

Economic Uncertainty and Divisive Politics: Evidence from the dos Españas

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This article exploits two newspaper archives to track economic policy uncertainty in Spain from 1905–1945. We find that the outbreak of the Civil War in 1936 was anticipated by a striking upward level shift of uncertainty in both newspapers. We study the reasons for this shift through a natural language processing method, which allows us to leverage expert opinion to track specific issues in our newspaper archives. We find a strong empirical link between increasing uncertainty and the rise of divisive political issues like socio-economic conflict. This holds even when exploiting content differences between the two newspapers in our corpus.

Economic policy uncertainty and divisive politics have been identified as key challenges for economic development.¹ Recently, there has been a dual shift in economic policy uncertainty and divisive politics, often framed in terms of political polarization, which has been particularly pronounced in the United States. It has been suggested that there is a link between the two (Baker et al. 2020). But it is not clear whether this mechanism generalizes beyond the United States. If it does, this would

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¹ In our definition of economic policy uncertainty, we follow Bloom (2009, 2014), Baker et al. (2014), and Baker, Bloom, and Davis (2016). We use divisive politics as an umbrella term for different political conflicts, including ethno-linguistic conflict (Easterly and Levine 1997; Alesina, Michalopoulos, and Papaioannou 2016), conflicts about the distribution of economic rents (Rodrik 1999; Besley and Persson 2011; Acemoglu and Robinson 2012), or religious conflict (Iyer 2016).

make economic policy uncertainty a channel through which divisive politics can retard economic development.

In this paper, we provide a new way of studying the issue in a case study of Spain in the first half of the twentieth century. Few countries have experienced internal political turbulence as dramatic as Spain did during this period. The country started out with a constitutional monarchy, went through a first dictatorship in 1923–1930, a republic in 1931–1936, a bloody civil war in 1936–1939, and the dictatorship of Franco from 1939. This historical context not only offers a unique opportunity to study political divisiveness and economic policy uncertainty, but it also serves as a case study of how a democracy can succumb to civil war. Recent work in political science and economics points toward the dangers of political polarization, heralding the possibility of violence and the breakdown of political institutions. The period leading up to the Spanish Civil War could be an example of this, as it is often characterized as a period of the *dos Españas*—an expression from the period that described a situation of extreme political polarization.²

We evaluate whether economic policy uncertainty increased with political divisions in Spain. We do this by using a novel dataset derived from scanned images of pages of two leading newspapers in the country: *ABC* and *La Vanguardia*. We first use this dataset to capture the economic policy uncertainty (EPU) that actors in Spain faced in these turbulent times. Using a new method to obtain simulated EPU values for every page, we show that the period of the democratic Second Republic (1931–1936) stands out with very high levels of EPU, even when compared to other periods in our sample. This is a striking finding given that the Second Republic is the period most closely associated with the term *dos Españas*.

In order to measure political divisions quantitatively, we use a method from natural language processing (NLP) that allows us to track important division lines in Spanish society in our news corpus. For this, we exploit the discussion of historians, who order these division lines into four categories: socio-economic conflict around agrarian reform and worker's rights; the clash between strong regional and national identities; the role of the military in society; and the role of the church and education. We provide the first quantitative measure of the relative importance of these issues for the entire period from 1905–1945. In this way, we build on the analysis of historians and contribute to it.

² The phrase, referring to political division that later led to the Civil War, originated in a short, untitled poem by the Spanish poet Antonio Machado. It contains the phrase: *Spaniard as you come to the world, may God save you. One of the two Spains will freeze your heart.* [Authors' translation.]

We find a strong positive association between EPU and political divisions. The link to discussions of divisive socio-economic issues is particularly strong and robust. By exploiting variation across the two newspapers, we show that this relationship holds even when we control for time fixed effects. We also show that the results are robust to controlling for a number of censorship indices, suggesting that censorship affecting the two newspapers differentially over time cannot account for our findings. Results even hold when we focus exclusively on the Second Republic, a democratic period in which censorship was limited. These findings have important implications. First, the association between EPU and political divisions is not driven alone by objective changes in the environment, such as economic activity, as these are absorbed by the fixed effects. Second, it also means that censorship or other aspects of the political regime alone cannot explain the association we find.

This strong association is obviously not proof of a causal link. But we find examples in the text that show that commentators at the time explicitly made the causal link between agricultural reform, political divisions, and uncertainty. Our interpretation is that socio-economic conflict led to economic policy uncertainty.

Our findings connect several separate literatures. First, our study confirms findings elsewhere that demonstrate a link between political divisions and economic policy uncertainty. Baker et al. (2014) show that an increase in economic policy uncertainty in the United States since the 1960s is closely associated with political polarization. Kelly, Pástor, and Veronesi (2016) use option values for twenty countries to show that national elections and global summits induce large economic uncertainty. Burgess et al. (2015) and Besley and Mueller (2018) demonstrate the role played by political checks and balances in mediating the effect of political divisions on political outcomes. Hassan et al. (2019) show how firms that are exposed to political risk retrench workers and reduce investment and actively lobby and donate to politicians to manage this risk. We contribute with our detailed analysis of historical Spain. We show that the timeline we generate can usefully complement existing work by historians like Moradiellos (2008), who stresses the importance of tensions between the major political forces at the time. We show that the power shifts among reformists, reactionaries, and revolutionaries can be traced in historical news content and linked quantitatively to changes in economic policy uncertainty.

A special feature of our analysis is the use of time fixed effects. Whereas studies of economic policy uncertainty generally rely on differences in reporting across time, variation across news outlets has received

much less attention, despite the fact that these differences can clearly be meaningful (Gentzkow and Shapiro 2010; Bignon and Miscio 2010). We are the first to exploit variation at the newspaper level, controlling for time fixed effects, to show that the link between mentions of economic policy uncertainty and politically dividing issues remains intact. It is clear from this striking robustness that a focus on different issues is a crucial aspect of outlet-specific reporting. How much this news selection drives changes in the aggregate levels of economic policy uncertainty is under-researched.

Second, we show in the Spanish data that a situation in which divisive issues became increasingly salient anticipated the outbreak of a civil war. There is a large literature studying the relevance of political divisions and political institutions for the risk of civil war.³ The conflict literature, however, is currently not linked to a second literature that tracks political polarization more broadly.⁴ An exception is perhaps Levitsky and Ziblatt (2018), who argue for the United States that the breakdown of “mutual toleration” and respect for the political legitimacy of the opposition is a critical early warning indicator for the breakdown of democratic institutions. Our results suggest that changes in the EPU captured large political frictions that contributed to the outbreak of the Spanish Civil War.

But if political divisions can cause political violence and at the same time lead to an increase in economic policy uncertainty, then this opens several interesting directions for future research. First, the EPU could anticipate outbreaks of violence more generally. We show that this is indeed true in the contemporaneous data in the sixth section. This is particularly important for countries that are polarized, like the United States, but the warning from our case study applies more broadly as future austerity could increase political divisions elsewhere as well.⁵ It could also be a mechanism through which political tensions harm the economy.⁶ If increasing tension leads to increases in the EPU, then this could affect the investment climate even if violence has not broken out yet.⁷

³ See, for example, Easterly and Levine (1997), Rodrik (1999), Montalvo and Reynal-Querol (2005), Besley and Persson (2011), and Esteban, Mayoral, and Ray (2012). For reviews, see Blattman and Miguel (2010) and Ray and Esteban (2016).

⁴ For a summary of this literature, see Boxell, Gentzkow, and Shapiro (2020).

⁵ For the latest U.S. evidence, see www.policyuncertainty.com and Boxell, Gentzkow, and Shapiro (2020). For the link to austerity, see Fetzer (2019) and Galofré-Vilà et al. (2021).

⁶ It is well established that political risk can harm the economy by affecting investments (Bloom 2009; Hassan et al. 2019).

⁷ Zussman, Zussman, and Nielsen (2008) show that events in the Israeli–Palestinian Conflict affected stock prices. Verdickt (2020) shows that mentions of war affected stock market evaluations and manager strategies using data from the Brussels stock exchange before the outbreak of WWI. Also see Veldkamp (2006).

Finally, we contribute to the economic history literature that studies Spain in the first half of the twentieth century. General historical accounts of the period can be found at Graham (2006), Jackson (1976), Moradiellos (2008), Payne (1990), Pérez (2001), Preston (2012), and Thomas (2001). An important strand of work shows that the Civil War had long-lasting consequences for political attitudes (Oto-Peralías 2015), social capital, collective memory, and voting behavior (Tur-Prats and Valencia Caicedo 2020).⁸ Another strand of the literature studies the origins of the Civil War. Malefakis (1970) and Simpson and Carmona (2020) study how the agrarian issue contributed to the outbreak of the war. La Parra-Pérez (2020) provides evidence on the role of military reforms by showing that officers who gained from reforms in the years before the Civil War were more likely to remain loyal to the government. Our contribution to this literature is to construct a new dataset and quantitatively track the EPU during this period. We also demonstrate that it is possible to track specific political issues in historical news texts based on the discussion of these issues provided by contemporary historians and a simple NLP technique.⁹

In what follows, the second section provides historical background with a particular focus on the four dividing issues during this period. The third section explains our methods to track economic policy uncertainty and political divisions quantitatively from our text archives, and lays out additional data on censorship and the stock market. The fourth section discusses the evolution of the EPU during the period. The fifth section examines the association between the dividing issues and economic policy uncertainty. The sixth section discusses the mechanism linking political divisions and economic policy uncertainty and provides cross-country evidence that there is a systematic anticipation effect of EPU increasing before armed conflict. The seventh section concludes.

HISTORICAL BACKGROUND AND MECHANISM

Overview

In the first decades of the twentieth century, Spain followed a political system known as the Restoration (*Restauración*), which was based on

⁸ Also see the recent work by Leitão et al. (2019), showing that Spanish Civil War events affected Portuguese returns negatively.

⁹ Previous work by Ghirelli, Pérez, and Urtasun (2019) and Battilossi, Houpt, and Verdickt (2022) also constructs uncertainty indices for Spain. Ghirelli, Pérez, and Urtasun (2019) cover more recent decades, but our EPU measure is comparable to theirs. We differ from Battilossi, Houpt, and Verdickt (2022) in that we consider a longer time horizon and exploit the fact that we use two newspapers to show the link from political divisions and economic policy uncertainty.

the Constitution of 1876 and was relatively stable. The Restoration was formally a democratic system. Regular elections (with male universal suffrage since 1890) were held and some individual rights were protected. In practice, however, the result of general elections was in many cases predetermined, with an agreement between the two main parties to alternate periods of power (*turnismo*). Although this system was relatively stable in its first decades, a number of issues created increasing social and political unrest in the 1910s and early 1920s. These included the fear of anarchist terrorism or a proletarian revolution (especially after the Russian Revolution of 1917), and the rise of nationalist movements. These issues, along with dissatisfaction with the handling of the colonial war in Morocco and the promotion system in the armed forces, led to increasing military discontent. General Miguel Primo de Rivera initiated a coup d'état in 1923, suspended the Constitution, and assumed powers as a dictator. After some years of stability and economic growth, increased government spending caused the government to go bankrupt. Primo de Rivera resigned in 1930.

On 17 August 1930, a meeting of Republican representatives took place in the city of San Sebastián. Reformist and revolutionary factions formed an alliance, devising a strategy to oust the king and introduce a republic ("pacto de San Sebastián"). After a short transition period, known as the *Dictablanda*, the king fled the country following the municipal elections of 1931, in which Republican parties won a majority of the main cities. Spain's Second Republic was proclaimed. Following the victory of right-wing parties in the 1933 election, left-wing parties organized a revolutionary general strike in 1934. In February 1936, left-wing parties won a general election and regained control of the government.

After a spiral of violence and political assassinations, General Franco and other military commanders toppled the government in a coup d'état, which triumphed in some regions but not in others. Hence, the country split into two zones, with the Republican Government and its supporters on one side (an uneasy alliance of communists, socialists, and anarchists, who favored a more equitable civil society and a diminished role for the church) and on the other side the opposition Nationalists (a right-wing alliance of the army, the church, the monarchy, and the fascist-style *Falange* party). A bloody Civil War ensued, lasting until the nationalists' entry into Madrid in April 1939. This marked the beginning of Franco's dictatorship (1939–1975).

Overall, the period we study covers two democratic periods (the Restoration and the Second Republic) and two autocratic periods (Primo de Rivera and the first years of Franco).

The Politics of the dos Españas

From today's perspective, the Second Republic was a particularly interesting period. It directly preceded the Civil War and was characterized by internal conflict over land redistribution, worker's rights, the role of the church, and nationalist movements in Catalonia and the Basque Country. This political division is often referred to as *dos Españas* (two Spains), an expression that captures the political polarization that these issues represented. According to Moradiellos (2008), many of these divisions were the result of three main ideological forces: reformists, reactionaries, and revolutionaries, that were present in all of Europe at the time. He maintains that the split into reformists and revolutionaries on the "left" contributed critically to the failure of the Second Republic.

To operationalize the tracking of political divisions in the news text, we do not focus on these broader forces but instead try to track the policy debates around controversial issues, that is, the policy battlegrounds. We divide these policy areas into four groupings, which we will capture quantitatively through a simple NLP tool.

SOCIO-ECONOMIC CONFLICT

Socio-economic conflict was pervasive during the twentieth century in Spain. The main issues raised by the union movements were low wages, working conditions, and the distribution of land. Based on this struggle, the main anarcho-syndicalist union, the *CNT*, got to have more than 700,000 members. Strikes were common—especially noteworthy are the general strikes of 1917 and 1934—and so was political and social violence. Three prime ministers were assassinated by anarchists during the Restoration period and there were also some prominent attacks against Kings Alfonso XII and Alfonso XIII. But there were hundreds of murders, with employers and unions having, at times, their own armed militias.

Economic conflict became especially heated during the Second Republic. In 1932, the left-wing government approved an agrarian reform law. This was an attempt to change the distribution of the land by allowing for the expropriation of some large plots of land, which would then be split and transferred to agrarian workers. This resulted in two political camps. On one side of the political spectrum, the slow execution of the law caused bitter disappointment in many rural laborers and led to the radicalization of labor unions. On the other side, landowners and the right-wing opposition lobbied strongly against the reform. This mobilized many conservative owners and played an important role in the victory of right-wing parties

in the 1933 general election (Gil Pecharromán 1997). During the first year of the new right-wing government, the reform continued to be (slowly) implemented. However, a new agrarian law was passed in August 1935, which in practice meant the end to the reform efforts.

REGIONAL SEPARATISM

During the twentieth century, nationalism grew stronger in the Basque Country and Catalonia. Coinciding with the proclamation of the Second Republic, the Catalan Republic was proclaimed in Barcelona. Nationalist leaders renounced the Catalan Republic in exchange for substantial regional autonomy. In 1934, the president of the autonomous government proclaimed the “Catalan State within the Spanish Federal Republic.” The Catalan government was sent to prison, and autonomy was suspended. Overall, this was a highly contentious issue during our period of study (and still is today) and especially during the Second Republic. In general, the Spanish right favored a more anti-nationalist stance and advocated for a more centralized state, while the left favored more autonomy for the regions.

THE POWER OF THE MILITARY

The involvement of the military in politics was pervasive during the nineteenth and twentieth centuries. In 1923, General Primo de Rivera coup d'état ended the democratic government and suspended the Constitution, starting a military directory (“directorio”). When the Second Republic was proclaimed in 1931, many military officials were reluctant to serve the Republic, as they had pledged loyalty to the king. The new Republican government was suspicious of a possible military rebellion against the government and offered voluntary retirement with full pay. Those who chose to remain active had to pledge an alliance to the Republic. Around 10,000 officials opted for retirement, but many of the ones that did not soon started conspiring against the Republic. In addition, the government canceled the promotions decided by Primo de Rivera's dictatorship, reduced the number of divisions, and eliminated some military academies. These measures were deeply resented by some sectors of the military.

THE ROLE OF THE CHURCH AND RELIGIOUS EDUCATION

Since the 1851 agreement with the Vatican, the Catholic Church was in close alliance with the conservative sectors of the country (Pérez 2001, p. 577). During the first two years of the Second Republic, civil marriage

and divorce were introduced, public funding of the Church was canceled, and churches and other religious buildings became public property. A related, especially divisive issue, was that of education. The Republican government approved the closing of all Catholic primary and secondary schools, promoting at the same time the construction of a large number of public schools. In addition, during these years, there was widespread violence against Catholics, including the burning of convents. This created outrage in most of the Catholic and right-wing populations. The issue remained bitterly polarized during the Republic years, with the political right adopting a more pro-Catholic stance and against the secularizing measures, and the left defending them.

DATA AND FEATURE EXTRACTION FROM TEXT

For this study, we automatically collected over 347,858 pages from the Spanish newspaper *ABC* and 263,095 pages from *La Vanguardia*, published between 1905 and 1945. We chose these two newspapers because they are the only ones that are available online for the whole period of interest. *ABC* was founded in 1903 and was initially weekly.¹⁰ *ABC* was one of the most read newspapers in the country, with a print run of 100,000 copies during the Second Republic. It maintained a conservative and monarchist stance throughout the period, with the exception of the Civil War years, when it was taken over by the Republican government. *La Vanguardia* was founded in 1881 in Barcelona. In 1903, it underwent a renovation process, and, after that, it became the most read newspaper in the region of Catalonia, with a print run of more than 80,000 copies. In its first years, it was closely related to the *Partido Liberal*, and it maintained a catalanist and liberal editorial stance throughout the period until Franco's takeover of Catalonia in 1939.

To extract the text, we read in archived page image files of the two newspapers. The procedure is described in Online Appendix A. Our method manages to extract the text but does not allow us to distinguish the page columns and headlines consistently. As a raw material for our analysis, we therefore have 610,000 digitized pages of text that we use to extract the following text features.

SIMULATION OF ECONOMIC POLICY UNCERTAINTY

To produce estimates for economic policy uncertainty, we build on the work of Baker, Bloom, and Davis (2016) and count the number of

¹⁰ It became a daily on 1 June 1905. For this reason, we use that date as our starting point. We use 1945 as our end date to focus on the turbulent times until the end of WWII.

mentions of terms indicating economics (E), policy (P), and uncertainty (U) on each page. As our dictionary, we use the Spanish terms proposed by Ghirelli, Pérez, and Urtasun (2019) to capture economic policy uncertainty in a Spanish context (see word lists in Online Appendix Table A1). For robustness, we construct an alternative EPU index, adding “ E ” words that may be better suited for a historical context such as business, industry, commerce, or commercial—see the alternative list in Online Appendix Table A2.¹¹

In the original method, the EPU index is calculated by using the number of articles, which have $E > 0$, $P > 0$, and $U > 0$. We need to approximate this from mentions on the page level, as we cannot attribute text to separate articles. To do this, we use simulations of the coincidence of terms in articles, assuming a random distribution of mentions of the terms across each page and an approximation of the number of articles on each page.

We discuss these simulations in detail in Online Appendix B. They produce two insights. First, there are decreasing returns to mentions of E , P , and U at the page level. This is because there are saturation effects of increasing the mentions at the page limit, where in the limit every (simulated) article on a page will have at least one mention from each term list. Second, there are complementarities between mentions of E , P , and U . For example, for high levels of P and U , the EPU rises by much more with an increase in E . This is because the likelihood of the three sets of terms coinciding increases with more mentions of P and U . Importantly, this means that adding mentions of E , P , and U at the page level would be a mistake when approximating the EPU index.

We aggregate the information contained in the two newspapers by subtracting the mean and dividing it by the standard deviation. In most of the analysis, we will show results for both *La Vanguardia* and *ABC* separately to make differences and similarities between the two newspapers visible.

A QUANTITATIVE MEASURE OF DIVISIVE ISSUES

Our text archive allows us to quantify the importance of the four divisive political issues in the period 1905–1945. To do this, we construct a new dictionary of Spanish terms related to each of the four issues based on text retrieved from Casanova (2007), Gil Pecharromán (1997), and Pérez (2001).¹² Importantly, we do not choose these sources for their focus on

¹¹ We thank an anonymous referee for this suggestion.

¹² We also use text from Jackson (1976) for a robustness check.

conflict. Rather, conflict is such an important feature of this period that historians usually put a large emphasis on political divisions at the time. Hence, the four issues we capture are discussed in all three text sources.

We combine the text into one corpus where each document is one of the four relevant pre-Civil War issues. The separation into four documents, one for each political issue, then serves as a kind of supervision for our text processing. We exploit this supervision by generating dictionaries based on the thirty tokens with the largest tf-idf (Term-Frequency Inverse-Document-Frequency) in each of the four documents. This is a simple but effective way to capture the terms that are specific to an issue when compared to the other three issues.

The tf-idf lists are presented in Table 1 (see Online Appendix Table A3 for an English translation). An inspection of the lists indicates that they capture important elements of the political debate in our period. The only additional step we conduct to arrive at the dictionaries of ten terms is to get rid of terms that are either specific to the Second Republic or too common. The resulting final dictionaries are marked in italics in Table 1. We use these dictionaries to construct indices for the appearance of divisive issues across time. We will also show that our main results are robust to shorter or longer dictionaries. Online Appendix C contains more detail on the construction of the dictionaries.

Our method clearly works in that the dictionaries capture the historical debates surprisingly well. However, do they also capture political divisions? The dictionary for the socio-economic conflict index contains several words related to the agrarian reform issue, which was extremely divisive, for example, land (*tierras*) or agrarian reform (*reforma agraria*). But it also contains words on workers' rights and labor conflict, for example, mixed juries (*jurados mixtos*), which refers to juries composed by both landowners and workers to resolve conflicts in labor relations and working conditions. Out of the top four pages with the highest socio-economic conflict index values, two discuss in detail the agrarian reform in 1932 (Online Appendix Figure A1) and the agrarian (counter-)reform in 1935 (Online Appendix Figure A2), and one discusses the reintroduction of the law of mixed juries from 1931 (Online Appendix Figure A3).¹³

The regional separatism index contains words like *estatuto*, which refers to a law providing autonomy to regions and was persistently argued for by Catalan and Basque nationalists during the first half of the century, or *federal* and *autonomía*, which refers to types of power decentralization

¹³ As robustness check we also construct separate indices for agrarian reform and labor conflict (see Online Appendix Tables A4 and A5) and show our main results with these. We also run robustness checks by adding other issues in the results section.

TABLE 1
 DICTIONARIES OF FOUR DIVISIVE ISSUES

Socio-Economic Conflict	Regional Separatism	Role of Church	Power of Military
reforma	<i>estatuto</i>	iglesia	militares
agraria	<i>autonomía</i>	<i>católicos</i>	ejército
propietarios	<i>vasco</i>	<i>católica</i>	oficiales
trabajo	cataluña	enseñanza	generales
reforma agraria	<i>competencias</i>	escuelas	<i>ascensos</i>
tierras	constitución	<i>religiosos</i>	<i>efectivos</i>
jurados	<i>autonómico</i>	<i>clero</i>	cuerpo
jurados mixtos	<i>regiones</i>	órdenes	<i>divisiones</i>
mixtos	provincias	maestros	<i>mandos</i>
trabajadores	región	centros	reforma
campesinos	<i>federal</i>	<i>religiosas</i>	<i>orden público</i>
tierra	<i>existencia</i>	<i>vaticano</i>	<i>méritos</i>
fincas	catalán	<i>secularización</i>	<i>oficialidad</i>
campo	<i>proceso</i>	<i>congregaciones</i>	<i>reorganización</i>
laboral	referéndum	<i>iglesia católica</i>	
	<i>plantillas</i> condiciones	regional	
	<i>católico</i>	<i>fuerzas armadas jornaleros</i>	
	aprobado	debía	
	franco		
salarios	popular	colegios	armadas
viejas	país vasco	cardenal	ministerio
casas	catalana	culto	profesionales
casas viejas	maciá	compañía	fuerzas
comisión	región autónoma	española	
	manuel ministerio	autónoma	
	religión	antigüedad	
campesinado	gestoras	todas	academia
extremadura	generalidad	hizo	
	ciento contratos	integral	
	conventos	escalafón	
terratenientes	nacionalistas	creía	
	méritos guerra laborales		vascos
	escolares	decretos	
obreros	central	iglesia	
	ministro agricultura	parlamento	
	divorcio	administración	

Notes: The words under each issue are the 30 initial words from the tf-idf model. The italicized words are the ones finally used for the indices after removing common and period-specific words. *Sources:* In the Online Appendix, see Appendix C for details and Table A3 for an English translation.

discussed during the period. In the top pages of this issue, we find debates on regional autonomy. For example, the page with the highest value of the index (Online Appendix Figure A4) shows a heated argument against the suspension of Catalan autonomy.

The dictionaries for the role of religion and the military contain more generic words covering religion or the military. Our index measures for these two issues will therefore be more noisy. However, both dictionaries are still able to capture controversial issues surrounding the role of the church and military. For example, the writer in Online Appendix Figure A5 bitterly complains about “the very sad situation created to the Catholic Church in Spain” and that all the new measures have not been enough to “satisfy the anti-religious tendencies of current members of parliament.” The military dictionary contains words like military reform (*reforma militar*) and military jurisdiction, capturing the debates of the era on the involvement of the military in politics. For example, Online Appendix Figure A6 contains an example with a high military index that discusses the military reform proposed by the War Ministry, with important provisions on how to recruit and promote officials.

In the Online Appendix, we also provide word cloud summaries of the top-100 pages for each issue (Figures A7–A10). Not surprisingly, the clouds give a lot of weight to words that are directly related to the dictionaries. However, the clouds also suggest a much broader context of political divisiveness and economic uncertainty. For socio-economic conflict, we have words like *trabaj* (work), *justici*, *problem*, *expropi* (expropriation), or *indemniz* (compensation). For regional separatism, we have terms like *problem*, *minor* (minority), or *discussion* (argument). For the role of the church and the power of the military, again, we confirm that they contain more generic terms, but they also contain words like *problem*, *polit*, *reform*, or *diput*.

An important part of our method is that we do not calculate the tf-idf by distinguishing texts on the Second Republic from other texts in our corpus. As a result, the generated dictionaries retain the ability to flag pages that discuss the four political issues even when they lie outside the period of the Second Republic. For example, among the pages with the highest socio-economic conflict index is a page from 1926 (Online Appendix Figure A11), which discusses new government decrees by Primo de Rivera’s government on commercial operations and lease agreements, containing new regulations on expropriation conditions. This is also confirmed by word clouds, where the panel figures referring to the prewar period show that pages are also mentioning the words referring to the issues.

CAPTURING BROAD TOPICS IN THE TEXT

In addition to these specific dictionaries, we also want to gain an impression of the entire text and the changes in the topics that were discussed in the first half of the twentieth century. To do this, we applied a latent Dirichlet allocation (LDA) model to the text corpus to extract thirty topics from the text.¹⁴ This unsupervised method allows us to clearly identify the broad topics of politics, economics, culture, war, and business. We use these topics as controls.

CENSORSHIP

As our main analysis relates different news-based features to each other, it is important to analyze the role played by censorship. As explained in del Valle's (1981) seminal article on censorship in Spain, censorship of the press was an important tool of repression during our period of study, with the partial exception of the Second Republic.¹⁵

We therefore put particular effort into controlling for censorship in the next section, using two sets of variables to account for censorship. First, we consider three variables from the Varieties of Democracy (V-Dem) dataset: government censorship, harassment of journalists, and media self-censorship.¹⁶ We will interact these period-specific variables with newspaper dummies to allow for the option that the two newspapers behaved differently after these institutional changes. Second, we coded a "suspension of constitutional guarantees" variable from del Valle (1981), who explains that censorship was strongest in the periods of time in which constitutional guarantees ("garantías constitucionales") were suspended and provides a list of dates on which this happened. Interestingly, there is some variation by newspaper in this measure, as for some periods of time, constitutional guarantees were suspended in the Barcelona province (where *La Vanguardia* was produced) but not in Madrid (where *ABC* was). Online Appendix Figure A12 shows the timeline for these variables.¹⁷

¹⁴ We use the gensim package by Rehurek and Sojka (2010) and provide more details on this empirical methodology in Online Appendix D.

¹⁵ See Martínez Pineda (2016) for a detailed account of censorship during this period.

¹⁶ The V-Dem dataset is a multidimensional and disaggregated dataset that quantitatively tracks several dimensions of democracy, including the freedom of the press. See more details at <https://www.v-dem.net>.

¹⁷ We also analyzed periods of suspension, including a longer episode in May 1931 in which the *ABC* was suspended, and found no evidence for differential changes in the EPU before or after suspension. Similarly, we looked into changes in newspaper leadership. Our sample covers two main changes, one for *ABC* in April 1929 and another for *La Vanguardia* in January 1920. The results reveal no significant change in the reported uncertainty levels following such changes.

It is important to stress that we expect an asymmetric effect of censorship on the EPU index and on reports on divisive issues. The method of the EPU index is currently used to track uncertainty in autocracies with sophisticated censorship systems like China or Singapore. The reason the index still works in these environments is that news stories on the interaction of economics, politics, and uncertainty will not, typically, be on the radar of censors. This is consistent with what we find when we look at the newspaper-specific suspension of constitutional guarantees—there is no correlation of censorship with the EPU. Furthermore, we document that the timeline of the EPU remains broadly similar when we plot the residuals after filtering out the censorship controls (see next section). On the other hand, we find a strong, negative association of censorship with reporting on divisive issues. This suggests that our results will be downwardly biased in periods in which the press was not free. And, indeed, we find that if we focus our analysis on the period of the Second Republic, a period with a more free press, our point estimate increases considerably.

OTHER DATA

We also use as controls data on elections and government changes and the Polity Score measure from PolityIV.¹⁸ Finally, as an additional measure of economic expectations, we use monthly stock market data obtained from de Madrid (1994). These data are available from 1915 (with a break during the Civil War, 1936–1939).

ECONOMIC POLICY UNCERTAINTY IN TURBULENT TIMES

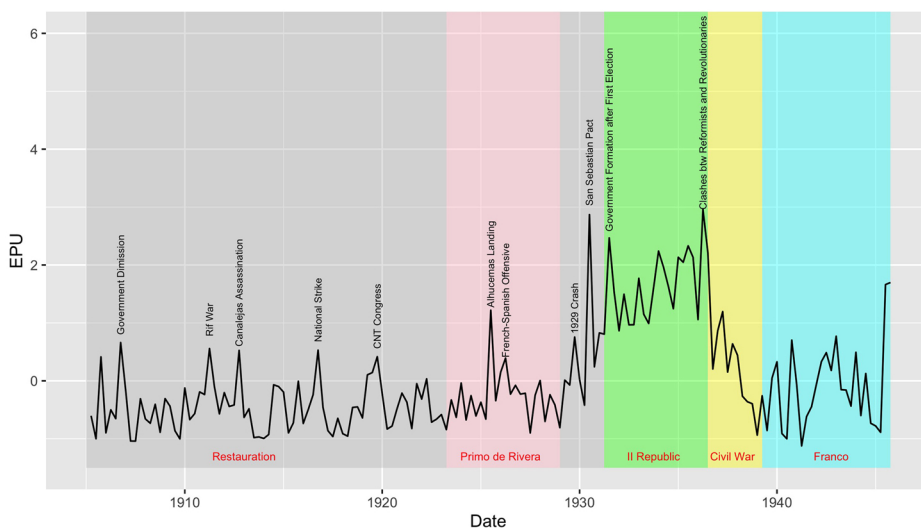
In this section, we present our first main result—our simulated economic policy uncertainty (EPU) index. We will later provide an interpretation of the data through the lens of policy risk, that is, assuming that the EPU captures the perceived standard deviation of future policy outcomes.¹⁹

Figure 1, Panel A, shows the timeline for the quarterly EPU index coming from our simulations. The most striking feature of the movements

¹⁸ The Polity data is a dataset widely used to quantify how democratic a regime is. The Polity Score captures the regime authority spectrum on a 21-point scale ranging from –10 (hereditary monarchy) to +10 (consolidated democracy). See more details at <https://www.systemicpeace.org/polityproject.html>.

¹⁹ Think of a policy outcome x that could capture policy positions such as regional separatism or the division of economic rents. At time t , the policy outcome x_{t+s} , $s > 0$, is not known, so the expected policy outcome $E[x_{t+s}]$ has an associated standard deviation $sd[x_{t+s}]$.

(a) Entire Sample



(b) Second Republic

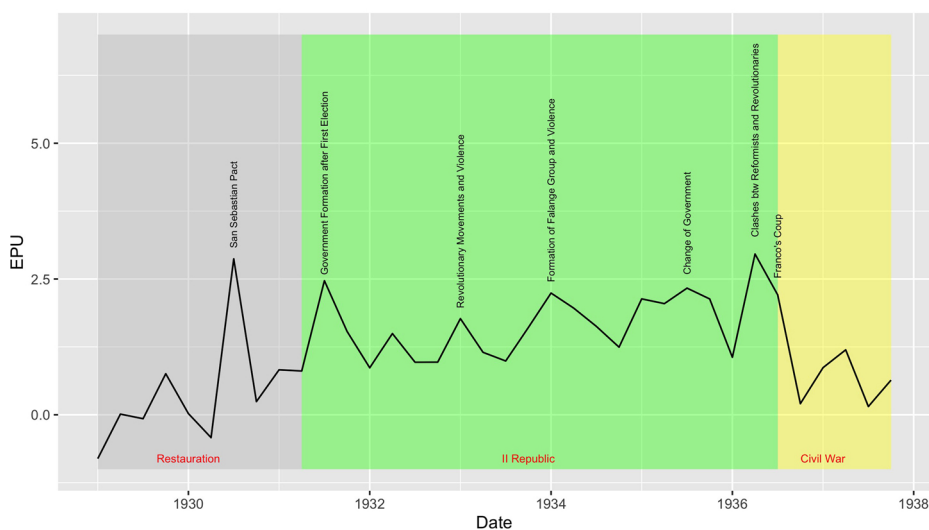


FIGURE 1

EPU INDEX FOR SPAIN IN 1905–1945

Note: Both panels show quarterly averages across both newspapers.

Source: The EPU index is calculated using the procedure described in Online Appendix B.

of the EPU in this period is the high and persistent level of EPU in the Second Republic.²⁰ This feature is remarkable as the entire period we analyze featured a lot of political and economic turbulence and because it arises from two very different newspapers.²¹ The EPU only fell again with the outbreak of the Civil War and remained low during Franco's regime. This is in itself an interesting finding, as it suggests that part of the economic policy uncertainty during the Second Republic was related to policy conflicts that were specific to the Second Republic and vanished thereafter. Importantly, this pattern is robust to controlling for our censorship variables.²²

In Figure 1, Panel B, we zoom in on the Second Republic to highlight some of the events that took place in and around this period. Most of the peaks that are visible can be directly linked to important political and economic events in the data. The second highest peak occurred in the third quarter of 1930, coinciding with the formation of a Republican policy block with the "Pact of San Sebastian." The signatories of this pact agreed on establishing a Republic, if necessary by force, to guarantee religious and political freedom, political elections, and a strengthening of the political autonomy of the Spanish regions.

During the Second Republic, a first peak can be seen with the formation of the first Republican Parliament in the third quarter of 1931, right after the first Republican election on 28 June. This election, won by the left in votes and seats, revealed that neither reformists nor revolutionaries had the majority but needed to form an alliance. The instability of this alliance is a recurring theme in the academic literature of this period. A subsequent peak in the EPU can be seen in the first quarter of 1933, coinciding with the Casas Viejas events, in which a revolutionary march was violently repressed by the police, resulting in 24 deaths. These events were followed by a large political crisis that resulted, at the end of the year, in the fall of the left-wing government.

Next, we see a peak in the first quarter of 1934, when violent assaults took place in Madrid organized by university students. This quarter, a new fascist party, Falange Española de las JONS, was created. Although the Falange never succeeded in elections, this revealed a new, radical

²⁰ In Online Appendix Table A6, we show that the EPU was significantly higher than in any other period and by about 1.5 standard deviations higher than during the Restoration period. We also separate and simulate economic and political uncertainty. We do this by constructing an "EU" index and a "PU" index. The results, shown in Online Appendix Figure A13, are qualitatively similar for both.

²¹ We show figures separating our two newspapers in Online Appendix Figure A14.

²² We show this in Online Appendix Figure A15, which plots the residuals of newspaper-specific regressions of the EPU on our four censorship variables.

organization of reactionary forces. The third and fourth quarters of 1935 saw another spike in uncertainty, coinciding with a corruption scandal (“estraperlo”) affecting the right-wing government. This resulted in a government crisis, with mounting government instability and fears of parliament dissolution. Finally, the largest spike of uncertainty in our sample occurred in the second quarter of 1936. This quarter was characterized by a larger number of strikes and growing clashes within the Socialist Party between its reformist (“prietista”) and revolutionary (“largocaballerista”) factions. At the same time, political violence spiked: more than fifty leftist workers and more than forty falangistas died during armed clashes between April and July. The Civil War broke out in July 1936.

DRIVERS OF HIGH EPU

What were the drivers of these persistently high levels of the EPU? According to Prados de la Escosura (2017), GDP and other macroeconomic indicators did not significantly drop before the outbreak of the Civil War.²³ Hence, it is unlikely that policy uncertainty was generated purely as a reaction to the Great Depression alone. Spain had a relatively isolated economy, and the banking system held up relatively well in this period (Tortella and Gamir 1984). Another factor that could have contributed to economic policy uncertainty was a shift in trade policies during the Second Republic. Betrán and Huberman (2021) explain that the government of this period shifted away from a focus on tariffs to negotiating bilateral trade agreements. However, they also stress that this should be regarded as a kind of second best policy reaction designed to manage the uncertainty of the international trade environment of the time. Still, there should be no doubt that this was an economically turbulent time. Jorge-Sotelo (2020), for example, discusses the sharp contraction in bank lending and economic activity that followed the declaration of the Second Republic in April 1931. His analysis suggests an interplay between economic and political factors leading to an economic crisis. Our explanation of the dramatic shift in EPU focuses on political economic factors.

As a first step towards understanding the drivers of the remarkably high EPU during the Second Republic, we sampled the pages in our corpus with the highest values of EPU. Word clouds on the fifty pages

²³ However, in Online Appendix E, we use a VAR framework to show that the Second Republic was also characterized by suppressed stock market prices, which seem to follow innovations in the EPU.

with the highest EPU score show a direct association with terms relating to our socio-economic conflict dictionaries (see Online Appendix Figure A16). In some cases, as shown in Online Appendix F, the authors also make a causal link. In *ABC*, on 18 November 1933 (Appendix Online Figure A17), the author explicitly mentions the uncertainty created by the agrarian reform law passed in September 1932 and states that the “owner of rural land who wants to sell it, cannot do it, because no one will buy until the current uncertainty is resolved” and concludes that this is how “the economy of a nation can go bankrupt in all activities, in a short period of time: by passing laws and other regulations as if it were possible to be in a capitalist and a socialist regime at the same time.”

This points to a specific causal mechanism in which the political deadlock around the agrarian reform had generated economic policy uncertainty, which, according to observers at the time, directly damaged investment incentives. The text also suggests a direct link between the agrarian issue and political divisions. In 1935, *ABC* (Online Appendix Figure A18) quotes a member of parliament saying that the agrarian reform, due to its “sectarian inspiration” is a “source of hatred, having achieved nothing practical.” This suggests that the member of parliament saw a direct causal effect of the agrarian issue on political polarization. The tone was different in *La Vanguardia*, but the issue played a critical role here as well. In 1935, for example, *La Vanguardia* highlights the importance of the agrarian issue and reports that the Agriculture Minister pleaded with agrarian owners not to evict workers from their land (Online Appendix Figure A19).

But obviously, not only socio-economic conflict is discussed on pages with high EPU scores. We find, for example, that writers from *La Vanguardia* were worried about the political deadlock in parliament (see Online Appendix Figure A19). We also see mentions of restrictions on trade, fluctuating wheat tariffs, and concerns that “as a consequence of the wild interventionism,” Spain experienced dramatic fluctuations in the exchange rate, which affected importers and led to currency risks.²⁴ These episodes were related to the abandonment of the gold standard and its implications for Spanish monetary policy (Online Appendix Figure A20). However, it is hard to say whether these events were responsible for the persistently high levels of EPU throughout the Second Republic. To capture the potential drivers of EPU more systematically, we therefore turn towards a quantitative analysis of the text.

²⁴ This is in line with the idea that the international trade environment was turbulent, as stressed by Betrán and Huberman (2021).

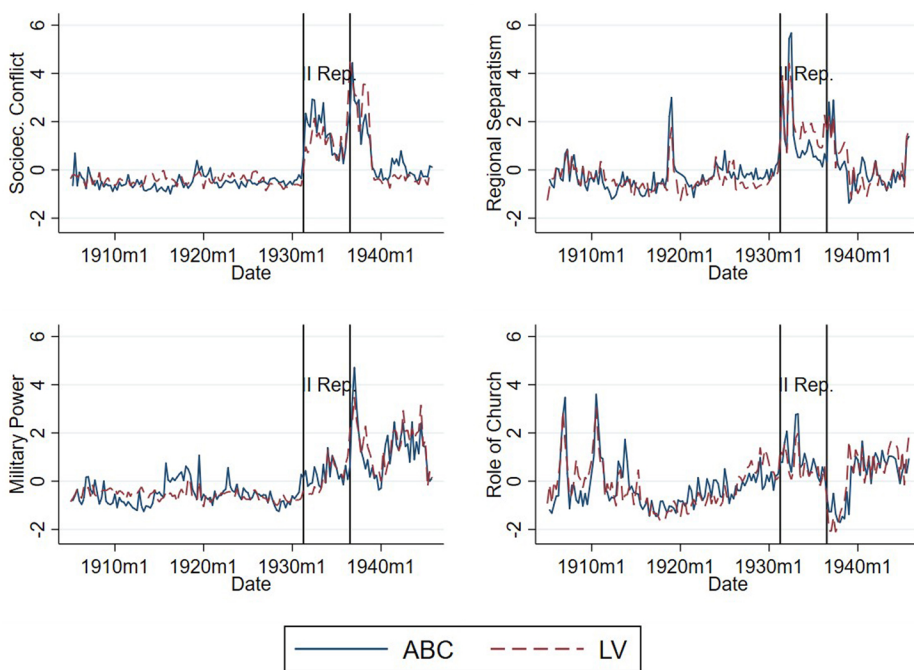


FIGURE 2
FOUR DIVISIVE ISSUES

Note: See Online Appendix C for details. Quarterly data used. Sample period: 1905–1945.
Source: The four indices are calculated with a tf-idf model.

QUANTIFYING THE *DOS ESPAÑAS*

Main Results

Figure 2 shows the timeline of the four divisive issues following the quantification described in the second section (replication files for all results can be accessed at García-Urbe, Mueller, and Sanz (2023)). Note, first, that the four issues behave quite differently across time. Second, there is a striking resemblance between the rise of coverage of socio-economic conflict in particular and the levels of EPU reported in Figure 1 for both *ABC* and *La Vanguardia*.

To quantify the association between the divisive issues and the EPU, we run regressions of the form

$$EPU_{nt} = \sum_j \alpha_j Issue_{jnt} + \beta X_{nt} + v_n + \eta_t + \varepsilon_{nt},$$

where EPU_{nt} is the economic policy uncertainty reported in newspaper n in month t and j is the index of the divisive political issue.

We include a number of controls X_{nt} . First, we include censorship controls from V-Dem (government censorship, harassment of journalists, and media self-censorship), all interacted with newspaper dummies, and suspension of constitutional guarantees (from del Valle 1981). Second, we include the economics and politics topics from the LDA model to understand whether the EPU follows broader economics or politics topics or divisive issues specifically. Third, we include as political controls dummies for government change and election, and the polity2 score.

We also present results with newspaper (v_n) and time (η_t) fixed effects, where we exploit differences in reporting between the two newspapers and how these fluctuate from month to month. An association between EPU_{nt} and $Issue_{jnt}$ when controlling for time fixed effects implies that months in which a newspaper covers an issue more intensely are also months in which the newspaper writes more about economic policy uncertainty, controlling for everything that happened during the same month. This specification controls for all aspects that change over time, but in the same way for both newspapers, like economic fundamentals.

Table 2 reports the results. We first look at the monthly association between the EPU and each of the issues which, according to historians, were dividing society in this period. We find strong evidence of a positive association (Column (1)). All dictionary variables are normed with their standard deviations, and therefore the coefficient on the socio-economic conflict indicates that an increase of one standard deviation in debates around this issue is associated with an increase of the EPU index by almost 30 percent of a standard deviation. In Column (2), we show that little in these strong associations changes if we control for censorship. The coefficients are strikingly robust to the seven newspaper-specific censorship controls we add. In Column (3), we also control for the discussion of broader debates in politics and economics through our LDA topics and for institutional factors like elections, government changes, and the regime score. Again, the results are robust to this.

In Column (4), of Table 2, we add the time and newspaper fixed effects. Column (5) includes the censorship controls that interacted with the newspaper on top of the fixed effects. This accounts for the possibility that censorship affects the two newspapers differently at a given moment in time. Column (6) adds the LDA controls. The point estimate on socio-economic conflict actually increases across these specifications, but the association with the other issues is slightly less robust to this change. This is interesting because it shows that the strong association between the EPU and socio-economic conflict is not driven by general trends like

TABLE 2
POLITICAL DIVISIONS AND THE EPU INDEX

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Socioec. conflict	0.273*** (0.054)	0.205*** (0.072)	0.155** (0.067)	0.342*** (0.100)	0.369*** (0.105)	0.299*** (0.109)	1.146** (0.520)	0.239* (0.131)
Regional separatism	0.217*** (0.048)	0.174*** (0.046)	0.138*** (0.045)	0.202** (0.098)	0.157 (0.106)	0.111 (0.107)	0.013 (0.314)	0.319*** (0.099)
Power of military	-0.003 (0.035)	0.132*** (0.051)	0.121** (0.047)	0.119 (0.087)	0.096 (0.087)	0.035 (0.087)	-0.251 (0.622)	-0.117 (0.090)
Role of church	0.168*** (0.034)	0.191*** (0.037)	0.194*** (0.037)	0.108* (0.062)	0.117* (0.062)	0.156** (0.061)	0.624 (0.427)	0.109 (0.068)
Observations	977	977	977	970	970	970	122	622
R ²	0.22	0.26	0.32	0.75	0.75	0.76	0.66	0.69
Time and paper FE	No	No	No	Yes	Yes	Yes	Yes	Yes
LDA controls	No	No	Yes	No	No	Yes	No	No
Political controls	No	No	Yes	No	No	No	No	No
Censorship controls	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Sample	All	All	All	All	All	All	II Rep.	Pre II Rep.

Notes: OLS regressions of EPU on the indicated variables. LDA controls are the economics and politics topics from the LDA model. Political controls are dummies for government change and election, and polity2 score (from Polity IV). Censorship controls are government censorship, harassment of journalists, and media self-censorship (from V-Dem), all interacted with newspaper dummies, and suspension of constitutional guarantees (from del Valle 1981). The unit of observation is a pair month-newspaper. Standard errors clustered by month in parentheses.

*** p ≤ 0.01, ** p ≤ 0.05, * p ≤ 0.1.

Sources: In the Online Appendix, see Appendix B for the construction of the EPU index, Appendix C for the four issues, Appendix D for the two topics from the LDA model, and Figures A14, 2, A12, and A21 for a graphical representation of the variables over time.

economic conditions or regime characteristics.²⁵ In periods in which one of the newspapers puts higher salience on socio-economic conflict, it also reports more economic policy uncertainty. We have seen in the page examples that this was sometimes explicitly driven by a perceived causal link running from a policy option to economic policy uncertainty. Column (7) shows that this association is larger when we focus on the Second Republic period. Given that this was a period of mostly free press, this strongly suggests that censorship cannot account for our findings. Finally, Column (8) shows that the association is also present in the period before the Second Republic. This is important because it suggests a general mechanism that is not specific to the Second Republic alone but that only strengthened in that period.

It is important to keep in mind that commentators at the time saw a direct causal link between the salience of socio-economic conflict, political polarization, and economic policy uncertainty. We will return to the interpretation of these findings in the sixth section.

Robustness Checks and Additional Results

ROBUSTNESS

In the Online Appendix, we run a battery of robustness checks to demonstrate that the association between EPU and the divisive issues is robust. First, we use daily instead of monthly data, which is a demanding specification because day fixed effects absorb more variation and because it requires that mentions of EPU and political divisions coincide on the same newspaper day. The results are robust to this (Online Appendix Table A7).

Given this close association, it is important to stress that the relationship between socioeconomic conflict and the EPU is not mechanical. We show in the Online Appendix that it is possible to have high EPU and low socio-economic conflict, and vice versa.²⁶ For example, on 9 April 1931 (Figure A23), *ABC* talks about the monetary problems in Spain and the “necessity that the monetary issue is definitively solved.” This page scores high on EPU but low on socio-economic conflict. *La Vanguardia*

²⁵ The fixed effect specifications are equivalent to taking the difference between the two newspapers on the left-hand and right-hand side variables. The inclusion of fixed effects also makes it clear that our findings are not driven by copying across newspapers.

²⁶ Online Appendix Figure A22 displays a scatterplot of the relationship between EPU and socio-economic conflict. A positive relationship can be gathered from the graph (as expected from the regression results), but observations are spread over the four quadrants.

on 6 September 1931 includes some provisions on the implementation of the Agrarian Reform Law (Figure A24). Although the text talks about the agrarian reform, the redistribution of the land, and other terms indicating the presence of socio-economic conflict, it contains no comments on its economic implications. This page scores low on EPU but high on socio-economic conflict. By contrast, *ABC* from 9 April 1931 (Figure A25), while also related to the agrarian reform, is an opinion piece that relates the reform to the “crisis” and mentions the dangers of a “revolution.” This page scores highly on both EPU and socio-economic conflict.

We also run a robustness check where we drop the term *reforma* from the list of the EPU dictionary. This is the only word that coincides in the EPU lists and in some of the socio-economic conflict lists (Online Appendix Table A8). Results are robust to this, which is not surprising as our simulated EPU index behaves as an interaction between the three *E*, *P*, and *U* lists.

The results are also robust to alternative constructions of the dictionaries. Online Appendix Tables A9 and A10 show, respectively, that the relationship between socioeconomic conflict and EPU remains very similar when we use either the top-five or the top-15 words without dropping the words that are too common (those with mentions across pages larger than 0.1, as described in Section C). The association of EPU and regional separatism also remains similar, while the ones for military power and the role of the church change a bit more with respect to the baseline. We also provide an additional test in which we unwrap the socio-economic conflict issue by producing two separate dictionaries discussing the agrarian reform issue and worker’s rights (Online Appendix Table A11).²⁷ Both of these divisive issues are significantly and strongly associated with EPU. Finally, the results are robust when we use an alternative EPU measure, adding terms such as business, industry, commerce, or commercial, which might better capture economics in the earlier period. Online Appendix Figure A27 shows that the timeline of this alternative EPU variable is extremely similar to the one following the method by Ghirelli, Pérez, and Urtasun (2019). Again, our interpretation is that it is the interaction of the *E*, *P*, and *U* lists that makes the difference. Online Appendix Table A12 shows that the association between socio-economic conflict and the EPU remains strong when using this alternative EPU measure.

²⁷ See Online Appendix Figure A26 for the timeline of the issues under this alternative categorization.

EXPLORING OTHER ISSUES

To illustrate how our method can be used to track other salient issues from other periods, we construct four alternative dictionaries using additional paragraphs from Jackson (1976). We call the resulting issues: revolutionary ideologies, monarchy and parties, culture, and industry. Table 3 shows the results of the new tf-idf weighting for all issues. The first four columns of Table 3 contain the updated dictionaries for our four main issues, which now also account for the content in the four new dictionaries. We see that these dictionaries are remarkably robust to the newly added data, with some subtle changes. Specific terms in the socio-economic-conflict topic related to “work” or “workers,” for example, are now ranked lower. This is because these terms are also closely related to other new issues and therefore have a lower idf weighting.

The Revolutionary Ideologies dictionary covers words relating to anarchism, socialism, and revolutionary activities. It contains words such as “terrorism,” “anarchism,” “socialism,” or “strikes.” The Monarchy and Parties issue tracks general political events related to the monarchy, political parties, and politicians in general, containing words such as “monarchy,” “parties,” or “elections.” The Culture issue tracks content relating to cultural life, education, or philosophical stance, containing words such as “sciences,” “education,” or “rationalism.” The Industry issue tracks industrial and economic development through words such as “industry,” “production,” and “exports.” It also contains words relating to some of the northern provinces of Spain, like Vizcaya, as they were the industrial hub of the country.

Online Appendix Figure A28 provides the timelines of the new issues. What is most striking is that the controversial issues (revolution, monarchy) show similar level shifts in the Second Republic as the ones we found for our other divisive issues, while the other two issues (culture, industry) do not. It is also worth noting the general upward trend of industry during the first half of the century.

INTERPRETATION AND COROLLARIES
OF OUR MAIN RESULTS*The Link between Political Divisions and Uncertainty*

Why should political divisions increase economic policy uncertainty? The answer to this question depends first and foremost on the concept of uncertainty as it is measured by the EPU index. Knight (1921)

TABLE 3
EXPLORING OTHER ISSUES

	Socio-Economic Conflict	Regional Separatism	Role of Church	Power of Military	Revolutionary Ideologies	Monarchy and Parties	Culture	Industry
reforma	estatuto	iglesia	ejército	<i>anarquismo</i>	<i>monarquía</i>	<i>ciencias</i>	industrias	
agraria	autonomía	azaña	azaña	<i>terrorismo</i>	cánovas	<i>universo</i>	industrias	
propietarios	vasco	escuelas	militares	<i>anarquista</i>	política	<i>armonioso</i>	capital	
tierras	catalán	católica	oficiales	<i>sindicatos</i>	militar	<i>institución</i>	<i>industria española</i>	
reforma agraria	cortes	enseñanza	militar	anarquismo rural	ejército	gner	<i>rápidamente</i>	
trabajo	competencias	católicos	generales	<i>anarcosindicalismo</i>	marruecos	<i>educación</i>	<i>dependieron</i>	
jurados	gobierno	republicanos	asesores	huelga	alfonso	hombre	<i>provincias periféricas</i>	
fincas	constitución	religiosos	decreto	<i>socialismo</i>	partidos	<i>discipulo</i>	<i>periféricas</i>	
tierra	provincias	órdenes	efectivos	clase	<i>monarquía constitucional</i>	<i>civilización europea</i>	industriales	
jurados mixtos	autonómico	gobierno	cuero	<i>huelga general</i>	bajo	racionalismo armonioso	producción	
mixtos	región	política	reforma	<i>anarcosindicalistas</i>	libertad	<i>civilización</i>	<i>mundial</i>	
gobierno	nacionalismo	clero	mandos	<i>revolución</i>	autoridad	<i>eminentes</i>	<i>mercados</i>	
campesinos	federal	centros	divisiones	<i>anarquistas</i>	elecciones	sanx	<i>vizcaya</i>	
trabajadores	vascos	maestros	orden público	organización	primo	krause	<i>crecimiento</i>	
decreto	proyecto	colegios	público	sociedad	rivera	<i>científicos</i>	<i>desarrollaron</i>	
agricultura	regiones	mayo	profesionales	trabajadores industria	primo rivera	figuras	depresión	
largo	proceso	caólico	ministerio	comprender	<i>existia</i>	pléyade	exportaciones	
proyecto	catalana	vaticano	régimen	libremente	<i>anarquista</i>	racionalismo	industrial	
grandes	izquierda	congregaciones	armadas	aldeas	cortes	convivencia	progreso	
laboral	regional	iglesia católica	fuerzas armadas	sociedad colectivista	nuevo	krausismo	altos	
terratienentes	aprobado	cortes	franco	centralizada	<i>pareció</i>	pasado	aranceles	
población	referéndum	religiosas	oficialidad	comunal	palabra	naturales	desarrolló	
comisión	nacionalistas	debia	plantillas	pericia	real	escuela	momento	
mayo	abril	régimen	méritos	federadas	alfonso xiii	libre	provincias	
campo	popular	cardenal	reorganización	clase trabajadora	<i>pronunciamientos</i>	poetas	incapaz retener	
viejas	existencia	escolares	orden	colectivista	<i>enteramente</i>	krausistas	potencias	
casas	región autónoma	compañía	manuel	anarcosindicalismo	monarquía pareció	menéndez	potencias industriales	
extremadura	gestoras	culto	medidas	sindicalismo	<i>elecciones amañadas</i>	europa	modo industria	
casas viejas	autónoma	secularización	julio	contribución	<i>borbones</i>	francisco giner	bélico	
jornaleros			decretos	rural	<i>experimentó</i>	filólogos	bélico renovada	

Sources: The words under each issue are the 30 initial words from the tf-idf model. The italicized words are the ones finally used for the indices after removing common and period-specific words. In the Online Appendix, see Appendix C for details and Table A.14 for an English translation.

distinguished two concepts, “risk” and “uncertainty.” Risk applies to situations in which we do not know the outcome but can accurately measure the odds. In this view of the EPU, situations that feature a higher standard deviation around future policies will feature a higher EPU.²⁸ When policy proposals become more extreme and the population is split into different, strong political camps, the standard deviation of future policies will increase. Most changes in the EPU that we have highlighted in Figure 1 can be explained from a risk perspective. Important aspects here are changes in the political institutions, shifting dynamics between the three main political forces, and the opening of a violent contest.

A democratization like in the Second Republic means that new policy proposals can enter the political arena, and this will increase the standard deviation of future policies. Figure 2 shows that mentions of socioeconomic conflict and regional separatism indeed increased markedly with the institutional change. Both issues represented high-stakes conflicts about the division of economic rents, and the policy positions of the three main forces, Republicans, reactionaries, and revolutionaries, were dramatically different. In the case of regional separatism, this was amplified by ethno-linguistic conflict. This meant that shifts of attention towards these issues increased economic policy uncertainty. However, the first peak of the EPU occurs in the same quarter as the Pact of San Sebastian, that is, preceding the institutional change. Why would the pact increase the EPU? Our interpretation of the data is that the pact represented the formation of a viable political alternative to the reactionary policy default, and it explicitly included the separatists. This increased the likelihood of a policy outcome far away from the reactionary default and thereby increased policy risk.

But, as pointed out by Moradiellos (2008), the political coalition between revolutionaries and Republicans was not stable, which meant that policy outcomes remained volatile throughout the Second Republic. According to Malefakis (1970), the agrarian conflict represented a stark example of this tension. His analysis suggests that the lack of a united program of action during the first two years of the Republic jeopardized the reform. In addition, the lack of unity on the left opened the door to fast revision when the right came to power in the next two years. All these factors added to policy uncertainty surrounding the agrarian reform.

²⁸ Knightian uncertainty, on the other hand, applies to situations where we cannot know all the information we need in order to set accurate odds in the first place. The theoretical literature has linked the concept of uncertainty to the max-min criterion (Wald 1945; Gilboa and Schmeidler 1989). Thus, perceptions about the worst-case scenario could have a huge impact on the index if it captures Knightian uncertainty.

A key element of this period is the use of violence for political means. The conflict literature typically models violent contests through a Tullock contest function. In this view, the embrace of violence for political means is choosing a lottery of “all or nothing” over the compromise solution that would be reached within the political institutions. It is therefore no surprise that several peaks of the EPU coincide with violent events or the formation of violent groupings. The best example here is the sharp increase of the EPU with the clashes of revolutionaries and Republicans towards the end of the Second Republic. Risk not only increased because it was unclear who would have the upper hand between the two groups but also because the breakdown of the coalition increased the chance of violent conflict.

Political Divisions, Uncertainty, and War Risk

Periods of increased EPU can anticipate the outbreak of political armed violence if the same political conflict that leads to uncertainty about future outcomes also leads to a risk of armed conflict.²⁹ The anticipation of armed violence could itself further increase uncertainty because wars have high stakes and uncertain outcomes. In addition, the formation of groups that are willing to engage in violence increases uncertainty because it suggests that institutional arrangements will no longer hold.

A corollary of these mechanisms is that periods of increased EPU should then precede the outbreak of violence. We look into this using the contemporary EPU data provided by <https://www.policyuncertainty.com>, which contains over 7,600 country-month observations from 22 countries. We combine this with armed violent events from the Uppsala Conflict Data Program (UCDP) GED dataset.

It is hard to test the hypothesis that intense civil wars are anticipated by episodes of high EPU, as the EPU index is produced only for relatively peaceful countries. A civil war of the intensity of the Spanish Civil War is not present in the contemporaneous EPU sample. However, there are several countries in the EPU sample that experience intense armed political violence (Mexico, Russia, and Colombia), and many countries experience at least some armed political violence according to the UCDP definition. We define armed conflict as a country-month with more than one fatality from armed conflict.

²⁹ Besley and Persson (2011), for example, model a simple policy conflict between incumbents and oppositions and show that the types of political institutions that allow for large policy shifts are more prone to lead to armed conflict.

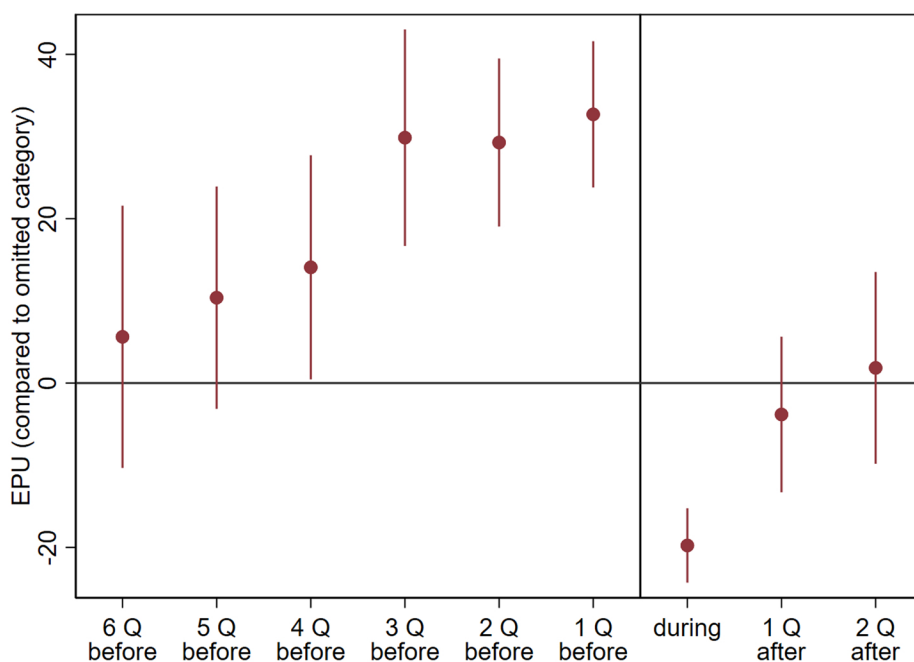


FIGURE 3
INCREASES OF EPU ANTICIPATE ARMED VIOLENCE

Source: Figure shows regression coefficients of the EPU index provided by <https://www.policyuncertainty.com/> on dummies capturing the quarters before, during, and after armed violent events from the UCDP GED dataset.

This dataset allows us to test whether there is a systematic anticipation effect of EPU increasing before armed conflict. Figure 3 shows the average level of the EPU before, during, and after episodes of armed political violence. There is a significant increase in the EPU before outbreaks, followed by a dramatic decrease during violence. The aftermath of the Civil War is characterized by levels of EPU close to baseline.³⁰ This is a remarkable pattern, consistent with the mechanism proposed previously.

What is most striking about this result is that a mechanism that was held close to 100 years ago in Spain seems to be still valid today. On the one hand, this raises the prospect of using the EPU for conflict forecasting. On the other hand, our findings suggest a mechanism through which future conflict can harm economic activity—if economic actors

³⁰ In Online Appendix Figure A29, we show that this pattern also holds if we compare to more demanding baselines by running a regression with country and year fixed effects.

take current political conflict into account because it increases economic policy uncertainty, then this can harm the economic situation and even lead to self-fulfilling prophecies.

CONCLUSION

We have provided evidence on the evolution of economic policy uncertainty in the first half of the twentieth century in Spain, a period of dramatic political instability. We observe that uncertainty was unusually high in the democratic Second Republic (1931–1936), after which the country fell into a bloody civil war.

Our analysis allows us to quantitatively test whether specific issues are correlated with economic policy uncertainty, and we find a close and remarkably robust association between issues capturing socio-economic conflict and economic policy uncertainty. Interestingly, this association stems from newspaper-specific reporting and holds up to controlling for month and day fixed effects and newspaper-specific censorship controls.

The close association of socio-economic conflict and EPU is in line with the views of contemporary commentators, who explicitly posit a causal link running from controversial political issues to EPU. However, it is likely that other factors contributed to the high level of EPU at the time. It should be kept in mind that the period of the Second Republic followed the financial crash of 1929, and our results therefore have to be seen in this context. The Great Depression of 1929–1933 and the international trade environment doubtlessly contributed to the instability and uncertainty we observe. Another contributing factor for variation in the EPU is the degree of censorship that has varied over time. None of these factors can, however, explain our findings, given that we find a stronger link between socio-economic conflict and EPU when we control for censorship and time fixed effects.

Our findings are closely related to an understanding of political institutions as buffers for economic shocks (Rodrik 1999; Besley and Persson 2011). In this view, Spain experienced a civil war because its political institutions could not deal with the internal socio-economic conflict triggered by rapid shifts in the economic environment. Even though *de jure* political power was at times in the hands of the workers, reforms were blocked by the *de facto* power of landowners (see Acemoglu and Robinson 2006) and the unstable alliance between Republicans and revolutionaries (see Moradiellos 2008), which made the conflict escalate.

Our findings also suggest a fruitful avenue for future research using local news sources from countries with socio-economic or ethnic conflict to see whether the link from these conflicts to economic policy uncertainty generalizes. This would establish economic policy uncertainty as a mechanism through which ethnic divisions hinder economic development. A particularly useful approach in this regard is to exploit newspaper-specific variation in perceptions of the EPU and coverage of different political issues.

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