why [do] some regions currently receive large net transfers (subsidies, grants, other benefits) from the centre while others pay large net taxes..." (299). Triesman's answer is a region's overall

discontent with the center as well as a minority regions' propensity to secede. He argues that to preemptively counter threats, Russia spent more to placate dissatisfied regions. The theory has since performed well when tested on funding of regions in India (Aleman and Treisman 2005) but, it has had varying results when tested on funding of federal regions globally (Bakke and Wibbels 2006)4 and finally, it performed well when tested on funding in response to how regions voted in the 2005 Ethiopia election (Ishiyama 2012).

While the literature is innovative in looking at fiscal distribution and propensity for separatism, it has two major issues. First, it does not ask why separatism happens, but rather why funding is given out in a particular way. As the theory of this paper will explore further, it is not just a matter of reversing the variables. To understand secessionist demands, one needs to look at both aspects: how minority regions are preemptively placated with spending but also and how variation in spending affects demands to separate.

Secondly, perhaps because these papers are studying preemptive threats, they tend to use very short time periods. For instance, Ishiyama (2012) only studied one year of funding in Ethiopia. In rare cases when more time is used and it has separatism as the dependent variable, the study does not observe demands. For instance, Bakke and Wibbels (2006) are an exception since they do study changes over a long period and they use separatism for their dependent variable but unlike the previous papers-Triesman (1996,1998) in particular-they do not observe secessionist demands. Ultimately, this literature comes close but never quite puts together all the needed elements. Of the three aspects needed for this research-studying demands, separatism as the outcome variable and a relatively long time sample, a study might have two, but never all three.

Globalization

Finally, perhaps the closest theory to this project is how globalization-that is, economic integration-increases the likelihood of secessionism. Firstly, it is worth noting that there is not a clear consensus within this research over whether globalization makes secession more likely (Sambanis 2006; McHenry 2009). However, to the extent that there are arguments for globalization increasing separatism, they come in two forms (Sorens 2004). The first is that globalization directly increases support for secessionist parties because of economic dissatisfaction. For instance, Zirakzadeh (1989) has argued that unemployment leads to increased secessionist

party support in the Basque region and Scotland. More recently, Hopkin (2016) has pointed to European Union austerity following the 2008 economic crisis as a catalyst for secessionism in Catalonia and Scotland. In this mechanism, economic dissatisfaction leads to support for a new state which is more protectionist and socially generous.

The second mechanism is more counter-intuitive, it proposes that globalization gives regions economic leverage to threaten secession in order to get concessions from the center (Sorens 2004). It argues globalization economically benefits minority regions and governments implement more political decentralization to facilitate these regions' growth. As a result, minority regions threaten secession when they do not get sufficient political decentralization or other economic benefits from the center. Therefore, these theories are clearly the closest for this project since it deals with secessionist demands, is looking at funding as a possible mechanism and even uses the same cases.

Why then, is it insufficient at answering the question? First, the mechanisms are indeterminant for figuring out which minority regions become secessionist (and which do not). Sorens (2004) says this explicitly, writing "... this paper deals only with the over-time determinants of secessionism. It does not seek to address the cross-sectional determinants of secessionism..." (732). Since globalization affects countries at the national level, it does not explain the subnational variation for different minority regions in the same country.

Second, while the literature does suggest that globalization leads to distributional conflicts which can lead to secessionism (Sorens 2004; Hopkin 2016), it is surely not the only factor to do this. One can imagine situations such as right-wing populist parties winning elections which might eschew austerity but might decrease minority spending because of their (majority) nationalist platform. Thus, it is better to think of proximate causes for separatism and to remain agnostic about the different processes that go into those causes. In sum, this literature comes very close to answering the question but is crucially unable to account for subnational variation or possible circumstances when globalization might not be the driver of secessionist sentiment.

Theory

Scope Conditions

Before describing the theory, it is important to clarify what we mean by "elites," "secession demands," "minority region" and to what regions this theory actually applies to. First, this paper borrows the definition of elites from Van Loon and Whittington (1984) as "...those...who occupy roles, offices or positions in the political system that vest formal decision-making power in their incumbents" (447). That is, those with formal, political and decision-making power. For "demands," this paper is referring to speech acts by these elites in favor of creating a separatist, independent state. Finally, the minority regions are provinces in which one, predominant ethnic group resides that is different from the majority ethnic (or other) groups of the country. This regional minority and local government can thus be thought of as the basis of a potential state.

It should be clarified that this is only for a new state, not regional separatism advocating absorption into already existing states. For instance, Northern Ireland would not count since its separatist forces favor unification with Ireland, not a new state altogether. Finally, this also does not apply for colonial territories. While they are analogous in terms of independence, this paper is dealing with regions that are politically integrated with the rest of the country. Likewise, this theory is limited to those regions which do not have consocial or confederal agreements with the state. Since I argue that the driver of secession demands is state control, confederal agreements- especially legislative and cabinet quotas for minority groups-would institutionalize a degree of minority control and thus neutralize calls for separatism.

Co-opting Minority Elites

I borrow from Hale (2008) the idea that secessionism is a strategy by regional elites but, rather than economic gain, I argue it is done to take state power.7 To accomplish this, regional elites have two options: (1) attempt to gain power in the central government (center-seeking) or (2) attempt to create a new independent state, whereby they can rule. This is analogous (although not the same) as the struggle by colonial elites. For instance, both Anderson (1991) and Lawrence (2013) have argued that imperial exclusion led colonial elites to pursue nationalism. Lawrence (2013) goes further by arguing that, when metropoles granted (and kept) full citizenship rights to colonies, it actually reduced calls for independence.

For minority elites, the first is much more difficult to attain given that their advancement might lead to resentment by the dominant ethnic group in the country (Peterson 2002) and might increase ethnic tensions in general (Tusalem 2015). In the rare cases that minority elites do control the center, it might also moderate regional demands since it creates the perception that (other) minority elites from the same region can easilly take power. This is especially relevant in the UK when Tony Blair and Gordon Brown governed (both Scottish) and might have made other Scottish elites think that were waiting in the wings.

One exception are consocial and confederal systems since they institutionalize minority power-sharing-especially through legislative or cabinet quotas. Scholars have suggested that these agreements tend to reduce the risk of secessionist violence. For instance, Bormann (2014) has found that confederal agreements (measured very broadly as "ethnic coalitions") reduced the likelihood of territorial civil wars. Others have found that the elimination of power-sharing agreements increasesconflict, for instance Bunce (1999) noted that the refusal of Serbian leaders to rotate the presidency of Yugoslavia precipitated a series civil wars. However, these are the exception, Bird (2014) finds that only 19 countries have this kind of system.

Therefore, secessionism becomes a much more attainable option. As has been widely acknowledged in political science, ethnicity is itself salient and can thus make collective action easier (Bakke and Wibbels 2006; Hale 2008, Larson and Lewis 2017). Ultimately, minority elites are able to mobilize their populations into new states in a way that non-minority, regional elites cannot. This situation brings up its own puzzle: if there are many concentrations of minorities (and few consocial states) then why do we not see serious pushes for secession in the vast majorities of states today?8

In place of consocial policies, states can provide generous fiscal benefits to co-opt regional elites. By providing generous public goods to these regions, it gives minority elites a stake that they may lose if they pursued secessionist activity. This is similar to the fiscal appeasement literature which found that governments increase funding in order to prevent ethnic secessionism (Treisman 1996; Aleman and Treisman 2005; Bakke and Wibbels 2006; Ishiyama 2012). Cederman et al (2010) also note that states attempt to "co-opt leaders of protest movements" because if "groups. . . are marginalized in the distribution of state resources, government jobs, and public goods [they] may have greater motives to take up arms," (109). There are, of course, numerous co-optation methods the state can use, but when it comes to secessionist threats, funding is a tool

which can be used constantly.

Therefore, in situations when funding decreases, it renders co-optation ineffective and spurs secessionist demands. As can be seen in the globalization literature, austerity is a major driver of secession, especially in the Spanish and UK cases (Sorens 2004; Hopkin 2014). However, cuts in spending can occur for numerous reasons, including increased (dominant) nationalist sentiment and pro-unionist ideology by the incumbent party. Regardless of the reason, spending reductions would make it so that regional elites are no longer co-opted.

Alternative Explanation: Brinksmanship

One possible alternative for why regions try to secede in response to decreased funding is that they are using a form of extortion. That is, it assumes regions are trying to maximize the amount of funding they can get by threatening to leave, something already suggested by a branch of globalization theory (Sorens 2004). This could also fit with the fiscal appeasement literature since regions have the ability to mobilize for secession, and thus states offset this potential threat with more generous funding to begin with.

This mechanism also follows the logic of strategic brinksmanship. In Kahn's (1965:11) famous example of the chicken game, secession is "[taking] the steering wheel and [throwing] it out the window" so that the opponent (the center) sees and "chickens out" to avoid a car collision (increases funding to prevent secession). Indeed, Kselman and Piquer (2016) have used this analogy for Catalan secession in Spain. And, as Khan (1965) points out, it is quite possible that neither side chickens out resulting in secession. That is, secession can occur even if regional elites did not really intend it.

This would also follow the logic of two-level games (Putnam 1988). When the region and center are negotiating, and if the goal is increased funding, then revenue constraints (for instance from recessions) on the center should prompt regions to moderate their demands. Following two-level games, the center's lack of revenue is actually an advantage for negotiations since they cannot offer what regions want, and thus they would have to moderate until the revenue situation improves. This would not apply under co-optation theory: when the center lacks revenue, the regions would still increase their demands since their goal is their own state rather than more funding.

Thus, to differentiate these two theories, the crucial test is how regional elites behave when the center has reduced revenue. If they significantly moderate their demands when revenues decrease, then it would demonstrate brinksmanship, if they continue with their demands, then it demonstrates co-optation.

Hypotheses

This theory can therefore be laid out as hypotheses: H1: Regional funding is inversely related to parliamentary secession demands. H2: When the state leader is from a minority region, it reduces secession demands from their region. H3: Regional funding is still inversely related to secession demands even when the center's revenue is decreased. Finally, as a conceptual check, we can add that: H4: Greater secessionist demands increase the likelihood of secessionist referendums.

In summary, this section proposes that regional elites (except for in consocial systems) tend to seek secessionism as a way to gain state control. States offset this with generous funding as a means to co-opt elites from leaving and in situations when funding is reduced, it eliminates that co-optation. Finally, one theoretical alternative to this is brinksmanship, which assumes that regions are threatening to leave.

Research Design

Methods

Fundementally, this paper studies whether decreases in government spending on minority regions increases secessionist demands. In order to do this, I use sub-national parliamentary speeches. These are good sources for a number of reasons, first, as the highest governmental authorities within the region (not counting the central government) parlimantarians are regional elites. Second, the speeches they put out are official and highly salient which will affect public discourse and policy. Third, because they meet regularly, there is a high volume of them which leads into the final benefit: the taboo nature of secession. Because calls for independence are typically not the norm, they are likely to be rare and taboo subjects for parlimentarians to give speeches about. This rarity, in an ocean of speeches, makes it more salient when secessionist demands do happen.

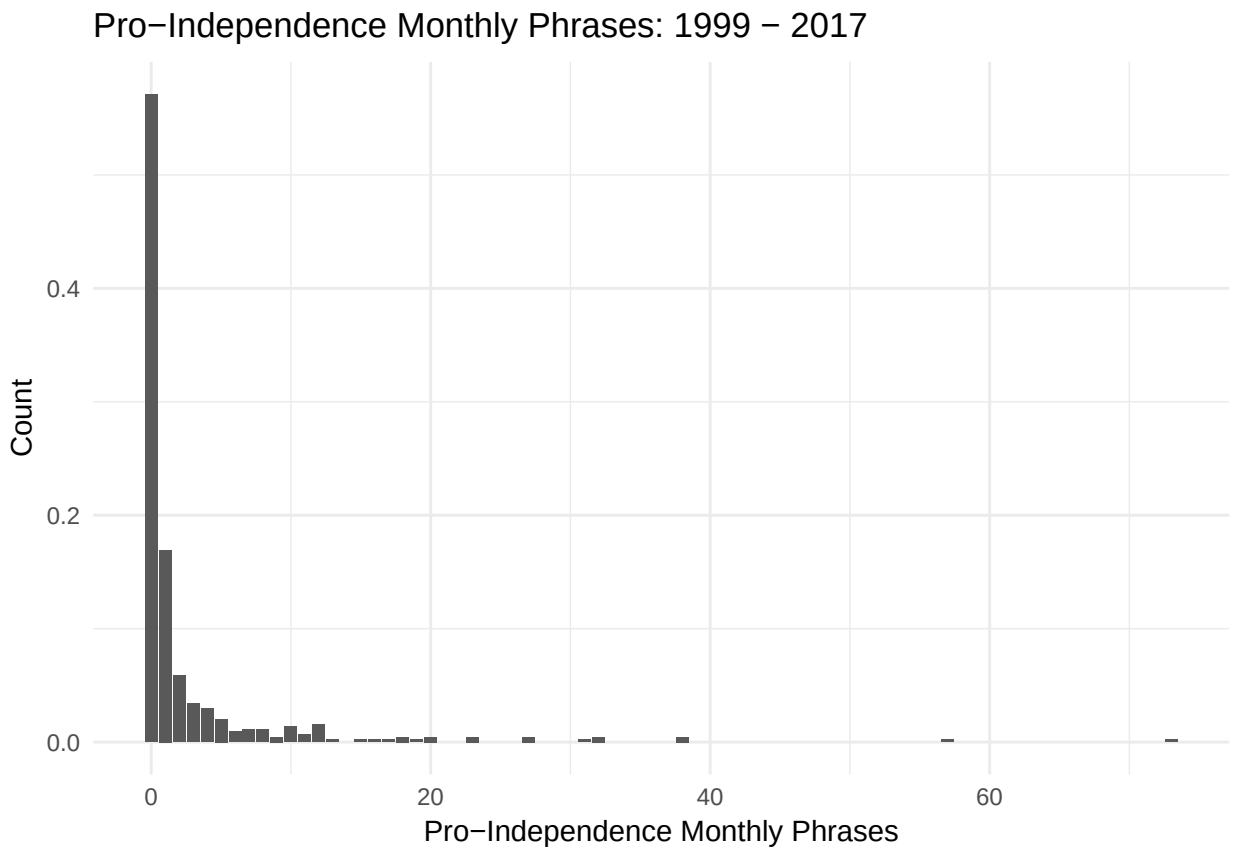
In order to measure the dependent variable, I use a text analysis of parliamentary speeches. Specifically, I

use a negative binomial regression for counts of important stem words that indicate secessionist sentiment. In this case they are “secession” and “self-determination”. This is measured in both the dominant and minority language of each region, namely English for Scotland (Gaelic is not spoken in parliament) and Spanish/Catalan for Catalonia. I use “autodeter” as a stemword for “autodeterminació” and “autodeterminación” in Spanish and Catalan as well as “self-det” for “self-determination” in Scotland. I also use “secession” with “seces as the stemword for”secession“,”secessió" and “secesión” in English, Catalan and Spanish respectively.

These counts are organized by month and zero indicates both that no such words were spoken or that no parliamentary secession occurred. It also uses all types of parliamentary secessions, whether or not they relate to independence. Given that this is a rare event with possible, long-tailed distributions, I will use a negative binomial regression. Slapin and Proksch (2008) have suggested using the Wordfish algorithm in order to best capture policy proposals in parliaments. However, there several reasons for why this is problematic both theoretically and empirically. First, many of these parties do not have a consistent policy for independence for the entire 1999 to 2017 period. Wordfish is designed to input policy platforms and then traces the frequency of those platform phrases in a corpus. However, this requires that parties have a consistent, stated position on a policy for the entire period which nationalists did not.

The tests are organized as such: First, I use a logit of use word counts of secessionism to predict whether secessionist rhetoric increases the likelihood of independence referendums to occur. This is a conceptual check for whether the words are valid as a means of measuring secessionism. Secondly, because of the data’s distribution, I use a negative binomial regression of budget data to predict secessionism, my ultimate variable of interest. This suggests that as budgets decrease, secessionist demands increase in minority regions.

Figure 1: Pro-Independence Phrase Monthly occurrence



Data

For the parliamentary speeches, I used web scraping to download thousands of speeches from the Catalan and Scottish parliaments. These speeches are stored online by the Catalan and Scottish regional websites and are transcribed after secessions. For the project, I included all speeches regardless of the relevance of the secession: they included committees, plenary meetings and all parliamentary business in general. This was done to include the possibility that MPs talk about seceding in unrelated committees. I then used text analysis to get a word count of the words mentioned earlier and aggregated them by month from 1999 to 2017.

Table 1: Summary Statistics

"secession"	"self-determ. . . "	Demands (total)	Tax Autonomy
Min. : 0.0000 1st Qu.: 0.0000 Median : 0.0000 Mean : 0.6298 3rd Qu.: 0.0000 Max. :28.0000 NA	Min. : 0.000 1st Qu.: 0.000 Median : 0.000 Mean : 1.898 3rd Qu.: 1.000 Max. :64.000 NA	Min. : 0.000 1st Qu.: 0.000 Median : 0.000 Mean : 2.528 3rd Qu.: 2.000 Max. :73.000 NA	Min. :0.0000 1st Qu.:0.0000 Median :0.0000 Mean :0.4853 3rd Qu.:1.0000 Max. :1.0000 NA

Referendum	Court Ruling	Mas speech	Budget
Min. :0.000000 1st Qu.:0.000000 Median :0.000000 Mean :0.006772 3rd Qu.:0.000000 Max. :1.000000 NA	Min. :0.0000 1st Qu.:0.0000 Median :0.0000 Mean :0.3991 3rd Qu.:1.0000 Max. :1.0000 NA's :215	Min. :0.0000 1st Qu.:0.0000 Median :0.0000 Mean :0.2807 3rd Qu.:1.0000 Max. :1.0000 NA's :215	Min. :11.49 1st Qu.:26.91 Median :34.03 Mean :40.20 3rd Qu.:59.55 Max. :71.20 NA's :12

Co-ethnic Leader	Revenue	Polls
Min. :0.0000 1st Qu.:0.0000 Median :0.0000 Mean :0.2799 3rd Qu.:1.0000 Max. :1.0000 NA	Min. :0.1890 1st Qu.:0.2190 Median :0.2510 Mean :0.2516 3rd Qu.:0.2840 Max. :0.3000 NA's :96	Min. :29.00 1st Qu.:36.00 Median :41.10 Mean :40.87 3rd Qu.:45.00 Max. :57.00 NA's :131

Results

Do Secession Demands Increase the Onset of Referendums?

Given the novelty of this design, I first wanted to test to see if these phrases were meaningful indicators of secession or independence. To test H4, I use instances of referendums in Scotland and Catalonia. These were major votes to decide whether or not the regions would secede and become their own countries, occurring in both regions in 2014 and again in Catalonia in 2017. Therefore, I test whether pro-independence phrases predict the onset of these referendums.This simple model uses referendum onset as the dependent variable with the secessionist stemword variables as the independent variables. Likewise, it includes robust standard errors and is clustered by region.

The logistic regression suggests that there is a significant and positive, albeit weak, relationship between demands and secession referendums. Despite its small size, this suggests that demands do play a role in increasing the onset of referendums and thus is a valid measure of secessionist sentiment.

Table 2: Demands and Onset of Referendums

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.003267	0.004139	0.7894	0.4303
Demands	0.001386	0.0005703	2.431	0.01547

Does Funding Predict Secessionist Demands?

This paper tested whether funding affected parliamentarian secessionist demands. The results indicate that there does seem to be a significant, negative relationship between funding and secessionist demands. That is, as funding decreases, the calls for an independent state increase. However, the effect size is not necessarily that strong. Likewise, it should be noted that in the robustness checks it was sometimes positive and insignificant. The other hypotheses (H2-H3) were much stronger; for instance pro-independence polls significantly increased the chance of demands. However, perhaps the strongest findings were having co-ethnic leaders (Catalan Prime Minister for Spain and Scottish Prime Minister for the UK) substantially and significantly decreased demands. This can be seen in the 1997 to 2011 period in the UK when Tony Blair and Gordon Brown (both

Scots) reduced the onset of Scottish demands. Finally, tax autonomy was a major predictor of demands, as the tax autonomous regions were less likely to make demands.

Table 3: Funding and Demands

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	1.663	0.2559	6.497	8.172e-11
Budget	-0.01938	0.005839	-3.318	0.000905

Table 4: Budget and Other Predictors of Demands

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-2.544	0.726	-3.504	0.0004582
Budget	0.007891	0.006253	1.262	0.207
Co-ethnic Leader	-3.02	0.3902	-7.739	9.998e-15
Polls	0.08626	0.0176	4.902	9.504e-07

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-2.731	0.6823	-4.003	6.249e-05
Budget	0.09576	0.01719	5.571	2.53e-08
Co-ethnic Leader	-0.6521	0.5059	-1.289	0.1974
Polls	0.03596	0.01859	1.934	0.05313
Tax Autonomy	-4.583	0.8199	-5.59	2.275e-08

Figure 2: Funding and Demands (All Regions)

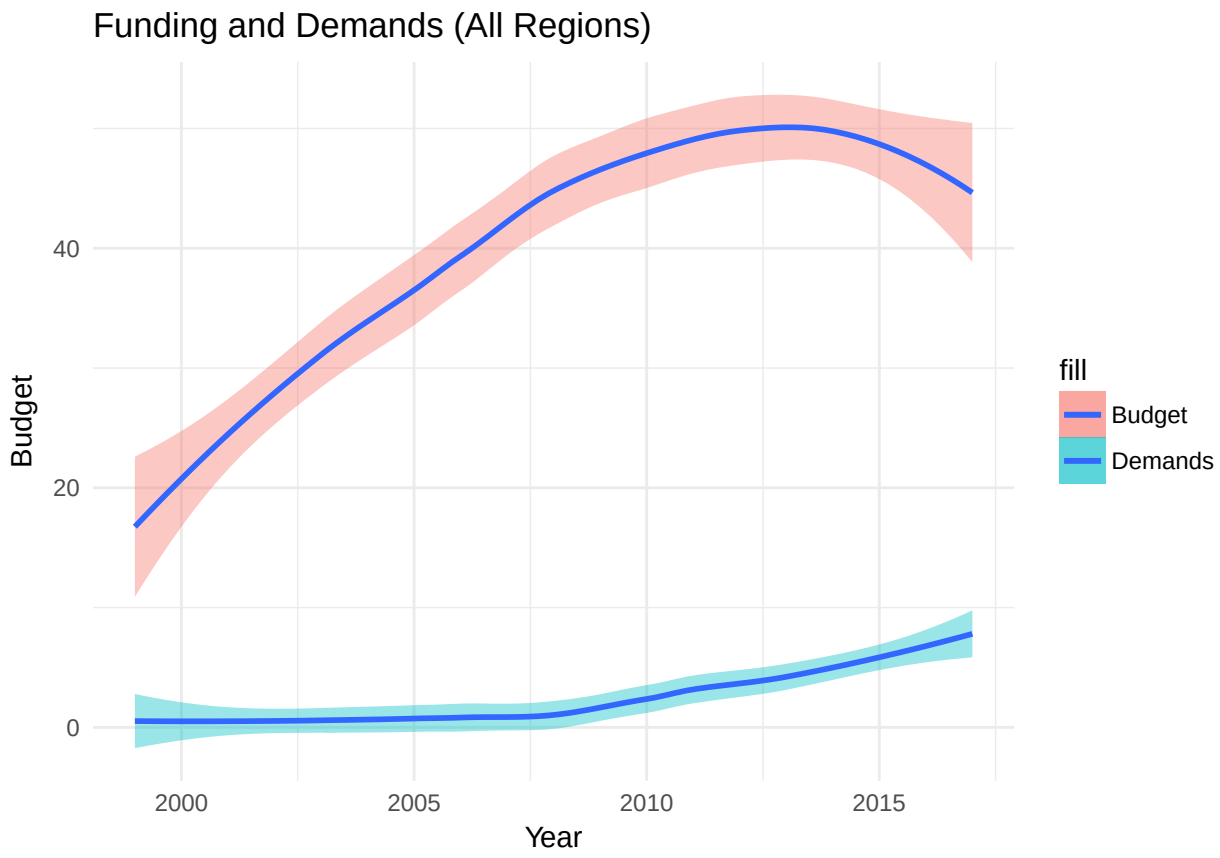
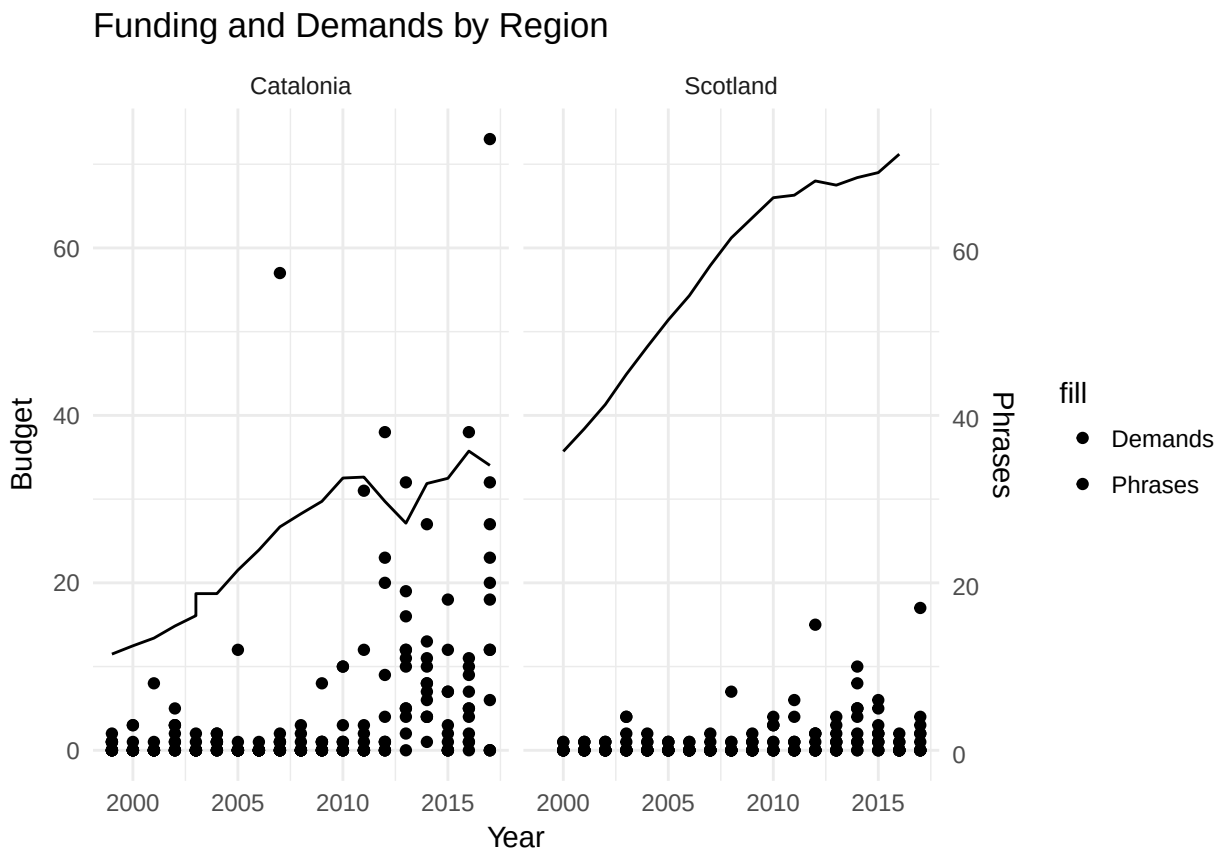


Figure 3: Funding and Demands (By Region)



Co-optation or Brinksmanship?

Finally, it is important to figure out which mechanism was driving the relationship between funding and demands. Specifically, whether local elites wanted more funding or if they were being co-oped by funding. This was tested using tax revenue for the entire country. By the logic of bargaining, if tax revenue decreases (ie there is less money from the state to give to minority regions) then regional elites reduce their demands since there is no way they could plausibly get their money. In contrast, co-optation predicts that elites would still press for independence when there is less revenue.

Table 5: Revenue's Effect on Regional Funding

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-61.91	4.507	-13.74	1.476e-34
Tax % GDP	397.3	17.73	22.41	2.745e-69

Table 6: Revenue and Secession Demands

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	6.845	1.103	6.205	5.465e-10
Budget	0.03002	0.0107	2.806	0.005015
Tax % GDP	-30.92	5.547	-5.574	2.493e-08

The results are not definitive, but they suggest that co-optation theory is more accurate. First, as expected, revenue was highly predictive of the funding regions received; this means revenue strongly affects whether there is money to give to regions. While the ideal results would have been that the budget variable remain negative, it is still significant and tax revenue is strongly, negatively correlated with demands. This demonstrates that elites pressed for demands when the state had *less* money to give, going against the brinksmanship hypothesis.

In summary, the results suggest that there is a negative correlation with funding and that co-optation theory better explains this. Regions are less likely to make demands when their co-ethnics are in control of the state and are more likely to make demands when revenue is lower. This suggests funding is used as a means to co-opt minority regions.

Conclusion

It is poorly understood why richer and democratic, minority regions want to secede. This paper proposes that regional elites inherently want their own state and that the state uses funding as a means of co-opting them from doing this. To test this, I use a text analysis of the Catalan and Scottish regional parliaments from 1999 to 2017 to test for secessionist stemwords. The results suggest that funding indeed is negatively correlated and that co-optation better explains why it is correlated. Ultimately, this suggests that there is considerable conflict lurking in richer regions, and that this should be better understood to prevent more violence.

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