

# Certain uncertainty? The response of Venezuelan banks to a political dilemma.

Mary Armijos & Guillem Cuberta

Barcelona Graduate School of Economics  
Master of Economics in Public Policy

June 20, 2019

1 Motivation

2 Literature Review

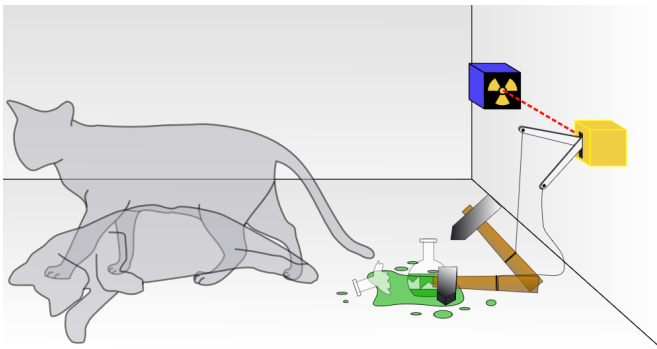
3 Data

4 Methodology

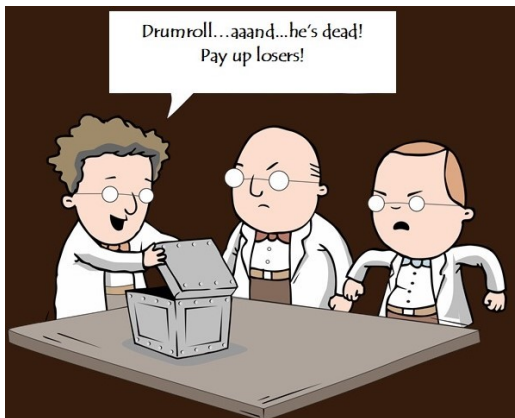
5 Results

6 Conclusions

# Motivation



# Motivation



# Motivation



# Motivation



# Literature Review

## Uncertainty: good or bad?

- Investment and consumption decrease, less workers hired, recession (Giavazi & McMahon, 2012; Gulen & Ion, 2016; Morikawa, 2018; Born et al., 2018)
- Boosts research and development (Atanassov, Julio and Leng, 2015)

## How do banks respond to uncertainty?

- Reduction of lending, negative effect on banks' liquidity creation, negative effect on profits (ROA) (Gissler, Oldfather, and Ruffino, 2016; Berger et al., 2018; Şanlısoy et al., 2017)

## Political connection matters!

- Connected firms anticipate better future policy changes (Ni Xiaoran, 2018)
- Banks have larger loan amount and smaller amounts of provision (Cheng et al., 2017)

# Data

- We construct two indices: economic policy uncertainty index and the political connection index
- Micro level data obtained from SUDEBAN (Venezuela's Superintendence of Banks) from January 2006 to April 2018.
- Macro data from the IMF International Financial Statistics database.
- The variables we choose for our specifications are based on the works done by Vera et al. (2019) and Bordo et al.(2016).

Credits, Loss provisions, ROA

Deposits, default rate, liquidity ratio, ROE,  
asset quality ratio, CAR

Bank type

Market share

GDP, inflation rate, deposit and lending  
interest rate

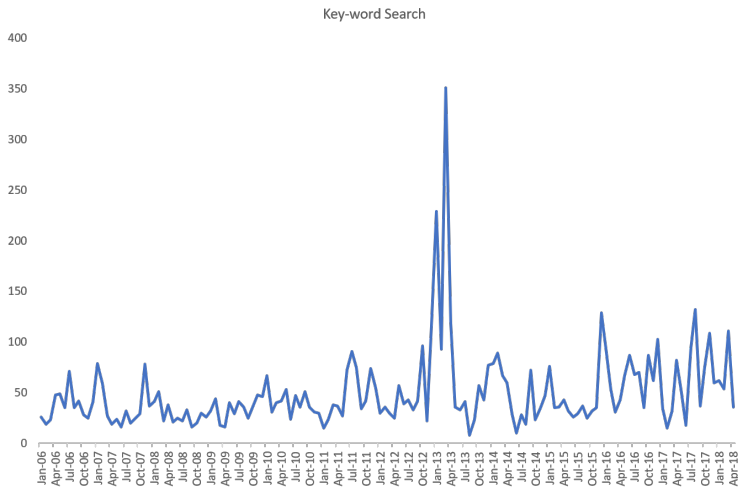


## Economic Policy Uncertainty Index - Venezuela (EPUV)

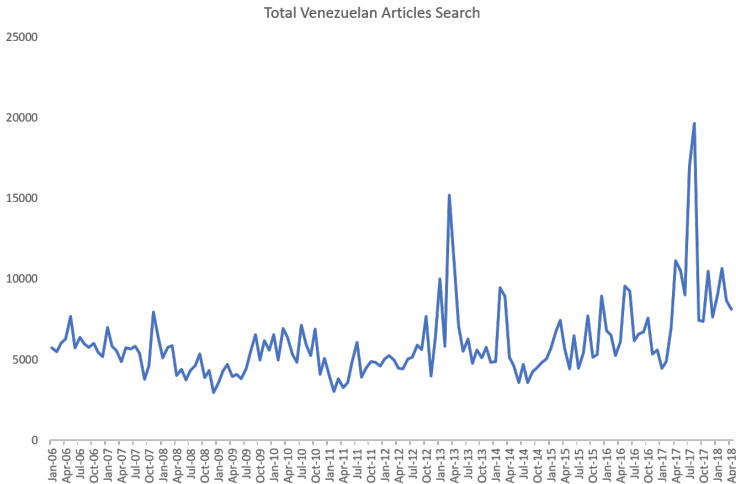
We follow the work previously developed by Baker, Bloom, and David, on the Economic Policy Uncertainty Index (EPU Index) and by Ahir, Bloom, and Furceri, on the World Uncertainty Index (an extension of the EPU).

Category	Keywords used (English)	Keywords used (Spanish Translation)
<b>V</b>	Venezuela	Venezuela
<b>E</b>	Economy, Economic	Economía, Economico, Economica
<b>U</b>	Uncertainty, Uncertain	Incertidumbre, Incierto, Incierta
<b>P</b>	Fiscal Policy, Tax, Public Spending, Fiscal Deficit, Budget, Monetary Policy, Central Bank, Exchange Rate, Interest Rate, Tariff, Sanction, Inflation, Commerce, Public Policy, Structural Reform, Assembly, Senate, Decree, Referendum, Supreme Court, Government, President, Regulation, Crisis, Corruption, Conflict, Opposition	Política Fiscal, Impuesto, Gasto Público, Déficit Fiscal, Presupuesto, Política Monetaria, Banco Central, Tasa de Cambio, Tipo de Interés, Arancel, Sanción, Inflación, Comercio, Política Pública, Reforma Estructural, Asamblea, Senado, Decreto, Referendo, Corte Suprema, Gobierno, Presidente, Regulación, Crisis, Corrupción, Conflicto, Oposición

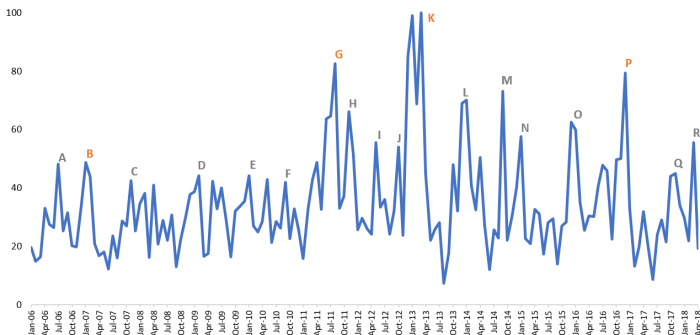
# Economic Policy Uncertainty Index - Venezuela (EPUV)



# Economic Policy Uncertainty Index - Venezuela (EPUV)



# Economic Policy Uncertainty Index - Venezuela (EPUV)



**B:** Chavez wins presidential elections. He announces the nationalization of key businesses.

**G:** Chavez's first public appearance without hair. OPEC reveals Venezuela's oil reserves are the largest in the world.

**K:** Chavez dies after choosing Maduro as interim President.

**P:** 100 Bs bills go out of circulation. Protests and looting erupt resulting in 5 deaths and curfews being issued.

# Political Connection Index

We develop our political connection index based on the work done by Haoping Xu and Jian Zhou (2008).

## Criteria

- 1 Explicitly connected banks: the ones that use state capital.
- 2 Implicitly connected banks: the that ones use private capital but have at least one board member that has a relative in government or if is considered as a 'bolibourgeoisie'.

# Political Connection Index

	Number of Banks	Percentage
<b>Explicitly connected:</b>		
- State-owned banks	12	37.5%
<b>Implicitly connected:</b>		
- Board member with family connection	2	6.25%
- Board member with direct personal connection with the president (godfather, cousin, friend, etc.)	5	15.63%
- Board member considered from the Boliburgeoisie	13	40.62%

# Descriptive Statistics

	<i>Politically Connected Banks</i>			<i>Non-Politically Connected Banks</i>		
	<i>High uncertainty</i>	<i>Low uncertainty</i>	<i>Difference</i>	<i>High uncertainty</i>	<i>Low uncertainty</i>	<i>Difference</i>
<i>Log Credits</i>	14.06 (3.24)	13.77 (3.34)	0.29	14.98 (2.85)	14.60 (2.99)	0.38
<i>Log Provisions</i>	11.05 (2.89)	10.79 (2.97)	0.26	11.35 (2.78)	11.07 (2.92)	0.28
<i>Log Deposits</i>	14.88 (3.25)	14.75 (3.11)	0.13	15.52 (2.96)	15.22 (2.99)	0.30
<i>Default Rate</i>	6.13 (12.22)	6.75 (14.72)	-0.62	1.80 (5.89)	1.89 (5.83)	-0.90
<i>ROA</i>	1.33 (6.74)	1.63 (6.09)	-0.30	2.31 (6.40)	2.25 (6.50)	0.06
<i>Months (freq.)</i>	56	92	-	56	92	-

# Methodology

## Credits

$$\text{Credits}_{bt} = \theta_b + \alpha_1 \text{EPUV}_t + \alpha_2 \text{EPUV}_t * \text{PoliticalConnection}_b + \nu \text{Fin}_{bt-1} \\ + \rho \text{Banktype}_{bt} + \phi \text{MarketShare}_{bt-1} + \delta \text{Macro}_t + u_{bt}$$

$$\text{Credits}_{bt} = \theta_b + \gamma_t + \alpha_1 \text{EPUV}_t * \text{PoliticalConnection}_b + \nu \text{Fin}_{bt-1} \\ + \rho \text{Banktype}_{bt} + \phi \text{MarketShare}_{bt-1} + u_{bt}$$



# Methodology

## Provisions

$$\begin{aligned} Provisions_{bt} = & \theta_b + \gamma_t + \alpha_1 EPUV_t * PoliticalConnection_b + \nu Fin_{bt-1} \\ & + \rho Banktype_{bt} + \phi MarketShare_{bt-1} + u_{bt} \end{aligned}$$

## Performance

$$\begin{aligned} ROA_{bt} = & \theta_b + \gamma_t + \alpha_1 EPUV_t * PoliticalConnection_b + \nu Fin_{bt} \\ & + \rho Banktype_{bt} + \phi MarketShare_{bt-1} + u_{bt} \end{aligned}$$

## Results: Credits

VARIABLES	(1)	(2)	(3)	(4)	(5)
EPUV	0.0219*** (0.00417)	0.00938*** (0.000768)	-7.88e-05 (0.00134)	0.000497 (0.000639)	
Polit Connection	-0.625 (0.689)				
EPUV * Polit Connection	-0.00716 (0.00750)	-0.00479* (0.00244)	-0.000555 (0.00275)	0.00203 (0.00137)	0.00262* (0.00143)
Lag Log Deposits			0.843*** (0.0486)	0.734*** (0.0657)	0.470*** (0.0843)
Lag Default Rate			-0.0167** (0.00718)	-0.0142** (0.00546)	-0.0104* (0.00567)
Lag Liquidity Ratio			6.07e-05** (2.91e-05)	3.71e-05*** (1.20e-05)	2.02e-05*** (6.76e-06)
Lag ROA			0.00621 (0.0115)	0.0117 (0.00937)	0.0222* (0.0117)
Lag Asset Quality Ratio			-0.00532 (0.00774)	-0.00889* (0.00490)	-0.0127** (0.00521)
Lag CAR			-0.00234*** (0.000814)	-0.00250** (0.00101)	-0.00321*** (0.000820)
Log GDP				-0.414*** (0.149)	
Inflation				0.0144*** (0.00402)	
Deposit Interest Rate				0.0674*** (0.0234)	
Lending Interest Rate				0.0362** (0.0147)	
Observations	5,467	5,467	4,862	4,862	4,862
R-squared	0.028	0.680	0.930	0.962	0.971
Type of bank	no	no	yes	yes	yes
Mkt Share Controls	no	no	yes	yes	yes
Bank F.E.	no	yes	yes	yes	yes
Time F.E.	no	no	no	no	yes

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## Results: Provisions

VARIABLES	(1)	(2)	(3)	(4)	(5)
EPUV	0.0207*** (0.00404)	0.00947*** (0.000823)	-0.000559 (0.000980)	2.68e-05 (0.000532)	
Polit Connection	-0.126 (0.636)				
EPUV * Polit Connection	-0.00497 (0.00667)	-0.00293 (0.00293)	0.00432** (0.00184)	0.00146 (0.00108)	0.00192* (0.00113)
Lag Log Credits			0.970*** (0.0472)	0.985*** (0.0535)	0.909*** (0.0605)
Lag Log Deposits			0.0540 (0.0426)	0.0182 (0.0458)	-0.00644 (0.0372)
Lag Default Rate			0.0757*** (0.00788)	0.0670*** (0.00597)	0.0639*** (0.00636)
Lag Liquidity Ratio			1.52e-06 (3.84e-06)	4.62e-06 (2.78e-06)	2.58e-06 (1.81e-06)
Lag ROA			-0.0162*** (0.00262)	-0.0152*** (0.00300)	-0.0115*** (0.00412)
Lag Asset Quality Ratio			-0.00556** (0.00240)	-0.00148 (0.00198)	-0.00314 (0.00221)
Lag CAR			0.00234*** (0.000631)	0.00155*** (0.000379)	0.000996** (0.000484)
Log GDP				-0.130 (0.0861)	
Inflation				0.00296*** (0.000978)	
Deposit Interest Rate				0.0531*** (0.0110)	
Lending Interest Rate				-0.0424*** (0.0105)	
Observations	5,744	5,744	4,920	4,920	4,920
R-squared	0.013	0.624	0.973	0.982	0.984
Type of bank	no	no	yes	yes	yes
Mkt Share Controls	no	no	yes	yes	yes
Bank F.E.	no	yes	yes	yes	yes
Time F.E.	no	no	no	no	yes

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

## Results: Performance

VARIABLES	(1)	(2)	(3)	(4)	(5)
EPUV	0.0185*** (0.00553)	0.0140** (0.00692)	0.00149 (0.00499)	-0.00236 (0.00446)	
Polit Connection	0.0855 (0.760)				
EPUV * Polit Connection	-0.0253*** (0.00773)	-0.0195** (0.00777)	-0.00471 (0.00778)	-0.00656 (0.00537)	-0.0109** (0.00538)
Log Credits			0.153 (0.403)	0.500 (0.480)	1.389** (0.677)
Log Deposits			0.175 (0.416)	0.350 (0.385)	0.721* (0.411)
Default Rate			-0.187*** (0.0478)	-0.0985 (0.0596)	-0.0945 (0.0587)
Lag Liquidity Ratio			-6.74e-05*** (1.60e-05)	-6.16e-05*** (1.22e-05)	-2.93e-05* (1.47e-05)
Lag Asset Quality Ratio			-0.0656* (0.0391)	-0.0708* (0.0414)	-0.0416 (0.0403)
Lag ROE			0.0265* (0.0141)	0.0229* (0.0133)	0.0212* (0.0123)
Lag CAR			0.00157 (0.00443)	0.00652* (0.00386)	0.0102** (0.00428)
Log GDP				3.296* (1.695)	
Inflation				-0.0249 (0.0192)	
Deposit Interest Rate				-0.298*** (0.109)	
Lending Interest Rate				-0.0318 (0.0496)	
Observations	5,927	5,927	4,933	4,933	4,933
R-squared	0.005	0.165	0.262	0.354	0.401
Type of bank	no	no	yes	yes	yes
Mkt Share Controls	no	no	yes	yes	yes
Bank F.E.	no	yes	yes	yes	yes
Time F.E.	no	no	no	no	yes

# Conclusions

- Our study provides new insights for the scarce literature on this field, especially on the measure of the variables of interest.
  
- It also highlights relevant information for Venezuelan economy.