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VOTER TURNOUT IN ITALIAN MUNICIPAL ELECTIONS, 2002-2013

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Voter turnout in Italian municipal elections, 2002-2013

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Abstract

This paper investigates the determinants of voter turnout in a panel dataset of over 15,000 Italian municipal elections through more than a decade. The estimation results show a significant negative effect of the size of the electorate on voter turnout, and an effect of its demographic structure that is compatible with the political life-cycle hypothesis. Moreover, turnout is systematically higher when municipal elections are held at the same time as more salient, higher stakes contests, and all ex post indicators of election closeness are estimated to influence voter turnout in the expected direction.

Key words: voting; turnout; political life-cycle; salience; electoral uncertainty

JEL codes: D72

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1 Introduction

In spite of the widespread process of decentralization of power to local governments across the developed as well as the developing world during the 1980s and 1990s (Henderson and McEwen, 2010), voter turnout in local elections has remained systematically lower than turnout in parliamentary and presidential elections (Wood, 2002; Hajnal and Lewis, 2003). Moreover, the most recent years saw voter turnout in local elections decline just as rapidly as in national elections.

Of course, low and declining rates of participation in local elections raise a number of concerns, particularly with reference to the potential distortion of choices in conventional areas of decentralized policy-making (social care, health, education, and environmental protection, to name the most frequently encountered) that might be caused by unequal representation of interests of the diverse segments of society (Trounstine, 2009). This calls for an understanding of the causes and the identification of the possible remedies to low and declining voter turnout rates in decentralized structures of government.

Due to the lack of systematic data on local elections, though, the empirical investigation of the factors explaining voter turnout in municipal races has lagged behind, and the existing evidence is sparse.¹ This paper aims at shedding light on this issue by taking advantage of a large panel dataset of Italian mayoral elections (over 6,000 authorities) through more than a decade. Importantly, I can rely on complete and official data on all elections that took place in municipal jurisdictions of continental Italy during 2002 to 2013 (Ministry of the Interior), and merge them with detailed demographic data at the municipal level (ISTAT-National Statistics Institute). Moreover, the institutional set up

¹Recent works on participation to local government elections in European countries include Andersen et al. (2014) on Norwegian data, Persson et al. (2014) on Swedish data, and Michelsen et al. (2014) on German data.

of the analysis is particularly attractive: municipal elections in Italy garner considerable attention due to the traditionally important and recently increasing role played by directly elected mayors both in rural and in metropolitan areas, and to the unusually large rates (frequently exceeding 80%) of voter turnout.

In analyzing the determinants of voter turnout, I start from a number of variables that are measured yearly at the administrative unit of analysis and that have shown to play a major role in previous aggregate-level research on voter turnout (Geys, 2006). Besides the size and demographic structure of the electorate, I focus on the impact of indicators of closeness of the electoral outcome on turnout. I employ a number of indices that share a common underlying rationale: citizens should be more likely to turn out in an uncertain election, where the chances are higher that their vote counts and can change the election outcome, than in an election where the outcome is easily predictable either because a candidate mayor runs uncontested, or because he is confronted by no credible opponent (Dhillon and Peralta, 2002; Feddersen, 2004). Higher electoral closeness, however measured, should therefore be predicted to boost voter turnout - a well established result in the existing literature (Geys, 2006).

In the absence of *ex ante* measures of electoral uncertainty, I construct a number of *ex post* indicators of electoral closeness at each of the over 15,000 municipal elections that occurred during that decade, and test the effect of those electoral closeness indicators on voter turnout by a fixed effects estimator that controls for observable as well as unobservable time-invariant municipal characteristics (thus virtually ruling out the risk of attributing to included explanatory variables an effect that is in reality due to omitted local traits) and exploits within-municipality variation in the variables of interest to estimate the key parameters of the voter turnout equation.

The main results of the empirical analysis can be briefly summarized as fol-

lows. First, I find that electoral closeness (in terms of the degree to which an election is contested and of the win margin of the mayor) is a key determinant of individuals' participation decision. In line with the idea of instrumental voters participating in larger numbers when the outcome of the election is uncertain, I find that electoral closeness has a large positive impact on voter turnout: turnout is increasing in the number of mayor candidates, it is decreasing in the win margin of the mayor, and it is significantly lower, and by almost seven percentage points, in uncontested elections. In addition, and thanks to the fact that municipal elections are staggered, I can test the effect of concomitant elections, and find that turnout is systematically higher when municipal elections are held at the same time as more salient, higher stakes contests (national and EU Parliament). As for the size of the electorate, the rational voting theory predicts a negative effect of the number of eligible voters on turnout due to its depressing effect on the probability of casting the decisive vote. Such negative effect is generally found in the empirical literature based on aggregate data, and it clearly emerges from my estimates too. Finally, I find the municipal age structure to have a strong influence on voting behavior: in line with the existing individual-level based evidence, turnout is highest amongst people in their 40s and 50s, and lowest among younger and elderly voters, thus confirming the political life-cycle hypothesis (Smets and van Ham, 2013).

The rest of the paper is structured as follows. Section **2** illustrates the institutional framework and the 2002-2013 panel dataset on municipal elections in Italy. Section **3** discusses the empirical model and the main econometric issues, section **4** presents the estimation results, and section **5** concludes.

2 Institutional framework and dataset

The municipal level of government is the oldest administrative jurisdiction in Italy, and is highly fragmented. The total number of municipalities exceeds 8,000, with average population size of around 7,000 inhabitants (table 1). The number of cities above 100,000 inhabitants is around 40, just two of them exceeding one million residents, with more than half of localities having less than 3,000 residents.

Municipal authorities' role as an autonomous and representative level of government is explicitly defined in the Constitution, according to which they are statutorily responsible, irrespective of their size, for the provision of a number of crucial public services in two main areas.² The first area concerns environment-related services and includes urban public transport, road maintenance and cleaning, waste collection and management, water and sewer services, environmental monitoring and protection, planning, zoning (including location of new productive plants), and management of industrial, agricultural and touristic infrastructures located within the municipal boundaries. The second area concerns personal social services including social care to the elderly and disabled, organization and management of pre-school services (kindergartens), cultural services (libraries, museums, sports infrastructures), and local police services.

I focus here on the 6,702 municipalities that are situated in the fifteen "state law" continental Italy's regions. I therefore exclude the two island regions (*Sardegna* and *Sicilia*) and the three small regions in the Alps (*Valle d'Aosta*, *Trentino-Alto-Adige* and *Friuli-Venezia-Giulia*) that are entitled to larger autonomy - "home rule" - and that establish own limits and obligations on municipal governments located within their boundaries. For each municipality, I

²The sole exception is the possibility (or obligation in some instances) for small-sized municipalities to set up an intermunicipal cooperation institution for the provision of public services that require a minimum scale of production

use yearly observations over the 2002 to 2013 time span on the demographic structure of the resident population (table 1). Second, I have information on all municipal elections that occurred in those 6,702 municipalities between 2002 and 2013. I observe 15,122 elections in total. Most municipalities had two elections during that period, though some voted more often, as shown in table 2. For instance, since elections in Italian municipalities take place every fifth year, the municipalities having early elections in the sample period (2002 and 2003) were supposed to - and most of the times did - vote again five and ten years later, thus recording three regularly spaced election events.

As for voting requirements, voting is formally mandatory for all Italian citizens that reside in a given municipality and are aged above 18. No sanctions exist for abstainers, though. Voters express a vote for a mayor candidate as well as for a councillor candidate if they wish.³ While the members of the council and the mayor are all elected in a direct ballot, in larger localities (population > 15,000 inhabitants) the two most voted mayor candidates face a runoff stage if none gets more than 50% of the votes in the first stage. Importantly for the purposes of our empirical analysis, the election schedule across the country is staggered, meaning that several elections occurred in each of the 2002-2013 years, as shown in table 3.

Table 3 shows that turnout in municipal elections is pretty high, though it has been declining during the decade from close to 80% to less than 70%. Figure 1 shows that the decline in voter turnout is not unique to local elections. From the 2004 to the 2014 European parliament elections, turnout fell by almost 15 percentage points, while turnout for the Italian parliament elections fell below 80 per cent for the first time in 2013. Figure 1 also shows that turnout in municipal elections was pulled up in 2001 and 2008, when local elections

³ $\frac{2}{3}$ of the council seats are assigned to the councillor candidates (frequently grouped in one or more parties) supporting the mayor that is elected.

were held concomitantly as parliamentary ones, while local turnout remained at significantly lower levels in 2006 and 2013, when municipal and parliamentary elections took place on different days.

Finally, table 4 reports a number of statistics on election outcomes, including the ideology of the elected mayor (coded as left-wing, right-wing or non-partisan based on the affiliation of the parties supporting the mayor) and his win margin with respect to the opponent. The win margin is computed as the difference in votes between the elected mayor and his most voted opponent, divided by the number of total votes. It ranges from 0 in case of a tie to 100 in an uncontested election.

3 Empirical model

I model the trajectory of voter turnout by means of an overlapping generations structure of agents. Denote a voter's cohort (year of birth) by a superscript h , the locality where an election is observed by the subscript n , and the year a variable is observed in a given locality by a subscript t . Let $\tau_{n,t}^h \geq 0$ represents the probability that a voter belonging to cohort h turns out to vote at an election that is held in locality n at the beginning of period t . Assuming individuals live for two periods (young, old), $\tau_{n,t}^t \geq 0$ is the probability that an individual from cohort t turns out to vote in the first period of his life (young). Similarly, call $\tau_{n,t+1}^t \geq 0$ the probability that an individual from cohort t turns out to vote at an election that is held in locality n at the beginning of period $t+1$, when the t cohort is old, and let: $\tau_{n,t+1}^t = \tau_{n,t}^t + \omega^t$, with ω^t denoting the change in the propensity to vote of cohort t when turning old. Finally, let the cohort of individuals that are born at the beginning of period t in locality n be of size $s_{n,t}^t$. As a result, the overall turnout rate that is registered at an election held

in year t in locality n ($\tau_{n,t}$) equals:

$$\begin{aligned}
\tau_{n,t} &= \sum_h \phi_{n,t}^h \tau_{n,t}^h \\
&= \phi_{n,t}^{t-1} \tau_{n,t}^{t-1} + \phi_{n,t}^t \tau_{n,t}^t \\
&= \tau_{n,t}^t + \phi_{n,t}^{t-1} (\tau_{n,t}^{t-1} - \tau_{n,t}^t)
\end{aligned} \tag{1}$$

where $\phi_{n,t}^{t-1}$ and $\phi_{n,t}^t$ are the population shares of the old and young generations coexisting at time t in locality n :

$$\begin{aligned}
\phi_{n,t}^{t-1} &= \frac{s_{n,t}^{t-1}}{s_{n,t}^{t-1} + s_{n,t}^t} \\
\phi_{n,t}^t &= \frac{s_{n,t}^t}{s_{n,t}^{t-1} + s_{n,t}^t}
\end{aligned} \tag{2}$$

To operationalize equation (1), say that cohort h 's turnout in locality n in election year t can be written as the sum of a constant (a), a time-invariant locality effect reflecting the stable socio-economic environment (the quality of institutions) in which elections take place (i_n), an year effect that is common to all localities having elections in that year and that reflects national politics and the macroeconomy (c_t), a cohort effect capturing the degree of civic capital that is specific of the individuals born in year h (k^h), an aging effect that we assume to be constant across years and cohorts (ω), a vector of election-specific features such as the number of candidates and the uncertainty of the election outcome ($\mathbf{x}_{n,t}$), and an i.i.d error term ($\varepsilon_{n,t}$):

$$\tau_{n,t}^h = a + i_n + c_t + k^h + \omega(t - h) + \mathbf{x}'_{n,t} \beta + \varepsilon_{n,t} \tag{3}$$

Using (3), equation (1) can therefore be written as:

$$\tau_{n,t} = a + i_n + c_t + (\kappa + \omega) \phi_{n,t}^{t-1} + \mathbf{x}'_{n,t} \beta + \varepsilon_{n,t} \tag{4}$$

where I have assumed $k^{h-1} - k^h = \kappa$ for all cohorts h .

I estimate equation (4) using panel data on municipal elections, where I control for locality (i_n) and election year (c_t) fixed effects, and where $\phi_{n,t}^{t-1}$ is a population share vector. Vector $\mathbf{x}_{n,t}$ includes proxies of political competition at an election held in locality n in election year t and the size of the electorate ($e_{n,t} = \sum_h s_{n,t}^h$). In particular, the characteristics of the population residing in a locality mechanically determine, given the existing entitlements to vote based on age (≥ 18), residence, and (EU) citizenship, the size and demographic structure of the locality's electorate:

$$e_{n,t} = \delta(\mathbf{p}_{n,t}) \tag{5}$$

where δ can be interpreted as an eligibility function, i.e., a set of selection criteria to be applied to a vector of characteristics of the resident population $\mathbf{p}_{n,t}$ (age, residence, citizenship) for the people living in n to be registered as voters.

4 Results

I estimate the turnout determination equation (4) on panel data for the over 15,000 municipal elections that were held between 2002 and 2013 in 6,702 Italian municipalities. The panel is unbalanced due to the fact that, because of historical reasons dating back several decades, elections are not held simultaneously in all localities, and, as mentioned above, some municipalities experience more than two elections (table 2).

Turnout in local elections is generally lower than turnout in parliamentary and presidential elections. As emerges from the enormous empirical research on aggregate data (Geys, 2006) and individual-level data (Smets and van Ham, 2013), the determinants of voter turnout include the stakes and salience of the

elections, the degree of political competition, the number and characteristics of candidates, the cost of voting, and, most importantly, the size, socioeconomic composition, and demographic structure of the electorate.

I first focus on the effects of electorate's size and age structure on turnout. As for the size of the electorate, the rational voting theory predicts a negative effect of the number of eligible voters on turnout due to its depressing effect on the probability of casting the decisive vote. Such negative effect is generally found in the empirical literature based on aggregate data (Geys, 2006), and it clearly emerges from our estimates too. The within groups estimation results of a turnout determination equation reported in table 5 show that the size of the electorate has a negative and significant impact on turnout, both in the linear specification (columns (5.1) and (5.2)) and in a double-log specification (columns (5.3) and (5.4)). The latter returns an estimate of the elasticity of turnout with respect to the size of the electorate of around -0.2 .

It is tempting to view this result as a confirmation of the theoretical hypothesis of rational voting, according to which the instrumental motive for voting - in terms of the probability of casting the decisive vote - falls for *all* voters as the electorate gets larger. However, this is not the only possible cause of a negative impact of the size of the electorate on turnout. In fact, sizeable peacetime changes in the size of the electorate in a jurisdiction are typically due either to historical variation in the dimension of the cohorts of teen-agers entering the electorate for the first time, or to time-series variation in the number of immigrants. A negative within-municipality correlation between electorate size and turnout rate could therefore result either from younger voters showing lower turnout rates than mature ones - the conventional 'political life-cycle' hypothesis (Persson et al., 2013; Smets, 2016) - or from recent immigrants being less likely to vote than tenured residents (Squire et al., 1987).

Consequently, I look at the impact of the age composition of the electorate on turnout. While I do not directly observe the demographic composition of the electorate $e_{n,t}$, I have detailed information on the demographic composition of the whole resident population $\mathbf{p}_{n,t}$ at the municipal level, and define the following age groups:

$$H = \{[18, 25], [26, 35], \cdot, [46, 55] [56, 65] [66, \cdot]\} \quad (6)$$

with the first bracket $[18, 25]$ including first-time voters, and the middle aged group $[36, 45]$ playing the role of reference group. According to the individual-level empirical literature reviewed by Smets and van Ham (2013), turnout is low among the youth, it rises with the transition into adulthood, and it declines again when citizens age and start to withdraw from social life (the political life-cycle hypothesis).⁴

Table 6 reports the results of estimation of an equation as (4), where turnout is regressed on the age group shares (6), as well as on the size of the electorate. All coefficient estimates have the expected signs and most of them are statistically significant. As for demographics, age structure has a strong influence on voting behavior: in line with the existing individual-level based evidence, turnout is highest amongst people in their 40s and 50s, and lowest among young and elderly voters. Interestingly, the strong negative effect of the size of the electorate on the rate of turnout is robust to the inclusion of the age group shares, thus lending support to the instrumental voter hypothesis: even when controlling for the age structure of the electorate, the number of voters is estimated to have a negative impact on the rate of turnout. Overall, the results in table

⁴In general, turnout is highest among middle-aged voters due to their active social role (church attendance, community life, party attachment) and their growing income (Rubenson et al., 2004; Bhatti et al., 2012). However, the extent to which the effects of period, cohort, and age effects on turnout can actually be identified by relying on micro-level data has been a source of heated debate (Bell and Jones, 2014).

6 provide a neat picture of voting behavior in municipal elections that is consistent with existing evidence on voting determinants, pointing to the powerful role of demographics in explaining voter turnout.

As for the effect of electoral uncertainty on voter turnout, I measure it in three ways. First, I use the number of mayor candidates, a variable that is likely to be positively correlated both with the actual uncertainty of the electoral outcome (i.e., which of the mayor candidates will eventually be elected) and, more plausibly, with the perceived chances of councillor candidates supporting minority mayor candidates of gaining seats in the local council. Second, I use the win margin of the elected mayor as a proxy of electoral uncertainty. I compute it as the vote difference between the elected mayor and its most voted opponent, expressed as a percentage of total votes cast. Ideally, an *ex ante* measure of expected vote difference would be preferable, but unfortunately it is not available for municipal elections in Italy. Finally, I build a dummy variable that equals 1 in uncontested elections. Such variable is of course an accurate description of lack of competition in those local elections where a candidate runs unopposed, but might underestimate the true number of non-competitive outcomes by missing those races whose result is easily predictable even in the presence of more than one candidate.

The results are reported in table 7, and show that all of those indicators of electoral uncertainty have a statistically significant impact on voter turnout, and in the expected direction. In particular, turnout is increasing in the number of mayor candidates and is decreasing in the win margin of the mayor. Further, voter turnout is significantly lower, and by almost seven percentage points, in uncontested elections.

The results are robust when I allow for the presence of concomitant elections for other tiers of government (provinces, regions, state, and European

Parliament) in column (7.4). In fact, it is well known that turnout in ‘second-order’ elections tends to be systematically higher if those elections are held at the same time as more salient, higher stakes contests (Berry and Gersen, 2011; Anzia, 2014; Lo Prete and Revelli, 2014). I use a set of dummy variables controlling for the presence of concomitant elections, that is when elections occur on the same day as provincial government, regional assemblies, national Parliament, or EU Parliament elections. The presence of concomitant elections means that voters can simultaneously cast ballots for all the involved levels of government, thus raising the overall stakes of elections and reducing the cost of voting per vote cast. The intensity of the phenomenon can be appreciated by looking at table 3, where it emerges that almost all voters had the chance to vote for European Parliament candidates on the same day as for mayor candidates in the local elections held in 2004 and 2009. In addition, many of them (in around 3,000 municipalities) had the chance to cast a ballot for the provincial government too. Similarly, voters that were called to the polls in the around 400 municipal elections in 2005 and 2010 had regional elections on the same day, while the parliamentary elections of 2008 were held simultaneously as 423 municipal elections.⁵ The parliamentary elections of 2006 and 2013 were instead held on different days than the municipal elections that would be held in the same years but later on during the summer. The results in column (7.4) show that turnout in municipal elections tends to be significantly higher if a national or EU parliament election is held on the same day (by seven and four percentage points respectively). However, the large negative effect of the uncontested election dummy on turnout remains unchanged.

⁵In the two remaining municipalities having elections in 2008, the date of the election did not coincide with the national Parliament election day (April 13, 2008).

5 Concluding remarks

This paper has investigated the determinants of voter turnout in a large panel dataset of Italian municipal elections through over a decade. The dataset contains official information on all elections that took place in municipal jurisdictions of continental Italy during 2002 to 2013, and is merged with official demographic data at the municipal level. I have explored the effect of a number of variables that have proved to be important drivers of voter turnout in previous aggregate-level research (Geys, 2006), including the size of the electorate, its demographic structure, the presence of concomitant elections (provincial, regional, national, EU), and a number of indicators of closeness of the electoral outcome on turnout.

The estimation results point to a negative effect of the size of the electorate on turnout rates. As for demographics, age structure has a strong influence on voting behavior: in line with the existing individual-level based evidence, turnout is highest amongst people in their 40s and 50s, and lowest among young and elderly voters. Interestingly, the strong negative effect of the size of the electorate on the rate of turnout is robust to the inclusion of the age group shares, thus lending support to the instrumental voter hypothesis: even when controlling for the age structure of the electorate, the number of voters is estimated to have a negative impact on the rate of turnout. In addition, and by exploiting the fact that municipal elections are staggered, I find that turnout is systematically higher when those elections are held at the same time as more salient, higher stakes contests (national and EU Parliament). Finally, all *ex post* indicators of electoral uncertainty have a statistically significant impact on voter turnout, and in the expected direction. In particular, turnout is increasing in the number of mayor candidates, it is decreasing in the win margin of the mayor, and it is significantly lower, by almost seven percentage points, in uncontested elections.

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Tables

Table 1 Municipal population

year	population (mean)	age shares						obs.
		18-25	26-35	36-45	46-55	56-65	65+	
2002	7,186	8.94	14.91	14.70	13.18	11.67	20.45	6,700
2003	7,230	8.65	14.66	15.04	13.17	11.79	20.63	6,701
2004	7,306	8.48	14.53	15.32	13.18	11.86	20.70	6,702
2005	7,385	8.27	14.34	15.52	13.13	11.91	20.92	6,702
2006	7,425	8.10	13.99	15.68	13.22	11.92	21.18	6,702
2007	7,478	7.99	13.65	15.76	13.33	11.97	21.43	6,702
2008	7,545	7.97	13.39	15.84	13.55	12.02	21.41	6,702
2009	7,603	7.94	13.07	15.86	13.79	12.14	21.40	6,702
2010	7,644	7.89	12.71	15.82	14.09	12.32	21.42	6,702
2011	7,687	7.84	12.32	15.69	14.46	12.55	21.46	6,699
2012	7,520	7.81	11.92	15.38	14.69	12.87	21.60	6,699
2013	7,561	7.74	11.55	15.21	15.03	12.94	21.88	6,699
	7,465	8.14	13.42	15.49	13.74	12.16	21.21	80,412

Table 2 Number of elections during 2002-2013

# elections	municipalities
1	4
2	5,062
3	1,552
4	82
5	2
	6,702

Notes: Source: Ministero dell'Interno, Municipal election data.

Table 3 Voter turnout at municipal elections

year	obs.	turnout (%)	voting on the same day for:			
			province	region	state	EU
2002	733	76.68	0	0	0	0
2003	321	76.95	0	0	0	0
2004	4,319	79.29	3,179	0	0	4,310
2005	367	76.06	9	340	0	0
2006	1,161	74.31	115	0	0	0
2007	773	73.28	50	0	0	0
2008	425	78.98	50	0	423	0
2009	4,081	76.92	2,986	0	0	4,077
2010	461	72.29	69	372	0	0
2011	1,176	72.41	117	0	0	0
2012	777	67.85	0	0	0	0
2013	528	67.49	0	0	0	0
	15,122	75.95	6,575	712	423	8,387

Notes: turnout rate = (votes/electorate)*100; Source: Ministero dell'Interno, electoral data.

Table 4 Election outcomes

year	obs.	left-wing	right-wing	non-partisan	win margin (%)	min	max
2002	733	226	185	322	19.48	0	100
2003	321	90	67	164	21.13	0	100
2004	4,319	482	132	3,705	25.00	0	100
2005	367	108	51	208	20.45	0	100
2006	1,161	263	144	754	23.38	0	100
2007	773	85	139	549	20.63	0	100
2008	425	41	80	304	20.49	0	100
2009	4,081	300	424	3,357	24.89	0	100
2010	461	50	72	339	21.79	0	100
2011	1,176	115	106	955	21.91	0	100
2012	777	106	53	618	21.98	0	100
2013	528	78	38	412	22.10	0	100
	15,122	1,944	1,491	11,687	23.44	0	100

Notes: win margin = (vote difference between the two most voted candidates/total votes)*100; Source: Ministero dell'Interno, electoral data.

Table 5 Turnout determinants: electorate

	(5.1)	(5.2)	(5.3)	(5.4)
	turnout (%)		ln(turnout)	
electorate (,000)	-0.2157*** (0.0525)	-0.2605*** (0.0522)		
ln(electorate)			-0.2021*** (0.0094)	-0.2001*** (0.0094)
North trend		-0.2368*** (0.0198)		-0.0028*** (0.0003)
year effects	yes	yes	yes	yes
municipality effects	yes	yes	yes	yes
observations	15,122	15,122	15,122	15,122

Notes: dependent variable = turnout (%) or ln(turnout). Standard errors in parentheses.
 ***: p-value < 0.01; **: p-value < 0.05; *: p-value < 0.10.

Table 6 Turnout determinants: demographics

	(6.1)	(6.2)	(6.3)
age 18-25 (%)	-0.0889* (0.0513)	-0.1006** (0.0513)	-0.1199** (0.0510)
age 26-35 (%)	0.0553 (0.0375)	0.0532 (0.0374)	-0.0211 (0.0379)
age 46-55 (%)	0.1184*** (0.0381)	0.1172*** (0.0380)	0.0762** (0.0380)
age 56-65 (%)	0.1524*** (0.0408)	0.1511*** (0.0407)	0.0836** (0.0410)
age > 65 (%)	-0.0805** (0.0409)	-0.0858** (0.0408)	-0.0778** (0.0406)
electorate (,000)		-0.2293*** (0.0524)	-0.2666*** (0.0522)
North trend			-0.2142*** (0.0209)
year effects	yes	yes	yes
municipality effects	yes	yes	yes
observations	15,121	15,121	15,121

Notes: dependent variable = turnout (%). Standard errors in parentheses. ***: p-value < 0.01; **: p-value < 0.05; *: p-value < 0.10.

Table 7 Turnout determinants: electoral closeness

	(7.1)	(17.2)	(7.3)	(7.4)
candidates	0.5811*** (0.0401)			
win margin		-0.0767*** (0.0018)		
uncontested			-6.8850*** (0.1732)	-6.8876*** (0.1731)
age 18-25 (%)	-0.0941* (0.0506)	-0.0704 (0.0465)	-0.0716 (0.0470)	-0.0772 (0.0470)
age 26-35 (%)	0.0596 (0.0370)	0.0697** (0.0340)	0.0505 (0.0343)	0.0470 (0.0343)
age 46-55 (%)	0.1323*** (0.0376)	0.1239*** (0.0345)	0.1374*** (0.0349)	0.1358*** (0.0349)
age 56-65 (%)	0.1739*** (0.0402)	0.1719*** (0.0370)	0.1626*** (0.0374)	0.1596*** (0.0373)
age > 65 (%)	-0.0902** (0.0403)	-0.0862** (0.0371)	-0.0875** (0.0375)	-0.0933** (0.0375)
electorate (,000)	-0.2404*** (0.0518)	-0.2516*** (0.0476)	-0.2314*** (0.0481)	-0.2323*** (0.0480)
election (province)				0.0251 (0.1701)
election (region)				0.7286 (0.5110)
election (Parliament)				7.1418*** (2.7545)
election (EU)				4.0709*** (1.1876)
year effects	yes	yes	yes	yes
municipality effects	yes	yes	yes	yes
observations	15,121	15,121	15,121	15,121

Notes: dependent variable = turnout (%). Standard errors in parentheses. ***: p-value < 0.01; **: p-value < 0.05; *: p-value < 0.10.

Figure 1: Voter turnout

