



A new economic policy uncertainty index for Spain[☆]

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HIGHLIGHTS

- We refine the Economic Policy Uncertainty (EPU) index (Baker et al., 2016) for Spain.
- We fine-tune the richness of the expressions used and the newspaper coverage.
- We unveil an index chronology more in line with key uncertainty-increased events.
- EPU shocks affect economic activity and more so private consumption and investment.

ARTICLE INFO

Article history:

Received 18 December 2018
Received in revised form 30 March 2019
Accepted 12 May 2019
Available online 30 May 2019

JEL classification:

D8
C43
E2
E3

Keywords:

Economic uncertainty
Policy uncertainty
Uncertainty shocks

ABSTRACT

We explore how sensitive is the influential Economic Policy Uncertainty (EPU) index (Baker et al., 2016) to certain key features of the construction methodology. Our results (for the case of Spain) both as regards the chronology of economic policy-related events as well as the effects of uncertainty shocks on the economy, show the relevance of fine-tuning two key methodological choices: (i) the richness of the keywords and expressions used, and (ii) the newspaper coverage. Thus, our results are not to be read only as regards the case under study (Spain), but rather convey a more general message.

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1. Introduction

The theoretical and empirical literature shows that heightened economic uncertainty can harm economic activity. Nevertheless, being “uncertainty” a non-observable concept, a number of empirical strategies have been developed in the literature to proxy it (see e.g. [Castelnuovo et al. \(2017\)](#)), and the references quoted therein). The most influential methodology to compute such proxies is the so-called Economic Policy Uncertainty (EPU) index of [Baker et al. \(2016\)](#) (BBD henceforth). This index has been borrowed in a number of empirical applications: e.g. [Meinen and Roehle \(2017\)](#), [Fontaine et al. \(2017\)](#), [Caggiano et al. \(2017\)](#) and [Colombo \(2013\)](#).

BBD construct indexes of economic policy uncertainty based on newspaper coverage frequency for the US and some other countries.¹ For the US case, they rely on a large press and time coverage. For European countries, they restrict the press coverage to two newspapers per country, i.e. *El País* and *El Mundo* in the Spanish case. The time coverage varies case by case, and for Spain starts in January 2001. For each country, they count the number of articles that contain terms referring to three categories: economy, policy, and uncertainty. For Spain, they consider the following keywords: (economy) *económica* or *economía*; (policy) *impuesto* or *tarifa* or *regulacion* or *politica* or *gastar* or *gasta* or *gasto* or *presupuesto* or *deficit* or *banco central*; (uncertainty) *incierto* or *incertidumbre*. They scale the raw count by the total number of articles in the same newspaper/month, standardize the monthly series of scaled counts, average them across the newspapers, and rescale the resulting index to mean 100.

In this paper we provide a new EPU index for Spain, building on the methodology of BBD, so that it is more in line with

[☆] The views expressed in this paper are the authors' and do not necessarily reflect those of the Bank of Spain or the Eurosystem. We thank Mirian Luengo for her research assistance, and seminar participants at the Bank of Spain for their comments.

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¹ See also [Davis \(2016\)](#), and the dedicated webpage <http://www.policyuncertainty.com/>.

the index BBD constructed for the US. We expand the latter in several relevant dimensions, namely: (i) we expand the headline newspaper coverage from 2 to 7, including economic-financial ones; (ii) we use a much richer set of keywords to form the search expressions; (iii) we cover a longer sample period (from January 1997). In addition, we provide estimates of the macroeconomic effects of uncertainty shocks.

Two results stand out: (i) the new index presents a more consistent chronology of economic policy events; (ii) the macroeconomic effects of uncertainty shocks measured from the new index yield significant negative responses of GDP, private consumption and private investment, compared to mute responses obtained using the original one. Beyond this, our results suggest that, in addition to the richness of keywords, widening press and time coverage is key to improve the quality of the index.

In the rest of the paper we explain how we build our index (Section 2), our empirical exercise (Section 3), and some conclusions (Section 4).

2. Building the index

We consider 7 relevant Spanish national newspapers: *El País*, *El Mundo*, *La Vanguardia*, *ABC*, *Expansión*, *Cinco Días*, and *El Economista*. The first 4 newspapers are the most read generalist newspapers in Spain, while *Expansión*, *Cinco Días*, and *El Economista* are the three headline Spanish business newspapers. All searches are carried out using the Dow Jones' Factiva service. For each newspaper, we conduct our search from the first date in which the newspaper is collected in the database, starting from January 1997.²

Our search (in Spanish language) counts the number of articles containing simultaneously at least one keyword related to the categories of “uncertainty”, “economy”, and “policy”:

- Uncertainty: *inciert** or *incertidumbr** or *inestabl** or *inestabilidad/inestabilidades* or *riesgo/riesgos*;
- Economy: *economic** or *economía*;
- Policy: *Parlamento* or *Moncloa* or *gobierno central* or *Hacienda* or *Comisión Europea* or *déficit* or *presupuest** or *gasto público/gastos públicos* or *deuda pública/deudas públicas* or *política fiscal/políticas fiscales* or *política monetaria/políticas monetarias* or ((el or de or del or un or por or este or ese or aquel) w/1 *impuesto* or *impuestos*)³ or *Banco Central Europeo/BCE* or *Banco de España/BdE* or *legislación/legislaciones* or *reforma/reformas* or *norma/normas* or *normativ** or *regulación/regulaciones* or *reglamento/reglamentos* or *ley/leyes*.

The construction of the index follows closely the procedure used by BBD, as described in the previous section. Our EPU indicator is shown in Fig. 1a. The new EPU index increases in periods that are generally associated to periods of higher uncertainty: e.g. the Lehman Brothers bankruptcy or the Greek bailout. It shows the highest spike in June 2012, when Spain asked for a financial sector support package from the European institutions, and decreases afterwards. Also, in the most recent period, the index increases again during the Catalan crisis in October 2017.

A comparison between the new EPU index and the original BBD's EPU index (named EPU-BBD hereafter) is provided in Fig. 1b. The EPU-BBD index is more volatile than the new one, showing some important spikes that cannot be associated to any relevant policy-related historical event. In addition, it increases

² We restrict all queries to articles whose content is related to Spain. We replicated the index ignoring this condition and got very similar results (available upon request).

³ We want to ensure that we capture sentences in which *impuesto* is a noun (meaning taxes) and not the past participle of the verb *imponer*.

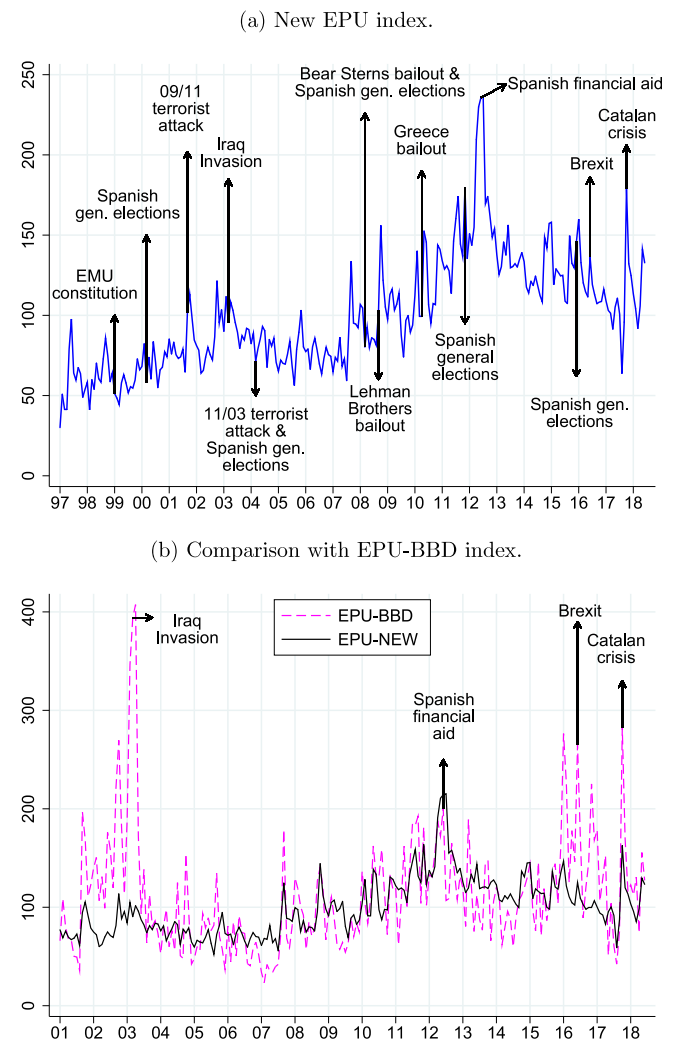


Fig. 1. Narrative of main events in EPU indexes. Notes: EPU-BBD: BBD's EPU index. EPU-NEW: own calculation.

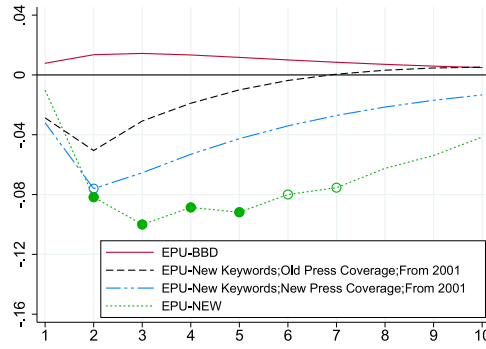
dramatically in March 2003, at the time of the Iraq invasion. Although this event could have reflected Spain-related economic policy uncertainty, it is hard to associate it with the sharpest increase in the series. The new EPU index, in contrast, presents only a slight increase at that date. Of particular notice is the increase in economic policy uncertainty at the time of the recapitalization of the Spanish banking sector, a major event in the Spanish recent economic history, that is much more marked, in relative terms, by the new EPU index (see Fig. 1).

3. Empirical exercise

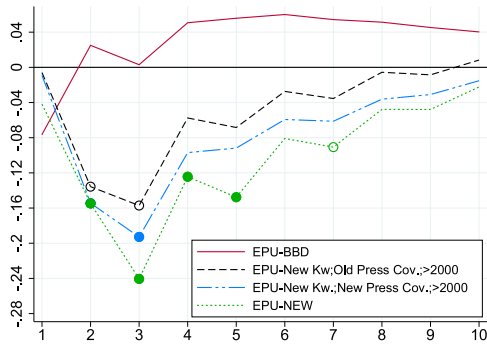
We identify the macroeconomic effects of EPU shocks by means of VAR models: $X_t = \Pi(L)X_t + \epsilon_t$, where X_t is a set of endogenous variables, Π is a matrix of VAR coefficients capturing the dynamics of the system, and $\epsilon_t : N(0, \Omega)$ is the vector of reduced-form residuals having zero-mean and variance-covariance matrix Ω . The VAR models are estimated by OLS. In each model we include lags according to the optimal lag length.

To make sure that EPU shocks are orthogonal to the other stochastic elements in the econometric framework, we model the impulse vector responsible of the one-impact response of the variables in the vector X_t by means of a Cholesky decomposition of the reduced-form variance-covariance matrix Ω . The

(a) GDP.



(b) Consumption.



(c) Investment.

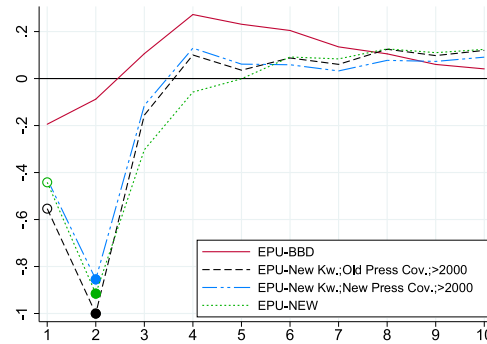


Fig. 3. Relative contribution of richness of keywords, press and time coverage in improving the index. *Notes:* The graph shows GDP responses to a positive shock of one standard deviation in the EPU. Full (empty) circles indicate statistical significance at 5 (10)%. VAR models as described in Fig. 2.

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