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Turnout in electoral democracies

ANDRÉ BLAIS & AGNIESZKA DOBRZYNSKA
Département de Science Politique, Université de Montréal, Canada

Abstract. We examine turnout in 324 democratic national lower house elections held in 91 countries, between 1972 and 1995. We rely on Freedom House ratings of political rights to determine whether an election is democratic or not. We distinguish three blocs of factors that affect turnout: the socio-economic environment, institutions, and party systems. We show that turnout is influenced by a great number of factors and that the patterns that have been shown to prevail in studies dealing with more limited samples of countries generally hold when we look at a larger set of democracies. But we also show that the socio-economic environment, which has been downplayed in previous studies, has a substantial impact on turnout.

Introduction

When and where is turnout highest and lowest and why? We propose a comparative study of variations in turnout in electoral democracies. A number of analyses have attempted to account for cross-national variations in turnout (Powell 1980, 1982, 1986; Crewe 1981; Jackman 1986; Jackman & Miller 1995; Blais & Carty 1990; Black 1991; Franklin 1996). Our study builds on these previous works. But we also fill some important gaps in the literature.

Perhaps the most important gap concerns the selection of observations. We are interested, as were previous studies, in turnout in democratic elections for the national lower house. In our judgement, however, previous studies have not provided rigorous justification for their inclusion or exclusion of countries.

Powell (1982) defines five criteria that ought to be met for a country to be deemed democratic, reviews the work of other scholars, and comes up with a list of 29 countries that in his view meet his criteria. The approach is not entirely satisfactory, however, because Powell relies on the work of others who did not have exactly the same criteria and because there is disagreement among authors with respect to a number of cases, the inclusion or exclusion of which appears somewhat arbitrary.

Crewe (1981), like his co-authors in *Democracy at the Polls*, examines those countries that were classified by Freedom House as 'free' or 'partly free' and that have a population of more than three million. Size is not a meaningful

criterion; the editors of *Democracy at the Polls* themselves acknowledge that they eliminated small countries only to keep the number manageable.

Jackman (1987), for his part, chose to confine his analysis to 19 industrial democracies (23 in the 1995 article with Miller).[1] It is not clear why non-industrial democracies are excluded. It may be appropriate to compare countries as similar as possible in terms of socio-economic characteristics in order to better isolate the impact of political institutions. The downside is that the number of cases is small, and that the results may not be generalized to the universe of democracies. Moreover, this approach does not permit us to measure the potential effect of factors such as economic development on turnout. Clearly, if we wish to arrive at a comprehensive understanding of the sources of cross-national variations in turnout, we should look at as many cases as possible (see King, Keohane & Verba 1994) and exploit the richness of data provided by the process of democratization.

We believe it is important to examine *all* democratic elections. We consider all elections that can be construed as democratic. We rely on Freedom House to characterize a country as democratic or not in a given year. Freedom House has been rating 'political rights' and 'civil liberties' in each country of the world for every year since 1972. It is the most systematic evaluation of the degree of democracy, an evaluation whose validity has been judged to be quite satisfactory (Bollen 1993). Its index of democracy is now widely used in cross-national research (Burkhart & Lewis-Beck 1994; Helliwell 1994).

Freedom House gives every country a rating ranging from 1 to 7 on political rights and on civil liberties, a rating of 1 corresponding to maximum degree of freedom and a rating of 7 to minimum degree. We use only the 'political rights' scale, which focuses on the fairness of elections. We construe ratings of 1 and 2 as reflecting a 'satisfactory' level of democracy; Freedom House itself collapses ratings of 1 and 2 as indicating a 'free' country (Gastil 1979: 24).[2]

We have been able to obtain data on turnout in 324 democratic elections held in 91 different countries, between 1972 and 1995 (see Appendix A).[3] We believe our decision to consider all democratic elections and to rely on the judgement of one standard source as to whether a country is democratic or not constitutes a major improvement over previous studies. That choice has the additional advantage of increasing the number of observations.

We also wish to provide a *systematic* account of variations in turnout. Most studies (see, especially, Jackman 1986; Blais & Carty 1990) have focused on a certain set of factors. Our objective here is more comprehensive: what kinds of factors affect turnout and what are their relative importance?

Our approach is inspired by Powell (1982). Powell distinguishes three kinds of factors that influence political performance in general and voting

participation in particular: the socio-economic environment, the constitutional setting, and the party system. We believe this is a fruitful way to conceptualize the process. We make a minor amendment and refer to the institutional setting rather than the constitution, since many institutional features we examine are not formally parts of the constitution.

We have three blocs of variables: the socio-economic environment, institutions, and party systems. We start with the first bloc and examine which socio-economic variables influence turnout. We then look at the impact of various institutions, controlling for the socio-economic environment. We finally analyze the party system, and assess whether it has an additional independent influence on turnout.

Our measure of turnout is the percentage of those registered on the electoral list who cast a vote. This is the measure that is reported in official documents and that is used by Crewe (1981), Blais and Carty (1990), Black (1991), and Franklin (1996). Powell (1980, 1982, 1986) and Jackman (1986) rely on a different measure, the percentage of the eligible population who cast a vote.

The latter measure, however, has one major shortcoming, which has to do with the procedure for estimating the size of the eligible population. The eligible population is basically assumed to be the voting age population at the time of the election. As Powell (1986: 40) acknowledges 'in most democracies voting eligibility is limited to citizens. Population figures . . . usually include noncitizens resident for a year or more. Countries vary substantially in the percentage of such aliens . . . . Unfortunately, we do not have good data on percentage of residents . . . who are aliens of voting age, and cannot systematically adjust our turnout data to remove them'. Likewise, Black (1991: 71) who reports such estimations for a small number of countries, indicates that 'the entire exercise required drawing some overly simplified assumptions'.

Given these problems, we believe it is more prudent to use, as do Crewe (1981), Blais & Carty (1990), Black (1991), and Franklin (1996) as well as most official documents (see, in particular, Mackie & Rose 1991), the percentage of those registered on the electoral list who cast a vote. This measure raises a serious problem only in the USA because of its peculiar registration procedure. The appropriate solution, it seems to us, is to treat the USA as a special case. The analysis presented below thus excludes the USA.

The socio-economic environment

As already indicated, we distinguish three blocs of factors: the socio-economic environment, the institutional setting, and the party system. We first consider six socio-economic variables: *GNP per capita, growth of GNP per capita,*

average life expectancy, degree of illiteracy, size and *density of population* (see Appendices B and C for a more detailed description of variables).

Perhaps, the most important hypothesis to be tested is that economic development fosters turnout. The reasoning underlying this hypothesis is that economic development makes people more informed and engaged in the political process (Powell 1982: 37). Powell does find a positive correlation between economic development and turnout but Crewe (1981) and Jackman (1987) report no such correlation. The discrepancy could stem from the fact that these authors have examined different samples of countries. There is also the possibility that the relationship is non-linear, that what is required for a good turnout is a modest level of economic development but that over a certain threshold more development does not have any additional impact on turnout. We use the standard and most simple measure of economic development, *GNP per capita*.[4]

It may not be only the level of economic development that matters but also the economic conjuncture at the time of the election. Rosenstone (1982), in particular, argues that economic adversity depresses turnout, because it disrupts the kind of social relationships that nurture political participation and induces people to withdraw from politics and focus on their personal concerns.[5] Our indicator of economic conjuncture is the *increase or decrease in GNP per capita* in the election year, compared to the previous year.

But the larger social environment must also be taken into account. It is possible that the most important condition for people to get engaged in political life is that their basic needs be met (see, especially, Moon 1991). We have thus included one standard indicator of quality of life, *average life expectancy*.

As Verba, Schlozman & Brady (1995) show, voting is the least demanding form of political activity, and the one that is least dependent on the possession of civic skills. Still, some minimum of skill may be required, and they note that those with little linguistic skill are less likely to vote. It thus seems reasonable to predict that high *levels of illiteracy* tend to depress turnout.

We also consider *size of population*. The relationship between community size and turnout is far from being unambiguous (see Dahl & Tufte 1973). Verba, Nie & Kim (1978) show, however, that once individual socio-economic characteristics are controlled for, communal activity is more prevalent in smaller settings,[6] in good part because social and political life tends to be more impersonal and distant in larger communities (Verba & Nie 1972). We thus expect to replicate the finding of Blais and Carty (1990) that turnout tends to be higher in smaller countries.[7]

Our last variable is *population density*. We assume that turnout tends to be lower in less densely populated countries, because people who are dispersed

Table 1. The determinants of electoral participation: socio-economic environment

Variables	B	(Error)
North America	−8.83***	(2.09)
South America	−0.68	(2.63)
Africa	−6.58**	(3.31)
Asia	−2.86	(2.50)
Oceania	9.74***	(2.48)
Average life expectancy	−0.13	(0.21)
Density	6.72*	(4.02)
GNP per capita (log)	3.29***	(0.97)
Growth of GNP per capita	0.03	(0.09)
Illiteracy rate (squared)	−0.002**	(0.001)
Size of population (log)	−2.72***	(0.88)
Switzerland	−36.73***	(4.82)
Constant	71.81	(13.76)
N	298	
Adjusted R^2	0.41	

* Significant at the 0.10 level; ** significant at the 0.05 level; *** significant at the 0.01 level.

over a wide territory are less likely to be exposed to group pressure to vote (Lipset 1981) and are more difficult to mobilize.

The analysis includes dummy variables for each of the continents (Europe is the reference category). These variables reflect the impact of other unmeasured factors which may be specific to a given geographic area. Lijphart (1992: 940), especially, has highlighted 'the remarkable clustering ... of the four basic forms of democracy in four geographical-cultural world regions'. This raises the possibility that political culture differences, regarding for instance whether voting should be construed as a civic duty, lead to variations in turnout in different regions of the world. We also have a dummy for Switzerland, a clearly deviant case that has been treated as such in all previous studies.[8]

Table 1 presents the findings. Three variables emerge as significant. First, GNP per capita. This finding confirms that of Powell: economic development does seem to facilitate turnout. The relationship is logarithmic. This implies that the main difference is at the low end of economic development: everything else being equal, turnout increases by 13 points when GNP per capita moves from 163 American dollars (Malawi, 1994), the lowest in the sample, to the average (7,614) but only by 5 points when it moves from the average to the

highest, 30,433 (Luxembourg, 1994). It is the economic structure, however, and not the economic conjuncture, that seems to matter, as higher economic growth does not foster turnout.

But economic development is not all that matters. Even at a given level of economic development, turnout is affected by the degree of illiteracy.[9] This confirms that a minimum degree of literacy is almost a prerequisite to a good turnout. The relationship is curvilinear. Holding all other variables constant, turnout increases by a hefty 16 points when the illiteracy rate moves from the highest level (85%)[10] to the average (12%) but by only one point when it moves from the average to the lowest level (2.5%).[11] It is extremely difficult to achieve a high level of turnout when there is a high degree of illiteracy.

Turnout is also higher in smaller countries. The relationship is logarithmic, indicating that the important difference is between smaller countries and all other countries. Everything else being equal, turnout is 7 points higher in a country of 100,000 people than in one of 26 million, which is the average in the sample; the difference between turnout in a country of 26 million and one of 100 million is only 2 points.[12] This confirms the view that smaller countries are able to arouse a greater sense of community which itself fosters a higher turnout. The results also indicate that turnout is somewhat higher in more densely populated countries. The relationship, however, is not very strong.

Finally, turnout varies substantially across continents, even when other socio-economic factors are controlled for. It is particularly high in Oceania and particularly low in Africa and North America. It would thus seem that other unmeasured factors that are specific to the political cultures of these continents affect voting participation.

The institutional setting

Voting is a political act, and turnout depends not only on social and economic factors but also on how elections and politics more broadly are structured. The second stage of the analysis thus looks at the impact of political institutions.

Five institutional features appear particularly worthy of examination.[13] The first three have to do with the *electoral law*. First, in a number of countries the law makes it compulsory to vote. As previous studies have shown (Powell 1982; Jackman 1986; Blais & Carty 1990; Black 1991; Franklin 1996), we expect *turnout to be substantially higher in countries where voting is compulsory*. Second, the voting age varies from one country to another. As young voters are less inclined to vote, in good part because they have been less exposed to politics (see, especially, Wolfinger & Rosenstone 1980), the hypothesis is that the *lower the voting age, the lower the turnout.*

Finally, the electoral system. The standard assumption is that *turnout tends to be higher in PR systems*, for any (combination) of the following three reasons (see Blais & Carty 1990). First, PR is a fairer system, and because it is fair people feel less alienated and are thus more inclined to vote. Second, PR increases the number of parties and the variety of options among which people can choose. Third, PR makes elections more competitive: as there are many members to be elected in each district, most parties have a chance to win at least one seat, and as a consequence they attempt to mobilize electors throughout the country.

At first sight, all previous studies (Powell 1986; Jackman 1986; Blais & Carty 1990; Black 1991; Franklin 1996) seem to provide strong support for this hypothesis. The evidence is not unambiguous, however. First, both Powell and Jackman rely on a variable they call 'nationally competitive districts', which encapsulates the combined effect of the electoral formula and of district magnitude; the result is that it is not clear what it measures exactly (Blais & Carty 1991). Second, while Blais and Carty (1991) find PR to foster turnout, they are unable to explain why, since none of the three mediating variables (disproportionality, number of parties, and competitiveness) through which PR is generally assumed to affect turnout comes out significant. Furthermore their results hinge on the inclusion of dummy variables for four countries; reanalysis of their data shows that differences among electoral formulas are no longer significant when these dummy variables are dropped.

It is thus appropriate to reexamine, with a larger sample of elections and a more systematic set of control variables, the impact of electoral systems on turnout. We have created dummy variables for *PR, plurality, majority*, and *mixed* systems.

The next institutional characteristic pertains to the decisiveness of elections. As Jackman (1986) has argued, we would expect turnout to be higher the more important the election, that is the greater the power that is bestowed on those elected. We look at turnout for the election of the national lower house. The more powerful the national lower house, the more decisive the election, and the higher the expected turnout.

The lower house may have to share power with other institutions, specifically with an upper house, a president, or other subnational institutions. Unfortunately, we do not have standardized data on the relative power of these institutions. We may assume, however, that they are more likely to be powerful if they are directly elected.

We may thus predict that turnout will be lower if there is an elected upper house or president or if the country is a federation. This prediction holds only if subnational, presidential or upper house elections are *not* held at the same time. The presence of an elected upper house, for instance, matters only if

the lower and upper house elections are *not* held at the same time: in such a context, the lower house election can be construed as being less decisive, and turnout could be lower. If the two elections are held at the same time, the situation is equivalent to there being one house.

We constructed a dummy variable that takes into account the presence and the timing of subnational, upper house, and/or presidential elections. The variable takes the value of 1 if there are no such elections or if the elections are simultaneous (the lower house election in both cases is decisive), of 0.5 if there is one other election (subnational, upper house, or presidential) that is held non-simultaneously, and of 0 if there are two (the election can then be construed as being less decisive).[14] The prediction is that *turnout is higher when the election is more decisive*.

We have finally included *degree of democracy* as an additional institutional variable. All elections included here are considered to be democratic but the degree of democracy may vary from one case to another. More specifically, some countries obtained a score of 1 on political rights, and others a score of 2. In the latter case, elections can be construed as somewhat less democratic, and possibly less decisive, thus yielding a somewhat lower turnout.

The findings are reported in Table 2. Compulsory voting seems to boost turnout by 11 points. This is consistent with the results of previous studies. Likewise, the lower the voting age, the lower the turnout: everything else being equal, turnout is reduced by almost two points when the voting age is lowered one year. The implication is that lowering the voting age from 21 to 18 reduces turnout by 5 points. This is not surprising given the lower propensity of younger electors to vote.

The results also indicate that turnout is affected by the decisiveness of elections: everything else being equal, turnout is reduced by 6 points when lower house elections are least decisive. These findings are consistent with those reported by Jackman.

The results concerning electoral systems are interesting. Column 1 shows that turnout is slightly higher in PR than in plurality, majority or mixed systems: the differences, however, are small and not significant, except in the case of majority systems. Among mixed systems, we may distinguish those that are corrective (such as Germany), where PR seats are distributed so as to compensate weaker parties that do poorly in single-member seats, and those where PR and plurality or majority are simply combined without any corrective (Blais and Massicotte 1996). It could be argued that the former are basically PR systems. When they are coded as such, the differences between PR and mixed systems become somewhat larger, though still not statistically significant (Column 2).

Table 2. The determinants of electoral participation: socio-economic environment and institutional setting.

Variables	Column 1		Column 2		Column 3		Column 4		Column 5	
	B	(Error)	B	(Error)	B	(Error)	B	(Error)	B	(Error)
North America	−8.76***	(2.39)	−9.15***	(2.40)	−7.62***	(2.20)	−8.29***	(2.06)	−7.99***	(2.41)
South America	−5.69**	(2.40)	−4.81**	(2.36)	−4.35*	(2.34)	−7.63***	(2.45)	−8.37***	(2.63)
Africa	−3.89	(3.13)	−4.39	(3.14)	−3.19	(2.98)	−10.09***	(3.43)	−9.15**	(3.70)
Asia	−2.77	(2.54)	−3.12	(2.53)	−1.85	(2.44)	−4.48*	(2.40)	−3.74	(2.48)
Oceania	9.94***	(2.99)	9.71***	(2.99)	9.80***	(2.73)	8.27***	(2.33)	9.27***	(2.87)
Density	7.43**	(3.60)	7.45**	(3.58)	8.08**	(3.55)	4.47	(3.67)	3.61	(3.77)
GNP per capita (log)	3.49***	(0.81)	3.33***	(0.82)	3.35***	(0.81)	2.96***	(0.90)	2.76***	(0.92)
Illiteracy rate (squared)	−0.001**	(0.001)	−0.002**	(0.001)	−0.002**	(0.001)	−0.0004	(0.001)	−0.001	(0.001)
Size of population (log)	−2.97***	(0.83)	−2.97***	(0.82)	−3.00***	(0.81)	−3.07***	(0.83)	−2.80***	(0.83)
Switzerland	−35.00***	(4.32)	−35.05***	(4.30)	−35.04***	(4.30)	−35.33***	(4.24)	−35.35***	(4.24)
Compulsory voting	11.72***	(1.58)	11.73***	(1.58)	10.61***	(1.46)	10.56***	(1.43)	10.84***	(1.51)
Degree of democracy	−0.13	(1.52)	−0.25	(1.52)	−0.21	(1.52)	−0.46	(1.59)	−0.86	(1.59)
Decisiveness	4.97**	(2.13)	5.10**	(2.13)	6.17***	(2.04)	6.06***	(2.12)	5.92***	(2.11)
Voting age	1.26**	(0.55)	1.23**	(0.55)	1.31**	(0.55)	1.68***	(0.57)	1.82***	(0.57)
Plurality	−0.49	(1.93)	−0.59	(1.92)						
Majority	−6.03*	(3.13)	−6.02*	(3.12)						
Mixed 1	1.65	(2.20)								
Mixed 2			−4.93	(3.34)						
PR					2.63*	(1.58)			5.81**	(2.87)
Disproportionality							−0.19**	(0.08)	0.05	(0.14)
Disproportionality × PR									−0.46**	(0.20)
Constant	31.55	(13.60)	33.77	(13.64)	28.84	(13.73)	30.64	(14.06)	24.90	(15.10)
N	298		298		298		271		271	
Adjusted R^2	0.54		0.54		0.54		0.54		0.54	

* Significant at the 0.10 level; ** significant at the 0.05 level; *** significant at the 0.01 level.

The main difference, then, is between PR (including corrective mixed systems) on the one hand, and all other systems on the other hand. Column 3 establishes that, everything else being equal, turnout is three points higher in PR systems. The difference is small but statistically significant.

It could be argued that what really matters is not the type of electoral system as such but the overall degree of disproportionality it produces. There are a great variety of PR systems (Blais & Massicotte 1996), which diverge substantially in the degree to which they represent smaller parties. In Column 4, we substitute the degree of disproportionality for the dummy PR system. It can be seen that the variable is statistically significant.

Column 5 combines the electoral system and the degree of disproportionality. It shows that a fully proportional system, in which seat shares correspond exactly to vote shares, yields a turnout that is 6 points higher than a non-PR system. The impact is, however, reduced as the degree of disproportionality increases: for a deviation index of 13, the difference vanishes entirely.[15] And disproportionality does not have any independent impact in non-PR systems, which is what we would expect given the fact that the degree of disproportionality observed within non-PR systems is likely to depend more on the distribution of the vote than on the mechanics of the electoral law.

Finally, turnout does not appear to be lower in countries where political rights are not as well protected. This may not be surprising. Most of these cases are new democracies and the stakes in these countries are probably as high as in well-established democracies.

It is also interesting to note that economic development and size of population still affect turnout, even after institutional variables are included. Turnout is lower in countries with a lower GNP per capita and a larger population for reasons that have little to do with institutional factors. The same pattern holds for continental variations

The party system

In a legislative election, electors are offered to make a choice among parties and candidates. We would expect turnout to depend to a good extent on the kind of choice people are offered, and that choice is very much structured by the party system. The party system stems in part from the socio-economic environment and the institutional setting, but we may suppose that it also has a life of its own.

We consider two aspects of the party system. First, the number of parties. It can be predicted that *the greater the number of parties, the more choice electors are offered, and the higher the turnout*. Counter-arguments, however, have to be considered: the greater the number of parties, the more complex

the system, and the more difficult it can be for electors to make up their mind. Moreover, the greater the number of parties, the less likely it is that there will be a one-party majority government. And elections that produce coalition governments can be construed as being less decisive, as the composition of the government is the product of backroom deals among the parties as much as of the electoral outcome per se (Jackman 1986). This suggests the opposite hypothesis that *the greater the number of parties, the smaller the probability of a one-party majority government and the lower the turnout.*

There are conflicting results on these two dimensions. Jackman (1986) finds that multipartyism depresses turnout, and infers that this is because multipartyism produces coalition governments. Blais & Carty (1990) report a similar pattern though the relationship is curvilinear; but they do not find that turnout is increased when there is a one-party majority government. Finally, Black (1991) indicates no link at all between number of parties and turnout. We use three measures of the number of parties: the number of parties running in the election, and the effective number of electoral and legislative parties (see Laasko & Taagepera 1979). We also include a dummy variable that equals 1 for all those elections when one party wins a majority of the seats.

The second dimension of the party system is competitiveness. The expectation is that *the closer the election, the higher the turnout.* The measure of closeness is the gap (in vote shares) between the leading and the second parties. Here again, the results of previous studies are not conclusive, as the hypothesis is confirmed by Blais & Carty (1990) but not by Powell (1982) and Black (1991).

Table 3 presents the findings. It can be seen that closeness does matter. When there is a gap of 10 points between the leading and the second parties, turnout is reduced by 1.4 points. It should be stressed that we are measuring only the impact of overall systemic competitiveness. An election may be very close at the national level but not close at all in a number of districts.[16] Those results thus underestimate the true impact of closeness.

As for the number of parties, the results confirm Jackman's finding that turnout tends to be reduced when the number of parties increases.[17] The relationship is logarithmic: turnout declines by 4 points when the number of parties moves from 2 to 6, but by only 2 points from 6 parties to 10 and from 10 to 15.

Some have suggested that a greater number of parties makes it less likely that a one-party majority government will be formed after the election, and that this makes elections less decisive. If such a view is valid, it should follow that elections in which one party gets a majority of seats tend to produce a higher turnout. Our 'majority government' variable does not come out significant. Not too much should be made of this null finding, however. That variable is

Table 3. The determinants of electoral participation: socio-economic environment, institutional setting and party system.

Variables	B	(Error)
North America	−9.50***	(2.28)
South America	−8.22***	(2.34)
Africa	−8.38**	(3.41)
Asia	−2.42	(2.25)
Oceania	6.57**	(2.71)
GDP per capita (log)	2.83***	(0.68)
Size of population (log)	−2.57***	(0.80)
Switzerland	−34.55***	(4.23)
Compulsory voting	10.41***	(1.48)
Decisiveness	7.70***	(2.05)
Voting age	1.79***	(0.56)
PR	4.82***	(1.79)
Disproportionality × PR	−0.33**	(0.14)
Closeness	−0.14**	(0.06)
Number of parties (log)	−8.99**	(3.66)
One-party majority government	−0.25	(1.95)
Constant	32.11	(13.37)
N	276	
Adjusted R^2	0.57	

* Significant at the 0.10 level; ** significant at the 0.05 level; *** significant at the 0.01 level.

strongly correlated with the number of parties and electoral systems, and this makes it difficult to sort out its specific impact.

It is hard, indeed, to make sense of our results concerning the negative effect of the number of parties without the 'majority government' hypothesis. The only alternative interpretation would be that complexity increases with the number of parties. If it were so, however, turnout should decline substantially when the number of parties gets very high. But, as we have just observed, turnout is only slightly reduced when the number of parties moves from 10 to 15. The important difference is between a system with very few parties, 2 or 3, and one with 6 or 7. And the most plausible explanation for that difference is that in the former case people are more likely to feel they are electing the party that will form the government.

It is interesting to note, finally, that the introduction of these party system variables does not substantially affect the coefficients of the other variables. The fuller equation does help however, to account for the slightly higher

turnout observed in PR systems. Three reasons have been adduced to predict a higher turnout in PR systems: a fairer system, more competitive elections, and more parties. The data indicate that fairness and competitiveness do foster turnout. As for the number of parties, the relationship is negative: PR rarely produces one-party majority governments, thus slightly reducing turnout. PR thus has both positive and negative effects, with the overall impact being a slightly positive one.

From this perspective, our results are more satisfactory than those obtained by Blais & Carty (1990). Our findings indicate that, everything else being equal, turnout is 3 points higher in PR than in non-PR systems. This estimate is lower than that of Blais and Carty, but in this study we are able to explain why PR modestly increases turnout.

We note, finally, that dummy variables for the continents remain significant. It would seem that even taking into account the socio-economic environment, the institutional setting, and the party system, turnout is particularly high in Oceania and particularly low in America and Africa. We do not have ready explanations for this pattern, which would require further analysis.

Conclusion

When and where is turnout highest and lowest and why? Previous studies have addressed this question by looking at a limited number of countries. We have argued that there is no theoretical reason not to consider all democratic elections. Relying on Freedom House ratings of political rights, we have examined 324 democratic elections held in 91 countries, between 1972 and 1995. We have distinguished three blocs of variables that may affect turnout: the socio-economic environment, institutions, and party systems.

Our study shows that turnout in the national lower house election is affected by a great number of factors: economic development, degree of illiteracy, population size and density, the presence or absence of compulsory voting, voting age, the electoral system, the closeness of the electoral outcome, and the number of parties.

Most of these factors affect turnout only at the margin but when combined they can make a substantial difference. Turnout is likely to be highest in a small, industrialized, densely populated country, where the national lower house election is decisive, voting is compulsory and the voting age is 21, having a PR system with relatively few parties and a close electoral outcome. All of these conditions are never met in any specific instance but when most are, turnout can exceed 90 percent, and when most conditions are not met, turnout may easily be under 60 percent.

Our study also illustrates the fruitfulness of distinguishing blocs of variables when examining the determinants of turnout. Previous studies have been prone to put a great number of variables into the same equation without distinguishing their conceptual status. It makes sense, we have argued, to start with the most distant factor, the socio-economic environment, and to assess its overall impact, then to turn our attention to the role of institutions, and finally to find out whether the party system has an additional effect of its own.

Our findings confirm those of previous studies that institutions do matter, and that turnout is affected by a number of institutional features. But we show that the socio-economic environment also matters substantially. Turnout is strongly affected by economic development, the degree of illiteracy, and population size.

The impact of socio-economic variables has tended to be downplayed by previous studies, partly because the focus has been on institutional factors and partly because the analysis has been limited to industrialized countries which do not differ as markedly with respect to many of these variables. The fact remains, however, that a moderate degree of economic development is almost a prerequisite for a high level of turnout in a democratic election. It is only when we look at all democratic elections, in poor as well as in rich countries, that this pattern clearly emerges.

Notes

1. Black (1991) also examines industrial democracies. As for Blais & Carty (1990), and Franklin (1996) their data base includes the countries covered by Mackie & Rose (1991).
2. The same criterion is used by Cox (1997).
3. There was a total of 359 elections. We were not able to obtain data on turnout in 34 cases and we excluded one case where the election was boycotted. Mean turnout is 77 percent.
4. We would have preferred to use GDP per capita but unfortunately that measure was not available for all the cases examined here. For all socio-economic variables, we use data pertaining to the year of the election if the election is held in July or later. If the election is held in the first six months, we use data pertaining to the previous year.
5. Radcliff (1992) suggests that economic downturns depress turnout only at intermediate levels of welfare spending, and that the impact is reversed at high and low levels of spending. Some of the results obtained by Radcliffe (especially the fact that average turnout in the two previous elections is not statistically significant), however, are perplexing. Furthermore, Jackman & Miller (1995, Appendix 3, note 3) failed to replicate his findings for industrialized countries.
6. Verba, Nie and Kim find the relationship to be weaker for voting than for community activity. It remains that the median net gap between rural and urban turnout is five points.
7. Powell (1982) also reports a negative relationship, which is however not statistically significant, perhaps because it is based on a smaller number of observations.
8. As Powell (1982, 1986), Jackman (1987) and Jackman & Miller (1995) have argued, Switzerland is a special case because of demobilization of party competition by the four major parties which have agreed to share the collective executive, thus making

electoral outcomes virtually meaningless, and because of the exceptionally frequent use of referenda.

9. The correlation between the two variables (−0.52) is not overwhelming. The implication is that some of the impact of economic development is mediated through a higher literacy rate. If illiteracy is dropped from the equation in Table 1, the coefficient of GNP per capita increases to 3.77. We should also note that illiteracy is strongly correlated (−0.82) with life expectancy. It is thus difficult to sort out the specific effects of these two variables. We believe, however, that illiteracy is more likely to affect turnout than life expectancy.
10. This is Burkina Faso, 1978.
11. For a good number of countries, the UNESCO source indicates only that the rate is less than 5 percent. All these countries were given a rate of 2.5 percent.
12. The impact of size does not simply reflect the inclusion of very small countries. We have added a dummy variable for all countries with a population smaller than one million. The dummy variable proved to be non significant, and size of population (log) remained significant.
13. Franklin (1996) reports that turnout appears to be higher when postal voting is allowed, when the election takes place in a single day and when that single day is Sunday. We were unable to obtain information on these three dimensions in many of the countries covered in our analysis.
14. There is no instance of three other non-simultaneous elections.
15. Thirteen percent of PR elections have a deviation index of 10 or more. The average deviation index in PR systems is 5.7.
16. This is of course more likely to be the case in single-member districts. On the importance of measuring competitiveness at the district level, see Cox (1997).
17. We have also run regressions with effective number of electoral and legislative parties but we obtain slightly better results with the simple measure of the number of parties. We would argue that this simple measure corresponds more closely to the kind of information that is most easily available to most electors.

Appendix A

Democratic elections 1972–95 and participation rate

Country and election date	Participation (%)	Country and election date	Participation (%)	Country and election date	Participation (%)
Europe					
Andorra 12/93	80.9	France 03/78	83.2	Italy 06/83	89.0
Austria 10/75	92.9	France 06/81	70.9	Italy 06/87	90.5
Austria 05/79	92.2	France 03/86	78.5	Italy 04/92	87.3
Austria 04/83	92.6	France 06/88	66.2	Italy 03/94	86.1
Austria 11/86	90.5	France 03/93	67.5	Liechtenstein 03/89	90.9
Austria 10/90	86.1	Germany 11/72	91.1	Liechtenstein 10/93	85.3
Austria 10/94	78.1	Germany 10/76	90.7	Lithuania 11/92	75.2
Austria 12/95	82.7	Germany 10/80	88.6	Luxembourg 05/74	90.1
Belgium 03/74	90.3	Germany 03/83	88.4	Luxembourg 06/79	88.9
Belgium 04/77	95.1	Germany 01/87	84.3	Luxembourg 06/84	88.8
Belgium 12/78	94.8	Germany 12/90	77.8	Luxembourg 06/89	87.3
Belgium 11/81	94.6	Germany 10/94	78.9	Luxembourg 06/94	86.6
Belgium 10/85	93.6	Greece 11/74	79.5	Malta 09/76	95.0
Belgium 12/87	93.4	Greece 11/77	81.1	Malta 12/81	94.6
Belgium 11/91	92.7	Greece 10/81	81.5	Malta 05/87	96.1
Belgium 05/95	91.2	Greece 06/85	83.8	Malta 02/92	96.0
Bulgaria 10/91	83.9	Greece 06/89	84.5	Monaco 01/93	73.2
Bulgaria 12/94	75.2	Greece 10/93	79.2	Netherlands 11/72	83.5
Czechoslovakia 06/90	96.3	Hungary 04/90	65.1	Netherlands 05/77	88.0
Czechoslovakia 06/92	84.7	Hungary 05/94	68.9	Netherlands 05/81	87.0
Denmark 12/73	88.7	Iceland 06/74	91.4	Netherlands 09/82	81.0
Denmark 01/75	88.2	Iceland 06/78	90.3	Netherlands 05/86	85.8
Denmark 02/77	88.0	Iceland 12/79	89.3	Netherlands 09/89	80.1
Denmark 10/79	85.6	Iceland 04/83	88.6	Netherlands 05/94	78.3
Denmark 12/81	83.2	Iceland 04/87	90.1	Norway 09/73	80.2
Denmark 01/84	88.4	Iceland 04/91	87.5	Norway 09/77	82.9
Denmark 09/87	86.7	Iceland 04/95	87.4	Norway 09/81	82.0
Denmark 05/88	85.7	Ireland 02/73	76.6	Norway 09/85	84.0
Denmark 12/90	82.8	Ireland 06/77	76.3	Norway 09/89	83.2
Denmark 09/94	84.0	Ireland 06/81	76.2	Norway 09/93	75.8
Finland 01/72	81.4	Ireland 02/82	73.8	Poland 10/91	43.2
Finland 09/75	73.8	Ireland 11/82	72.8	Poland 09/93	52.8
Finland 03/79	75.3	Ireland 02/87	73.3	Portugal 04/76	83.3
Finland 03/83	75.7	Ireland 06/89	65.5	Portugal 12/79	87.5
Finland 03/87	72.1	Ireland 11/92	68.5	Portugal 10/80	85.4
Finland 03/91	68.3	Italy 05/72	93.2	Portugal 04/83	78.6
Finland 03/95	68.6	Italy 06/76	93.4	Portugal 10/85	75.4
France 03/73	81.3	Italy 06/79	91.1	Portugal 07/87	72.6

Appendix A (continued)

Country and election date	Participation (%)	Country and election date	Participation (%)	Country and election date	Participation (%)
Europe (continued)					
Portugal 10/91	67.8	Spain 10/89	69.9	Switzerland 10/79	48.1
Portugal 10/95	67.2	Spain 06/93	77.1	Switzerland 10/83	48.9
San Marino 05/78	79.0	Sweden 09/73	90.8	Switzerland 10/87	46.1
San Marino 05/83	79.5	Sweden 09/76	91.8	Switzerland 10/91	46.0
San Marino 05/88	81.1	Sweden 09/79	90.7	Switzerland 10/95	42.3
San Marino 05/93	80.3	Sweden 09/82	91.4	United Kingdom 02/74	78.9
Slovakia 09/94	75.7	Sweden 09/85	89.9	United Kingdom 10/74	72.9
Slovenia 12/92	85.9	Sweden 09/88	86.0	United Kingdom 05/79	76.3
Spain 03/79	68.1	Sweden 09/91	86.7	United Kingdom 06/83	72.8
Spain 10.82	79.8	Sweden 09/94	86.8	United Kingdom 06/87	75.4
Spain 06/86	70.6	Switzerland 10/75	52.4	United Kingdom 04/92	77.0
Asia					
Bangladesh 03/73	57.0	Israel 06/81	78.5	Japan 07/93	67.0
Bangladesh 02/91	52.0	Israel 07/84	78.8	Lebanon 04/72	39.0
Cyprus 05/81	95.8	Israel 11/88	79.7	Nepal 05/91	65.0
Cyprus 12/85	94.6	Israel 06/92	77.4	Philippines 05/87	90.0
Cyprus 05/91	93.0	Japan 12/72	71.7	South Korea 04/88	75.7
India 03/77	60.5	Japan 12/76	73.4	South Korea 03/92	71.9
India 01/80	56.8	Japan 10/79	68.0	Turkey 06/77	70.0
India 12/84	63.5	Japan 06/80	74.6	Turkey 11/87	93.3
India 11/89	58.0	Japan 12/83	67.9	Turkey 10/91	83.9
Israel 12/73	78.6	Japan 07/86	71.4		
Israel 05/77	79.2	Japan 02/90	73.3		
Oceania					
Australia 12/72	95.4	Fiji 05/72	99.3	New Zealand 08/87	87.2
Australia 05/74	95.4	Fiji 07/82	86.0	New Zealand 10/90	85.2
Australia 12/75	95.4	Kiribati 01/83	75.9	New Zealand 11/93	85.2
Australia 12/77	95.0	Kiribati 03/87	84.0	Papua New Guinea 06/82	96.5
Australia 10/80	94.4	Nauru 01/87	92.7	Samoa 04/91	78.0
Australia 03/83	94.6	New Zealand 11/72	89.1	Solomon Islands 02/89	64.9
Australia 12/84	94.2	New Zealand 11/75	82.5	Solomon Islands 05/93	63.6
Australia 07/87	93.8	New Zealand 11/78	83.7	Vanuatu 11/83	98.7
Australia 03/90	95.5	New Zealand 11/81	89.0	Vanuatu 11/87	83.0
Australia 03/93	95.7	New Zealand 07/84	91.7		
Africa					
Benin 02/91	51.7	Botswana 10/89	68.2	Gambia 03/72	79.5
Botswana 10/74	33.0	Botswana 12/94	76.6	Gambia 04/77	82.0
Botswana 10/79	58.0	Burkina Faso 04/78	40.2	Gambia 04/92	55.8
Botswana 09/84	76.0	Cape Verde 01/91	75.3	Madagascar 06/93	60.0

Appendix A (continued)

Country and election date	Participation (%)	Country and election date	Participation (%)	Country and election date	Participation (%)
Africa (continued)					
Malawi 05/94	80.0	Mauritius 08/87	85.0	Sao Tome & Principe 01/91	76.7
Mali 03/92	21.3	Mauritius 09/91	84.5	Sao Tome & Principe 10/94	52.1
Mauritius 12/76	91.0	Namibia 12/94	76.1	South Africa 04/94	86.9
Mauritius 06/82	90.0	Nigeria 08/83	38.9	Zambia 10/91	45.5
North America					
Antigua & Barbuda 05/84	61.1	Costa Rica 02/82	78.6	Jamaica 09/89	78.4
Antigua & Barbuda 03/89	60.7	Costa Rica 02/86	81.8	Jamaica 03/93	60.0
Bahamas 07/77	89.9	Costa Rica 02/90	81.8	Panama 05/94	73.7
Bahamas 06/82	89.8	Costa Rica 02/94	81.1	St. Kitts & Nevis 06/84	77.7
Bahamas 06/87	87.9	Dominica 07/80	80.2	St. Kitts & Nevis 03/89	66.4
Barbados 09/76	74.1	Dominica 07/85	74.6	St. Kitts & Nevis 11/93	66.4
Barbados 06/81	71.6	Dominica 05/90	66.6	St. Lucia 07/79	68.0
Barbados 05/86	76.7	Dominican Rep. 05/78	72.5	St. Lucia 05/82	65.8
Barbados 01/91	63.7	Dominican Rep. 05/82	73.9	St. Lucia 04/87	60.7
Barbados 09/94	60.3	Dominican Rep. 05/86	69.5	St. Lucia 04/87	64.7
Belize 12/84	75.0	Dominican Rep. 05/90	59.4	St. Lucia 04/92	62.8
Belize 09/89	72.6	El Salvador 03/72	56.7	St. Vincent & Gren. 12/79	63.9
Canada 10/72	77.2	El Salvador 03/85	43.3	St. Vincent & Gren. 07/84	88.8
Canada 07/74	71.0	Grenada 12/76	65.3	St. Vincent & Gren. 05/89	72.4
Canada 05/79	75.7	Grenada 03/90	68.4	St. Vincent & Gren. 02/94	65.6
Canada 02/80	69.3	Grenada 06/95	61.8	Trinidad & Tobago 09/76	55.8
Canada 09/84	75.7	Honduras 11/85	84.0	Trinidad & Tobago 11/81	56.4
Canada 11/88	75.5	Honduras 11/89	76.0	Trinidad & Tobago 12/86	65.5
Canada 10/93	69.7	Jamaica 02/72	78.9	Trinidad & Tobago 12/91	65.8
Costa Rica 02/74	79.9	Jamaica 12/76	85.2		
Costa Rica 02/78	81.2	Jamaica 10/80	86.1		
South America					
Argentina 11/85	82.2	Chile 12/93	91.3	Guyana 07/73	82.9
Argentina 09/87	83.6	Columbia 04/74	57.1	Peru 05/80	80.1
Argentina 05/89	84.2	Columbia 02/78	33.0	Peru 04/85	80.5
Argentina 12/91	89.7	Columbia 03/82	41.0	Surinam 10/77	77.8
Argentina 10/93	79.7	Columbia 03/86	43.6	Uruguay 11/89	88.7
Argentina 05/95	80.9	Columbia 10/91	31.9	Uruguay 11/94	91.4
Bolivia 07/85	82.0	Ecuador 01/84	71.2	Venezuela 12/73	96.5
Bolivia 05/89	73.7	Ecuador 06/86	74.0	Venezuela 12/78	87.5
Brazil 11/86	85.0	Ecuador 01/88	77.7	Venezuela 12/83	87.8
Brazil 10/94	82.2	Ecuador 06/90	67.7	Venezuela 12/88	81.7
Chile 03/73	81.2	Ecuador 05/92	73.0		

Democratic elections excluded from the analysis because of missing participation data:
Andorra 04/92, Bahamas 08/92, Belize 06/93, Benin 03/95, Bolivia 06/93, Brazil 10/90, Dominica 06/95, El Salvador 03/74, Ecuador 05/94, Fiji 04/77, Kiribati 05/91, Kiribati 07/94, Liechtenstein 02/93, Micronesia 03/91, Micronesia 03/93, Micronesia 03/95, Nauru 12/76, Nauru 11/77, Nauru 12/80, Nauru 12/83, Nauru 12/89, Nauru 11/92, Papua New Guinea 06/77, Papua New Guinea 06/87, Papua New Guinea 06/92, Solomon Islands 08/80, Solomon Islands 10/84, Sri Lanka 07/77, Tuvalu 09/81, Tuvalu 09/85, Tuvalu 09/89, Tuvalu 09/93, Vanuatu 12/91.
Participation rate = Jamaica 12/83 excluded because of boycott (participation rate 2.7%).

Appendix B

The dependent variable

Variable	Indicator	Sources
Turnout	Percentage of those registered on the electoral list who cast a vote	Inter-Parliamentary Union, *Chronique des élections et de l'évolution parlementaires*; Mackie and Rose (1991); *European Journal of Political Research* (various years); *Electoral Studies* (various years); IFES, *Elections Today* (various years); *Keesing's Record of World Events* (various years); Nohlen, Dieter (1993); Jones, Marc P. (South America, personal information); Mozaffar, Shaheen (Africa, personal information)

Appendix C

The independent variables

Variables	Indicator	Source
North America	A dummy variable which equals 1 when the election was held in North America	UNESCO, *Statistical Yearbook*
South America	A dummy variable which equals 1 when the election was held in South America	UNESCO, *Statistical Yearbook*
Africa	A dummy variable which equals 1 when the election was held in Africa	UNESCO, *Statistical Yearbook*
Asia	A dummy variable which equals 1 when the election was held in Asia	UNESCO, *Statistical Yearbook*
Oceania	A dummy variable which equals 1 when the election was held in Oceania	UNESCO, *Statistical Yearbook*
Average Life Expectancy	Average life expectancy (number of years)	World Bank, *World Tables*
Density	The number of people by squared kilometers of territory	World Bank, *World Tables* UNESCO, *Statistical Yearbook*
GNP per capita (log)	GNP per capita in constant US dollars measured as GNP per capita in current US dollars divided by corresponding US GDP deflator	World Bank, *World Tables*

Appendix C (continued)

Variables	Indicator	Source
Growth of GNP	Annual percentage increase or decrease in GNP per capita in the election year compared to the previous year (based on gross national product indicator expressed in local currency)	World Bank, World Tables
Illiteracy Rate (squared)	The proportion of adult illiterate population	UNESCO, *Statistical Yearbook*
Size of Population (log)	Total population	World Bank, *World Tables*
Switzerland	A dummy variable which equals 1 when the election was held in Switzerland	
Compulsory Voting	A dummy variable which equals 1 when voting is compulsory	Inter-Parliamentary Union, *Chronique des élections et de l'évolution parlementaires*[*]
Degree of Democracy	A dummy variable which equals 1 when the election was held in the country which obtained a score of 1 on political rights	Freedom House
Voting Age	A variable which ranges from 16 to 21, corresponding to the voting age requirement	Inter-Parliamentary Union, *Chronique des élections et de l'évolution parlementaires*[*]
Decisiveness	Scale from 0 to 1, depending on the presence and the timing of subnational elections in federations, upper house direct elections in bicameral countries and presidential direct elections: 1 = no such elections or other elections (subnational, upper house, or presidential) are held simultaneously; 0.5 = one other election (subnational, upper house, or presidential) held non-simultaneously; 0 = two other elections (subnational, upper house, or presidential) held non-simultaneously	Inter-Parliamentary Union, *Chronique des élections et de l'évolution parlementaires*; *Keesing's Record of World Events*
Plurality	A dummy variable which equals 1 when the election was held under the plurality rule	*see* Appendix B[*]
Majority	A dummy variable which equals 1 when the election was held under the majority rule	*see* Appendix B[*]
Mixed 1	A dummy variable which equals 1 when the election was held under the mixed rule	*see* Appendix B[*]

Appendix C (continued)

Variables	Indicator	Source
Mixed 2	A dummy variable which equals 1 when the election was held under the mixed rule, excluding mixed corrective systems	*see* Appendix B*
PR	A dummy variable which equals 1 when the election was held under the proportional representation rule, including corrective mixed systems	*see* Appendix B*
Disproportionality	The sum of absolute values of vote-seat share differences, divided by 2	*see* Appendix B
Disproportionality × PR		*see* Appendix B
Number of Parties (log)	The number of parties running in the election which obtained at least 1% of votes	*see* Appendix B
One-Party Majority Government	A dummy variable which equals 1 when the election produced a one-party majority government	*see* Appendix B
Closeness	The difference in vote shares between the leading and the second parties	*see* Appendix B

* We had access to the electoral laws of the following countries: Australia, Austria, Belgium, Benin, Canada, Cape Verde, France, Germany, Greece, Hungary, Italy, Nepal, Portugal, South Africa, Spain, Switzerland, United Kingdom.

We also consulted the following sources:

Andreenkov & Andreenkova 1995; Blaustein & Flanz (various years); Dimitras 1994; Diskin 1992; Gonzales 1991; Grzybowski 1994; Jones 1995; Juberias 1994; Mathur 1991; Moriss 1993; Mozaffar 1995; Simon 1995; Sisk 1994; Sóltesz 1994.

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Address for correspondence: André Blais, Département de Science Politique, Université de Montréal, C.P. 6128, Succursale Centre-Ville, Montréal, PQ, Canada
Phone: (514) 343-7349; Fax: (514) 343-2360; E-mail: blais@ere.umontreal.ca