

Dipartimento di Politiche Pubbliche e Scelte Collettive – POLIS Department of Public Policy and Public Choice – POLIS

Working paper n. 60

December 2005

A simulative assessment of the Italian electoral system

Guido Ortona, Stefania Ottone, Ferruccio Ponzano

UNIVERSITA' DEL PIEMONTE ORIENTALE "Amedeo Avogadro" ALESSANDRIA

A Simulative Assessment of The Italian Electoral System

Guido Ortona Stefania Ottone Ferruccio Ponzano

Department of Public Policy and Public Choice – Polis Università del Piemonte Orientale "Amedeo Avogadro" Via Cavour 84 – 15100 Alessandria - Italy Phone: +39 0131 283707 +39 0131 283715 Fax :+39 0131 283704 E-mail: guido.ortona@sp.unipmn.it stefania.ottone@sp.unipmn.it ferruccio.ponzano@sp.unipmn.it

Introduction

From 1948 to 1992 members of both houses of the Italian Parliament were elected by proportional representation. Since 1993 a new electoral system has been adopted. Three quarters of the seats are elected by plurality voting in single member districts, while the remaining seats are filled by proportional representation. This choice was justified by the fact that in 44 years some 50 governments were in office, on average for less than one year. The new electoral system was supposed to be the right tool to obtain more stable and long-lasting governments. Unfortunately, this was not the case.

In section 1 we propose two simple indices we use to evaluate the goodness of an electoral system. In section 2 we apply them to the Parliaments elected both by the old (1992) and by the new (1994, 1996 and 2001) electoral system. Section 3 is devoted to some simulations based on electoral data from 1992 to 2001. The aim is to present some possible electoral results with different electoral systems. In section 4 we analyse the relevance of strategic voting, while section 5 is devoted to some forecasting about the next elections (2006). Conclusions are in section 6.

1. Representativeness and Governability

The performance of a Parliament affects a lot of features¹. Ideally, a criterion to choose the best electoral system should take account of all of them. However, there is a general agreement that the most relevant ones are actually two: representativeness (R) and governability (G).

Representativeness may be defined "the capacity to correctly represent the choices of the electors". The parliament elected by pure proportionality in a nation-wide district may be assumed to be the most representative². When, under an electoral system, some parties obtain more seats than under the proportional rule, we have a loss of representativeness. This allows to build a very intuitive index of representativeness (r_i):

$$r_{j} = 1 - \frac{\sum_{i=1}^{n} \max\{S_{j,i} - S_{PP,i}, 0\}}{S_{T}}$$
(1)

where:

j = electoral system

i = party

n = number of parties

 $S_{j,i}$ = number of seats obtained by party *i* under system *j*

 $S_{PP,i}$ = number of seats obtained by party *i* under perfect proportional rule

 S_T = total number of seats in the House

The range of r_j is (0,1]. When it is equal to 1, the parliament is as representative as under the proportional rule³.

Governability may be defined "the capacity to effectively govern the State". We assume that governability is inversely related to the number of parties in the governing coalition, and directly to the number of seats⁴. The resulting index (g_i) is:

¹ See Ortona, 2000, for a sixteen-item, non exhaustive list.

² Actually, the representativeness of Parliaments elected by one-district pure proportionality may be different due to the "running costs". We will not deal with this topic here, as it concerns mostly inter-country comparisons.

³ Note that the indices of proportionality based on the difference between the share of votes and the share of seats, like Gallagher's, are not suitable to compare the representativeness of electoral systems, because the share of votes is affected by the electoral system. ⁴ This assumption is in line with mainstream theory (for a discussion see f.i. Shugart and Wattenberg, 2001, ch.2). However, it has been challenged by several authors (see fi.i Farrell, 2001, ch 9.).

$$g_j = \frac{S_{j,m}}{P_m} * \frac{1}{S_T}$$

where:

m = majority

 $S_{j,m}$ = number of seats obtained by the majority *m* under system *j*

 P_m = number of parties in the majority

How is it possible to compare the performance of different systems? When a system results to be either dominant among a set of systems (i.e. it shows the highest levels of representativeness and governability) or dominated by one of them, there is no doubt. The former is the best system while the latter is ruled out. When there exists a trade-off between the two dimensions, we have to establish a criterion to decide which one is the most relevant. A possible solution is to introduce a social utility function⁵:

(2)

$$U = Ag^{a}r^{b} \tag{3}$$

where:

A = constant term

g = index of governability

r = index of representativeness

a = partial elasticity of the utility with respect to g

b = partial elasticity of the utility with respect to r

The relative importance of the two main dimension is represented by the ratio a/b^6 . When its value is higher than 1, governability is assigned a higher weight than representativeness. When a/b is lower than 1, representativeness is the most relevant dimension. Obviously, the system with the highest value of U is the best one.

The problem of choosing the best electoral system is reduced to that of choosing the value of a/b. The proof follows.

⁵ There are several reasons why a Cobb-Douglas function is most suitable; they are illustrated in Fragnelli et al., 2006.

⁶ Actually, the ratio of partial elasticities may be considered a proxy for the relative weight that the community assigns to relative increase in the value of g and r. See Fragnelli *et al.* (2006) for a broader discussion.

Let's indicate, for simplicity, an electoral system X with small letters, and another one Y with capital. From u>U iff $Ag^ar^b > AG^aR^b$ we get u>U iff $(g/G)^a > (R/r)^b$, u>U iff $(g/G)^{a/b} > (R/r)$, and finally

[1] u>U iff a/b> Ln(R/r)/Ln(g/G) [if g>G; otherwise U<u. The case of g=G is trivial.]

A major problem is how to determine the ratio a/b. A normative solution may be represented by a decision of the Supreme Court or someone else at a very high level. Alternatively, someone (but not the Parliament itself) may vote on its value. A positive solution may be obtained through an applied analysis where the values of a and b are chosen by the voters. An experiment and a further discussion is in Ortona (2005).

2. The Italian Parliament from 1992 to 2001

In 1992 Italian citizens chose for the last time their Parliament by proportional representation (see Table 1 for the results).

Parties	Seats – Proportional system
DC	206
PDS	107
PSI	92
Lega lombarda	55
Rif Comunista	35
MSI	34
PRI	27
PLI	17
PSDI	16
Verdi	16
la Rete	12
Pannella	7
Others	6

Table 1 – Chamber of Deputies in 1992

In 1993 the electoral system was changed, to become a mixed system with 75% of seats elected by plurality and 25% by proportional representation. In the meanwhile, a big corruption scandal (Tangentopoli) changed the political scenario. The Democrazia Cristiana (DC) split into two parties: PPI and CCD. The Lega Lombarda became the Lega Nord, while the MSI changed its name into AN. A new right-wing party entered the political scene: Forza Italia.

In 1994 the major coalition was the *Polo (Polo della Libertà⁷* in the north and *Polo del Buon* $Governo^8$ in the south). The results are in Table 2.

 ⁷ An alliance of *Forza Italia* with CCD and the *Lega Nord*.
⁸ An alliance of *Forza Italia* with CCD and AN.

Table 2 – Chamber of Deputies in 1994

Alliances	Seats
Polo	366
Progressisti ⁹	213
Progressisti ⁹ Patto per l'Italia ¹⁰	46
SVP	3
UV	1
LAM	1

In 1995 the center-right wing of the PPI left the party and formed the CDU. In 1996 the winning coalition was the Ulivo (PDS + PPI - SVP + Verdi + Rinnovamento Italiano). The results are in Table 3.

Table 3 – Chamber of Deputies in 1996

Alliances	Seats
Ulivo	287
Polo per le libertà ¹¹	246
Lega Nord	59
Rif. comunista	35
UV	1
LAM	1
Democrazia libertà	1

In 1998, the less-extreme part of Rifondazione Comunista left the party and constituted the Partito dei Comunisti Italiani. Following other marginal secessions in different parties, UDR (UDEUR after few months), Democratici and SDI entered the political system. Before the elections of 2001, an alliance of PPI, Rinnovamento Italiano and other new left-wing forces resulted in a new party, La Margherita.

In 2001, the winner was the Casa delle Libertà (Forza Italia + $AN + UDC^{12} + Lega Nord$). The results are in Table 4.

⁹ PDS + Verdi + La Rete + Rifondazione Comunista + Alleanza Democratica.

¹⁰ PPI + *Patto Segni*. ¹¹ *Forza Italia* + AN + CCD + CDU

 $^{^{12}}$ CCD + CDU

Table 4 – Chamber of Deputies in 2001

Alliances	Seats
Casa delle libertà	368
Ulivo ¹³	247
Rif. comunista	11
SVP	3
UV	1

The existence of a proportional share allows to apply our index of representativeness. As expected, the mixed system from 1994 to 2001 is always less representative than the proportional one in 1992 (see Table 5). However it performs quite well, mostly if one takes the high share of plurality seats into account. It is noticeable the absence of a negative trend: the adoption of plurality did not imply a tendency towards a reduction of the number of parties.

<u>Table 5 – Representativeness</u>

Year	r
1992	0.96 ¹⁴
1994	0.83
1996	0.89
2001	0.87

The index of governability was computed for the House where the Government had the lowest ratio between the number of seats in the majority (computed on the basis of the vote of confidence) and the total number of seats. The Governments with the highest values are those lead by Berlusconi, while the lowest are those of D'Alema's and Amato's (II) leadership. However the values are generally low, and not that different, due to the high number of parties in the majority coalition. The figures are in Table 6.

¹³ PDS + *La Margherita* + SDI + *Verdi* + *Comunisti Italiani*.

¹⁴ The representativeness index in 1992 is lower than 1 due to the existence of many multi-member electoral districts instead of a single national district.

Year	Prime Minister	Alliance	Seats	g
1992	Amato I	DC + PSI + PLI + PSDI	173*	0.135
1993	Ciampi	DC + PSI + PLI + PSDI	309	0.123
1994 ¹⁵	Berlusconi I	Forza Italia + CCD + AN + Lega Nord	159*	0.124
1996	Prodi	PDS + PPI – SVP + Verdi + Rinnovamento Italiano + Rifondazione Comunista	322	0.102
1998	D'Alema I	DS ¹⁶ + PPI – SVP + Verdi + Rinnovamento Italiano + Comunisti Italiani + UDR + SDI	333	0.075
1999	D'Alema II	DS + PPI – SVP + Verdi + Democratici + Comunisti Italiani + UDEUR	310	0.082
2000	Amato II	DS + PPI – SVP + Verdi + Democratici + Comunisti Italiani + UDEUR + SDI + Rinnovamento Italiano	319	0.063
2001	Berlusconi II	Forza Italia + UDC + AN + Lega Nord	175*	0.137
2005	Berlusconi III	Forza Italia + UDC + AN + Lega Nord	334	0.133

Table 6 – Governability

* Seats in the Senate

We may compare these governments by using the utility function (3). First of all, we obtain the best government for each legislative term of office by ruling out the dominated governments. Amato I (1992), Berlusconi I (1994), Prodi (1996), Berlusconi II (2001) result to be the best. Secondly, we rule out the dominated governments among the best ones for each period. The final

¹⁵ In 1995 Mr. Dini formed a non-political government of technical experts. We do not consider this government because we cannot provide a good proxi of the number of parties that supported it. ¹⁶ The former PDS

comparison is between Amato I and Berlusconi II. The citizens with a value of a/b equal to 6.7 are indifferent between the two governments. Those with a value of a/b greater than 6.7 prefer Berlusconi II. Amato I is chosen when a/b is lower than 6.7. People who find Berlusconi II better than Amato I have a very strong preference for governability. Actually, they accept up to a 6.7% decrease in representativeness in exchange for a 1% increase in governability.

3. The Italian Parliament from 1992 to 2001: some simulations with different electoral systems

In the previous section we examined the goodness of the Parliaments and governments elected from 1992 to 2001 under the actual electoral system. The aim of this section is to simulate what would have happened under different electoral systems. In particular, on the basis of the recent debates about the choice between a proportional and a plurality system, we start from the real electoral data and we compare the mixed system both with the national pure proportional representation and with the plurality system. Under the mixed system the Chamber of Deputies is elected through two lists: a list for the seats voted by proportional representation and a list for the deputies chosen by the plurality system. We use the real votes obtained by the parties in the former to simulate the Parliament under the proportional system (with one nation-wide district) and the votes obtained in the latter to simulate the Parliament under the plurality system. The results of the simulations are in Table 7, 8 and 9.

Parties	Seats					
	Actual system	Proportional system	Plurality system			
Progressisti	213	203	218			
Polo	366	271	401			
Patto per l'Italia	46	99	5			
SVP	3	4	4			
UV	1	0	1			
LAM	1	1	1			
Others	0	52	0			

Table 7 – Chamber of Deputies in 1994 – simulations

Table 8 – Chamber of Deputies in 1996 – simulations

Parties	Seats					
	Actual system	Proportional system	Plurality system			
Ulivo	287	219	331			
Polo per le libertà	246	266	224			
Lega Nord	59	64	52			
Rif.comunista	35	54	20			
UV	1	0	1			
LAM	1	1	1			
Democrazia libertà	1	0	1			
Others	0	26	0			

Table 9 – Chamber of Deputies in 2001 – simulations

Parties	Seats					
	Actual system	Proportional system	Plurality system			
Casa delle libertà	368	313	374			
Ulivo	247	221	251			
Rif. comunista	11	31	0			
SVP	3	3	4			
UV	1	0	1			
Others	0	62	0			

In 1994 and 1996, the winning coalitions (*Polo* and *Ulivo*) would experience a relevant difference of seats if switching from the actual mixed system to one of the others. *Patto per l'Italia* and *Rifondazione Comunista* too would score significantly different results. At the same time, the difference of seats obtained by the main contenders of the winners (*Progressisti* and *Polo*) and by *Lega Nord* is quite limited.

The scenario for 2001 is different. The presence of decoy lists ("liste civetta") eliminates any relevant difference of seats between the mixed and the plurality system for the winners. Also, it is noticeable that in 1994 the actual majority would not have been such under proportionality. Moreover, in 1996 a single-party majority would have been possible under plurality (actually a single-coalition one), while in 2001 the system does not affect the composition of the majority.

What is the best system? The indices of representativeness (Table 10) and governability (Table 11) allow to compare the three different systems for each year (the data for the actual system are in table 5 and 6).

Table 10– Representativeness

Year	Proportional system	Plurality system
1994	1	0.77
1996	1	0.82
2001	1	0.85

Table 11 – Governability

Year	Pro	portional syst	tem	Plurality System		
	Alliance	e Seats <i>g</i> Alliance		Seats	g	
1994	Polo + PPI	341	0.108	Polo	401	0.159
1996	Ulivo + Rifondazione Comunista + Lega Nord or Polo + Lega Nord	333 or 330	0.088 or 0.130	Ulivo	327	0.131
2001	Casa delle libertà + Democrazia Europea	328	0.105	Casa delle libertà	374	0.148

The straight application of criterion [1] to these data produces a relevant result: the mixed (actual) system is always dominated, as results from This means that, depending on the value of p, citizens prefer either the proportional representation or the plurality system. In particular:

- in 1994 the plurality system is preferred when a/b is greater than 0.68;
- in 1996 the plurality system is preferred when *a/b* is greater than 0.5 in the first alliance and as much as than 25.6 in the second (the real one);
- in 2001 the plurality system is preferred when a/b is greater than 0.47.

4. The Strategic Voting

Strategic voting occurs when a voter does not vote her first preference, thinking that another one could get a better result. The most common situation where people find it profitable to implement the strategic voting is the plurality electoral system. A voter may decide to vote not for her first choice, but for a further one she hopes will be more likely to win.

Since the Italian Chamber of Deputies is elected partially by proportional representation and partially by plurality, it is possible to check whether the Italian citizens chose the strategic voting to show their preferences in the plurality list. We analysed the data of the elections in 2001. This choice is due to the fact that we suppose that people need some time to "learn" how the system works and the consequences of their choice.

The result obtained under the two different systems by the two big coalitions (*Casa delle Libertà* and *Ulivo*) and by two small parties (*Lista Di Pietro* and *Democrazia Europea*) that ran alone are in Table 12.

	Lista l	Di Pietro	Dem	ocrazia	Casa d	elle Libertà	Uliv	VO
			Eu	ropea				
	Prop.	Plur.	Prop.	Plur.	Prop.	Plur.	Prop.	Plur.
Piemonte 1	4.1%	5.3%	0.9%	1.3%	46.1%	42.6%	44.8%	49.2%
Piemonte 2	4%	3%	1.7%	2.8%	54.5%	49.8%	35.5%	40%
Lombardia 1	3.8%	5.4%	0.7%	0.8%	52.9%	52%	38.5%	41%
Lombardia 2	4%	5.6%	1.6%	2.6%	59%	54.5%	30.4%	36.1%
Lombardia 3	4%	4.3%	1.6%	2.3%	52.8%	49.1%	38.7%	42.5%
Trentino Alto Adige	4%	4.3%	1.6%	-	31.9%	31%	60.5%	35.1%
Veneto 1	4.5%	4.6%	2.2%	4%	56.3%	48%	31.4%	34.3%
Veneto 2	4.8%	4.5%	1.3%	2.5%	52.5%	46.4%	35.2%	40%
Friuli Venezia	4.2%	4.9%	2.1%	2.9%	51.4%	47.8%	38.8%	41.6%
Guglia	2 (0/	2.20/	1.00/	1 40/	45.50/	42.00/	46.20/	50.50/
Liguria	3.6%	3.3%	1.8%	1.4%	45.5%	43.9%	46.3%	50.5%
Emilia Romagna	3.5%	3.4%	1.1%	1.7%	39.5%	37%	53.6%	56.8%
Toscana	2.5%	2.4%	1%	1.6%	38.6%	36.6%	55.6%	57.4%
Umbria	2.7%	3.1%	1.6%	0.9%	42.6%	41.4%	51.1%	53.4%
Marche	3.7%	3.1%	1.5%	2.7%	44.8%	38.3%	47.3%	51.5%
Lazio 1	2.5%	2.5%	1.7%	1.1%	48%	46.6%	44.8%	47.6%
Lazio 2	3.7%	3.3%	3.3%	4.7%	57.2%	51.9%	34%	38.8%
Abruzzi	6.3%	5.3%	1.9%	3.5%	50.6%	45.2%	38.2%	43.5%
Molise	14.3%	15%	3.4%	11.2%	45.6%	35.8%	33.7%	36.2%
Campania 1	3.8%	4.3%	2.4%	5.3%	52.2%	44.5%	39%	43.1%
Campania 2	3.9%	3.5%	6.2%	8.6%	50.6%	42.6%	35.1%	41.3%
Puglia	5.1%	4%	2.9%	6.1%	50.6%	45.1%	37.6%	41.3%
Basilicata	5.2%	4.9%	6.6%	9.2%	37.1%	36.3%	48.2%	47.5%
Calabria	3.6%	4.1%	4%	6.8%	49.8%	44.5%	39.4%	41.8%
Sicilia 1	3.6%	3.1%	7.9%	9.2%	56%	50.7%	30.4%	35.5%
Sicilia 2	4.1%	3.6%	6.3%	8.1%	56.5%	52.8%	30.9%	33.8%
Sardegna	3.3%	3.4%	1.9%	1.5%	49.5%	45.2%	38.9%	43.4%
Valle								
d'Aosta	-	-	-	-	_	-	_	-

Table 12 – Strategic voting

Switching from the proportional to the plurality system the *Ulivo* is voted by a higher number of citizens. This is perfectly in line with the strategic voting; but the change is small, more so if you consider that the contest was forecasted to be a close one. When we consider the votes received by the *Casa delle Libertà*, the result is even more striking: in all the districts the percentage of votes under the proportional system is higher than the percentage of votes under the plurality system. At the same time, small parties like *Lista Di Pietro* and *Democrazia Europea* are preferred on average by a higher number of citizens under the plurality system. A possible explanation is that the distance among the parties in the *Casa delle Libertà* is high enough to create a competition à la

Hotelling between the coalition and small parties (for instance, *Democrazia Europea*) that are close to the most central party of the coalition (UDC).

To sum up, we cannot affirm that the strategic voting is implemented by the Italian voters. This is a remarkable results, as it undermines the main reason to move away from proportionality.

5. Forecasting

What will be the political scenario in 2006? It is a difficult question. First, we do not know whether the future coalitions will further change. Second, we are not able to predict the reaction of the voters to the last political events. And finally, and most important, the return to proportionality is debated in the Parliament when these pages are written (October-November 2005), and likely to be adopted.

However, we try and provide a forecasting of the next political elections, starting from two surveys: the *Osservatorio del Nord Ovest*'s survey (May 2004)¹⁷ and the *Repubblica - IPR*'s survey (October 2005). The results are in Table 13 and 14; Ulivo is the center-left coalition, CDL ("Casa delle Libertà") the center-right one.

Parties	Survey	Proportional	Plurality	New Proportional
	%		Seats	
Rifondazione Comunista	8.8%			
PDCI + Verdi	5.1%			
DS	16.9%			
SDI	1.1%			
Margherita	12.2%			
UDEUR	0.1%			
Lista Di Pietro	7%			
TOT. ULIVO	51.3%	328	498	340
Forza Italia	20.2%			
Lega Nord	5.6%			
Alleanza Nazionale	13.5%			
UDC	4.5%			
TOT. CDL	43.8%	280	132	290
Nuovo PSI	1.9%	12	0	0
Radicali	1.6%	10	0	0
MSI	0.3%	0	0	0
Others	1%	0	0	0
		r = 1	r = 0.73	r = 0.97
		g = 0.074	g = 0.113	g = 0.077

Table 13 – Elections 2006 forecasting (Osservatorio del Nord Ovest's survey)

¹⁷ We'd like to thank the director of the Osservatorio, prof. Luca Ricolfi, for his kind permission to use the data.

Parties	Survey	Proportional	Plurality	New Proportional
	%	Seats		
Rifondazione Comunista	6%			
PDCI + Verdi	4.5%			
DS	22%			
Margherita	12.5%			
Lista Di Pietro	1.5%			
UDEUR	2%			
SDI + Nuovo PSI	2.5%			
TOT. UNIONE	51%	322	450	340
Forza Italia	18%			
Lega Nord	5.5%			
Alleanza Nazionale	12%			
UDC	5%			
Nuovo PSI De Michelis	1.5%			
Democrazia Cristiana	2%			
Alternativa Sociale	1.5%			
TOT. CDL	45.5%	286	180	290
Radicali	1.5%	9		
Others	2%	13		
		r = 1	r = 0.80	r = 0.97
		g = 0.073	g = 0.102	g = 0.077

Table 14 – Elections 2006 forecasting (*Repubblica - IPR's* survey)

We consider only the Lower Chamber, and three different electoral systems: the proportional representation, the plurality system and the new proportional system that will be probably voted by the Italian Parliament. This is a proportional representation where the winning coalition is entitled to a majority premium. The alliance that has been chosen by the plurality of the electors obtains the maximum number of seats between 340 (54% of the total number of seats) and the actual seats assigned by the proportional voting. In both surveys, the winner is the *Unione* (the center-left coalition).

Also in this case we try and find out which is the best electoral system. The data from the *Osservatorio del Nord Ovest*'s survey suggest that:

- the plurality system is preferred when a/b > 0.745
- the pure proportional system is preferred when a/b < 0.745

From the *Repubblica* - *IPR*'s survey, we find out that:

- the plurality system is preferred when a/b > 0.685

- the new proportional system is preferred when 0.571 < a/b < 0.685
- the proportional system is preferred when a/b < 0.571

The most interesting result is that the new system may be the best one only under very restrictive conditions. Actually, it is such only when the government elected by the proportional system tends to be unstable (i.e., when the number of seats of the majority under the pure proportional representation is close to half of the seats in the Chamber of Deputies). In this case, the majority prize solve the problem by increasing the governability at an acceptable cost in terms of representativeness. But as the number of seats of the majority approaches 340, the (small) gain in governability is rapidly counterbalanced by the loss of representativeness.

5. Conclusive remarks

The results of the last section may appear somehow disappointing. The threshold values are so close that they do not allow to safely pinpoint the best electoral system. Actually, they are quite precious. They indicate that a choice criterion based on the trade-off between representativeness and governability is not that discriminating, at least for contemporary Italy. In a sense, it does not matter that much which system is actually chosen. One could object that the advantages of the plurality systems take some time to manifest, as voters must change their habits; but the data of section 4 (and subsequent anecdotic evidence) suggest that some ten years is not enough for a trend into this direction to manifest.

If representativeness and governability cannot be used to individuate the best electoral system, we must resort to a further dimension. Which one? We suggest that, lexicographically, the third most important one is the trust of the voters for the political aristocracy. Our feeling is that such trust is higher in proportional representation with open lists, as the political market is more contendible.¹⁸

This, obviously, is a matter for further research. Another one is the following. Why voters did take advantage only to a very limited extent of the possibility of reducing the redundancy of the parties offered by the electoral reform of 1993? Possibly they were too strongly linked to traditional fidelities. But possibly they shared instead the opinion of Lijphart (1999) that the advantages of plurality are at most very dubious, and "voted with their votes" against the electoral reform. Putting the argument the other way round, the behavior of Italian voters provide some support to Lijphart.

¹⁸ Possibly this is why this hypothesis has not been considered by any party in the current debate on the electoral reform.

References

Farrell, D. M. (2001), Electoral Systems: a Comparative Introduction, Palgrave, Basingstoke, UK.

Fragnelli, V., G. Monella and G. Ortona (2006), A Simulative Approach for Evaluating Electoral Systems, forthcoming, "Homo Oeconomicus".

Lijphart, A. (1999), Patterns of Democracy. Government Forms and Performance in Thirty-Six Countries, Yale University Press, New haven, USA.

Ortona, G. (2000), A weighted-voting electoral system that performs quite well. in V. Dardanoni and G. Sobbrio (eds.), *Istituzioni politiche e finanza pubblica*, Angeli, Milano.

Ortona, G. (2005), Voting on the Electoral System: an Experiment, forthcoming, "Polena".

Shugart, M. S and M. P. Wattenberg (2001), Mixed-Member Electoral Systems: The Best of Both Worlds? Oxford Un. Press, Oxford, UK.

Working Papers

The full text of the working papers is downloadable at <u>http://polis.unipmn.it/</u>

*Eco	onomics Ser	ies **Political Theory Series	⁸ Al.Ex Series
2005	n.60 ^ε	Guido Ortona, Stefania Ottone and Ferruccio Po of the Italian electoral system	nzano: A simulative assessment
2005	n.59 ^ɛ	Guido Ortona and Francesco Scacciati: Offerta c tassazione: l'approccio sperimentale	li lavoro in presenza di
2005	n.58*	Stefania Ottone and Ferruccio Ponzano, An exter Aversion by Fehr and Schmidt	nsion of the model of Inequity
2005	n.57 ^ε	Stefania Ottone, Transfers and altruistic punishin experiments	nent in Solomon's Game
2005	n. 56 ^ε	Carla Marchese and Marcello Montefiori, Mean behavior: an experiment	voting rule and strategical
2005	n.55**	Francesco Ingravalle, <i>La sussidiarietà nei trattat</i> dell'UE.	i e nelle istituzioni politiche
2005	n. 54*	Rosella Levaggi and Marcello Montefiori, It tak constraint and cream skimming in the hospital c	8 1 8
2005	n.53*	Ferruccio Ponzano, Competition among differen election problem.	t levels of government: the re-
2005	n.52*	Andrea Sisto and Roberto Zanola, Rationally ad empirical investigation of Italian consumers	dicted to cinema and TV? An
2005	n.51*	Luigi Bernardi and Angela Fraschini, <i>Tax systen</i>	and tax reforms in India
2005	n.50*	Ferruccio Ponzano, Optimal provision of public intergovernmental competition.	goods under imperfect
2005	n.49*	F.Amisano A.Cassone, Proprieta' intellettuale e conseguenze microeconomiche	mercati: il ruolo della tecnologia e
2005	n.48*	Tapan Mitra e Fabio Privileggi, Cantor Type Att Models	ractors in Stochastic Growth
2005	n.47 ^ε	Guido Ortona, Voting on the Electoral System: a	n Experiment
2004	n.46 ^ε	Stefania Ottone, Transfers and altruistic Punish Punishment Game Experiments.	nents in Third Party

2004	n.45*	Daniele Bondonio, Do business incentives increase employment in declining areas? Mean impacts versus impacts by degrees of economic distress.
2004	n.44**	Joerg Luther, La valorizzazione del Museo provinciale della battaglia di Marengo: un parere di diritto pubblico
2004	n.43*	Ferruccio Ponzano, The allocation of the income tax among different levels of government: a theoretical solution
2004	n.42*	Albert Breton e Angela Fraschini, Intergovernmental equalization grants: some fundamental principles
2004	n.41*	Andrea Sisto, Roberto Zanola, Rational Addiction to Cinema? A Dynamic Panel Analisis of European Countries
2004	n.40**	Francesco Ingravalle, Stato, groβe Politik ed Europa nel pensiero politico di F. W. Nietzsche
2003	n.39 ^ε	Marie Edith Bissey, Claudia Canegallo, Guido Ortona and Francesco Scacciati, <i>Competition vs. cooperation. An experimental inquiry</i>
2003	n.38 ^ε	Marie-Edith Bissey, Mauro Carini, Guido Ortona, ALEX3: a simulation program to compare electoral systems
2003	n.37*	Cinzia Di Novi, Regolazione dei prezzi o razionamento: l'efficacia dei due sistemi di allocazione nella fornitura di risorse scarse a coloro che ne hanno maggiore necessita'
2003	n. 36*	Marilena Localtelli, Roberto Zanola, The Market for Picasso Prints: An Hybrid Model Approach
2003	n. 35*	Marcello Montefiori, Hotelling competition on quality in the health care market.
2003	n. 34*	Michela Gobbi, A Viable Alternative: the Scandinavian Model of "Social Democracy"
2002	n. 33*	Mario Ferrero, Radicalization as a reaction to failure: an economic model of islamic extremism
2002	n. 32 ^ε	Guido Ortona, Choosing the electoral system – why not simply the best one?
2002	n. 31**	Silvano Belligni, Francesco Ingravalle, Guido Ortona, Pasquale Pasquino, Michel Senellart, <i>Trasformazioni della politica. Contributi al seminario di</i> <i>Teoria politica</i>
2002	n. 30*	Franco Amisano, La corruzione amministrativa in una burocrazia di tipo concorrenziale: modelli di analisi economica.
2002	n. 29*	Marcello Montefiori, Libertà di scelta e contratti prospettici: l'asimmetria informativa nel mercato delle cure sanitarie ospedaliere

2002	n. 28*	Daniele Bondonio, Evaluating the Employment Impact of Business Incentive
		Programs in EU Disadvantaged Areas. A case from Northern Italy
2002	n. 27**	Corrado Malandrino, Oltre il compromesso del Lussemburgo verso l'Europa federale. Walter Hallstein e la crisi della "sedia vuota"(1965-66)
2002	n. 26**	Guido Franzinetti, Le Elezioni Galiziane al Reichsrat di Vienna, 1907-1911
2002	n. 25 ^ε	Marie-Edith Bissey and Guido Ortona, A simulative frame to study the integration of defectors in a cooperative setting
2001	n. 24*	Ferruccio Ponzano, Efficiency wages and endogenous supervision technology
2001	n. 23*	Alberto Cassone and Carla Marchese, Should the death tax die? And should it leave an inheritance?
2001	n. 22*	Carla Marchese and Fabio Privileggi, <i>Who participates in tax amnesties?</i> Self-selection of risk-averse taxpayers
2001	n. 21*	Claudia Canegallo, Una valutazione delle carriere dei giovani lavoratori atipici: la fedeltà aziendale premia?
2001	n. 20*	Stefania Ottone, L'altruismo: atteggiamento irrazionale, strategia vincente o amore per il prossimo?
2001	n. 19*	Stefania Ravazzi, La lettura contemporanea del cosiddetto dibattito fra Hobbes e Hume
2001	n. 18*	Alberto Cassone e Carla Marchese, <i>Einaudi e i servizi pubblici, ovvero come contrastare i monopolisti predoni e la burocrazia corrotta</i>
2001	n. 17*	Daniele Bondonio, Evaluating Decentralized Policies: How to Compare the Performance of Economic Development Programs across Different Regions or States.
2000	n. 16*	Guido Ortona, On the Xenophobia of non-discriminated Ethnic Minorities
2000	n. 15*	Marilena Locatelli-Biey and Roberto Zanola, <i>The Market for Sculptures: An Adjacent Year Regression Index</i>
2000	n. 14*	Daniele Bondonio, Metodi per la valutazione degli aiuti alle imprse con specifico target territoriale
2000	n. 13*	Roberto Zanola, Public goods versus publicly provided private goods in a two-class economy
2000	n. 12**	Gabriella Silvestrini, Il concetto di «governo della legge» nella tradizione repubblicana.
2000	n. 11**	Silvano Belligni, Magistrati e politici nella crisi italiana. Democrazia dei

guardiani e neopopulismo

- 2000 n. 10* Rosella Levaggi and Roberto Zanola, *The Flypaper Effect: Evidence from the Italian National Health System*
- 1999 n. 9* Mario Ferrero, *A model of the political enterprise*
- 1999 n. 8* Claudia Canegallo, Funzionamento del mercato del lavoro in presenza di informazione asimmetrica
- 1999 n. 7** Silvano Belligni, *Corruzione, malcostume amministrativo e strategie etiche. Il ruolo dei codici.*

1999	n. 6*	Carla Marchese and Fabio Privileggi, <i>Taxpayers Attitudes Towaer Risk and</i> Amnesty Partecipation: Economic Analysis and Evidence for the Italian Case.
1999	n. 5*	Luigi Montrucchio and Fabio Privileggi, On Fragility of Bubbles in Equilibrium Asset Pricing Models of Lucas-Type
1999	n. 4**	Guido Ortona, A weighted-voting electoral system that performs quite well.
1999	n. 3*	Mario Poma, <i>Benefici economici e ambientali dei diritti di inquinamento: il caso della riduzione dell'acido cromico dai reflui industriali.</i>
1999	n. 2*	Guido Ortona, Una politica di emergenza contro la disoccupazione semplice, efficace equasi efficiente.

1998 n. 1*Fabio Privileggi, Carla Marchese and Alberto Cassone, Risk Attitudes and the
Shift of Liability from the Principal to the Agent

Department of Public Policy and Public Choice "Polis"

The Department develops and encourages research in fields such as:

- theory of individual and collective choice;
- economic approaches to political systems;
- theory of public policy;
- public policy analysis (with reference to environment, health care, work, family, culture, etc.);
- experiments in economics and the social sciences;
- quantitative methods applied to economics and the social sciences;
- game theory;
- studies on social attitudes and preferences;
- political philosophy and political theory;
- history of political thought.

The Department has regular members and off-site collaborators from other private or public organizations.

Instructions to Authors

Please ensure that the final version of your manuscript conforms to the requirements listed below:

The manuscript should be typewritten single-faced and double-spaced with wide margins.

Include an abstract of no more than 100 words.

Classify your article according to the Journal of Economic Literature classification system.

Keep footnotes to a minimum and number them consecutively throughout the manuscript with superscript Arabic numerals. Acknowledgements and information on grants received can be given in a first footnote (indicated by an asterisk, not included in the consecutive numbering).

Ensure that references to publications appearing in the text are given as follows: COASE (1992a; 1992b, ch. 4) has also criticized this bias.... and "...the market has an even more shadowy role than the firm" (COASE 1988, 7).

List the complete references alphabetically as follows:

Periodicals:

KLEIN, B. (1980), "Transaction Cost Determinants of 'Unfair' Contractual Arrangements," *American Economic Review*, 70(2), 356-362. KLEIN, B., R. G. CRAWFORD and A. A. ALCHIAN (1978), "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," *Journal of Law and Economics*, 21(2), 297-326.

Monographs:

NELSON, R. R. and S. G. WINTER (1982), *An Evolutionary Theory of Economic Change*, 2nd ed., Harvard University Press: Cambridge, MA.

Contributions to collective works:

STIGLITZ, J. E. (1989), "Imperfect Information in the Product Market," pp. 769-847, in R. SCHMALENSEE and R. D. WILLIG (eds.), *Handbook of Industrial Organization*, Vol. I, North Holland: Amsterdam-London-New York-Tokyo.

Working papers:

WILLIAMSON, O. E. (1993), "Redistribution and Efficiency: The Remediableness Standard," Working paper, Center for the Study of Law and Society, University of California, Berkeley.