

The Price of a Vote

Evidence from France, 1993-2014

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Introduction

- Is democracy about the median voter or does money make a difference?
 - Grossman and Helpman (1996, 2001) : interest groups make campaign contributions to affect the likelihood that a candidate is elected.
- There is growing concern that, with rising inequality, money may increasingly corrupt politics.
- Different dimensions :
 - Political power increasingly conditioned upon wealth.
 - Firms' and individuals' donations to politicians / political parties : potential influence of contributors over legislators.
 - Extent to which preferences of the well-off are more reflected in government policy than those of poor or middle-income citizens (Gilens, 2012 ; Gilens and Page, 2014 ; Bartels, 2015).

This paper : campaign spending and financing in France

- Focus on local (municipal and legislative) elections from 1993 to 2014.
- Exploit changes in legislations.
- Distinguish between different sources of funding.
 - Private donations ;
 - Party contributions ;
 - etc.

This paper

- 2 main objectives :
 - ① Document the long-run evolution of campaign resources and spending (and changes in legislation).
 - ② Study the causal impact of spending on probability of being elected.
- Main empirical challenges :
 - Multiparty electoral system. \Rightarrow OLS model inappropriate.
 - Endogeneity of spending.

This paper

- Why France?

- France has enacted since 1988 important reforms providing public funds for campaigns and parties.

⇒ We develop a new identification strategy exploiting a change in legislation.

- Data availability : not only on spending and electoral results, but also detailed information on sources of revenues (e.g. private contributions vs. donations) and on candidates' characteristics.

- Multiparty electoral system : like the vast majority of democracies around the globe.

- Focus of the literature : mainly (two-party system) US.
- Lessons can be drawn from the French case for other countries.

Preview of the results

- Large **positive impact of spending** on votes, both for municipal and legislative elections.
 - Price of a vote : around 6 euros.
 - Without spending limit, private money can easily change the election results.
- Effect mainly driven by **private donations** and **personal contributions**.
 - Party contributions do not matter.
- Additional result : spending increases turnout (mobilization effect).

Literature review

- Literature documenting the sources and amounts of campaign contributions : Ansolabehere et al. (2003) on the US.
 - This paper : provide new evidence on France.
 - Research agenda : extend it in the future to other European countries.
- Literature on the **effect of campaign spending on election outcomes**.
- This paper : first attempt at estimating the causal impact of spending with multiparty electoral data.

Literature review

- Literature documenting the sources and amounts of campaign contributions : Ansolabehere et al. (2003) on the US.
- Literature on the **effect of campaign spending on election outcomes**.
 - Cross-sectional analyses : Palda and Palda (1998) on 1993 French legislative elections; Foucault and François (2005) on 1997 French legislative elections;
 - US Congressional elections : Jacobson (1978, 1980, 1985, 1990, 2006), Abramowitz (1988), Green & Krasno (1988), Levitt (1994), Gerber (1998), Ferguson *et al.* (2016), etc.
- This paper : first attempt at estimating the causal impact of spending with multiparty electoral data.
 - Heterogeneity of the effects : depending on the political parties, and depending on the sources of funding.

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- 2 Historical background and campaign finance rules
- 3 Data & Descriptive statistics
 - Electoral results data
 - Campaign spending
- 4 Empirical strategy
- 5 Results : Fully Contested Districts
 - Legislative elections
 - Depending on sources of funding
 - Robustness & Additional results
- 6 IV using change in legislation
- 7 Conclusion

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Local elections in France

- **Municipal (mayoral) elections.**

- Two-round list system with proportional representation.
- Data for 1995, 2001, 2008 & 2014 for all electoral districts with more than 9,000 inhabitants.
 - 950-1,050 districts.

- **Legislative elections.**

- Two-round system ; single-member constituencies (577 constituencies).
- Data for 1993, 1997, 2002, 2007 & 2012 for all electoral districts.
 - 555 districts.

Campaign finance reforms

- Important reforms have been introduced in France since 1988 : much later than in other countries (candidates were reimbursed relatively early for certain campaign costs : 1962).
 - Until 1988, parties were not allowed to accept donations and there were no direct public subsidies.
 - Since 1988, **direct public funding** of parties (in proportion to legislative results) as well as additional indirect public funding in the form of **public reimbursement** of candidates for election campaign costs.
- 1990 : creation of the CNCCFP ("*Commission nationale des comptes de campagne et des financements politiques*") : reviews the accounts of parties and candidates (legal sanctions and fees)
- Candidates have to keep a record of their spending and revenues since 1995 for municipal elections (for cities larger than 9,000 inhabitants) and 1993 for legislative elections.

⇒ This data was never collected before and forms the basis for this paper.

Campaign finance reforms

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- 1990 : creation of the CNCCFP ("*Commission nationale des comptes de campagne et des financements politiques*") : reviews the accounts of parties and candidates (legal sanctions and fees)
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Campaign finance rules : Spending limits

- Candidates cannot spend more than a **spending limit**.
 - Updated every 3 years to account for inflation.
- The limit depends on :
 - The population of the electoral district (but not linearly). [▶ tranches](#)
[▶ illustration](#)
 - Whether candidates qualified for the 2nd round.
 - Single limit for legislative elections.
- For instance, in the 2008 municipal elections, for a city of 335,505 inhabitants (\simeq Nice) :
- **Change in legislation** for legislative elections :

Campaign finance rules : Spending limits

- Candidates cannot spend more than a **spending limit**.
- For instance, in the 2008 municipal elections, for a city of 335,505 inhabitants (\simeq Nice) :
 - €247,568 for all candidates.
 - Of which up to €118,000 can be refund (47.5% of spending limit).
 - €332,684 for candidates qualified to the second round.
- **Change in legislation** for legislative elections :

Campaign finance rules : Spending limits

- Candidates cannot spend more than a **spending limit**.
- For instance, in the 2008 municipal elections, for a city of 335,505 inhabitants (\simeq Nice) :
- **Change in legislation** for legislative elections :
 - For **1993** election : spending limit = F500,000 (€104,806) for electoral districts with more than 80,000 inhabitants ; and F400,000 (€83,845) for constituencies smaller than 80,000 inhabitants.
 - For **1997** election : F250,000 (€52,403) for all districts + F1 (€0.15) per inhabitant.
 - Since **2002** election : €38,000 for all districts + €0.15 per inhabitant.

Campaign finance rules : Sources of funding

- Private donations.
 - From legal entities / firms.
 - Until 1995 : limited to 10% of the spending limit and F500,000.
 - Since 1995 (applied since 1997 legislative elections) : forbidden.
 - From natural persons / individuals.
 - Limited to €4,600 (F30,000).
 - Tax credit (as of 2017 : 66%, limited to 20% of taxable income).
- Personal contributions.
- Party contributions. [▶ Party financing](#)
- Contributions in kind.
- In the majority of the cases, total revenues = total spending.

Campaign finance rules : Sources of funding

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Campaign finance rules : Sources of funding

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- Contributions in kind.
- In the majority of the cases, total revenues = total spending.
 - Difference between revenues and spending = balance of the campaign account ("*solde compte de campagne*"). Median = 0 (mean=1,500).
 - Not allowed to have a negative balance : in this case, accounts not approved and financial and legal sanctions.
 - However allow to have a positive balance.
 - E.g. Alain Juppé in 1995 : +117,000€ (830,000€ of expenses but private donations = 222,000, of which 172,000 donations from 7 legal persons).

Campaign finance rules : Public refund

- Candidates are refunded for their personal contributions to the campaign if they reach 5% of vote shares in the first round.
- The refund cannot exceed 47.5% of the spending limit (50% before 2011).
 - Exception : 1993 legislative elections : only 10% of the spending limit refunded.
- No refund if the campaign accounts are not approved by the CNCCFP (about 3% of the cases)

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Candidates and vote shares

- Data on votes obtained by each candidate from the “*Centre de Données Socio-Politiques*” (CDSP), the Interior ministry, Bach(2011), and Cagé (2017).
 - Municipal elections : 1995, 2001, 2008, and 2014.
 - Legislative elections : 1993, 1997, 2002, 2007, and 2012.
- Data on political parties from the Interior ministry and the newspaper *Le Monde*.
 - Legislative elections : 5 main political parties : (i) the Communist party ; (ii) the Green party ; (iii) the Socialist party ; (iv) the right-wing party (UDF, RPR, UMP, etc.) ; and (v) the extreme-right party. [▶ table](#)
 - Municipal elections : political “affiliation” rather than political party : (i) extreme left ; (ii) left ; (iii) right ; and (iv) extreme right. [▶ table](#)

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Campaign spending

- Build a unique dataset on campaign resources and spending.
- Paper data from the “*Commission nationale des comptes de campagne et des financements politiques*” (CNCCFP).

⇒ Information for 45,793 candidates/elections.

- Merge with electoral results data using their name / electoral district.

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COMMISSION NATIONALE DES COMPTES DE CAMPAGNES
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PUBLICATION SIMPLIFIÉE
DES COMPTES DE CAMPAGNE

Élections municipales de l'année 2014



Élection municipale générale des 23 et 30 mars 2014

Département : Ain

Commune : Ambérieu-en-Bugey

Plafond des dépenses : 20 767 € au premier tour ; 28 597 € au second tour.

Scrutin non contesté

CANDIDATS, têtes de listes	DÉPENSES totales	RECETTES totales	RECETTES (PAR ORIGINE)					Solde compte de campagne	DÉV (1)	RFE (2)	Déc. CNCCFP
			Dons	Apport partis	Concours en nature	Autres	Apport personnel				
Mme EXPOSITO Josiane	11 652	11 652	0	0	153	0	11 499	0			
	11 991	11 991	0	0	553	0	11 438	0		11 038	ARM
M. FABRE Daniel	12 652	13 988	270	0	0	0	13 718	1 336			
	13 052	14 388	270	0	400	0	13 718	1 336	0	11 982	ARM
M. FORTIN Christophe	10 492	10 492	1 250	0	0	0	9 242	0			
	10 692	10 692	1 250	0	200	0	9 242	0		9 042	ARM
Mme PIDOUX Catherine	11 497	11 497	2 670	0	349	0	8 478	0			
	11 303	11 303	2 270	0	349	0	8 684	0		8 684	AR

Municipal elections : spending

▶ distribution

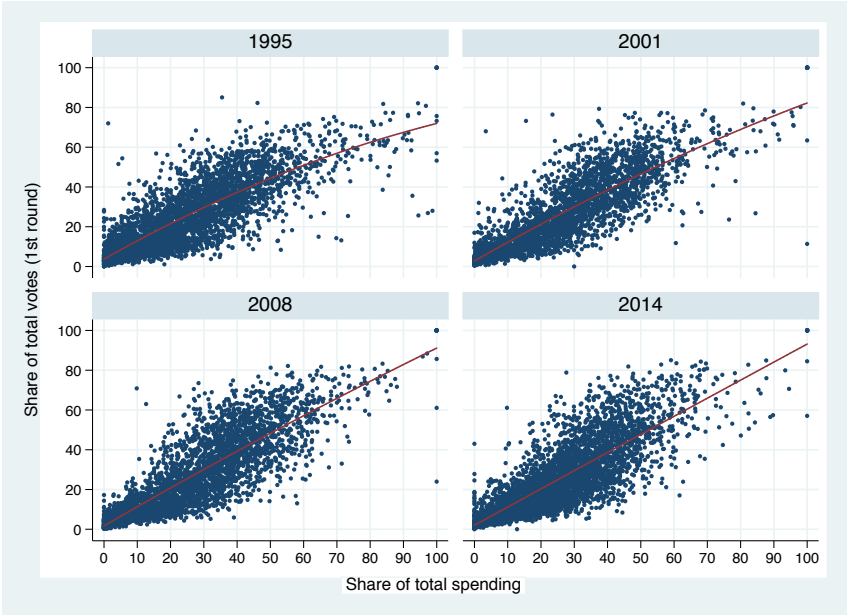
	Spending (cst 2014 €)					
	Mean	Median	sd	Min	Max	N
Total spending per candidate						
1995	23,389	14,235	31,151	0	426,652	3,839
2001	25,323	14,913	35,398	0	477,550	3,488
2008	21,765	13,345	29,905	0	393,380	3,743
2014	21,177	13,094	28,694	0	458,914	4,435
Per candidate & per voter						
1995	1.24	1.15	0.89	0.00	4.80	3,683
2001	1.31	1.28	0.92	0.00	4.51	3,023
2008	1.12	1.11	0.75	0.00	3.88	3,454
2014	1.05	1.02	0.71	0.00	3.98	4,313
Total spending per voter						
1995	4.81	4.55	2.42	0.00	14.99	945
2001	4.25	4.18	2.82	0.00	13.26	933
2008	3.84	3.66	1.88	0.00	13.31	1,002
2014	4.32	4.08	1.84	0.00	12.31	1,052

Legislative elections : spending

	Spending (cst 2014 €)					
	Mean	Median	sd	Min	Max	N
Total spending per candidate						
1993	21,637	11,143	26,916	0	170,564	5,116
1997	15,113	2,186	19,400	0	75,226	6,040
2002	11,261	1,414	17,148	0	81,169	7,981
2007	11,323	654	17,063	0	76,281	7,190
2012	18,282	17,320	17,164	0	71,351	3,942
Per candidate & per voter						
1993	0.33	0.16	0.42	0.00	4.08	5,060
1997	0.23	0.03	0.30	0.00	1.87	6,007
2002	0.17	0.02	0.26	0.00	1.58	7,848
2007	0.16	0.01	0.24	0.00	1.50	6,760
2012	0.23	0.20	0.22	0.00	1.29	3,896
Total spending per voter						
1993	2.97	2.80	1.19	0.49	9.10	555
1997	2.47	2.35	0.74	0.00	6.24	555
2002	2.34	2.12	0.93	0.56	7.34	555
2007	1.90	1.77	0.65	0.42	5.34	555
2012	1.68	1.61	0.52	0.00	4.51	540

- Decrease in spending after 1993. ⇒ Mainly due to change in regulation.
- Drop in number of obs. in 2012 : change in reporting requirement rule. [▶ distribution](#)

Municipal elections : Spending share vs. Vote share



Legislative elections : Spending share vs. Vote share



Sources of revenues

Municipal elections

	Mean	Median	sd	Min	Max	Obs
Private donation (%)	15.9	5.8	22.5	0	100	15,146
Party contribution (%)	7.3	0.0	19.9	0	100	15,147
Personal contribution (%)	73.9	84.5	29.3	0	100	15,144
In-kind contribution (%)	2.5	0.0	7.6	0	100	15,243
Other (%)	0.3	0.0	2.5	0	94	15,242

Legislative elections

	Mean	Median	sd	Min	Max	Obs
Private donation (%)	15.3	0.0	27.0	0	100	24,455
Party contribution (%)	28.4	5.2	37.5	0	100	24,462
Personal contribution (%)	50.7	56.4	41.6	0	100	24,427
In-kind contribution (%)	4.5	0.0	14.6	0	100	24,555
Other (%)	0.8	0.0	4.9	0	100	24,555

Municipal elections : Breakdown by political party

	(1) Extreme left	(2) Left	(3) Right	(4) Extreme right	(5) Left vs. Right
	mean/sd	mean/sd	mean/sd	mean/sd	b/t
% of total revenues					
Private donation (%)	15.1 (28.3)	13.0 (18.8)	21.6 (24.1)	1.7 (8.2)	8.6*** (20.4)
Party contribution (%)	37.7 (43.3)	6.3 (15.1)	4.3 (13.4)	4.8 (18.9)	-2.0*** (-7.3)
Personal contribution (%)	38.5 (43.3)	78.4 (23.9)	71.5 (26.9)	91.2 (22.3)	-6.9*** (-13.9)
In-kind contribution (%)	8.2 (18.3)	1.9 (5.0)	2.2 (5.9)	2.1 (8.0)	0.3*** (3.1)
In euros					
Private donations (cst 2014 €)	220 (871)	3,306 (6,778)	6,770 (13,087)	310 (1,974)	3,464*** (17)
Party contributions (cst 2014 €)	354 (661)	2,598 (10,045)	2,276 (9,084)	327 (2,626)	-323* (-2)
Personal contributions (cst 2014 €)	952 (2,756)	19,433 (23,609)	20,002 (25,489)	19,695 (21,808)	569 (1)
In kind contributions (cst 2014 €)	87 (369)	449 (1,407)	700 (3,359)	245 (1,124)	251*** (5)
Total revenues (cst 2014 €)	1,889 (8,849)	25,856 (33,531)	30,376 (47,204)	20,695 (22,425)	4,520*** (6)
Expenditures					
Total expenditures (cst 2014 €)	1,554 (3,075)	25,463 (33,192)	28,785 (35,827)	20,478 (22,324)	3,322*** (5)
Obs	1,068	5,901	5,521	1,389	11,422

Legislative elections : Breakdown by political party

	(1) Communist	(2) Green	(3) Socialist	(4) Right	(5) Extreme right	(6) Socialist vs. Right
	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	b/t
% of total revenues						
Private donation (%)	12.3 (22.3)	5.6 (16.0)	18.3 (21.9)	26.5 (25.3)	1.2 (5.2)	-8.3*** (-11.5)
Party contribution (%)	16.3 (30.6)	27.5 (38.0)	12.5 (19.8)	29.1 (20.3)	1.9 (11.6)	-16.6*** (-27.3)
Personal contribution (%)	68.4 (37.5)	61.5 (40.0)	65.5 (30.7)	40.3 (28.0)	95.3 (15.3)	25.2*** (28.1)
In-kind contribution (%)	2.1 (9.2)	4.4 (12.1)	2.4 (4.6)	3.1 (5.7)	0.9 (6.4)	-0.6*** (-4.0)
In euros						
Private donations (cst 2014 €)	2,348 (7,772)	440 (1,854)	10,020 (17,870)	17,073 (25,354)	261 (1,684)	-7,053*** (-11)
Party contributions (cst 2014 €)	1,546 (3,973)	878 (2,100)	5,154 (9,188)	14,015 (11,455)	244 (1,742)	-8,861*** (-28)
Personal contributions (cst 2014 €)	13,296 (12,750)	5,783 (9,228)	24,261 (12,901)	18,512 (13,846)	22,054 (11,398)	5,750*** (14)
In kind contributions (cst 2014 €)	167 (844)	173 (723)	847 (1,778)	1,259 (2,611)	119 (785)	-412*** (-6)
Total revenues (cst 2014 €)	17,783 (22,362)	7,331 (10,033)	41,147 (20,280)	51,846 (26,534)	22,822 (11,183)	-10,700*** (-15)
Expenditures						
Total expenditures (cst 2014 €)	17,169 (15,365)	7,234 (10,030)	39,376 (17,315)	47,595 (19,097)	22,663 (11,134)	-8,219*** (-15)
Obs	2,639	2,367	2,543	2,306	2,813	4,849

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Main empirical challenges

① **Multiparty** electoral data : OLS doesn't work.

- Need to use statistical model satisfying two conditions :

$$\text{vote share}_{cmt} \in [0, 1] \text{ for all } m \text{ and } c \quad (1)$$

$$\sum_{c=1}^C \text{vote share}_{cmt} = 1 \text{ for all } m. \quad (2)$$

- Multivariate logistic transformation and Seemingly Unrelated Regressions (SUR) (Katz and King, 1999 ; Tomz et al., 2002 \Rightarrow Clarify statistical suite).

② **Missing data** : political parties do not run everywhere.

③ **Endogeneity of spending** : high quality candidates are likely to receive a higher share of the votes and have high campaign expenditures.

Main empirical challenges

- ① **Multiparty** electoral data : OLS doesn't work.
- ② **Missing data** : political parties do not run everywhere.
 - Estimate the effect of spending on votes only in fully contested districts.
 - “Full information approach” (Honaker et al., 2002) : estimate the *effective* rather than the *actual* vote (\Rightarrow *Amelia* statistical suite).
- ③ **Endogeneity of spending** : high quality candidates are likely to receive a higher share of the votes and have high campaign expenditures.

Main empirical challenges

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- ② **Missing data** : political parties do not run everywhere.
- ③ **Endogeneity of spending** : high quality candidates are likely to receive a higher share of the votes and have high campaign expenditures.
⇒ IV strategy.

Empirical specification

$$\text{vote share}_{\text{Communist } mt} = \alpha_1 + \sum_{j=1}^5 \beta_{1j} \text{spending}_{jmt} + \sum_{j=1}^5 \delta_{1j} \text{Incumbent}_{jmt} + \mathbf{X}'_{mt} \boldsymbol{\kappa}_1 + \lambda_{1m} + \eta_{1t}$$

$$\text{vote share}_{\text{Green } mt} = \alpha_2 + \sum_{j=1}^5 \beta_{2j} \text{spending}_{jmt} + \sum_{j=1}^5 \delta_{2j} \text{Incumbent}_{jmt} + \mathbf{X}'_{mt} \boldsymbol{\kappa}_2 + \lambda_{2m} + \eta_{2t}$$

$$\text{vote share}_{\text{Socialist } mt} = \alpha_3 + \sum_{j=1}^5 \beta_{3j} \text{spending}_{jmt} + \sum_{j=1}^5 \delta_{3j} \text{Incumbent}_{jmt} + \mathbf{X}'_{mt} \boldsymbol{\kappa}_3 + \lambda_{3m} + \eta_{3t}$$

$$\text{vote share}_{\text{Right } mt} = \alpha_4 + \sum_{j=1}^5 \beta_{4j} \text{spending}_{jmt} + \sum_{j=1}^5 \delta_{4j} \text{Incumbent}_{jmt} + \mathbf{X}'_{mt} \boldsymbol{\kappa}_4 + \lambda_{4m} + \eta_{4t}$$

$$\text{vote share}_{\text{Extreme right } mt} = \alpha_5 + \sum_{j=1}^5 \beta_{5j} \text{spending}_{jmt} + \sum_{j=1}^5 \delta_{5j} \text{Incumbent}_{jmt} + \mathbf{X}'_{mt} \boldsymbol{\kappa}_5 + \lambda_{5m} + \eta_{5t}$$

where t index election, m the district & j the political parties.

- vote share_{jmt} : log ratio of party j 's share of the vote relative to that of the "other" party.

⇒ Equations estimated simultaneously via SUR.

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Legislative elections

	Log ratios of vote shares with respect to other party				
	Communist party	Green party	Socialist party	Right-wing party	Extreme-right party
Communist party spending	0.51*** (0.16)	0.05 (0.22)	-0.57** (0.22)	-0.22 (0.25)	0.01 (0.17)
Green party spending	0.46** (0.22)	3.35*** (0.30)	-1.59*** (0.30)	-0.19 (0.34)	0.21 (0.23)
Socialist party spending	-0.15* (0.09)	-0.24* (0.13)	0.78*** (0.13)	-0.25* (0.14)	-0.15 (0.10)
Right-wing party spending	0.18** (0.09)	-0.03 (0.12)	0.20 (0.12)	1.49*** (0.14)	0.11 (0.09)
Extreme-right spending	0.26 (0.17)	-0.07 (0.23)	0.04 (0.24)	0.19 (0.26)	0.80*** (0.18)
Election FE	Yes				
District FE	Yes				
Controls	Yes				
Observations	1,870				

⇒ A one-euro increase in spending by the communist party increases the log ratio of the communist party share of the vote – relative to the “other” party – by 0.5.

▶ otherparty

- Large magnitude of the effect for the right-wing party : +1.49.

Magnitude of the effect

- Perform two counterfactual estimations :
 - ① Assume spending by the right-wing party candidates = 0 in all the districts/years.
 - ② Assume all the right-wing party candidates spent €4 per eligible voters (maximum amount allowed in 1993).

(Average spending by right-wing candidates : €0.64 per registered voters. [▶ allparties](#))

The price of a vote : around 6 euros

No spending for right-wing party

Model		No spending by Right				
Year	Votes	Votes	Change in votes	95% CI	Change in spending	Price of a vote
1993	7,346,828	4,066,068	-3,280,760	-3.4 , -3.1	-€20,753,246	€6.3
1997	7,779,341	5,145,501	-2,633,840	-2.7 , -2.4	-€17,810,772	€6.8
2002	8,745,621	5,015,407	-3,730,214	-3.8 , -3.5	-€15,649,208	€4.2
2007	13,439,828	6,833,705	-6,606,123	-6.8 , -6.3	- €16,588,917	€2.5
2012	8,100,697	5,832,752	-2,267,945	-2.4 , -2	- €13,252,376	€5.8

Maximum spending (€4) for right-wing party

Model		Max spending by Right				
Year	Votes	Votes	Change in votes	95% CI	Change in spending	Price of a vote
1993	7,346,828	19,639,708	+12,292,880	12.2 ; 12.3	+ €62,170,496	€5.1
1997	7,779,341	24,853,326	+17,073,984	17 , 17.1	+ €87,126,656	€5.1
2002	8,745,621	24,225,274	+15,479,653	15.4 , 15.5	+ €86,635,632	€5.6
2007	13,439,828	33,006,806	+19,566,978	19.4 , 19.6	+ €122,774,000	€6.3
2012	8,100,697	28,174,862	+20,074,164	19.9 , 20.1	+ €105,708,400	€5.3

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Log ratios of vote shares with respect to other party

	Communist party	Green party	Socialist party	Right-wing party	Extreme-right party
Communist party					
Private donations	-0.10 (0.26)	0.13 (0.35)	-0.54 (0.36)	0.17 (0.40)	-0.01 (0.27)
Party contribution	0.15 (0.41)	0.31 (0.55)	-0.37 (0.56)	-0.84 (0.63)	0.22 (0.43)
Personal contribution	0.75*** (0.18)	0.21 (0.25)	-0.59** (0.25)	-0.20 (0.28)	-0.03 (0.19)
Green party					
Private donations	-0.52 (0.86)	-0.61 (1.17)	-0.73 (1.19)	-2.84** (1.32)	-0.81 (0.91)
Party contribution	-0.01 (0.79)	4.93*** (1.07)	0.97 (1.09)	2.27* (1.21)	1.16 (0.83)
Personal contribution	0.62*** (0.23)	3.52*** (0.32)	-1.28*** (0.32)	-0.03 (0.36)	0.37 (0.25)
Socialist party					
Private donations	-0.23** (0.11)	-0.31** (0.15)	0.33** (0.16)	-0.32* (0.18)	-0.25** (0.12)
Party contribution	-0.38 (0.23)	-0.80** (0.31)	-0.05 (0.32)	-0.72** (0.35)	-0.47* (0.24)
Personal contribution	-0.01 (0.14)	0.00 (0.19)	1.53*** (0.19)	0.02 (0.22)	0.04 (0.15)
Right-wing party					
Private donations	0.23*** (0.08)	0.20* (0.11)	0.29** (0.11)	0.94*** (0.13)	0.22** (0.09)
Party contribution	0.16 (0.14)	-0.30 (0.19)	0.25 (0.19)	1.31*** (0.21)	0.07 (0.14)
Personal contribution	0.30** (0.13)	0.21 (0.17)	0.07 (0.18)	1.61*** (0.20)	0.16 (0.14)
Extreme-right party					
Private donations	-1.21 (1.16)	-2.44 (1.58)	-0.90 (1.60)	-2.59 (1.79)	-0.26 (1.23)
Party contribution	0.78 (0.93)	0.50 (1.26)	-0.03 (1.28)	0.26 (1.43)	1.41 (0.98)
Personal contribution	0.17 (0.17)	-0.06 (0.23)	-0.07 (0.23)	0.06 (0.26)	0.74*** (0.18)
Election FE and District FE	Yes				
Controls	Yes				
Observations	1,870				

Robustness & Additional results

- Robustness :
 - Results do not change if estimate the effects on *effective votes* taking into account all the districts/years. [▶ table](#)
 - Similar results for municipal elections. [▶ table](#)
 - Results robust to controlling for temporal and spatial correlation (Ferguson *et al.*, 2016).
- Additional results : positive effect of spending on turnout. [▶ legi](#) [▶ muni](#)

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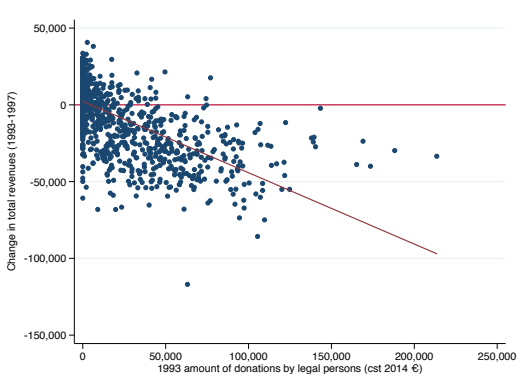
Empirical strategy

- 1995 : change in legislation. No longer allowed for a candidate to receive donations from private entities.
 - Applied for the 1st time for the 1997 legislative elections.
- Did not affect all the candidates the same way : some candidates were relying strongly on private donations from legal person, while others were not. [▶ party](#)

	Legislative elections (1993)					
	Mean	Median	P95	P99	Max	Obs
Donations from legal persons	8,608	0	58,396	103,571	350,355	5,111
Per registered voter	0.13	0.00	0.84	1.59	6.67	5,055
As a % of total revenues	12.4	0.0	70.6	91.0	100	5,109
As a % of total private donations	22.6	0.0	96.6	100	100	5,088

- Idea : use legislation change as an exogeneous shock on total spending.
- More precisely, instrument change in spending between 1993 & 1997 legislative elections by donations from legal persons in 1993.

⇒ Candidates were not able to recover from the ban.



IV estimates consistent with naive findings

Log ratios of vote shares with respect to other party

	Naive estimates		IV	
	Socialist party	Right-wing party	Socialist party	Right-wing party
Socialist party Actual spending	0.48*** (0.13)	-0.19 (0.14)		
Right-wing party Actual spending	-0.19 (0.13)	0.20 (0.14)		
Socialist party Predicted spending			0.31*** (0.09)	-0.18* (0.10)
Right-wing party Predicted spending			-0.07 (0.07)	0.02 (0.07)
Controls				
Socialist party Incumbent	0.55*** (0.12)	0.29** (0.12)	0.53*** (0.12)	0.29** (0.12)
Right-wing party Incumbent	0.14 (0.10)	0.25** (0.11)	0.13 (0.11)	0.27** (0.11)
% 15-19 years old	0.45*** (0.12)	0.37*** (0.12)	0.41*** (0.11)	0.37*** (0.12)
% 20-24 years old	-0.11* (0.06)	-0.13* (0.07)	-0.10 (0.07)	-0.12* (0.07)
% 65 of older	0.11*** (0.02)	0.10*** (0.02)	0.09*** (0.02)	0.10*** (0.02)
% no diploma	0.01 (0.02)	-0.00 (0.02)	0.01 (0.02)	0.00 (0.02)
% higher education	0.06*** (0.02)	0.05* (0.02)	0.06** (0.02)	0.05** (0.02)
% blue collar workers	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	0.00 (0.01)
Unemployment rate	-0.04** (0.02)	-0.06*** (0.02)	-0.03** (0.02)	-0.06*** (0.02)
Observations	113		113	

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Conclusion

- Using French data for local (municipal and legislative) elections, we have shown that money matters in elections : for a candidate, increasing spending is an efficient way to increase vote shares.
 - This suggests that we need to introduce stronger spending limitations, and more equal public funding.
- ⇒ Private money is a danger for democracy not only in the U.S. but also in Europe.

Many thanks for your attention !

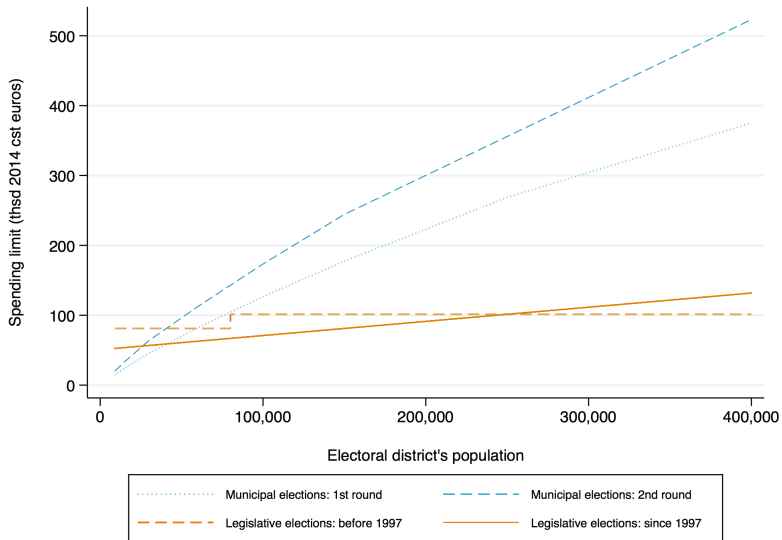
Spending limits calculations : 2008 municipal elections

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FRACTION DE LA POPULATION DE LA CIRCONSCRIPTION ÉLECTORALE	PLAFOND PAR HABITANT DES DÉPENSES ÉLECTORALES			
	en euros			
	élection des conseillers municipaux		élection des conseillers généraux	élection des conseillers régionaux
listes présentes au 1 ^{er} tour	listes présentes au 2 ^{ème} tour			
jusque 15.000 habitants	1,22	1,68	0,64	0,53
de 15.001 à 30.000	1,07	1,52	0,53	0,53
de 30.001 à 60.000	0,91	1,22	0,43	0,53
de 60.001 à 100.000	0,84	1,14	0,30	0,53
de 100.001 à 150.000	0,76	1,07	0,30	0,38
de 150.001 à 250.000	0,69	0,84	0,30	0,30
excédant 250.000	0,53	0,76	0,30	0,23

Spending limits

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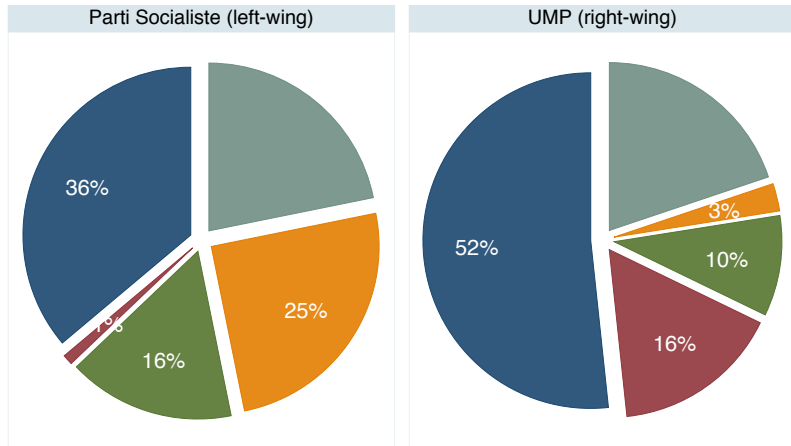
A note on party contributions

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- Candidates also receive financing support for political parties.
- Parties are financed through a number of a different ways :
 - Membership dues ;
 - Elected representatives' contributions ;
 - Public funding ;
 - Private donations.
- The relative importance of these different sources of revenues varies strongly from one party to the other.
- In 2014, party contributions to electoral campaigns ("*aides financières aux candidats*") have represented on average 9.6% of total parties' spending (9.37% for the "*Parti socialiste*" but 1.05% for the *UMP*).
 - Support paid to the candidate / representative & direct payment of electoral expenses.

Parties' sources of revenues : 2012

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Legislative elections : Political parties used in the empirical analysis

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	1993 Number	1997 Number	2002 Number	2007 Number	2012 Number
Communist party	555	535	484	507	543
Green party	326	434	446	519	468
Socialist Party	542	516	495	540	484
Right-wing party	533	543	551	547	517
Front National (FN)	554	555	554	552	550

Municipal elections : Political colors used in the empirical analysis

[▶ back](#)

	1995 Number	2001 Number	2008 Number	2014 Number
Extreme Left	126	193	226	227
Left	931	783	917	929
Right	889	753	921	908
Extreme Right	427	286	138	431

Spending per registered voter : municipal elections

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FIGURE: 1995

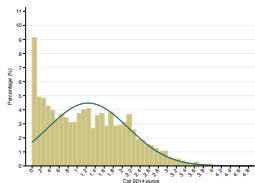


FIGURE: 2001

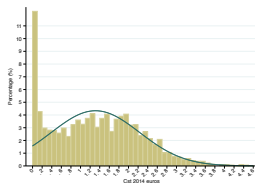


FIGURE: 2008

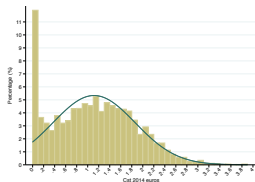
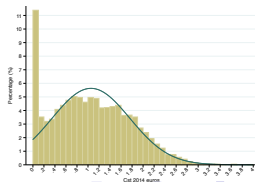


FIGURE: 2014



Spending per registered voter : legislative elections

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FIGURE: 1993

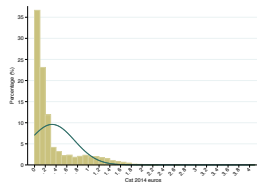


FIGURE: 2002

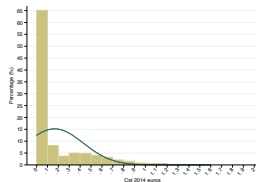


FIGURE: 1997

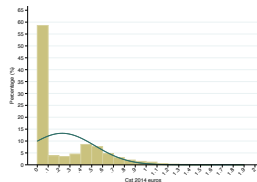
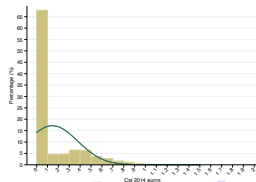
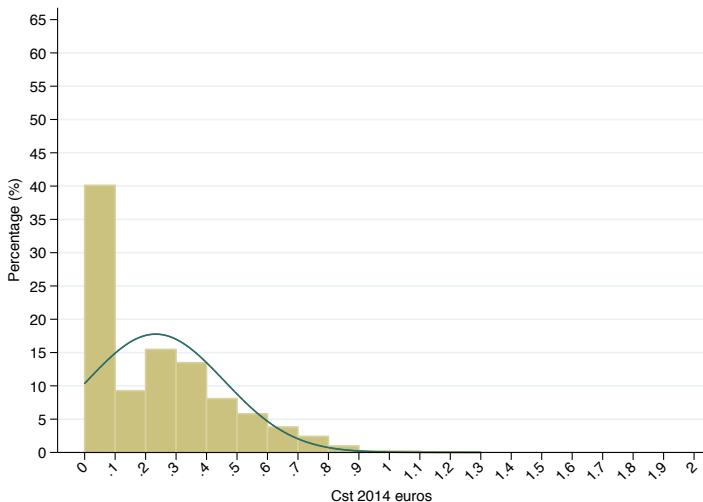


FIGURE: 2007



Spending per registered voter : legislative elections (ct'd)

FIGURE: 2012



Average vote share obtained by the “other” party, Legislative elections, Fully contested districts

▶ back

	Vote share of the other party					
	Mean	Median	sd	Min	Max	N
1993	15.7	10.9	12.2	0	68	304
1997	13.9	12.0	8.3	0	58	379
2002	17.9	14.3	10.8	4	70	359
2007	19.5	16.5	9.9	6	75	456
2012	11.4	7.3	10.8	1	71	372

Average spending per registered voter, Legislative elections, Fully contested districts

▶ back

	Communist	Green	Socialist	Right	Extreme right
	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd
1993	0.27 (0.29)	0.15 (0.08)	0.70 (0.46)	1.03 (0.42)	0.20 (0.09)
1997	0.38 (0.23)	0.05 (0.08)	0.55 (0.25)	0.70 (0.29)	0.51 (0.12)
2002	0.23 (0.26)	0.13 (0.18)	0.56 (0.25)	0.64 (0.29)	0.27 (0.18)
2007	0.13 (0.20)	0.04 (0.10)	0.41 (0.26)	0.49 (0.30)	0.26 (0.18)
2012	0.20 (0.17)	0.08 (0.12)	0.44 (0.18)	0.46 (0.24)	0.27 (0.09)

Legislative elections : Full Information Approach

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Log ratios of vote shares with respect to other party

	Communist party	Green party	Socialist party	Right-wing party	Extreme-right party
Communist party spending	1.15*** (0.14)	0.11 (0.19)	-0.28 (0.20)	-0.02 (0.20)	0.20 (0.14)
Green party spending	0.29* (0.17)	3.93*** (0.23)	-2.21*** (0.25)	-0.01 (0.25)	0.09 (0.17)
Socialist party spending	0.09 (0.08)	0.02 (0.11)	1.63*** (0.12)	-0.02 (0.12)	0.09 (0.08)
Right-wing party spending	0.31*** (0.08)	0.36*** (0.10)	0.20* (0.11)	1.91*** (0.11)	0.27*** (0.07)
Extreme-right spending	0.07 (0.17)	0.11 (0.22)	0.10 (0.23)	0.02 (0.24)	1.08*** (0.16)
Election FE	Yes				
District FE	Yes				
Controls	Yes				
Observations	2,571				

Municipal elections : Fully contested Districts

[▶ back](#)

	Log ratios of vote shares with respect to other party	
	Left	Right
Left spending	0.32*** (0.11)	0.12 (0.11)
Right spending	0.09 (0.08)	0.21** (0.08)
Election FE	Yes	
District FE	Yes	
Controls	Yes	
Observations	2,291	

Spending and first round turnout : Legislative elections

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	Turnout	Turnout	Turnout
Total spending	0.24*** (0.08)		
Communist party spending		-0.39 (0.35)	-0.39 (0.35)
Green party spending		2.14*** (0.49)	2.10*** (0.48)
Socialist party spending		0.63*** (0.20)	0.66*** (0.20)
Right-wing party spending		0.48** (0.19)	0.47** (0.19)
Extreme-right spending		-0.12 (0.39)	-0.07 (0.38)
Spending by other candidates		0.02 (0.12)	0.13 (0.11)
Number of candidates			-0.10*** (0.02)
Election FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
R-sq	0.88	0.88	0.88
Observations	2,759	2,759	2,759
Clusters (districts)	572	572	572
Mean DepVar	62.36	62.36	62.36

Spending and first round turnout : Municipal elections

[▶ back](#)

	Turnout	Turnout	Turnout
Total spending	0.79*** (0.06)		
Extreme-left spending		-0.01 (0.71)	-0.07 (0.72)
Left spending		0.87*** (0.09)	0.83*** (0.09)
Right spending		0.67*** (0.08)	0.64*** (0.08)
Extreme-right spending		0.87*** (0.18)	0.82*** (0.18)
Spending by other candidates		1.03*** (0.13)	0.97*** (0.12)
Number of candidates			0.19*** (0.05)
Election FE	Yes	Yes	Yes
District FE	Yes	Yes	Yes
R-sq	0.82	0.82	0.83
Observations	3,755	3,755	3,755
Clusters (districts)	1,079	1,079	1,079
Mean DepVar	57.9	57.9	57.9
Sd DepVar	6.6	6.6	6.6

Summary statistics : Donations from legal persons

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	(1)	(2)	(3)	(4)	(5)	(6)
	Communist	Green	Socialist	Right	Extreme right	Socialist vs. Right
	mean/sd	mean/sd	mean/sd	mean/sd	mean/sd	b/t
Donations from legal persons	765 (5,684)	47 (817)	4,482 (15,599)	7,750 (22,832)	52 (673)	-3,268*** (-6.0)
Per registered voter	0.01 (0.10)	0.00 (0.01)	0.07 (0.24)	0.12 (0.36)	0.00 (0.01)	-0.050*** (-5.88)
As a % of total revenues	1.6 (9.0)	0.4 (5.5)	6.2 (17.9)	8.1 (20.0)	0.2 (2.1)	-1.9*** (-3.6)
As a % of total private donations	3.1 (15.4)	0.7 (7.9)	11.5 (28.5)	14.1 (30.8)	0.9 (7.8)	-2.6*** (-3.2)
Obs	2,616	2,306	2,558	2,688	2,748	5,246