Government Spending and Pocketbook Voting: Quasi-Experimental Evidence from Romania

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Abstract:
This paper addresses the question of whether incumbents can buy political support through targeted public spending. Using a regression discontinuity approach which takes advantage of the quasi-experimental design of a recent Romanian government program that distributed coupons worth 200 Euros to poor families towards the purchase of a computer, we find that program beneficiaries were significantly more likely to support the parties of the incumbent governing coalition. These effects occurred both through higher political mobilization and through party-switching. The paper also analyzes the drivers of such political gains and we find that program beneficiaries did not trust either the central government or the governing parties any more than the control group. Instead, it appears that local governments reaped the benefits of increased trust, and the political support for incumbent parties occurred mostly in towns where the local government was controlled by one of the parties of the national ruling coalition.

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Can incumbents buy political support through targeted public spending? Judging by the widespread practice of politically motivated allocation of public funds in countries as diverse as the United States, Sweden and Brazil, most politicians seem to assume that the answer to this question is affirmative. The axiomatic acceptance of the importance of pocketbook considerations in individual voting decisions also lies at the basis of a substantial academic literature concerned with the theoretical prediction and empirical assessment of politically motivated patterns of government spending.[1] Nonetheless, despite this widespread (and reasonable) assumption that voters evaluate incumbents at least in part on the basis of how government policies have affected their personal economic fortunes, the large academic literature on economic voting has produced contradictory findings about the importance of such pocketbook considerations in the political choices of individual citizens.[2] Moreover, most existing approaches to isolate the effects of pocketbook voting suffer from considerable methodological limitations (Cramer 1983, Sigelman et al 1991), which will be discussed in greater detail below and further undermine our confidence in these findings.

As a result we still have few definitive answers to a number of important questions about the impact of government spending on the political decisions of individual citizens. Moreover, since most previous studies have analyzed the US and other advanced democracies, we know

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[1] For different theoretical perspectives see for example the debate about targeting core constituents (Cox and McCubbins 1986) vs. swing voters (Dixit and Londregan 1996), as well as Persson et al (2000) discussion of comparative institutional effects on public finance allocation, and the extensive literature on political business cycles (e.g. Tufte 1978).

[2] For thorough recent reviews of this literature, see Lewis-Beck and Stegmaier (2000) and Anderson (2007).

even less about the effects of government spending in developing countries and new democracies. In addition to the primary empirical puzzle about the existence and magnitude of a government spending-driven change in vote intentions, there are a number of interesting questions about the mechanisms through which such an effect operates. In particular, we want to know whether the electoral support gains of incumbents are driven primarily through the mobilization of citizens, who would have stayed away from the polls in the absence of government spending benefits, or whether the spending matters because it persuades former supporters of the opposition parties/candidates to switch their political allegiances and vote for the incumbents. Beyond the immediate concern with voting behavior, there are broader questions about how citizens assign credit and blame for changes in their personal economic situations, including whether direct benefits from government spending programs translate into greater political trust and satisfaction, whether such improvements benefit political institutions or individual politicians, and whether they accrue at the local or national level.

The present paper addresses these theoretical questions using empirical evidence from a public opinion survey of participants in a recent Romanian government program, which awarded low-income families with school-age children with vouchers towards the purchase of a new personal computer. Using a regression discontinuity approach, which takes advantage of the quasi-experimental nature of the voucher award process (see below), we find strong evidence that government spending can have a significant impact on political attitudes and electoral behavior. We find that voucher recipients were much more likely to report that they intend to vote in the upcoming elections, and that governing parties reaped most of the benefit of this increased political participation. We also find some evidence of vote switching from the main opposition party to the current incumbents and this effect was substantially stronger in towns

where the governing parties controlled the local government. The crucial mediating role of local government is further confirmed by the fact that program beneficiaries only displayed a trust increase towards local authorities (who administered the vouchers) but not towards national institutions and politicians despite the fact that the program was initiated and funded by the national government.

This paper is organized as follows: the first section briefly places the present analysis in the context of the scholarly debates about pocketbook voting and more broadly about retrospective economic voting. Next we provide a brief description of the "*Euro 200*" program in the context of Romanian party politics and electoral competition. The third section discusses the methodological approach of the paper and presents the main variables and hypotheses. The fourth section presents the statistical results and discusses their theoretical implications for our understanding of pocketbook voting and political behavior more broadly.

Government spending and pocketbook voting: previous findings and unresolved issues

As mentioned in the introduction, previous studies, which have focused primarily on the United States and Western Europe, have found fairly weak and contradictory support for pocketbook voting in established democracies: while several studies have identified significant pocketbook effects in US Congressional elections (Romero and Stambough 1995, Alvarez and Saving 1997, Ansolabehere and Snyder (2006), many other accounts of US elections found modest and insignificant effects (Kiewiet 1983, Markus 1988, Alvarez and Nagler 1995, Lewis-Beck and Stegmaier 2000.) In Western Europe, the evidence is equally mixed: several studies have found that personal economic considerations mattered less than sociotropic evaluations of the economy in French elections (Lewis-Beck 1988, 1997), and Borre (1997) found similarly weak pocketbook effects in Britain. Finally, Danish elections have been the subject of

unresolved debates between studies claiming to find strong pocketbook effects rooted in the country's welfare culture (Nannestad and Paldam 1995, 1997) and others finding no such effects using the same data (Hibbs 1993, Borre 1997).

What about pocketbook voting in developing countries? Judging by the widespread concerns about vote-buying and clientelism in many poor democracies(Brusco et al 2009), one would expect the impact of targeted government spending to play a greater role than in advanced industrial democracies. Moreover, given the gradual emergence of partisanship in new democracies (Brader and Tucker 2001), citizens may be easier to persuade to shift their political loyalties towards parties and politicians associated with tangible personal economic benefits. On the other hand, the greater impact of market fluctuations, and the prominent influence of international organizations, such as the International Monetary Fund (IMF) or the European Union (EU), on economic policies and outcomes, are likely to weaken the clarity of responsibility for changes in aggregate and individual economic fortunes, and may therefore undermine pocketbook voting. Moreover, citizens in new democracies may be less informed about the functioning of their more recent (and often still evolving) political institutions (Duch 2001), which is likely to influence the ways in which they assign credit or blame for their personal economic fortunes.

While these differences raise a number of interesting theoretical questions about the dynamics of pocketbook voting, the empirical evidence has been fairly limited so far, due to the shorter democratic track record and the relative scarcity of high-quality economic data and public opinion surveys in developing countries. The few existing studies concerned directly with the electoral effects of public spending have produced mixed results: thus, Samuels (2002) found that pork barrel spending in Brazil did not translate into greater electoral support and Bruhn

(1996) found similarly weak effects in Mexico. Meanwhile, Weyland (1998) finds that regions with more generous social spending were more likely to support incumbents in Argentina and Peru but not in Bolivia. For ex-communist countries, we are not aware of any studies linking government spending with voting behavior, although a few studies have revealed weak pocketbook voting effects in Poland (Cox and Powers 2000) and Hungary (Gomez and Wilson 2006). The more extensive literature on post-communist economic voting reports mixed findings with respect to collective retrospective economic evaluations: whereas Pacek (1994), Fidrmuc (2000) and Anderson et al (2003) report lower turnout and/or weaker support for incumbents in East-Central European elections occurring under bad economic conditions, Tucker (2006) finds stronger support for prospective than for retrospective economic voting and Pacek et al (2009) report weak and inconsistent economic effects on post-communist voter turnout. Therefore, the present paper's emphasis on the link between government spending and political attitudes and electoral intentions in post-communist Romania addresses an important and understudied aspect of political behavior, which should contribute not only to a better understanding of post-communist electoral dynamics but more broadly to the unresolved debates about the salience of pocketbook considerations in individual voting decisions.

Some of the inconsistent findings discussed above arguably reflect the changing salience of personal economic considerations across a wide range of political contexts, as well as the fact that the mechanisms through which government policies affect individual welfare range from programmatic government spending on public goods to clientelist practices targeted at particular groups and individuals and involving a quid pro quo. (Brusco et al 2009). However, a closer look at the different findings in the existing literature suggests that some of the differences seem to be driven by variations in methodological approach. Thus, whereas studies using aggregated data

tend to find significant pocketbook effects (Alvarez and Saving 1997, Weyland 1998, Ansolabehere and Snyder 2006), survey-based analyses of individual voters suggest that socio-tropic evaluations of the overall state of the economy are better predictors of voting behavior than individual economic considerations (Lewis-Beck 1988, Powers and Cox 2000).[3]

Most importantly, so far both types of analyses suffer from significant methodological limitations. The biggest concern is that the independent variables of interest included in the regression analyses are endogenous and therefore one cannot establish a causal link between these factors and the dependent variable (i.e. voting behavior). Thus, in studies using aggregate data, which often focus on government spending in a given district, we may worry that politicians are likely to direct spending to areas where they expect to get the most political gains from such expenditures. The resulting reverse causality problem can be only partly addressed by using lagged spending variables, since both spending levels and voting behavior tend to persist over time and may be driven by other unobserved variables. Individual-level analyses, which tend to focus either on the perceived benefits of government programs or on perceived personal economic satisfaction to explain voting behavior, suffer from a similar omitted variable problem. Thus, such perceptions are arguably influenced by some of the same variables – such as partisan ties and ideology – that also drive vote choice but may be only partially observable. Therefore, both types of studies run the risk of producing biased estimates of the effects of government spending on voting behavior. In addition, studies using aggregated data run the risk of ecological fallacy, since they try to infer individual behavior based on aggregate outcomes, and they do not

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[3] One notable exception is Nannestad and Paldam's (1995, 1997) survey-based work about the importance of pocketbook voting in Denmark but, as mentioned above, these findings have been disputed by other similar analyses.

lend themselves to investigating the mechanisms through which economic conditions affect individual behavior.

The present paper proposes to address the endogeneity of government spending identified by earlier studies through an original research design, which takes advantage of the quasi-experimental nature of a recent Romanian government program, which awarded about 27,000 vouchers worth 200 Euro (roughly $240 at the time) towards the purchase of a personal computer for students from low-income families. The program allocated a fixed number of such 200 Euro coupons on the basis of a simple ranking of family income in ascending order. The income cutoff line was not announced in advance but was determined by awarding vouchers to eligible applicants in increasing order of household income up to the budget constraint imposed by the total allocated funding.[4] The winners were notified of having been selected and received the coupon, which could be applied towards the purchase of a personal computer at a number of participating local retailers. Since the lists of winners and losers were published on the website of the program initiative, we were able to use this publicly available information to run a public opinion survey of 852 randomly selected program applicants from two Romanian counties. The face-to-face interviews were conducted in May-July 2007 by the Romanian branch of Gallup International and included almost identical proportions of winners and losers. To avoid priming,

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[4] The post-facto nature of the income cutoff reduces possible concerns about participants misrepresenting their income to squeeze in below the cutoff. While individual instances of underreporting are possible, it is unlikely that these would be concentrated around the income cutoff of 506,000 ROL, and should therefore have a negligible effect on our regression discontinuity findings.

respondents were not asked any questions about their participation in the Euro 200 program until the final part of the interview.

Surveying both winners and losers of this program has a number of important advantages as an empirical setting for testing the effects of targeted government spending on the political attitudes and electoral behavior of recipients. First, the abrupt and largely exogenous[5] income cutoff separating winners from losers affords a stark "regression discontinuity" that allows comparisons across families with very similar income and other background characteristics. Such an approach goes a long way towards eliminating concerns about omitted variables bias between recipients and non-recipients. (Gerber and Green 2008:374)[6]

Second, our survey benefits from the fact that we know a priori that some respondents (i.e. the voucher recipients) benefited from an exogenous consumption boost since the last election and, therefore, we do not have to rely on reported (and potentially subjective) measures of economic well-being. This feature addresses one of the most important difficulties encountered by earlier efforts to establish the electoral impact of changes in personal economic fortunes, namely that survey-based evaluations of such changes are at best biased by individual cognitive predispositions such as partisan preferences (Conover et al 1986, Peffley et al 1987) and at worst may be largely epiphenomenal (Fiorina 1981, Feldman 1985). While it is still

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[5] At the national level the income cutoff was of course endogenous to the size of the budget, the number of applications and the income distribution of applicants. However, as far as local level politicians and bureaucrats were concerned, the income cutoff was exogenously determined by the central government after applications were submitted, which limited their ability to manipulate the program for clientelist purposes.

[6] The statistical details of this approach are discussed in greater detail below.

conceivable that individuals interpret similar exogenous shocks in different ways for a variety of cognitive reasons, our research design ensures that such biases are not reflected in our main explanatory variable but can instead be tested empirically.

Third, since the program was a recent government initiative and required parents to apply for the vouchers on behalf of their children, we avoid the potential risk that respondents may not be aware of the benefit or that they would not associate it with a government program. This aspect is particularly important considering that earlier studies found that in the U.S. new federal outlays resulted in stronger electoral boosts for incumbents than total spending (Alvarez and Saving 1997) and that vote intentions for incumbents were driven by awareness of new public spending projects rather than by the actual change in such programs (Stein and Bickers 1994).

Finally, the vouchers represented a rather large income transfer for poor families,[7] and since they resulted in the purchase of a concrete (and visible) consumption good we would expect them to trigger noticeable political responses if pocketbook considerations are indeed important. This feature is important to address concerns that even if properly perceived and credited by individual recipients, the impact of government spending may be sufficiently modest to be "drowned out" by the noise from the wide variety of non-governmental factors affecting individual welfare (Sigelman et al. 1991).

Program background: electoral competition in Romania

To understand the political implications of the computer voucher program, it is important to place the program in the context of electoral competition in Romania. The voucher program,

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[7] For a family of four with the highest income qualifying for a voucher in 2005, the 200 Euro voucher corresponded to more than three times the monthly family income.

widely known as the *Euro 200* program in Romania, was proposed by the Prime Minister's office and adopted by unanimous vote in Parliament in June 2004 as Law 269/2004. The initiative of the ruling ex-communist *Partidul Social Democrat (PSD)* broadly conforms to the theoretical predictions of politically motivated government spending: first, it was timed in such a way that the winners were announced less than two months prior to the presidential and parliamentary elections in November 2004, thereby maximizing the electoral impact of the initiative. Second, in line with Romania's proportional representation electoral system, the program was not geographically targeted (along the lines of US pork barrel spending) and it was large in overall terms, thereby confirming Persson et al's (2000) predictions about public spending in PR systems. Since the program's primary beneficiaries were poor rural residents, which were traditionally the backbone of support for the ex-communists, it appears that the ruling PSD intended to use the program primarily as a way of mobilizing its core supporters. Targeting the rural poor was the most effective legal vote-buying strategy, both because for them the 200 Euro vouchers represented a greater relative benefit than for wealthier urban residents, and because traditionally voter turnout in post-communist Romania was highest in rural areas.

Despite this spending spree and a reasonably successful governance record from 2000-2004, the incumbent PSD suffered a narrow electoral defeat in the November-December 2004 elections. Their successors at the helm of the Romanian government were a motley crew of parties, which was based primarily on the center-right *Dreptate şi Adevăr* (DA) alliance (composed of the liberal *Partidul National Liberal PNL* and the nominally social-democratic *Partidul Democrat PD*) but also included the ethnic Hungarian *Uniunea Democratică Maghiară din România* (UDMR) and a small former ally of the ex-communists, the *Partidul Umanist din România (PUR).* Rather than eliminating or at least reducing program funding, the new

governing coalition actually expanded the resources allocated to the voucher program: thus, whereas in 2004 25051 families received vouchers, the number of awards increased to 27555 in 2005 (the year on whose participants the survey is based), 28005 in 2006 and over 38379 in 2007.[8] This decision suggests that apart from the policy merits and public image benefits associated with such an initiative, the new governing parties may have decided to use the program to challenge their ex-communists on their electoral home turf among poor rural voters. Given that in 2004 voter turnout in rural areas was for the first time lower than in urban areas, such an effort may work either by persuading former PSD voters to switch to the center-right governing parties or by mobilizing potential existing supporters who stayed away from the polls in 2004. However, despite its clear electoral intent, the program did not involve the type of *quid pro quo* inherent in traditional clientelist exchanges, and therefore qualifies as an instance of non-programmatic distributive politics that are very common in most democracies. (Brusco et al. 2009)

Empirical strategy

As mentioned above, under the new DA government, the Romanian Ministry of Education offered approximately 27,500 computer vouchers to low-income students enrolled in Romania's public schools in 2005, the year on which our survey is based. Since these computer

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[8] Along with the total number of vouchers, the proportion of applicants who received computers also increased dramatically from about 20% in 2004 to 53% in 2005, 96% in 2006 and 100% in 2007. As a result, the most recent two rounds of the program cannot be used for the current research design, since they do not provide meaningful control groups against which to evaluate treatment effects.

vouchers were allocated according to a simple income cutoff, we employ a regression

discontinuity (RD) design to compare outcomes across families with similar income and other

characteristics but experienced different levels of program entitlements. This enables us to

address the possibility of omitted variable bias between recipients of government benefits and

their counterparts who were ineligible. The basic regression model used through the analysis is

as follows:

(1) $outcome_i = \beta'X_i + \delta\ cutoff_i + f(\ income_i) + \varepsilon_i$

where *outcome$_i$* represents a particular political action or belief, such as voting behavior, by

respondent *i*. X_i includes a set of control variables, such as age, ethnicity, urban/rural location,

and educational attainment. In practice, these control variables have very little effect on our

estimates of the discontinuity and serve mainly to increase precision. *cutoff$_i$* is a dummy variable

equal to 1 if monthly household income per capita is less than the minimum cut-off for the

voucher program of 506,250 lei, and 0 otherwise. The coefficient δ , our main coefficient of

interest, indicates the effect of receiving a 200 euro computer voucher on the relevant outcome.

Finally, *f(income)* is a smooth function of income, which is the forcing variable in the context of

this regression discontinuity design. As in other recent studies employing this technique, we

specify a linear model of this forcing variable, but allow it to vary on either side of the

discontinuity.[9] While our primary specification uses a linear spline in income, we also estimate

regressions with alternative polynomial functions for robustness. Binary outcome variables are

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[9] See Dinardo and Lee (2004) for use of parametric functions in regression discontinuity design.

Estimating this equation using non-parametric methods, along the lines of Hahn, Todd, and van

der Klaauw (2001) and Porter (2003), also leads to similar results.

estimated with logistic regression models, other variables are estimated with OLS regression models.

The central assumption underlying the RD design is that we have correctly specified the function of income (the forcing variable), which determines assignment of the government subsidy (the computer voucher). Another important assumption is that households were not able to manipulate the forcing variable, by reporting a lower income. While it is of course possible that individual families underreported their income, such cheating should not be a serious concern for our results for at least two reasons. First, the minimum cut-off of 506,250 lei for the voucher program was not known ex-ante. This cutoff was determined by the amount of funds available and by the number of households that applied and their corresponding income, none of which were known prior to the start of the program. Nevertheless, we did test for manipulation of the forcing variable by examining the density of reported income around the cutoff, (McCrary, 2007) and found no evidence of cheating. Second, underreporting would only create a problem for our identification strategy if cheaters were clustered on either side of the income cut-off. This situation could only happen in situations where families had information about the cut-off at the time they applied for the program, which is highly unlikely given that this cutoff was only determined after all the applications were received by the Ministry of Education.

Data

The data used in this paper come from two sources. The first is a list of families that have participated in the 2005 round of the Euro 200 program in the Romanian counties of Valcea and Covasna. This list contains the names of the parent and child who applied, the place of residence as well as the name of the school of the child. There is also information on the income per family

member in the three months prior to the application deadline, which is crucial for implementing the regression discontinuity design of the current analysis.

The second source of data is a household survey that we conducted with the help of Gallup Romania in the spring of 2007 with the households included on the original list. Of the 1554 families included on the original list, we restricted our target sample to the 1317 families that live in localities where at least four families have applied to the program.[10] Of the remaining 1317 families, 858 were successfully interviewed for a response rate of 65%, which is in line with Gallup's interview rate for this population. While the remaining sample is not representative of the program applicant pool or the population of the two counties more generally, we found no evidence that attrition is different between winners and losers of the program.

The survey was designed to capture a number of different socio-economic outcomes of both children and parents and it included a wide range of questions about the political attitudes and voting preferences of the parents. Since the program was targeted towards low income families, it is not surprising that the sample population is predominantly rural (54%) and has comparatively low levels of educational attainment (49% have less than 8 years of education). Compared to national averages, the sample contains an unusually large fraction of Hungarians (41%) reflecting the fact that one of the two counties in the study (Covasna) is a region with a Hungarian majority. Table 1 presents summary statistics for the main variables used in the study. In our sample, 49% percent of families received a computer in the 2005 round of the Euro 200 program and computer ownership is high at around 75%.

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[10] This restriction was due to the high cost of surveying individuals in areas with few program participants.

The other variables in Table 1 summarize the answers of survey respondents to a number of questions about political attitudes and electoral behavior. Thus, we asked respondents about their vote intention in the next elections, as well as about their likely political party choice. Since at the time of the program implementation, the national government was composed primarily of the center-right DA coalition and the ethnic Hungarian UDMR, we included these parties both separately and as a government aggregate.[11] In addition, we coded supporters for the main opposition party, the ex-communist former governing party PSD, and an aggregate of two small nationalist and populist parties, PRM and PNG. The second set of survey questions asked respondents to rate their trust in a series of political institutions on a scale from 1(low) to 10 (high), and we tested the program impact on those institutions, which could be expected to benefit from a trust boost among winners: the local government (which administered the program details), the central government and the national parliament, which had passed the law and funded the program, and the political parties, which could affect the program at both the national and the local level. The higher ratings for local governments are consistent with national level survey findings which reflect slightly greater trust in local than in national political institutions. In addition to institutions, we asked respondents to rate a number of Romanian politicians (on a scale from 1-10), but for the purpose of this analysis we only focus on the prime ministers of the country at the time when the program was initiated (Adrian Năstase from PSD) and when the 2005 round was implemented (Călin Popescu-Tăriceanu from DA).

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[11] The government aggregate also includes supporters of the small centrist PUR/PC but the party's support was negligible by 2007, so we did not include it as an individual party in the regressions.

Finally, we analyze a number of additional survey questions, which tap into more general citizen attitudes about politicians, in order to test whether the first-hand experience of a tangible benefit associated with a direct government initiative can counteract the pervasive distrust many Romanian (along with other East Europeans) harbor against the political elite. Respondents were asked to react to the following four statements: (1) "most politicians care more about staying in power than about the interests of the people," (2) "most politicians make a lot of money by misusing public office," (3) "most politicians do not care what happens to people like me" and (4) "most politicians do their job well most of the time." Judging by inter-item correlations, the last question was much more weakly correlated with the other three than they were to each other, arguably because the former captures attitudes about politicians' intentions, while the latter taps into competence. Therefore, we also created a "political distrust index" representing the average of questions 1, 2, and 3 (with an alpha reliability score of .66).[12] Given that the scale for these questions ranges from 1 (complete disagreement) to 4 (complete agreement), the high averages for questions 1,2, and 3, combined with the low (but slightly less abysmal) score for 4 reflect the low esteem of Romanian citizens for their politicians. The final two survey questions analyzed, focus on the same two dimensions – intentions and competence – but this time referring to the government rather than politicians in general. Thus, since the Euro 200 program was clearly intended as a way for its political sponsors to polish their reputation for pro-poor policies, we asked respondents to state which political party (if any) showed greater concern for the country's poor, and coded those respondents who stated one of the governing parties. In this respect, it is worth noting that the proportion of respondents identifying the governing parties as pro-poor (20%) was less than half the share of likely voters for the incumbents (44%), a finding which is

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[12] Including question 3 in the index reduced the reliability index considerably (to .54).

in line with the government's proclaimed center-right ideology (and hints at a certain amount of sophistication among survey respondents). Finally, we asked respondents to evaluate the government's overall performance on a scale from 0 (very poor) to 3(very good), and the resulting average of 1.28 suggests moderate dissatisfaction but a slightly more positive evaluation than to the more generalized institutional and political trust questions.

Results

We start by showing the dramatic effect that the program income based eligibility rule had on the probability of winning a coupon worth 200 Euro towards the purchase of a computer. As mentioned previously, since the income cutoff was 506,000 lei (or about $17) per family member, children with monthly household incomes around 500,000 lei experienced significantly different probabilities of receiving a coupon. In panel A of figure 1 we normalized the household income per family member for the families in our sample to be 0 at the 506,000 lei cutoff. Winning a coupon in 2005 had a lasting impact on the probability of owning a computer in 2007 at the time of the survey. Panel B of the same figure, which plots the probability of owning a computer based on residuals from a regression of computer ownership on a number of socioeconomic background variables (age, education, rural/urban, ethnicity), shows that families around the cutoff with very similar in family income experienced a 30% difference in terms of having a computer at home. As a further robustness check of our empirical strategy, we made sure that families around the cut-off are not only similar in terms of their reported program income but also along a number of other socio-economic background characteristics. In regressions presented in electronic appendix, we ran models similar to those in equation 1, but

included age, gender, education, ethnicity and urban/rural location as dependent variables. The coefficients are almost always small and statistically insignificant.[13]

Main effects: greater electoral mobilization and incumbent support

Having established the large and discontinuous impact around the income cut-off on coupon eligibility and computer ownership, our analysis will essentially attempt to find out whether one can observe similar discontinuity in terms of political behavior around the same income cut-off. Table 2 provides regression estimates for the impact of the Euro 200 program on our main outcomes, corresponding to equation 1 from the preceding section.

Model 1 shows that respondents from families just below the income cut-off were significantly more likely to declare an intention to vote in the next election than respondents just above the cut-off. Given the nature of the regression discontinuity approach discussed above, this finding suggests that ceteris paribus, the experience of receiving a sizeable government "handout" increased the probability of voting by 25.8%, a remarkably large increase. Model 2 shows that most of this additional voter mobilization can be expected to benefit incumbent parties, which experienced a 15.5% boost among winners compared to the control group. Models 3 and 4 reveal that this increase is driven by gains of the two main government coalition members, DA (10%) and UDMR (5%), and the relative gain was larger and more significant for the former, arguably because the ethnic Hungarian UDMR was less likely to attract ethnic

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[13] The only exception is Roma ethnicity, but given the large number of background control variables tested, the probability is high of observing one significant result in this table even if the null hypothesis of no effect were true. Therefore there is a reasonable chance that the Roma ethnicity result represents a false significance (type I error).

Romanian voters from other parties. By contrast, Model 5 of Table 2 indicates that the Euro 200 program had only a small and insignificant effect on the intention to vote for PSD, the main opposition party and initiator of the Euro 200 program in 2004. As expected, in Model 6 we find a small (but statistically insignificant) negative effect on voting preferences for Romania's two main populist parties (PNG and PRM). Finally, Model 7 suggests that more than a quarter of the likely voters, which were mobilized by the experience of winning a computer voucher, were still undecided about their vote choice (but were nevertheless more likely to participate in the political process.)

Overall the findings in Table 2 provide strong evidence that government spending beneficiaries responded to this sizeable economic benefit through greater political mobilization, which mostly benefitted the political parties of the incumbent government coalition. This large impact on vote intention and vote choice can also be captured graphically. In Figure 2 we repeat the graphical analysis of Panel B of Figure 1 to look for discontinuities in these variables around the cut-off. As expected, Panels A (intention to vote) and B (intention to vote for government) show a visible discontinuity that illustrates the electoral behavior impact of receiving a voucher.

Mechanisms

Next we try to understand some of the mechanisms that might explain the higher turnout and the stronger electoral support for the governing parties. Table 3 illustrates the effect of receiving a computer voucher on the personal and institutional political trust indicators described earlier. Since the Euro 200 program was an initiative of the national government, which was unanimously approved by the parliament in a rare display of non-partisan unity, one might have expected that recipients would give some credit to national-level political institutions. However,

Models 2-4 in Table 3 reveal substantively small and statistically insignificant program effects

on trust in the central government, parliament or political parties respectively. Nor did the two

political leaders at the helm of the government when the program was initiated (Năstase) or

implemented (Tăriceanu) fare any better, as indicated by the weak negative effects on voter

evaluations of the two politicians in Models 6-7. Instead, winners appear to credit the local

government for their personal gains, as suggested by the significant and large boost (1.07 points

on a 1-10 scale) in trust towards local government among program beneficiaries in Model 1. The

change is also clearly visible in Panel D of Figure 2 that presents the graphical equivalent of the

regression results.

In Table 4 we try to understand to what extent the winners of the Euro 200 coupon

change their assessment of politicians along two dimensions: their intentions and their

competence. Judging by the results in Models 1-4, coupon winners were somewhat more likely

to give politicians the benefit of the doubt when judging their motivations, and the effects were

reasonable large and statistically significant for two of the three individual questions and the

overall index.[14] By contrast, according to Model 4, the gratitude of coupon winners is not

reflected in a more positive evaluation of politicians' competence, and in fact the regression

coefficient points in the wrong direction.

The different effects of winning on evaluations of political intentions vs. competence are

also confirmed – albeit somewhat more tentatively – by the last two regressions in Table 4.

According to Model 6, coupon winners were somewhat more likely to consider that the

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[14] The effects were smaller and at best marginally significant (at .16 two-tailed) for the first

question (about politicians caring primarily about power), which can be interpreted as winners

recognizing the electoral drivers of the program.

governing parties care about the poor, but even though the substantive effect is fairly large (8% compared to a 20% average response) it falls short of achieving statistical significance and should be interpreted with some caution.[15] By contrast, the negative (but statistically insignificant) effect of winning on evaluations of overall government performance in Model 7 suggests that winners were once again unwilling to update their beliefs about the competence of public servants based on the positive outcome of the Euro 200 program for their families.

Since the analysis so far has indicated that the stronger incumbent support among coupon winners cannot be explained by higher trust towards national level politicians and institutions, the final part of our analysis attempts to understand the sources of additional support for the government and the mediating role of the local government in this process. The first two models of Table 5 attempt to separate to what extent the increase in the intention to vote for the government is driven by mobilization of voters who did not vote in previous elections or by capturing voters from the opposition PSD party. In order to do this, we interact the winner variable with a variable indicating whether a person has voted in the previous national election of 2004 (Model 1) as well as a variable indicating voting for the PSD in 2004 (Model 2). The estimated coefficients in both regressions are sizeable: winners of the coupon who did not vote in 2004 are 5% more likely to be voting for the government and winners who voted for the PSD in 2004 are 10% more likely to vote for the government compared to other winners. While these results seem to indicate that both mobilization and party switching are important channels, the coefficients of the interaction terms are rather imprecisely estimated and need to be interpreted accordingly. However, it should be noted that when analyzing the conditional effects of winning

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[15] The effects were somewhat more significant (albeit only at .15 two-tailed) when focusing only on the DA alliance (results omitted).

a coupon, these were statistically significant at .05 only for former non-voters (in Model 1) and former PSD voters (in Model 2).

Next, we turn to the role of the local government in channeling electoral support. Given that in Table 3 we found that local governments are the main beneficiaries of greater political trust among coupon winners, we would expect that the electoral gains for national incumbents should be mediated by who controls the local government. This expectation is confirmed by Model 3, which suggests that coupon winners in towns where the national incumbents do not control the local government only experienced a relatively small and statistically insignificant increase in the likelihood of voting for the incumbents in the next election. However, we find a large (14%) and statistically significant (at .1 two-tailed) interaction effect between winning and local government by one of the members of the national government coalition, which means that the effects of winning a coupon in such a town results in an almost 21% increase in vote intentions for the government (significant at .03).

Local government control also affects the ability of national incumbents to get former opposition voters to switch their political allegiances. To demonstrate this, the last two regressions in Table 5 are restricted to those individuals who live in localities where the PSD does not control the local government (column 4) or where the government controls the local government (column 5).[16] Similarly to column 2, we interacted the coupon winner variable with an indicator of whether a person voted for the PSD in 2004. The estimated coefficients for the

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[16] These two restrictions are almost identical given that very few towns are controlled by other parties than the PSD or the government coalition.

interaction effects are very large in both models[17] and are significantly larger than in Model 2, which placed no restrictions on local government control. These results indicate that the national government parties were more effective in attracting former PSD voters in towns where one of the national incumbent parties also controlled the local government (or at least where the PSD did not). Moreover, the findings in Models 4 and 5 suggest that the much of the greater incumbent support among coupon winners in towns governed by parties from the national governing coalition (which was revealed in Model 3) comes from previous voters of the former governing party PSD: thus, the effects of winning were moderate (around .16) and at best marginally significant (at .2) among respondents who had not supported the PSD in 2004 but were three times larger and significant (at .05) among former PSD voters. We will return to the implications of these findings in the conclusion.

We have performed a number of additional tests to check the robustness of our results for our primary dependent variables (vote for government, intention to vote, trust local government, political distrust index). The first three rows of Table 6 consider three alternative sets of possible control variables: the standard controls used in our preferred specifications (age, education, urban, ethnicity), no control variables and an extended set of controls that include 109 locality fixed effects in addition to the standard controls. The results across the three rows are similar in

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[17] The interaction effect was marginally significant (at .1 in Models 4 and .14 in Model 5) due to the smaller sample size but the conditional effects for former PSD voters in non-PSD controlled towns were significant at .05 in both models. Moreover, we obtained somewhat stronger interaction effects (significant at .1) using triple interactions (between winner status, vote choice in 2004 and local government control) but these results are not presented here because they are more cumbersome to interpret and present.

terms of magnitude and statistical significance. The results that include locality fixed effects are generally weaker and are partly driven by the fact that the sample sizes for the intention to vote outcomes are smaller in these specifications since in a number of localities the dependent variable does not vary within a town. The next four models present results with the standard controls, but uses a number of different specifications for the income function (the forcing variable). The four specifications are linear, quadratic and cubic trends in income, and a quadratic spline. Finally, in the last two models we consider two alternative samples which restrict the windows around the cutoffs to 500,000 and 300,000 lei. Obviously, the precision of our estimates are bound to be lower in these narrow windows; however the magnitude of these estimates remain quite similar to those in our main specification and they are consistent with the visual jumps in the outcome variables around the discontinuity presented in Figure 2. Overall, the results in Table 6 confirm the robustness of our main results to a number of different specification checks.

Conclusion

This paper has addressed the question of whether and how targeted government spending affects the political attitudes and vote preferences of citizens. While this question has important theoretical implications for our understanding of electoral behavior, as well as for the policy debates about the impact of discretionary government spending on democratic governance, the findings of prior research have produced inconclusive results and have suffered from a number of widely recognized methodological limitations (Cramer 1983, Sigelman et al 1991). In this paper, we use a regression discontinuity approach, which takes advantage of the quasi-

experimental design of a Romanian government program to distribute 27500 computer vouchers to poor families with school-age children, and allows us to study the individual level impact of benefitting directly from government spending while controlling for potential omitted variable bias. Therefore, we avoid both the ecological fallacy danger of studies using aggregate data to make individual inferences, and the bias inherent in the use of reported personal economic evaluations, which undermine the credibility of most survey-based analyses of pocketbook voting.

Our analysis reveals a substantively large (over 25%) and statistically significant increase in vote intentions among government spending beneficiaries, and most of this increased mobilization benefits the parties of the national governing coalition at the time the program was implemented. In addition, we found some evidence that program beneficiaries were more likely to switch their political allegiances from the opposition party (PSD) to the current incumbents, a finding which confirms the weaker partisan bonds and the greater potential impact of government spending in new and poor democracies like Romania. These results are even more remarkable when we consider that the surveys took place roughly two years after the completion of the program, which suggests that substantial government spending programs can have a significant electoral impact beyond the short-term boost usually associated with electorally motivated government largesse.

However, a closer look at the mechanisms underlying these mobilization and switching trends suggests that the Romanian government did not fully succeed in its effort to win over the hearts and minds of such government spending beneficiaries. While winners were somewhat more likely to credit both politicians in general and the governing parties with having good intentions, this "warm, fuzzy feeling" did not extend to their evaluations of government

competence or to greater trust in either political institutions or individual political leaders at the national level. The only institution to receive such a boost was the local government, which administered the programs and was rewarded with a large and significant increase in trust. Moreover, local governments played a crucial role in mediating the electoral impact of government spending: thus, both the overall support increase for the national incumbents and their ability to attract former supporters of the main opposition party PSD were significantly stronger in towns where the national incumbents also controlled the local government. In other words, the electoral potential of government spending programs appears to depend on the extent to which local politicians can reinforce the political message that the center tries to send through its targeted spending programs.

As with most experimental and quasi-experimental work (Gerber and Green 2003), there are open questions about the generalizability of the findings in this paper beyond their immediate empirical context. While such questions can ultimately only be addressed by running similarly designed experiments in a variety of contexts that allow for variation in several crucial parameters, we will briefly address in closing how we expect the particular features of the current context to affect the nature and magnitude of our findings. On the one hand, the large impact on turnout and party choice is obviously affected by the fact that the 200 Euro voucher represented a fairly large and highly visible wealth transfer to poor voters (because the program targeted the poorest citizens in a low-middle income country.) Moreover, the relatively weak partisan ties in new democracies may increase the effectiveness of such efforts to buy political allegiances through targeted government spending. However, it should be noted that neither the poverty of the recipients nor the weak partisan ties are particularly unique to the Romanian case,

since they largely apply to a large proportion of the world's population that lives in poor, new and imperfect democracies.

At the same time, it is worth emphasizing that the interviews took place almost two years after the respondents received the vouchers and bought the computers, which indicates a remarkable persistence of these pocketbook effects and suggests that the short-term impact could be even greater. Another contextual aspect that probably reduced the size of our observed effects was the fairly weak clarity of responsibility arising from the fact that the computer voucher program was initiated and implemented by different political parties.

Finally, the importance of local politicians in mediating the political effects of central government spending is quite possibly a function of Romania's list-PR electoral system, which reduced the direct links between citizens and their national representatives, and therefore arguably elevated the importance of alternative political access points, such as local politicians. However, since list-PR is one of the most widespread electoral systems worldwide, the link between institutional variation and the mediating role of local politicians deserves more systematic attention in future research. Similarly, while the particular mix of mobilizing and switching revealed by our study is affected by the specific details of the computer voucher program, the Romanian government's policy choices are arguably representative of a much broader set of targeted public spending programs used by governments around the globe to attract electoral support, and therefore it contributes to our collective understanding of the link between public policies and individual political behavior in democracies.

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Appendix: Figures and Tables

Panel A: Received Euro 200 coupon

Panel B: Own Computer
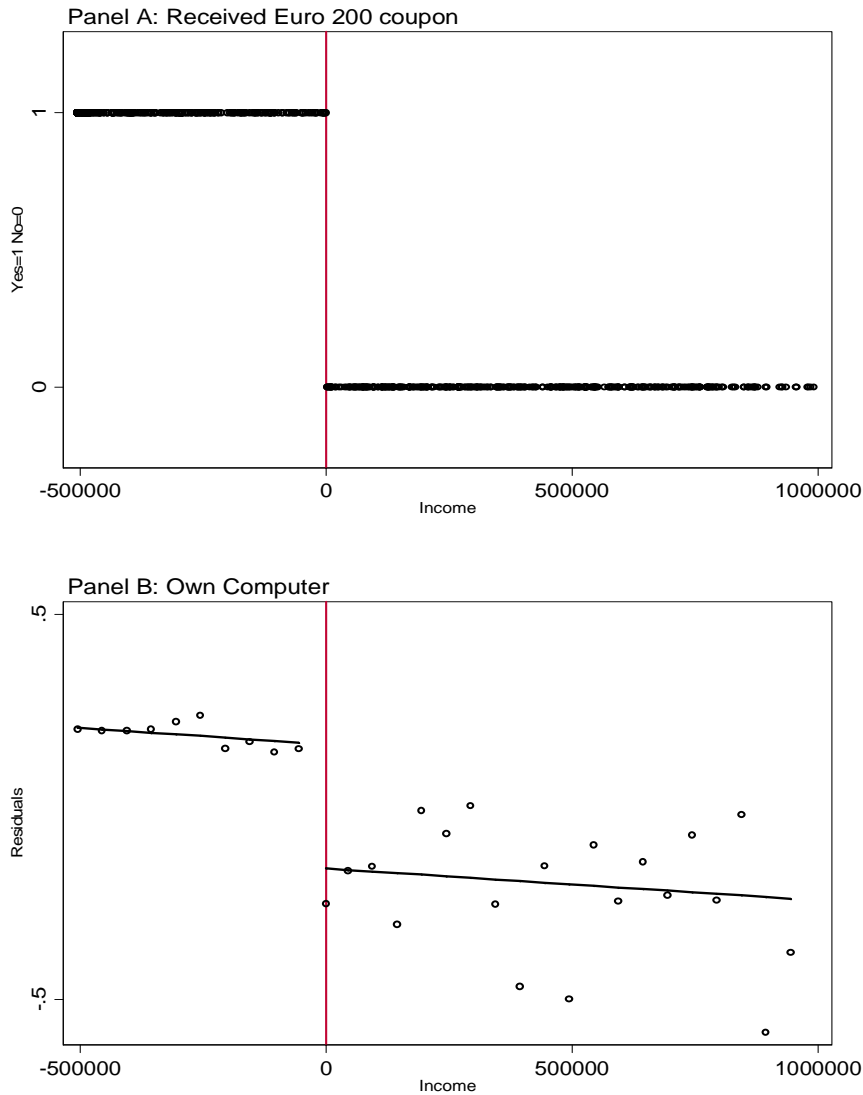
Notes: Panel A is a plot of the probability of winning a Euro 200 coupon as a function of reported income. In Panel B the open circles plot average residuals (for respondents in income intervals of 50,000 lei) from regressions of the computer ownership in 2007 on a number of background variables (age, education, urban/rural, ethnicity). The solid lines are fitted values to residuals from regressions of the dependent variable on a linear spline. The income variable is the monthly household income per family member used by the Euro 200 program and is normalized to be 0 at the 506,000 lei ($17) cutoff. Source: 2007 Euro 200 Survey and Euro 200 program data.

Figure 2 - Main results
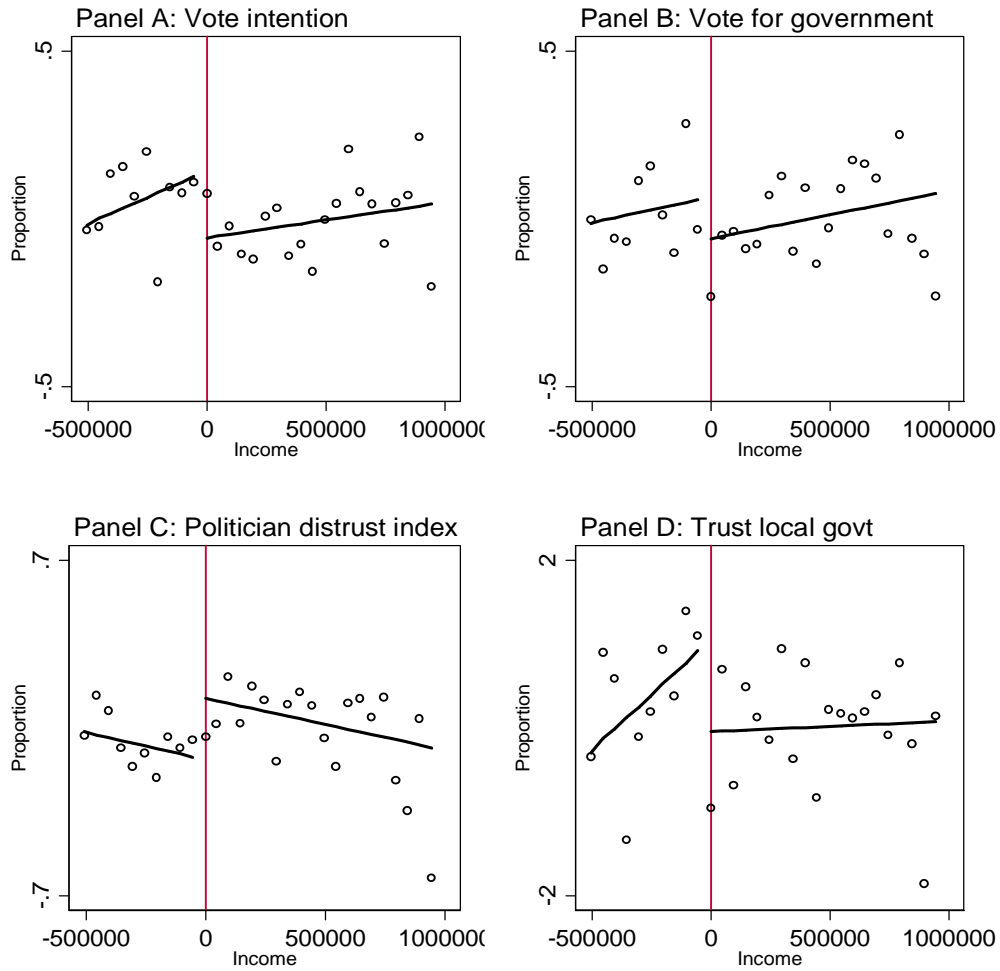
Notes: The dependent variables are defined in Table 1. The open circles plot average residuals (for respondents in income intervals of 50,000 lei) from regressions of the dependent variables on a number of background variables (age, education, urban/rural, ethnicity). The solid lines are fitted values to residuals from regressions of the dependent variable on a linear spline. The income variable is the monthly household income per family member used by the Euro 200 program and is normalized to be 0 at the 506,000 lei ($17) cutoff. Source: 2007 Euro 200 Survey.

Table 1: Descriptive Statistics

	Euro 200 Sample		
	Mean	SD	N
Variables			
Winner Euro 200 coupon	0.49	0.50	852
Owns computer	0.75	0.43	850
Vote for Government	0.44	0.50	852
Vote for DA	0.22	0.42	852
Vote for UDMR	0.22	0.41	852
Vote for PSD	0.07	0.26	852
Vote for Populist Parties	0.03	0.17	852
Vote intention	0.72	0.45	852
Trust local government	6.11	3.15	802
Trust central government	4.69	2.70	732
Trust parliament	3.81	2.53	716
Trust political parties	3.48	2.42	700
Trust Năstase	3.35	2.70	630
Trust Tăriceanu	3.94	2.71	645
Most politicians care more about power than people's interests	3.63	0.66	761
Most politicians get rich by misusing public office	3.60	0.64	744
Most politicians don't care about people like me	3.42	0.90	767
Most politicians do their job well most of the time	1.98	0.94	728
Politician distrust index	3.54	0.58	784
Government parties care for poor	0.20	0.40	852
Government performance	1.28	0.72	697

Source: 2007 Euro 200 survey.

Table 2: Effect of the Euro200 program - Main results

	Vote for Government	Vote for DA	Vote for UDMR	Vote for PSD	Vote for Populist Parties	Undecided voters	Vote intention
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Winner of coupon	**0.155***	**0.095**	**0.055**	**0.016**	**-0.006**	**0.075**	**0.258*****
	[0.083]	**[0.063]**	**[0.045]**	**[0.023]**	**[0.012]**	**[0.056]**	**[0.079]**
Specification	linear spline	linear spline	linear spline	linear spline	linear spline	linear spline	linear spline
Mean of dep. variable	0.44	0.22	0.22	0.08	0.03	0.16	0.73
Sample Size	831	831	831	831	831	831	831

Notes: Robust standard errors in brackets. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level respectively. The dependent variables are defined in Table 1. "Winner of coupon" is defined as 1 for individuals with an income above the program cutoff of 506,000 lei ($17), 0 otherwise. All regressions include controls for age, education, urban/rural and ethnicity. Source: 2007 Euro 200 survey.

Table 3: Effect of the Euro200 program - Mechanisms (1)

	Trust local government	Trust central government	Trust parliament	Trust political parties	Trust Năstase	Trust Tăriceanu
	(1)	(2)	(3)	(4)	(5)	(6)
Winner of coupon	1.037**	-0.058	0.105	0.152	-0.059	-0.37
	[0.520]	[0.505]	[0.479]	[0.469]	[0.559]	[0.540]
Specification	linear spline	linear spline	linear spline	linear spline	linear spline	linear spline
Mean of dep. variable	6.12	4.69	3.81	3.46	3.36	3.95
Sample Size	784	716	701	685	618	635
R-squared	0.04	0.04	0.04	0.04	0.04	0.06

Notes: Robust standard errors in brackets. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level respectively. The dependent variables are defined in Table 1. "Winner of coupon" is defined as 1 for individuals with an income above the program cutoff of 506,000 lei ($17), 0 otherwise. All regressions include controls for age, education, urban/rural and ethnicity. Source: 2007 Euro 200 survey.

Table 4: Effect of the Euro200 program - Mechanisms (2)

	Most politicians care more about power than people's interests	Most politicians get rich by misusing public office	Most politicians don't care about people like me	Politician distrust index	Most politicians do their job well most of the time	Government care for poor	Government performance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Winner of coupon	-0.161	-0.340***	-0.297*	-0.258***	-0.253	0.081	-0.138
	[0.109]	[0.119]	[0.162]	[0.094]	[0.159]	[0.064]	[0.131]
Specification	linear spline	linear spline	linear spline	linear spline	linear spline	linear spline	linear spline
Mean of dep. variable	3.62	3.60	3.43	3.54	1.97	0.20	1.28
Sample Size	743	726	748	765	709	831	679
R-squared	0.06	0.07	0.03	0.07	0.06	0.04	0.05

Notes: Robust standard errors in brackets. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level respectively. The dependent variables are defined in Table 1. "Winner of coupon" is defined as 1 for individuals with an income above the program cutoff of 506,000 lei ($17), 0 otherwise. All regressions include controls for age, education, urabn/rural and ethnicity. Source: 2007 Euro 200 survey.

Table 5: Effect of the Euro200 program - Interaction effects

Dependent variable:	Vote for Government	Vote for Government	Vote for Government	Vote for Government	Vote for Government
Interaction term	Did not vote in 2004	Voted for PSD in 2004	Government controls local government	Voted for PSD in 2004	Voted for PSD in 2004
Restriction	None	None	None	PSD does not control local government	Government controls local government
	(1)	(2)	(3)	(4)	(5)
Winner of coupon	0.150*	0.142	0.065	0.155	0.164
	[0.089]	[0.089]	[0.106]	[0.105]	[0.107]
Interaction	0.046	0.101	0.142*	0.320*	0.29
	[0.115]	[0.107]	[0.086]	[0.181]	[0.188]
Specification	linear spline	linear spline	linear spline	linear spline	linear spline
Mean of dep. variable	0.44	0.44	0.44	0.44	0.44
Sample Size	831	831	831	632	623

Notes: Robust standard errors in brackets. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level respectively. The dependent variables are defined in Table 1. "Winner of coupon" is defined as 1 for individuals with an income above the program cutoff of 506,000 lei ($17), 0 otherwise. All regressions include the main modifier variable (which varies by model) as well as controls for age, education, urban/rural and ethnicity. Source: 2007 Euro 200 survey.

Table 6: Robustness checks

	Vote for Government (1)	Vote intention (2)	Trust local government (3)	Politician distrust index (4)
Linear spline, standard controls	0.155* [0.083]	0.258*** [0.079]	1.037** [0.520]	-0.258*** [0.094]
Linear spline, no controls	0.141* [0.082]	0.233*** [0.077]	1.186** [0.515]	-0.255*** [0.098]
Linear spline, controls plus locality fixed effects	0.109 [0.098]	0.279*** [0.099]	0.911* [0.522]	-0.143 [0.087]
Linear, standard controls	0.149** [0.076]	0.199*** [0.064]	0.583 [0.484]	-0.257*** [0.089]
Quadratic, standard controls	0.176** [0.086]	0.251*** [0.079]	1.108** [0.543]	-0.238** [0.096]
Cubic, standard controls	0.239** [0.095]	0.199** [0.089]	1.143* [0.608]	-0.126 [0.116]
Quadratic spline, standard controls	0.210* [0.127]	0.107 [0.124]	1.586** [0.731]	-0.078 [0.132]
Linear spline, standard controls, 500,000 lei window	0.128 [0.100]	0.114 [0.089]	1.117* [0.614]	-0.128 [0.111]
Linear spline, standard controls, 300,000 lei window	0.152 [0.132]	0.156 [0.109]	2.104*** [0.794]	-0.169 [0.144]
Mean of dep. variable	0.44	0.73	6.12	3.54
Sample size for locality fe	775	698	784	765
Sample size for all other regs	831	831	784	765

Notes: Robust standard errors in brackets. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level respectively. The dependent variables are defined in Table 1. "Winner of coupon" is defined as 1 for individuals with an income above the program cutoff of 506,000 lei ($17), 0 otherwise. Source: 2007 Euro 200 survey.

Electronic appendix

Table 1: Specification Tests (Effect of the Euro200 program on covariates)

dependent variable	Year of Birth	Gender	Junior High	Vocational	Lower Secondary
	(1)	(2)	(3)	(4)	(5)
Winner	-0.594 [1.439]	0.096 [0.063]	0.047 [0.076]	-0.085 [0.058]	0.03 [0.056]
Sample Size	831	831	831	831	831
R2	0.08	0.02	0.04	0.04	0.05

dependent variable	Secondary or more	Romanian	Hungarian	Roma	Urban
	(1)	(2)	(3)	(4)	(5)
Winner	-0.049 [0.057]	-0.073 [0.079]	-0.018 [0.078]	0.092** [0.042]	-0.122 [0.076]
Sample Size	831	831	831	831	831
R2	0.04	0.08	0.07	0.1	0.09

Notes: Robust standard errors clustered at the household level are in brackets. ***, ** and * indicate statistical significance at the 1, 5 and 10 percent level respectively. "Winner" is defined as 1 for individuals with an income above the program cutoff of 506,000 lei ($17), 0 otherwise. All regressions include a linear spline in income. Source: 2007 Euro 200 survey.