

Purchasing Power...

On the Link between Campaign Spending
and Electoral Success.

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Comments Welcome

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Introduction

“Do you seriously imagine that the people are passing judgement on a man’s merits when they choose their magistrates? ... They elect the most assiduous canvasser.”

Cicero – Pro Plancio, 5-13.

“He then desired to know, what arts were practised in electing those whom I called the Commoners. Whether a strong purse, might not influence the vulgar voters to chuse him before their own landlords, or the most considerable gentleman in the neighbourhood.”

*King of the Brobdignags in Jonathan Swift’s
“Gulliver’s Travels” (part II, chapter 6).*

The idea that political campaigns can influence the election outcome is not at all a recent idea: both Cicero (1st century BC) and Jonathan Swift (18th century) have written about it. And even today, one can regularly find articles in newspapers and popular magazines that describe how this or that politician ‘bought’ a seat in the Parliament¹. It is not surprising then that also in academic circles there’s a lively debate about this presumed link.

In spite of such a broad attention, (academic) empirical studies have exclusively focused on data from ‘first-past-the-post’ elections². As far as we know, no study has been made about the effect of campaign expenditures in proportional systems, even though most countries use some form of proportional representation (see Lijphart (1994)). As several studies (Grofman and Lijphart (1985), Lijphart (1994), Cox (1997)) have shown that the way elections are organized influences the behavior of politicians and political parties, we will here study the case of Belgium, notably the first country to have adopted a ‘list system of proportional representation’ (in 1899, see Farrell (1997)).

Using these Belgian data also has some ‘econometric’ advantages. First, because we have data on two consecutive elections, we can control for time-specific unobservables. Second, we will see that the electoral system might make the

¹ See also the Economist (31/7/99).

² Most articles use US-data, some focus on Canada and the UK and one study uses French data.

econometric problems less severe. Third, the Belgian context provides us with a really exogenous source in (the changes in) spending. Indeed, the law that limits campaign expenditures has been changed after the 1995 elections thus providing a natural experiment: the changes in spending between the 1995 and the 1999 elections that are due to changes in the limits will be related to changes in votes only if money really matters.

Our estimates indicate that campaign expenditures do indeed have a statistically significant effect on the share of the votes a party or a candidate gets, even after controlling for both omitted variables and endogeneity. Candidate-level data further allow us to find evidence of crowding out as candidates that receive more money from the party to spend on their personal campaign will spend less out of their own pockets.

Research on the effect of campaign expenditures

Since spending data became available for the US elections in 1972, several studies have investigated the link between money and votes. Next to the question whether money matters at all, the main question of this literature has been whether ‘incumbents’ and ‘challengers’ benefit both to the same extent from campaign expenditures (for example Jacobson (1978)).

So far however, two related econometric problems, ‘omitted variables’ and ‘endogeneity’, have prevented a definitive conclusion. Indeed, one can argue that a candidate does not win because he spends more, but rather that a good candidate (a candidate that a priori is more likely to win) just spends more. This can be explained by differences in the candidate’s fund raising success: for a candidate that a priori is more likely to win, it will be much easier to raise funds. For example, a left-wing candidate in a left-wing district is more likely to get financial support, which will allow him to spend more than his right-wing competitor. Similarly, the candidate (or party) that is most likely to win will get more money from people or firms that hope to influence policy-decisions. At the other side, a candidate that is convinced to be ‘good’ might think that he doesn’t need a campaign.

Several of the more recent studies have tried to solve these econometric problems. Palda and Palda (1985) estimate a 2SLS equation on Canadian data and find that the

incumbents' expenditures have a significant effect on the vote-share but they also find that the effect is smaller than the effect of the challengers' expenditures. Gerber (1998) uses instrumental variables to estimate the effect for US Senate elections and concludes that both incumbents' and challengers' expenditures have a similar and meaningful impact on their voter share. Pattie, Johnston and Fieldhouse (1995) also use instrumental variables on UK data and find positive effects for challengers but mixed effects for incumbents. Finally, Levitt (1994) uses repeat challengers for seats in the US House in order to eliminate the candidate's quality by estimating first-difference equations. His results indicate "an extremely small impact of campaign expenditures, regardless of who does the spending (p777)".

Other studies have broadened the picture by using data for other countries (France, Palda and Palda (1998)), by allowing for different effects of different sorts of expenditures (Palda and Palda (1998), Depken (1996)), or by including additional variables that capture other campaign efforts (Carty and Eagles (1999)).

Table1: The results of some previous studies.

	Data	Method	Dependent variable	Change	Incumbent wins	Challenger wins
Palda & Palda(1985)	Canada	2SLS	number of votes	+1\$	0.3	0.62.
Jacobson (1978)	US	2SLS	Challenger vote share	+10000\$	0.5%	1.6%.
Gerber(1998)	US	2SLS ³	Incumbent vote share	+0.1\$/voter	1%	1.69%.
Pattie et al. (1995)	UK	2SLS ⁴	vote share		Mixed	+
Levitt(1994)	US	Fixed effects	Democratic vote share	+100000\$	0.1%	0.3%
Palda & Palda(1998)	France	OLS	Incumbent vote share	1 FrF/voter	1%	2.5%.
Depken(1996)	US	OLS	vote share	+100000\$	by PACs, +3.4%, own funds, +0.4%	
Carty&Eagles(1999)	Canada	OLS	vote share	1\$/voter	6%	23%

The discussion on the influence of campaign expenditures in Belgium.

Belgian politicians also believe in the power of money. In the introduction to the proposition of law that proposed to restrict campaign expenditures, the authors asked: "Is it fair that candidates of the same party or of different parties dispose of

³ Lagged spending, state population and wealth proxy as instruments.

completely different financial means? If we want to have democratic elections, this kind of discrimination should be made impossible. Rich people should not be able to reap advantage from this situation by organizing huge campaigns that provide them with renown that probably has nothing to do with personal qualities or the content of the program (Belgian House of Representatives, 1989, p. 3, translation from Dutch text)⁵.”

Second, some members of the Parliament recently have argued that the rule that allows a restricted number of candidates to spend more (see *infra*) should be abolished because ‘this favors the candidates that are preferred by the parties which are not always the ones that are preferred by the voters’ (De Standaard (02/02/2000)). Similarly, “The limits are too tight. Especially the lower-ranked candidates do not get enough room to promote themselves. In this way, the breakthrough of young politicians is hindered (Knack, 26/05/1999)”.

Also Belgian scientist have been interested in the effect of political campaigns: Dewachter and al. (1974,1976) proxied campaign expenditures by measuring the flyers, posters, TV and radio appearances of individual candidates. They found a positive correlation between ‘publicity’ and preferential votes but not between

The Belgian electoral system: proportional representation, flexible list, two tiers and compulsory voting.

For the elections of the federal parliament, Belgium is subdivided in 20 districts, where each district is given a number of seats that is largely proportional to the number of people living in the district. In these districts, several parties then propose a list of somewhere between 2 and 10 ‘effective’ candidates (dependent on the size of the district) and 6 ‘alternatives’⁶. The rank-order of the candidates within the party-list

⁴ Lagged votes as instrument.

⁵ Note that this law, together with the spending-limits, also introduced public subsidies to political parties.

⁶ If the ‘effective’ candidate dies, becomes minister or cannot take his seat for any other reason, he will

is determined by the parties, sometimes through local polls of party-members but most often by local party-committees (see De Winter 1980).

Each voter can choose to cast either a 'list vote', in case he approves the rank-order or is indifferent between candidates, or a 'preferential vote', if he has preferences for a specific candidate. If he likes several candidates, he can give one preferential vote to each of these persons as long as he stays within one party list⁷. So while each person votes for one party, each voter has the possibility to express his preference for several candidates within that party. The number of votes a list receives determines the number of seats it will win, the number of 'preferential votes' each candidate receives will determine which candidate(s) of the list will get the seat(s). However, the votes of those people that voted for the party (rather than casting (a) preferential vote(s)), are first added to the preferential votes of the candidate that was first on the list, then what's left to the second and so on until all the seats are distributed. In reality, preferential votes alone are almost never enough to get elected and candidates at the top-places will often win a seat even if they have fewer preferential votes than some of the lower ranked candidates have⁸.

The Belgian system further uses two tiers: for each district, the number of valid ballots is first divided by the number of seats for that district, which gives the vote-number. The number of seats for each party is then determined by dividing its number of votes through this vote-number. Of course, this division is unlikely to give an integer value, and hence, it is unlikely that all seats are thus distributed. The left-over seats are then distributed on the provincial level.

Note also that there are no Belgian parties: there's no party that has candidates in each Belgian district. Instead there are Dutch-speaking parties with candidates in Flanders and French-speaking parties with candidates in Wallonia. Only in the bilingual district of Brussels, the Dutch-speaking and French-speaking parties compete for voters.

Finally, voting is compulsory.

⁷ The ballot is a paper with for each party, a list with the names of the candidates. Next to each name, there's a square that should be crossed if one wants to give a preferential vote to that candidate. If one wishes to cast a list vote, one crosses a square at the top of the list. Note that if one voter crosses the squares of, for example, three candidates, each of them receives a full vote.

⁸ Note while this way of voting is specific to Belgium, it is quite similar to the voting system used by several other European countries. See Katz (1986) or Marsh (1985).

Effects of differences in the electoral system

While much has been written on the effects of electoral system (Grofman and Lijphart (1985), Lijphart (1994), Cox (1997)), little is known about the relationship between the electoral system and (the effectiveness of) campaign expenditures. In what follows, we will give some examples of how differences in electoral systems can affect the influence of political campaigns.

First, campaign expenditures have been shown to influence the voter turnout, which can influence the election-results if different 'kinds' of voters have different propensities to show up⁹. As voting is compulsory in Belgium, this effect becomes less important so one would expect the effect of expenditures to be smaller¹⁰.

Second, in a Belgian district, several parties can gain a seat, what's more each party can gain several seats (the district magnitude, this is the average number of seats per district, is 7.5). A first consequence is that districts will tend to be bigger in terms of the number of voters. Palda and Palda's (1998) study of France mentions 555 districts for about 60 million inhabitants, hence on average 100000 people per district. Similarly, Pattie, Johnston and Fieldhouse (1995) use 663 UK-districts. In Belgium, there are 20 districts for 10 million inhabitants, hence on average 500000 people per district. In addition, the number of parties tends to increase with the number of seats that have to be distributed (See Cox, 1997). Both the bigger size (it's less likely that you 'know' the candidate) and the higher number of parties should increase the demand for information and hence the importance of campaign expenditures should be bigger. The fact that the Belgian voter can further make a choice between several candidates within one party should have a similar implication.

The 'proportionality'-characteristic of the system will also influence the spending behavior of candidates. Indeed, in the Belgian system, a candidate can spend for two reasons. First, because expenditures influence the own probability of being elected. Above we noted that it's almost impossible to get elected by preferential votes alone. This could be interpreted as a sign that the lower ranked candidates have no personal

⁹ See Matsusaka and Palda(1999) for the effect of campaign expenditures on voter turnout.

¹⁰ It doesn't disappear as there are people who do not show up in spite of the fact that voting is compulsory.

incentives to spend money. But preferential votes are a good proxy for ‘popularity’, which can be exploited by the candidate in the race for a good place on the party’s list for the next elections or in the race for seats in the councils or governing boards in which political parties have representatives. Hence, campaign expenditures will not only influence the competition between candidates of different parties but also the competition within parties for preferential votes.

Second, expenditures influence the chance of other party members to get elected. As a consequence, a candidate who is certain of winning a seat will still have an incentive to spend money to help the other candidates of his party, which is not the case in the situation where each party has only one candidate. Similarly, a candidate with no chance of winning still has an incentive to spend in order to help his colleagues¹¹. This issue is important given the discussion about endogeneity/omitted variables above: in the Belgian list-system, the link between a candidate’s own quality and his campaign expenditures is smaller by nature.

Finally, the sources of individual campaign-money are different: In Belgium, candidates rely mainly on party-support (about 50%) and own funds (about 44%) and are only rarely financed through donations by third persons (about 6%). Milyo and Groseclose’s (1999) US data show that at most 20% of US campaign resources come from the candidates’ own funds. More reliance on own funds in Belgium implies that the ‘better candidates get more support’- idea is of lesser importance in our case (although parties also tend to support their better (higher-ranked) candidates more).

Note that the above examples seem to indicate that the Belgian data are, a priori, **less** subject to the econometric problems. In addition, the ‘list’-nature of the system provides us with a variable that should reduce the omitted variable bias. Indeed, the rank-order of the candidates can be used as a reasonable proxy for candidate-quality. While some might argue that the rank-order is mainly determined by party-loyalty rather than by candidate-quality, we think that at least “the parties take good care to present their candidates in a sequence that will not ensure the displeasure of their supporters” (Marsh (1985, p373))¹².

¹¹ The fact that even candidates that are almost surely elected spend money confirms this effect.

¹² Our estimates below indeed show that candidates higher on the list get more preferential votes.

The Data... and their shortcomings

The candidates' campaign expenditures were obtained from the Parliamentary Commission that controls the application of the law on the campaign expenditures. They are available for three general elections: 1991, 1995 and 1999. However, only since the 1995 election voters do have the right to give a preferential vote to several candidates. We therefore focus on the 1995 and 1999 elections.

Data on votes (preferential and total) are available from publications by the Ministry of the Interior. We further focused on the 10 big parties (they win all but a few seats) and the elections for the Belgian 'House of Representatives'^{13,14}.

Only the expenditures during the last three months before the election are taken into consideration. Expenditures before that period are unconstrained and hence, not recorded¹⁵. Still, an opinion poll 2 months before the elections of 1995 showed that, at that moment, most voters had not made a fixed choice yet (Platel, 1996).

Although the Commission checks data supplied by candidates, control is not very tight: it only observes whether limits have been respected, and investigates individual candidates' expenditures only if a complaint is registered against a particular candidate. Punishment of those that do not declare their expenditures is possible but so far has never occurred¹⁶.

The spending-limits are as following: alternative candidates can spend at most 100.000 BEF, 'effective' candidates can spend up to 200.000 BEF. However, each party can assign n+1 people that can spend up to a higher limit, the latter in function

¹³ Hence, the results are conditional on being (candidate for) an 'established' party.

¹⁴ VLD (liberal), SP(socialist), Agalev(green), VU(left-wing nationalists), CVP (Christian democrats) and Vlaams Blok (right-wing nationalists) in Flanders and PRL (liberal), PS(socialist), Ecolo (green) and PSC (Christian democrats) in Wallonia.

¹⁵ And parties indeed spend extra money before the start of this period. The PS for example spent 19 million BEF on a campaign two weeks before the start of the three-month period of the 1999 election (Le Vif Express 12/03/1999). It's unclear whether it is allowed to pay in advance for a campaign during those three months.

¹⁶ As far as cheating/misreporting is random, there's no problem. However, if candidates that do spend more than the limit simply cheat, our estimates will be biased.

of the number of voters in the district and where n equals the number of seats the party had conquered in that district at the previous election^{17,18}.

The limits on spending are relatively tight: 200000 BEF is more or less 4 times the net monthly wage of a Belgian graduate student. One can imagine that this excludes large-scale personal campaigns. Still, a local printer told me that one could easily buy 20000 flyers and 10000 posters with such an amount¹⁹. As such publicity has to be distributed to the voters, which is often done by the candidate or for free by his supporters, it is clear that ‘money’ probably proxies for ‘electoral effort’ in general.

Finally, note that we only have data on the expenditures of candidates for their personal campaign. Political parties only have to submit the total amount of money they spend (limits were 45 million in 1995 and 40 million in 1990²⁰) without subdividing those amounts to the district level. Still, it is quite likely that the biggest part of the parties’ expenditures is for campaigns that cover all the districts (advertisements on television, radio or press). This is confirmed by the data disclosed by one party (VU-ID): out of the 32.7 million the party spent, it spent 28.3 million (86%) nationally.

¹⁷ They could spend $500000 + 2 \text{ BEF} * \text{the number of registred voters in 1995}$, $350000 + 1.4 \text{ BEF} * \text{the number of registred voters in 1999}$. The maximum thus varied between 800000 and 2.5 million BEF in 1995 and between 500000 and 1.7 million in 1999. Note that the same law provided the political parties with a yearly subsidy that had to make parties less dependent on sponsors to finance their campaign. While spending limits became tighter over time, I’m not aware of any corresponding reduction of this yearly subsidy!

¹⁸ Note that this rule can induce a correlation between expenditures and party-votes on the district level: parties that had a lot of votes in the previous election have more incumbents in a district, will thus have a higher limit, and thus can spend more. In as far as voting behavior is stable over time and if limits do indeed matter, we would observe that parties that spend more in a district are also more popular. Therefor, we should try to control for the results of the party at the previous election or look at changes over time.

¹⁹ One candidate told me he received 200 posters, 3000 post cards and 1500 stamps of his party. In addition, he paid for the distribution and the printing of 8000 flyers. The total cost of all this was about 55000 BEF.

²⁰ These limits are for all elections taken together (European, House, Senate and Regional Parliaments).

Descriptive Analysis

Party-level data²¹.

First, we compare the sum of the candidates' expenditures with the parties' national expenditures (from here on, all amounts will be in 1999-BEF²² (in 1999, one dollar was worth about 40 BEF)).

Table 2: candidates' expenditures.

	Candidate95	Candidate99	Party95	Party99
AGALEV	0.04	0.77	15.01	33.73
SP	77.29	81.76	39.62	34.21
PS	84.09	80.12	47.95	35.33
VL.BLOK	15.77	46.43	45.45	38.27
VU	18.49	33.66	47.81	32.83
ECOLO	1.22	4.88	22.76	38.22
PRL-FDF	90.98	103.18	43.4	39.22
PSC	69.84	71.47	47.98	38.6
VLD	142.78	109.34	46.37	38.5
CVP	133.69	126.89	47.43	39.11

Amounts are in million BEF. Candidate99 includes the expenditures of the candidates for the House, the regional parliaments, the senate and also the European Parliament.

First, the sum of the expenditures over the different parties, which is the 'total marketing-cost' of the elections, has been about 1 billion BEF in both 1995 and 1999. The cost of the national campaigns of the different parties is fairly similar and tends towards the limit of 40 million BEF. There are however substantial differences in the spending by candidates. While the green parties (try to) stick exclusively to a party campaign, the CVP candidates spent about 127 million BEF in 1999²³.

Looking at the evolution over time of party expenditures, we see a major decline (in real terms - to a large extent due to the decline in the limits) but for two parties: Ecolo and Agalev. Hence, an explanation for the gain of those two parties in the most recent elections could be their considerable increase in expenditures rather than the dioxin-crisis (chicken-meat had been found to be 'polluted' with dioxin, caused by mixing industrial oil with animal food). Of course, one might suspect the reverse causality

²¹ Based on data published in Belgisch Staatsblad.

²² To inflate 1995-expenditures to 1999 prices, we used the consumption-price-index (97.68 in May 95 vs 103.65 in June 1999-hence 6.11%).

²³ Beware, however, that we will see later that a big part of the candidates' expenditures are financed through party-funds.

here: those parties spend more money because the dioxin-crisis gave them an excellent opportunity. Still, the latter became public only two weeks before the Election Day and Ecolo had decided to make use of the services of a communication agency for the first time in its existence before the outbreak of the crisis. A similar reasoning can link the high expectations and the high expenditures of the VLD in 1995 and their drop in expenditures in 1999. At the other side, the Augusta-crises (socialist ministers had received party support from the firm that could supply Augusta-helicopters to the Belgian Army) of 1995 which was expected to decrease the votes for the SP and PS does not seem to have influenced the spending behavior of those parties.

The next table compares the share in the votes (for the House-election) with first, the share in the expenditures by candidates for the House elections (separately for Flemish and French-speaking parties!) and then with share in the expenditures for all elections by both candidates and parties.

Table 3: vote shares versus expenditure shares.

	Voteshare95	Voteshare99	House expshare95	House Expshare99	All expshare95	All expshare99
AGALEV	7.1	11.2	0.0	0.2	2.4	5.5
SP	20.1	15.2	20.4	21.4	18.3	18.6
PS	31.7	27.2	33.5	31.3	31.9	27.6
VL.BLOK	12.5	15.7	2.8	7.3	9.6	13.6
VU	7.5	8.9	4.7	8.0	10.4	10.7
ECOLO	10.7	19.7	0.5	2.4	5.8	10.3
PRL-FDF	27.4	27.2	35.8	38.3	32.4	34.1
PSC	20.7	15.8	28.2	25.2	28.4	26.3
VLD	21.0	22.8	36.1	28.2	29.7	23.7
CVP	27.4	22.5	34.3	33.0	28.4	26.6

Shares sum to +- 200 because Flemish and Walloon parties are considered separately.

It's clear that the biggest spenders do indeed have the biggest vote-share. If one only considers the expenditures by the House candidates, one sees that for the smaller parties, the share in expenditures is smaller than the share in votes while for the big parties the reverse is true. Taking all the expenses into account brings vote-share and expenditures-share much closer. But even then, the relationship is far from being one-to-one: The PSC's vote-share is about half its expenditures-share while Agalev's

vote- share is about the double of its expenditures-share. This brings us to our first hypothesis:

Hypothesis one: if a party increases its campaign expenditures, it will increase its vote share.

Another way of showing the effects of campaign expenditures is through the share of preferential votes. Indeed, an effective personal campaign should attract votes for the candidate himself rather than for the party as a whole so the more personal campaigns are important (relative to the party campaign, defined as national party expenditures plus all personal expenditures of candidates for other parliaments), the higher the share of preferential votes should be²⁴.

Table 4: preferential votes.

	% preferential votes in 1995	% preferential votes in 1999	Share of personal expenditures in total expenditures 1995	Share of personal expenditures in total expenditures 1999
AGALEV	39.5	43.4	0.2	0.8
SP	59.3	67.1	23.1	25.4
PS	62.1	69.2	20.3	21.2
VL.BLOK	35.4	43.8	6.1	11.9
VU	52.0	58.3	9.5	16.6
ECOLO	40.3	45.9	1.7	4.3
PRL-FDF	60.3	62.9	21.4	21.0
PSC	73.7	74.9	19.2	17.9
VLD	58.9	62.8	25.3	26.2
CVP	65.1	69.5	25.1	27.3

Between 1995 and 1999, more people did not just vote for a party but did express their preference for one or more candidates²⁵. VI Blok, VU, Agalev and Ecolo, the parties that spend less on personal campaigns also appear to be the parties with the lowest percentage of preferential votes, which confirms our intuition and gives a second hypothesis:

Hypothesis two: if a party increases its personal campaign expenditures relative to its party campaign expenditures, the share of preferential votes on total votes will increase.

²⁴ Of course, we count the number of ballots that used preferential votes rather than the number of preferential votes itself (because one ballot can have several preferential votes).

²⁵ Note that in 1946 only about 20% of the votes were preferential votes (Smits and Thomas, 199?).

Focus on the candidates for the House of Representatives.

After having looked at the overall picture, we now focus on the House elections for which we gathered data about the individual candidates²⁶.

In table 5 we give some descriptive counts. Note that in both years 1520 candidates presented themselves to the voters²⁷.

Table 5: descriptive counts

	1995	1999
# positive expenditures	1140 (75.8%)	1228(88.5%)
Candidates using gifts	14.9 %	8.8 %
Candidates using party funds	73.3 %	92.1 %
Candidates using own funds	82.2 %	73.3 %

The percentages are of those with known source of funds (42 (1995), resp. 82 (1999) candidates didn't indicate the source of their expenditures).

- The number of candidates that spend money on a personal campaign increased from 1140 to 1228. While about 25% of the candidates did not spend anything in 1995, only 11.5 % of the candidates did not do so in 1999²⁸.
- In Belgium, firms are not allowed to give money to politicians. Gifts by 'physical persons' are allowed but only a limited number of candidates do receive such support (the maximum still being 685000 BEF in 1999).
- Most candidates use own funds and party funds, with the former losing some of its importance. One explanation for the increased number of people that receive party-support could be the decision to lower the limit for 'central' party-expenses from 45 million to 40 million. Indeed, a tighter limit can be circumvented by an increased support to the parties' candidates. If candidates use party-money as a substitute for own money (hypothesis 3 below) this could also explain the decrease in own funding.

²⁶ In 1995, seven categories of sources of campaign-funds were possible: monetary gifts by third persons, gifts in nature by third persons, other gifts of third persons, monetary gifts by the political party, gifts in nature by the political party, other gifts by the political party and finally, own funds. We aggregate these seven categories to three sources: own funds, party funds and gifts. In 1999, the other-party category has been merged with the other-third persons category. As this 'other' category has been used only by 57 candidates in 1999 and as in 1995, of the 93 candidates that used the other category, 81 indicated the 'other - party' category, we lose little by considering the other category as belonging to the party funds.

²⁷ For 15 (1995) and 132(1999) candidates, we have no information as did they didn't submit their declaration, due to unknown reasons or because they submitted it for another Parliament. The increase over time is due to the fact that at the time of entering the data, the submission for 1999 had only just been completed and because the 1999-file for one district (Leuven) was missing.

²⁸ The increase might be somewhat exaggerated as a disproportional part of those that did not respond on time is likely to consist of zero expenditures.

The average amount of money spent is given in table 6.

Table 6: average and conditional (on having positive expenditures) average

	Average ²⁹ 1995	Conditional Average 1995	Average 1999	Conditional Average 1999
Total expenditures	142360	188060	147950	167350
Funded by gifts	9040	84080	2550	35370
Funded by party funds	68020	127410	81680	107650
Funded by own funds	59740	99860	48110	79650

Amounts are in thousand BEF.

The average candidate spent about 167000 BEF in 1999 but the variance around this amount is considerable: in 1999, the most 'economic' candidate spent only 32 BEF, while the most expensive campaign cost over 2 million BEF. On average candidates spend 80000 BEF on their own campaign though the most 'self-interested' candidate in 1999 spent more than 800000 BEF on his campaign. Note further that the conditional average expenditures have declined in all categories (but from above we also know that more people received party support).

Next, we focus on the differences between the political parties. First, we consider the number of candidates that did spend money.

Table 7: sources of funds: number of candidates.

Party	1995					1999				
	#	%	%gifts	%party	%own	#	%	%gifts	%party	%own
AGALEV	2	1.2	0.0	0.0	100.0	36	23.2	0.0	18.8	84.4
SP	167	99.4	6.7	100.0	61.0	154	99.4	7.5	100.0	42.9
PS	120	100.0	15.8	93.9	81.6	115	100.0	10.6	98.9	62.8
VL.BLOK	83	50.0	5.1	0.0	100.0	146	98.0	4.1	99.3	73.3
VU	151	89.9	13.9	60.6	79.4	143	100.0	4.2	99.3	83.2
ECOLO	43	33.6	2.4	45.2	61.9	88	70.4	0.0	89.7	25.3
PRL-FDF	119	94.4	23.7	48.3	94.9	127	100.0	11.8	86.6	89.1
PSC	122	96.1	23.0	80.5	71.7	117	100.0	21.7	94.3	80.2
VLD	166	99.4	15.2	72.6	93.9	147	100.0	16.5	75.2	92.6
CVP	167	100.0	18.6	98.8	88.6	155	100.0	7.3	100.0	93.3

is the number of candidates having positive expenditures while % is # divided by the number of people of that party on which we have information. Each Flemish party has 168 candidates while each French-speaking party has 128 candidates (differences due to 11 Flemish districts versus 10 Walloon districts and fact that Walloon districts are smaller). For 1999, one Flemish district is missing (13 candidates per party).

²⁹ The fact that the sum of row 3-5 is not equal to row 2 is due to some candidates that didn't divide their expenditures over the different categories.

In 1995, more than 90% of the candidates of the six ‘traditional’ political parties (SP-PS-VLD-PRL-CVP-PSC) and the VU spent money on individual campaigns. Only about half of the candidates of VL Blok and Ecolo did campaign, while AGALEV adopted a ‘no-personal-campaign’-philosophy. An important reason for this difference was that the big parties spent more on the personal campaign of their candidates and to a lesser extent that their candidates received more gifts. In the personal contributions, this division did not show-up. By 1999, the non-traditional parties caught up with the big parties: only AGALEV retained its reluctance towards personal campaigns though even 21% of its candidates did spend money. Further, the evolutions we found at the aggregate level (less gifts, more party funds and less own support) can be found also on the party-level.

Next we look at the distribution of the amounts spent.

Table 8: sources of funds: amounts.

1995	%gifts	%party	%own	1999	%gifts	%party	%own
AGALEV	0.0	0.0	100.0	AGALEV	0.0	29.1	70.9
SP	1.6	72.5	25.7	SP	0.3	85.1	14.6
PS	4.1	70.5	25.5	PS	3.7	68.9	27.8
VL.BLOK	7.9	0.0	92.1	VL.BLOK	2.3	62.3	35.4
VU	8.2	28.2	63.4	VU	1.1	52.6	46.3
ECOLO	8.6	49.6	41.7	ECOLO	0.0	91.6	8.4
PRL-FDF	5.2	41.8	52.9	PRL-FDF	1.1	64.3	34.6
PSC	7.1	52.9	40.1	PSC	3.5	66.4	30.1
VLD	9.3	40.6	50.1	VLD	1.6	41.7	56.7
CVP	8.9	42.4	48.6	CVP	2.2	56.9	40.9

In 1995, gifts to candidates are for all parties less than 10%. Most parties had between 40 and 50% party support and 40 to 50% own support. Exceptions are VL. Blok with more than 90% own contributions and the two socialist parties (SP-PS) that rely mainly on party-resources. Less gifts, more party funds and less own support also pop-up here (note especially VL Blok and Ecolo). This leads to our third hypothesis.

Hypothesis 3: when a candidate gets more money from the party, he will spend less out of his own funds.

For each candidate, we also know the number of preferential votes received. In table 9, we give the correlation between the percentage of voters of the candidate’s district

that gave a preferential vote to this candidate and his part in the expenditures of that district.

Table 9: correlation between vote share and expenditure share

	1995	1995
Total sample	0.80	0.69
Effective candidates	0.81	0.69
Alternatives	0.61	0.62
Incumbents	0.74	0.66
Non-incumbents	0.74	0.61

There's a clear correlation between vote share and expenditure share on the candidate level. This correlation is higher for 1995-data and higher in the sample of effective candidates than in the sample of alternative candidates. Our fourth hypothesis is thus a simple reformulation of hypothesis 1.

Hypothesis four: if a candidate increases his campaign expenditures, he will increase his vote-share.

Econometric Analysis.

Part 1: Analysis on the district level.

Hypothesis one: if a party increases its campaign expenditures, it will increase its vote-share.

First we look at the effect of the expenditures on the percentage of the votes a party receives. The dependent variable is thus the number of votes of party X on the number of valid votes cast (this is excluding blank votes)³⁰. In our most basic specification, we use the expenditures, per voter, by candidates of party X, the expenditures, per voter, by candidates of all other parties and party dummies as independent variable. The sample consists of 106 party-district combinations for 1999³¹.

This specification shows that one BEF spent by party X ‘earns’ 1.34 percentage point of the vote. One BEF spent by the other parties decreases party X’s vote share by 0.41 percentage point. This makes that an increase of one standard deviation in the expenditures per voter by party X (3.8, mean 5.2) increases the share in the votes by 5.1 percentage points while an increase of one standard deviation of the expenditures per voter (6.6, mean 23.8) by the other parties, decreases party X’s vote share by 2.7 percentage points.

Next, we add the number of incumbents, as a measure for the success of the party at the previous election. The number of incumbents equals the number of people that are candidate (for party X in district Y) for the House in 1999 and were member of any of the Belgian Parliaments (Belgian House, Belgian Senate, Flemish Parliament, Brussels Parliament or Walloon Parliament). Including this variable, however, doesn’t change our results³².

Until now, we supposed that only the expenditures by the candidates for the House mattered. One could however argue that we should also take into account the expenses (in the district) for other parliaments and the national expenses done by the party. As mentioned before, the expenditures for the party campaign are only known

³⁰ Note however that the shares do not sum to 1 because of existence of other parties. Including the blank votes does not change the results.

³¹ We consider 6 Flemish parties in 11 districts and 4 Walloon parties in 10 districts.

³² For the 1995 data, the coefficient of the number of incumbents is significant.

at the national level. However, large parts of those expenditures are for national campaigns (television, press, radio) for which we can reasonably suppose that they influence all voters equally. Therefore we distribute these funds according to the number of registered voters in the district. The same procedure is used to distribute the personal expenditures of the candidates for the Senate and the European Parliament. The ‘other’ campaign expenditures equal then the personal expenditures by candidates for the regional parliaments plus the share in the national and senate expenditures.

Table 10: expenditures and vote share

		Vote share 1999		
Exp for the House.	1.34 (0.22)	1.32 (0.25)	0.99 (0.29)	0.72 (0.25)
Other parties Exp for the House.	-0.41 (0.06)	-0.41 (0.07)	-0.19 (0.09)	-0.18 (0.09)
Exp for the other parliaments.	----	----	0.32 (0.17)	0.25 (0.19)
Others Exp for the other parliaments	----	----	-0.06 (0.03)	-0.06 (0.02)
Exp for the House * incumbents	----	----	----	0.47 (0.41)
Exp for the other parliaments* incumbents	----	----	----	0.1 (0.27)
#incumb95	----	0.15 (0.37)	0.39 (0.39)	0.41 (0.38)
Dummies	YES	YES	YES	YES
R ² adj.	0.77	0.77	0.79	0.79

White heteroskedasticity-consistent standard errors between brackets. Incparties: dummy for parties forming government: PSC-CVP-PS-SP

This third specification confirms the existence of ‘spill-overs’: the national campaign and the expenditures for the other parliaments also influence the House results. Still, a BEF spend by House candidates is more effective than a BEF spend by candidates for other campaigns.

Finally, we interact the expenditures by party X with a dummy indicating whether the party has been part of the government or of the opposition. While the coefficients of these new variables are positive (hence, ‘government spending’ is more efficient than ‘opposition spending’), they are not significant³³.

³³ Note that for 1995 data we get some evidence that spending by government parties is more important.

Of course, until now we neglected the econometric problems:

We estimated:

$$\text{Vote-share}_{it} = f(\text{expenditures}_{it}, \text{expenditures}_{-it}, \text{incumbents}, \text{party dummies}) + \varepsilon$$

However, suppose that in reality:

$$\text{Vote-share}_{it} = g(\text{expenditures}_{it}, \text{expenditures}_{-i}, \text{incumbents}, \text{party dummies}, \text{Unobservable Quality}) + \varepsilon'$$

If there's a positive correlation between this quality and expenditures, then the coefficient of the expenditures variable in the above estimations will be biased. Using fixed effects however should, like in Levitt (1994) alleviate this problem as it will capture the unobservable quality.

Table 11: expenditures and vote share – first differences

		Δ Vote share		
ΔExp for the House.	0.41 (0.09)	0.41 (0.09)	0.43 (0.1)	0.32 (0.11)
ΔOther parties Exp for the House.	-0.08 (0.04)	-0.08 (0.04)	-0.08 (0.05)	-0.7 (0.05)
ΔExp for the other parliaments.	----	----	0.03 (0.1)	0.02 (0.1)
ΔOthers Exp for the other parliaments	----	----	-0.03 (0.04)	-0.02 (0.04)
ΔExp for the House * incumbents	----	----	----	0.25 (0.21)
ΔExp for the other parliaments* incumbents	----	----	----	0.05 (0.21)
Δ#incumb95	----	0.18 (0.17)	0.2 (0.18)	0.14 (0.2)
Dummies	YES	YES	YES	YES
R ² adj.	0.83	0.84	0.83	0.79

Differencing reduces the influence of expenditures quite substantially. Instead of coefficients ranging close to 1, we now get coefficients of about 0.4. So for each BEF spent extra, a party can expect 0.4 percentage points extra votes. The effect of differencing is similar on other parties' expenditures: from about 0.2 à 0.4 to about

0.1. This makes that an increase of one standard deviation in the change of the per voter expenditures (2.1) would increase the share in the votes by about 0.8 percentage point. The expenditures by others (4.4 standard deviation) decrease the share by 0.35 percentage points. Note that the effect of expenditures in other parliaments is no longer significant.

Of course, as quality can change over time, it would be better to use instrumental variables³⁴. While some cross-sectional studies have used 'wealth' (among others) as an instrumental variable for the expenditures of a candidate (for example, Gerber (1998) but see Milyo (1998) for a critique), here we will use a natural experiment provided by a change in law. Indeed, the rules that determined the expenditures-limits have been different for the 1995 and the 1999 elections, thus provoking a change in relative spending that has no direct influence on the vote-share.

In 1995, the Belgian regional parliaments were, for the first time, elected directly. Therefore the number of members of the House was reduced from 212 to 150. Changing the number of seats in itself changes the distribution of seats over districts and hence, over parties within the districts. Second, for both elections, the number of candidates spending up to the maximum limit has been determined by the number of elected candidates at the previous elections. Hence, 212 in 1992, 150 in 1999. In addition, in 1999 each list could (in each district) give one extra candidate the right to spend up to this higher limit, while in 1995 only those lists (in a district) that did not have a candidate elected in 1991 could do so. In addition, electoral changes between 1991 and 1995 did change the distribution of the elected candidates. Third, the maximum-limit has been decreased significantly over time. These changes will influence the expenditure limit of each party in each district in a different way. If limits further influence spending, then the observed change in expenditures will be related to the change in the limit.

So we first regress, the changes in expenditures on changes in the limits and then use the predicted values in the regression of votes on expenditures.

Table 12: instrumental variables

	Δ Vote-share		Δ Exp		Δ Exp other parties
Predicted Δ exp	0.67 (0.26)	Limit party	0.34 (0.09)	Limit party	0.66 (0.09)
Predicted Δ other parties exp	-0.04 (0.03)	Limit others	0.001 (0.01)	Limit others	1 (0.02)
Dummies	YES	Dummies	YES	Dummies	YES
R^2 adj.	0.82	R^2 adj.	0.35	R^2 adj.	0.95

White heteroskedasticity-consistent standard errors between brackets.

The instrumental variables estimate confirms that spending matters and gives a coefficient of 0.67 (with t-statistic 2.5) for own spending (compared to 0.41 (t-statistic 4) when taking first differences). The coefficient of the expenditures by competitors now becomes insignificant³⁵.

Overall, we find strong support for hypothesis 1: more spending means a bigger share in votes. A party that increases its (House-) expenditures by 1 BEF per voter for can expect to win between 0.4 and 0.7 percentage point extra.

Hypothesis two: if a party increases its personal expenditures relative to its party expenditures, the share of preferential votes on total votes will increase.

As mentioned before, an alternative way of looking at the effect of campaign expenditures is to look at the ratio preferential votes on list votes.

As independent variable, we use the share of expenditures by candidates for the House in the ‘total expenditures of the party’ (being the sum of district expenditures by candidates of the House and the Regional Parliaments plus a share in the national expenditures, the senate expenditures and the European Parliament expenditures that is proportional to the districts’ number of possible voters).

³⁴ It also helps to overcome a possible endogeneity problem. If however it is the unobservable quality that determines which candidates/parties will get support, then there’s only a problem of omitted variables.

³⁵ We also ran regressions with the share of party X in the districts’ expenditures as independent variable giving similar results. As did a regression where we only used the law driven changes in limits.

Table 13: influence of expenditures on preferential votes.

	1999	1995	Changes
Expenditures	0.72 (0.15)	0.39 (0.18)	0.24 (0.09)
#incumbents1995/(91)	0.004 (0.01)	0.028 (0.008)	0.009 (0.005)
District dummies	YES	YES	YES
Party dummies	YES	YES	YES
R ² adj.	0.85	0.84	0.58

White heteroskedasticity-consistent standard errors between brackets.

Personal campaigns do indeed seem to have an effect: we find a positive and significant effect, even when controlling for party- and district effects. A one standard deviation increase in the share of personal campaign expenditures (0.095, mean 0.17) increases the share of preferential votes with about 6.9 percentage points³⁶.

Differencing confirms that more personal expenditures lead to a higher percentage of preferential votes. However, the effect is reduced to 0.24. Meaning that an increase of one standard deviation in the change of the share of personal expenditure (0.055) increases the share of the preferential votes by 1.3 percentage points.

Part 2: Analysis on the candidate-level

Hypothesis 3: when a candidate gets more money from the party, he will spend less out of his own funds.

Until now we focused on the relationship between votes and expenditures, here we will take a closer look at relationship between different sources of expenditures. More specific, whether politicians spend less of their own money for their personal campaigns when they receive more money from their parties³⁷? Indeed, if candidates have an optimal amount of spending and the sum of party-funds and own funds is higher than that optimal amount then it is quite likely that they will keep some of their own funds. The data for the Belgian House, where we have information of the expenditures according to their source allows us to test this.

³⁶ 4 percentage points for 1995.

³⁷ Burnett et al (1997) note that US candidates add excess campaign funds to their personal wealth.

We start with a regression of the own expenditures on the party expenditures³⁸. A positive sign indicates crowding in (more party funds mean more own funds), a negative sign indicates crowding out (more party funds decrease the own funds). Of course, one might argue that the causality runs the other way with the political party reacting on the candidate's behavior. We think however that first, it is more difficult for the party to observe what its candidates do than it is for the candidates to observe what the party does and second, that parties decide about their spending before the candidates do³⁹.

Table 14: crowding in- extended specification.

	Own Expenditures 99	Own Expenditures 99	Own Expenditures 95	Own Expenditures 95
Party Expenditures	0.22 (0.04)	0.02 (0.05)	0.32 (0.05)	0.13 (0.04)
Nr	----	-4.7 (1.02)	----	-8.1 (1.2)
Alternatives	----	-32.5 (-5.5)	----	-52.9 (7)
Incumbents	----	126 (22)	----	184 (34.6)
Dummies	Yes	Yes	Yes	Yes
R ² adj.	0.23	0.33	0.21	0.33
#obs	1304	1304	1463	1463

White heteroskedasticity-consistent standard errors between brackets.

As could be expected, we find a positive relationship between the two variables. Of course, rather than money, the place on the list can be important: for example, being at the first place can increase both the money received from the party and the own contribution. In this case, a change in place will change the own contribution rather than change in party-funds. Further, for candidates with higher limits, the chance is lower that party funds will be enough to reach the preferred spending level, which could make us observe a positive relationship. Therefore, we add the candidates' number on the list, a dummy indicating the alternative candidates and a dummy for the incumbents (next to the party and district dummies).

³⁸ We neglect the gifts-category.

³⁹ One candidate "the party only knows what the candidates have spent at the moment they submit their spending information to the Parliamentary Commission".

One can see that including this extra control variables changes the conclusions somewhat: for the 1999 data, own expenditures do not react on changes in party support while for the 1995 data, the coefficient is reduced to 0.13 (from 0.32).

For 386 people that were candidate in both periods, we have observations in both 1995 and 1999 which allows us to go even further and control for person-specific characteristics⁴⁰.

Table 15: crowding out- first differences.

Δ Own Expenditures	Extended Specification
Δ Party Expenditures	-0.15 (0.075)
Δ NR	-7.6 (2.9)
Δ Effective/Alternative	48.6 (11.9)
Δ incumbency	10.5 (34.4)
Dummies	YES
R ² adj.	0.04
#obs	389

White heteroskedasticity-consistent standard errors between brackets.

While the R² is very low, the panel-estimates point in the direction of crowding out. Politicians decrease their own funds by 150 BEF when their party increases its support by 1000BEF.

Getting a higher rank and becoming an effective candidate also significantly effect the own expenditures.

Controlling for candidate-specific factors leads thus to the confirmation of hypothesis 3. Indeed, even politicians behave human and try to save on own funds when they get more party-support.

Hypothesis four: if a candidate increases his share in the campaign expenditures, he will increase his vote-share.

⁴⁰ 434 candidates where in both 1995 and 1999 candidates for the House (Some other candidates have been candidate on two different lists f.e. Senate in 1995 and House in 1999). For 397 of these, we had info in both years. We further excluded 8 candidates that changed districts or changed parties, thus leaving us with 389 observations.

In part 1, we looked at the effect of campaign expenditures on the vote percentage at the district level. Now, we descend one level of aggregation and look whether more campaign expenditures increase the number of preferential votes that the individual candidates received.

First, we regress the ratio of the number of preferential votes of candidate X on the number of ‘valid’ voters in the district on the campaign expenditures of candidate X divided by the number of registered voters. Hence, the coefficient gives the percentage of voters a candidate can convince for each BEF per voter that the candidate spends in his campaign⁴¹. We further add the expenditures by all other candidates and party dummies.

Table 16: candidate expenditures and preferential votes

	1999 voter share	1999 voter share	1995 voter share	1995 voter share
Exp.	2.01 (0.37)	1.57 (0.19)	2.05 (0.17)	0.7 (0.39)
Exp squared	-----	-0.1 (0.03)	-----	0.17 (0.12)
Exp. By incumbents	-0.017 (0.005)	1.43 (0.3)	-0.021 (0.003)	1.13 (0.28)
Exp. By other candidates	-----	-0.01 (0.005)	-----	-0.016 (0.003)
Nr	-----	-0.06 (0.007)	-----	-0.05 (0.006)
Effective	-----	0.27 (0.05)	-----	0.21 (0.04)
Incumbent	-----	-0.37 (0.33)	-----	0.07 (0.28)
Dummies	Yes	Yes	Yes	Yes
R ² adj	0.53	0.64	0.64	0.71
Obs	1387	1387	1505	1505

White heteroskedasticity-consistent standard errors between brackets.

Candidates that spend more do also attract the votes of a bigger part of the voters. For each BEF per voter, a candidate wins about 2 percentage points of the voters. Each BEF per voter spend by others reduces the candidate’s voter share by about 0.02 percentage points. A one standard deviation increase in expenditure (0.77) by a

⁴¹ We’ll use the notion of ‘voter share’ rather than vote share as voters can give preferential votes to more than one candidate.

candidate thus increases his voter share by 1.5 percentage point while a one standard deviation (9.55) increase by the other candidates decreases his share by 0.2⁴².

Of course, the above regressions did not control for other factors. In the literature on the money-votes relationship, a lot has been written on the difference of the effectiveness of campaigns for incumbents and challenger. In 1999, 139 candidates were incumbents (in the House or in another Belgian Parliament)⁴³. We therefor add two variables: an incumbent dummy and this dummy multiplied by the spending variable. We further add the candidates' rank on the party-list as an indicator of 'candidate-quality' and a dummy indicating whether a candidate is an effective candidate or not. Finally, to capture possible economies of scale, we include the square of the candidates' expenditures.

The extended specification confirms our basic results: more spending by the candidate still increases his voter share while more spending by the other candidates decreases the candidate's voter share. The 1999 data indicate decreasing returns to scale while the 1995 data show slightly increasing returns to scale.

Interesting to note is that we now find evidence for an incumbent-advantage: money spend by an incumbent is about twice as effective as money spend by an incumbent. Incumbents however do not have a 'fixed' advantage (the coefficient of the dummy-variable is insignificant).

Being an effective rather than an alternative candidate increases the vote share by 0.3 (0.2 in 1995) percentage points. As does being 5 (4) places higher on the list⁴⁴.

Next, we take the 434 candidates for whom we have observations in both 1995 and 1999. In this way, we can control also for candidate-specific effects that are time-invariant by using first-differences.

⁴² Based on the results for 1999.

⁴³ Note however that it is likely that incumbency status in the Belgian proportional system is quite different from the one in the 'first-against-the-post' system (for example, the former has several incumbents and several challengers within the same district, while the later has only one incumbent against one challenger).

⁴⁴ Note that being an incumbent, an effective candidate or being high on the list might we be 'caused' by expenditures at the previous elections. Here, we concentrate on 'first-order' effects. The higher order effects are unlikely to be high.

Table 17: candidates and their preferential votes- first differences.

Δ votes	Δ voter share	Δ voter share	Δ voter share IV	Δ voter share IV
Δ exp	0.4 (0.22)	0.42 (0.26)	0.8 (0.24)	0.51 (0.29)
Δ other exp	-0.003 (0.009)	-0.002 (0.008)	-0.005 (0.01)	0.003 (0.01)
Δ incumbency* Δ exp		-0.29 (0.32)	----	----
Δ rank	----	-0.045 (0.01)	----	-0.04 (0.01)
Δ effective	----	0.48 (0.09)	----	0.45 (0.1)
Δ incumbency	----	0.53 (0.19)	----	0.58 (0.2)
Dummies	YES	YES	YES	YES
R ² adj	0.05	0.12	0.01	0.07
#observations	435	435	435	435

Dummies are party-dummies and district-dummies (here not interacted). White heteroskedasticity-consistent standard errors between brackets.

First-differencing reduces the effect of campaign expenditures but still confirms hypothesis 4: increasing the expenditures by 1 BEF per voter, increases the voter-share by 0.4 percentage points. The expenditures by other candidates, however, do not seem to matter anymore. Being an effective candidate or being higher on the list again increases the vote-share. The incumbent dummy is now significant: becoming incumbent increases the share in the votes by 0.5 percentage points. However, the fixed effect regression doesn't show a difference anymore between incumbent and challenger spending (the sign is even negative indicating that if one becomes incumbent money is less important)⁴⁵.

The last columns give the IV results where changes in limits are again used as instruments. As before, this increases the coefficients.

Proportional versus First-Past-the-Post

It is not easy to compare our estimates to those of the literature on spending in first-past-the-post elections due to differences in the way campaign expenditures are measured in the different studies (in logarithms, as percentage of spending limits, absolute values or per voter). Anyhow, Palda and Palda (1998) find effects of between

⁴⁵ I also ran several of the above regressions in logs or taking the relative spending as explicative variable. Such modifications, however, do not change our conclusions.

1 and 2.5 percentage points for each French Franc spent per voter. The same amount spent in Belgium would lead to a gain of 2.4 to 4.8 percentage points. Similarly, at the sample mean, Gerber (1998) estimates that, for US senate elections, an additional 0.1 \$ per voter increases the vote share by 1 to 1.7 percentage points which is again somewhat smaller than our estimates. Still, one should be aware that a change of 1 French Franc or 10 \$ cents per voter are very huge changes within the Belgian context (they are outside the range of data we used to estimate our coefficients!).

Note further that we do not find any strong evidence for a difference between the effectiveness of spending by incumbents and spending by challengers. Still, becoming an incumbent (at the previous election) does increase the voter share by about 0.5 percentage points (at the next election).

Conclusions

The data on campaign expenditures by candidates for the Belgian House allow us to confirm empirically both Cicero's assertion and the King of the Brobdingnag's question: campaign money does influence the results of the elections. Indeed, more money spent by the candidates on their personal campaign increases both the number of preferential votes they receive as the number of votes their party receives. Solving econometric problems like omitted variables and endogeneity through first differencing and instrumental variables doesn't change this conclusion though it tends to reduce the coefficients. If a candidate increases his spending on his personal campaign by one BEF per voter, his voter share will increase by between 0.4 and 0.8 percentage points as will the vote share of his party.

In addition, we found evidence that even politicians behave 'human' as they react on increases of party support by decreasing the amount of own funds they use for their personal campaigns. More precisely, an increase of 1000 BEF of party support is offset by a decrease of own funds of about 150 BEF.

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