

Kohler, Ulrich; Rose, Richard

Working Paper

Election outcomes and maximizing turnout: Modelling the effect

WZB Discussion Paper, No. SP I 2008-203

Provided in Cooperation with:

WZB Berlin Social Science Center

Suggested Citation: Kohler, Ulrich; Rose, Richard (2008) : Election outcomes and maximizing turnout: Modelling the effect, WZB Discussion Paper, No. SP I 2008-203, Wissenschaftszentrum Berlin für Sozialforschung (WZB), Berlin

This Version is available at:

<https://hdl.handle.net/10419/44131>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

WZB Discussion Paper

Ulrich Kohler, Richard Rose

**Election Outcomes and Maximizing Turnout:
Modelling the Effect**

September 2008

Order No.:

SP I 2008 - 203

ISSN 1612-3468

Research Area:

Education, Work,
and Life Chances

Research Unit:

Inequality and Social
Integration

Social Science Research Center Berlin (WZB)
Reichpietschufer 50, 10785 Berlin
<http://www.wzb.eu>

* Richard Rose is Director of the Centre for the Study of Public Policy and Professor of Politics at the University of Aberdeen, Scotland. Several times he was visiting researcher in the Research Unit Inequality and Social Integration in recent years.

Abstract

An election outcome reflects institutional, behavioural and attitudinal influences. We set out a model showing it is a function of the electoral system, the offices at stake and the number of parties competing as well as the choices of voters and the level of turnout. Therefore, any attempt to estimate the impact of increased turnout on an election outcome must go beyond a comparison of the party preferences of voters and non-voters. This paper presents a model which integrates six different types of influences that collectively determine election outcomes. It demonstrates empirically that maximum turnout falls well short of 100 percent turnout. It also shows the effect of proportional representation and multiple parties in reducing the net benefit that any one party could expect from increased turnout and the inadequacy of using shares of the popular vote to predict increased turnout effects in the United States. It leaves open the normative debate between advocates of civic participation and the libertarian value of being free not to vote.

Contents

1	Introduction	5
2	Causes of variability in the effect of turnout	6
3	The institutional framework	8
4	Limits on maximizing turnout	9
5	The extent of competition	12
6	The party preferences of non-voters	14
7	Reducing or closing the gap?	18
8	The contingency of turnout	21
	References	24
A	Procedures for estimating what runner up needs to close the gap	27
B	Sources and definitions	27

List of Figures

1	Turnout at most recent national election	11
2	Leverage with maximum turnout	13
3	Number of parties dividing leveraged vote	15
4	Left-right self-placement of voters, non-voters	17

List of Tables

1	What non-voters would have to do to close the gap	20
---	---	----

1 Introduction

Every free and fair election shows that electorates are doubly divided: first there is a division between electors who vote and those who do not and then a division of party preferences of those who do vote. How the electorate divides on each dimension can have an impact on an election outcome. Insofar as ‘democratic responsiveness depends on citizen participation’ (Verba 1996: 2) and non-voters differ in their party preferences, non-voting places a question mark over the claim that elections are fully representative. Lijphart (1997: 1) goes so far as to claim that low turnout can create a ‘democratic dilemma’, insofar as nominal equality in the right to vote is accompanied by ‘highly unequal’ participation skewed by class and education. This view is endorsed by the APSA Task Force (2004: 655) on American democracy and economic inequality.

The diagnosis of a democratic dilemma leads to the prescription of maximizing turnout by reforms to make voting easier, for example, liberalizing postal votes or carrying the logic of civic obligation to the point of making voting compulsory (see e.g. Lacroix 2007). However, insofar as the party preferences of non-voters are much the same as those of voters, then there is no dilemma, since non-voters are vicariously represented by voters whose views they share. In his New Haven study, Dahl (1961: 270ff) argued that the right to vote is a ‘slack resource’ that citizens could invoke if dissatisfied with government. Insofar as political participation is seen as a civic virtue, non-voting is a dereliction from civic duty or, even worse, a sign of alienation from the political process (cf Pateman 1970; Barber 1984; Piven and Cloward 2000; Lipset 1960; Mead 2004). However, describing non-voters at a given election as alienated confuses persistent, politically motivated non-voters with persons who do not cast a vote in one election due to illness, holiday or other non-political reasons.

The analytic question raised by proposals for compulsory voting is stated succinctly by Bernhagen and Marsh (2007: 548): ‘If turnout was 100 percent, would it affect the election result?’ Conventionally, answers are based solely in the change in the division of the vote resulting from adding the putative preferences of non-voters to those of actual voters (see e.g. Brunell and DiNardo 2004; Franklin 2004; Lutz and Marsh 2007). However, defining an election result solely in terms of voting behaviour is reductionist, since votes are only inputs to the determination of the outcome of an election. To understand the impact on an election outcome of non-voters becoming voters requires, as Grofman et al. (1999: 364ff) have argued, ‘an explicit model’ of a multi-stage process.

Our approach to estimating the likelihood of maximizing turnout tipping the election result asks: How much or how little difference between the choices of voters and non-voters would there need to be for the election outcome to be changed? The process that determines an outcome is complex, involving political institutions as well as individual behaviour. Hence, our model shows an election outcome as a function of six terms:

$$\text{Election Outcome} = f(\text{Off}, \text{ES}, \text{TO}, \text{NP}, \text{DV}, \text{G})$$

The Office (Off) identifies what the election winners win, whether it is the presidency or seats in parliament. The Electoral System (ES) sets the rules for deciding who the winners

are by translating votes into offices. Turnout (TO) is the percentage of the electorate whose votes are used in the calculations of the electoral system and the Number of Parties (NP) identifies the contestants eligible to receive a share of the vote. The aggregation of individual choices determines the Division of the Vote (DV). The Gap (G) is the difference between the leading party's share of the vote and that of the runner up.

The purpose of this article is to identify under what circumstances and to what extent the maximization of turnout could have an effect on an election outcome after taking into account all six vectors in the above model. The paper shows how each term can vary across 30 democratic political systems—the 27 member states of the European Union plus Norway, Switzerland and the United States. It demonstrates that the conditions in which a democratic dilemma could exist—that is, the outcome would have been different if turnout had been maximized—are very limited.

2 Causes of variability in the effect of turnout

The following six hypotheses identify conditions in which maximizing turnout is more likely to have an effect on an election outcome. Each cause can vary categorically or in degree across the countries reviewed here. Moreover, within a country some influences can vary from one election to the next.

The effect of maximizing turnout on an election outcome will be greater if:

1. only one office is at stake. In democratic political systems two types of office may be elected: the president or Members of Parliament. In a parliamentary system with hundreds of members, an increase in turnout that alters a few seats will have only a marginal effect on the parliament's overall composition, whereas the singular nature of a presidential contest means that it will have an all or nothing effect. In every democratic European state there is an elected parliament but the prime minister is not elected. The formal head of state can be either a hereditary monarch or a president with few or no powers. France and the United States are exceptional in electing a president who is both head of state and has substantial powers. Inasmuch as the chief offices of state and their powers are normally fixed in the Constitution, they are constants within a country but variable between countries.
2. the electoral system is first-past-the-post. In a first-past-the-post (FPTP) system the party with one vote more than its nearest competitor is awarded the office. By contrast, in a proportional representation (PR) system, parties very close in their share of the vote normally win much the same number of seats, since electoral systems allocate seats in whole number. The great majority of democratic electoral systems make use of one or another form of proportional representation (Cox 1997; Shugart and Wattenberg 2001). In such a context, the effect of maximizing turnout is likely to a marginal alteration in the distribution of parliamentary seats. Only the United States and Britain rely exclusively on first-past-the-post national electoral systems.

3. non-voters are a substantial percentage of the electorate. The civic ideal of total participation in an election is nowhere realized. However, three countries covered here have consistently produced turnouts of more than 90 percent. Where turnout is very high, there is little scope for any increase to have an effect on an election outcome. However, in the median country covered here, 67 percent cast a ballot at the latest election; in Switzerland and Lithuania turnout was below 50 percent. Thus, maximizing turnout could add up to one-quarter or more preferences to the total vote influencing an election outcome. There is empirical evidence that the design of electoral institutions can increase turnout (Hirczy de Mino 2000; Jackman 2001; Norris 2004; Franklin 2004).
4. the number of parties contesting elections approaches or equals the minimum of two. If only two parties contest an election, any benefit from an increase in turnout will be concentrated on a single party. However, in the 30 countries covered here, only the United States and Malta may claim to have two-party competition. A system with seven or eight parties competing is normal (see Figure 3 below). In such a system, the votes from maximizing turnout will be dispersed among many parties, even if unequally. Thus, the net gain of any one party over its competitors will be less than any gross gain and may affect also ran parties rather than the chief party in government.
5. the party preferences of non-voters are distributed differently than the preferences of voters. The 'democratic dilemma' thesis is based on the assumption that the party preferences of non-voters are skewed by comparison with voters—and favour the runner up party rather than the winner. If non-voters have exactly the same preferences as those who do vote, then an election outcome would be unaffected by maximizing turnout.
6. the gap is small between the leader and the runner up. If the margin of the leading party over the runner up is large, then a small benefit accruing to the runner up party from maximizing turnout will reduce the gap but not change the election outcome. Within a country, the gap is not constant from one election to the next. In proportional representation systems, there is another critical threshold: parties must win a minimum percentage of the vote to qualify for a share of parliamentary seats. The likelihood of maximizing turnout enabling a party to qualify for PR seats is a function of the size of the threshold, e.g. one percent or five percent, and the gap between the threshold and a weak party's share of the vote.

Even though each hypothesis can be dealt with on its own, they are interdependent: a change in one condition can magnify or cancel out the effect of a change in another condition. For example, if non-voters are a substantial portion of the electorate (hypothesis 4), but their party preferences are distributed just the same as actual voters (hypothesis 5), then maximizing turnout would make no difference to an election outcome. On the other hand, if the gap between the winner of an office and the also ran is very small, then even a limited skewing of the party preferences of non-voters could have a big effect on

an election outcome. There is also interdependence in the configuration of conditions. For example, first past the post and presidential elections go together and proportional representation systems encourage a multiplicity of parties.

3 The institutional framework

Our model emphasizes the importance of offices and the electoral system in mediating between the preferences of the electorate and an election outcome. The Office identifies what the election winner wins. When the office is the national presidency, then the winner can only be a single person. In most presidential election systems, an absolute majority of the popular vote is needed to win office (Golder 2005: Table 6). If this is not achieved by the leader in the first round, then a run off is held in which only the candidates finishing first and second are allowed on the ballot. In France, for example two rounds of balloting have been required in each of its eight presidential elections since 1965. Because turnout averages over 80 percent in the first-round ballot, the scope for maximizing turnout is limited. Since more than half of first-round voters have their initial choice eliminated from the second round, second-round differences in turnout are unimportant compared to the behaviour of voters who are forced to choose a different candidate.

In electoral systems that produce a winner through the mediating process of aggregating sub-national results, the relationship between an election outcome and the distribution of the popular vote becomes more problematic. In the United States, an absolute majority of Electoral College votes is required. This can lead to the defeat of the candidate who is first past the post, as happened in the 2000 election, in which Al Gore won the most votes but George W. Bush won the most electoral college votes. Thus, the conventional American practice of analyzing the effect of turnout solely in terms of national shares of the popular vote is inadequate. At a minimum, to determine the effect on an election outcome analysis must take into account turnout at the state level, which varies by up to 25 percentage points, and the number of Electoral College votes of each state, which are distributed on a different basis than their share of the national electorate (Ladewig and Jasinski 2008).

In parliamentary systems and the United States Congress, hundreds of seats are at stake. In a FPTP single-member district in which the winner's margin is small, a limited increase in turnout could cause that seat to change hands. However, the advantages of incumbency mean that few seats are held by a small margin of votes. Yet winning a district is only a means to the end of gaining a majority through the aggregation of results in hundreds of seats. In the United States the results of House of Representatives elections are invariably reported in terms of seats won and national vote shares are considered unimportant. In Britain, differences between constituencies in turnout, the size of electorates, and inter-party competition mean that national vote shares do not necessarily determine national outcomes (see Kavanagh and Butler 2005: 251). The aggregation of constituency results has twice in the post-war era resulted in the party finishing second in the popular vote nationally winning control of the House of Commons.

Because a proportional representation election almost invariably results in no party winning an absolute majority of seats in parliament, deciding who governs requires in addition

bargaining over terms of a coalition Cabinet or a minority government (Laver and Shepsle 1996). Coming first in seats in parliament is not sufficient to guarantee a place in government. In Sweden the governing Social Democratic party won the most seats at the 2006 election, but it was forced into opposition when centre-right parties formed a governing coalition with a majority of seats in the Riksdag. Switzerland demonstrates that office can be independent of the distribution of votes. For almost half a century four Swiss parties collectively winning more than three-quarters of the popular vote have shared out places in the Cabinet and annually rotate the office of chairperson of the Federal Council. Franklin (2004: 219) cites this as an explanation for abnormally low turnout in Switzerland.

4 Limits on maximizing turnout

Turnout is a construct that is calculated by dividing the total number of valid votes cast in an election by the number of electors eligible to vote. Each of these terms can be defined in different ways. However, there is a mathematical limit to turnout: short of fraud or error, it cannot exceed 100 percent of the registered electorate. In fact, the maximum turnout achieved in countries with compulsory voting always falls significantly short of this limit.

The numerator for calculating turnout, the total number of valid votes, is always less than the number of ballots issued (see Massicotte et al. 2004: chapter 6). Ballots can be invalidated by electors making incorrect marks or, in the absence of a Russian-style ballot option of voting 'against all' (McAllister and White 2008), by intentionally spoiling their ballot. Lijphart (1997) has favoured an against all option on the ballot in order to allow anti-party voters to have their views represented in the electoral process. Voting machines substitute mechanical and electronic error for manual errors, as in the Florida presidential count in 2000 (see e.g. Brady 2004). In addition, some electors issued with a ballot may not mark or return it. In an American election putting many offices at stake, there is a fall off in the number of people giving a preference for offices below the top line office of the presidency (Bullock and Dunn 1996). In Britain more than one-fifth of persons requesting a postal vote at the 2005 British general election did not return their ballot for inclusion in the count (Rallings and Thrasher 2005: 16-20).

The denominator for calculating turnout is the electoral register, the list of individuals who are eligible to vote at a given national election. It is compiled to reduce fraud and avoid last-minute disputes about who can and cannot vote. The normal European practice is that a public agency takes responsibility for producing the electoral register. In a country in which everyone is expected to register a legal address with the state, can be a byproduct of Ministry of Interior activities (Massicotte et al. 2004: chapter 3). A few countries, such as Britain and Canada, independently compile an electoral register. The United States is atypical in placing the burden of registration on the individual citizen, creating a gap between the number of people eligible to vote and the number registered to vote (Highton 2004).

The electoral register contains errors of exclusion and inclusion. Exclusions arise when individuals who have the right to vote fail to inform electoral authorities of their whereabouts or are unwilling to do so. Problems tend to be greatest among mobile groups in the

population, such as youths, inner city transients and immigrants. There can also be double counting of people with two addresses, such as students. The register will also contain names of individuals who have died, emigrated or otherwise become ineligible since it was last revised (Electoral Commission 2005).

Given faults in electoral registers, the International Institute for Democracy and Electoral Assistance (IDEA 1998: 50) uses as its denominator for calculating turnout an estimate of the voting age population drawn from national censuses. However, this approach has multiple weaknesses. First, a census normally occurs only once a decade and the time span between the publication of census data and an election date can be even longer. IDEA (2004: 78) bases its turnout statistics for Western Europe in 2003 on the latest census published in the 1998 UN Demographic Yearbook. Second, census statistics are declining in accuracy for much the same reasons as the electoral register (see e.g. Hillygus et al. 2006). Thirdly, some residents included in a population count are non-citizens who are not eligible to vote (see Blais 2000: 23; Wattenberg 2002: 7f). Finally, citizens abroad on the date of a census enumeration may still be registered electors. The calculations that follow use as the denominator the figures most suited to our purpose, namely, the number of people officially eligible to vote at a given election.¹ Cross-national variations in turnout are substantial among the 30 countries reviewed here. At the most recent national election up to our cut off date of 31 December 2007, turnout was as high as 96.0 percent in Malta and at least 80 percent in nine countries. The mean turnout reviewed here was 69.2 percent (see Figure 1). In the older EU 15 systems, the lowest turnout was 61 percent in the United Kingdom. Seven new EU member states have a lower turnout than that, as does the United States. Such variability rejects Lijphart's (1997: 5) assertion that almost all democracies have 'low levels of electoral participation'.

A variety of institutional measures have demonstrated effectiveness in increasing turnout (Norris 2004: chapter 7; Franklin 2004: 130ff). Turnout tends to be higher when elections are held at the weekend rather than during the working week. It is higher when individuals have a choice of whether to vote in person, by post or proxy or, in a few cases, to vote by Internet (Trechsel 2007). Compulsory voting is the logical method of maximizing turnout. Three countries covered here—Belgium, Cyprus and Luxembourg—have compulsory voting laws. In all of them non-voters have their absence from the polls noted, and are liable to small fines (Massicotte et al. 2004: 34ff). In Italy the Constitution describes voting as 'a civic duty', but no penalties are imposed on non-voters.

Since even in the Soviet Union turnout has never been 100 percent, the concept of maximum turnout provides a more realistic basis for estimating the potential increase in turnout that can be achieved in a free and fair democratic election. This can be done by subtracting the number of invalid votes and absent electors from the total number of registered electors, and dividing the result by the number of registered electors.

The median² percentage of invalid votes is 1.1 percent of the electorate and the mean is 1.4 percent (see Table 1 on pg. 20 and Farrell (2001: 202f)). Consistent with the as-

1 Full details of all statistical sources can be in Appendix B.

2 As 30 countries are covered in this paper, the median is the midpoint between the fifteenth and sixteenth country in a ranking.

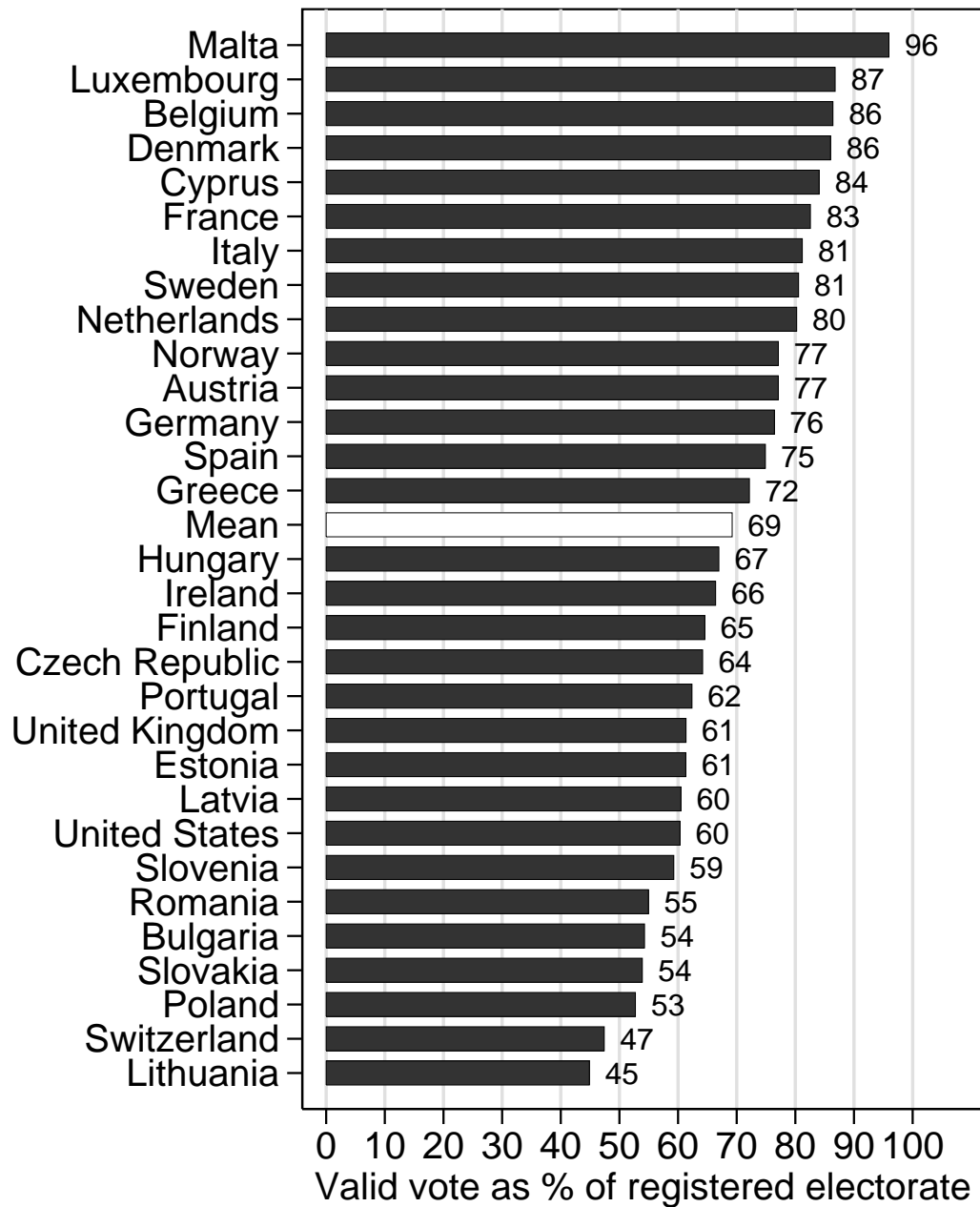


Figure 1: Turnout at most recent national election

Sources: European Journal of Political Research Yearbook and public official sources; see Appendix B (grturnout_by_country.do)

sumption that non-voters include electors with little understanding of politics or against all parties, the proportion of invalid votes tends to increase with turnout and to increase disproportionately when voting is compulsory (Hirczy de Mino 2000: 46). In Luxembourg, 5.1 percent of the registered electorate cast invalid votes, in Cyprus 5.0 percent and in Belgium 4.7 percent of registered electors turning up at the polls cast an invalid ballot. For purposes of estimating invalid ballots under conditions of maximum turnout, we take the average of the three countries with compulsory voting, 4.9 percent.

Systems of compulsory voting recognize legitimate grounds for non-attendance at the polls, such as old age or living far from a polling station (Massicotte et al. 2004: 34ff; Electoral Commission 2006: 7f). In Australia, which has had compulsory voting since the 1920s, 5.7 percent of registered electors did not cast a ballot at the 2004 election and more than nine-tenths offered reasons for non-voting accepted as valid by the election authorities (Mackerras and McAllister 1999: 223ff; Mackerras 2005: 929). In the three European countries with compulsory voting—Belgium, Cyprus and Luxembourg—absent voters average 9.3 percent of the registered electorate. This is more than double the percentage of absent electors in Malta, where close-fought parliamentary contests are the only elections in the country at any level (Hirczy de Mino 1995). Malta shows that formal laws are not the only influence on voters; political context matters too.

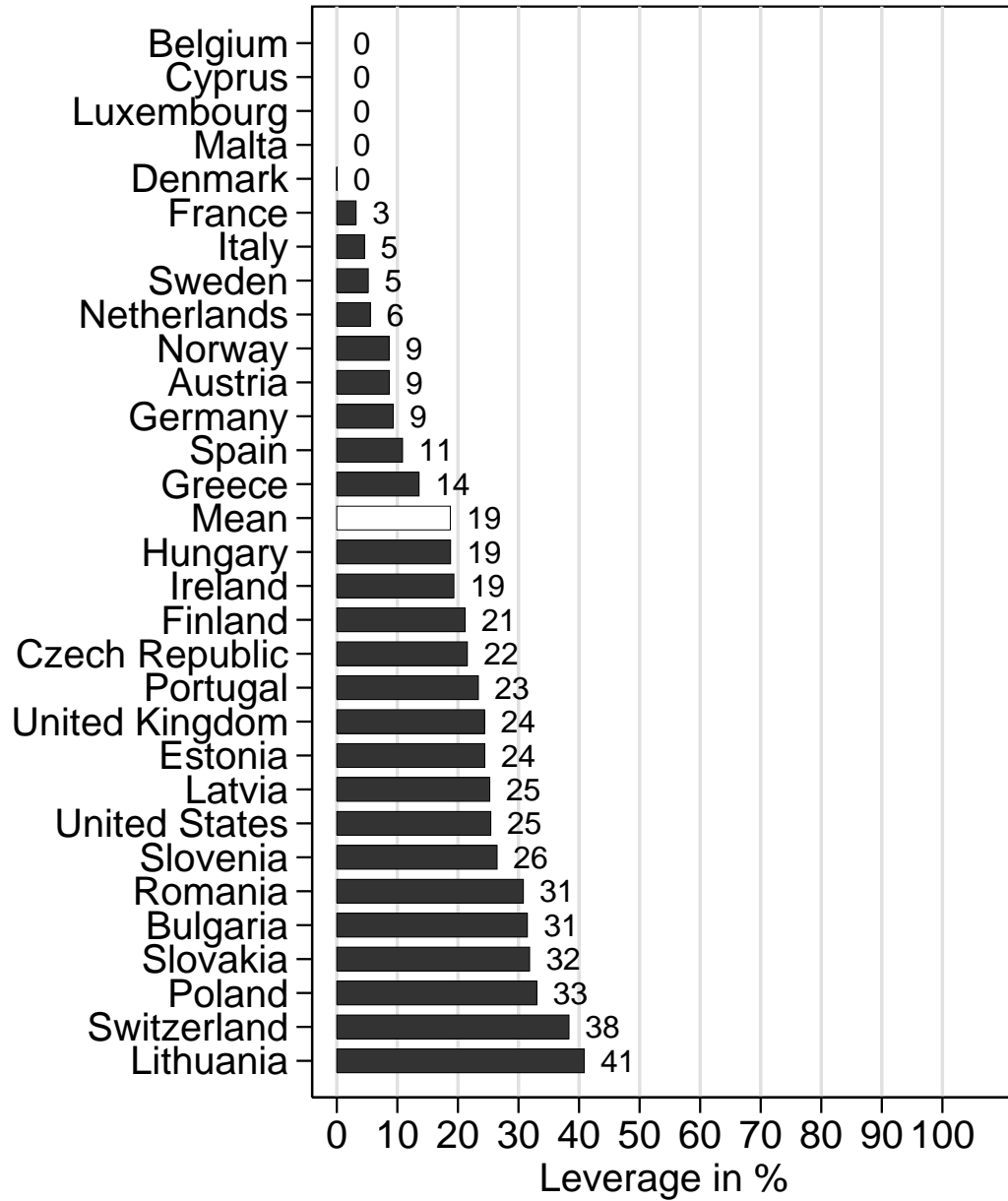
Maximum turnout can be estimated by taking average figures from the three compulsory voting countries. Together, the 9.3 percent of absent voters and 4.9 percent in invalid votes constitute 14.2 percent of the registered electorate. Thus, in conditions of maximum turnout in a free and fair election the valid vote is not likely to go above 85.8 percent of the registered electorate.

The leverage that non-voters could exercise by turning out to vote is the difference between the actual turnout and the above mentioned maximum turnout of valid voters. Leverage varies greatly across national boundaries. In five countries—the three with compulsory voting plus Malta and Denmark—actual turnout is already so high that leverage is nil (Figure 2). The mean cross-national leverage is 19 percent of the registered electorate. Thus, the achievement of maximum turnout in the notional mean country would boost turnout by more than one-quarter, that is, from 67 percent to 86 percent. In six new democracies of Central and Eastern Europe and in Switzerland the leverage of non-voters is greater than that in the United States. In elections to the European Parliament, the scale of leverage is greater still. In the 2004 European Parliament election, the valid turnout ranged from 85.9 percent in Luxembourg to 16.7 percent in Slovakia. In a majority of EU countries, there were more leveraged electors than actual voters.

5 The extent of competition

When increased turnout converts non-voters into voters the distribution of their preferences is, as hypothesis 4 makes clear, a function of the number of parties on the ballot. While the size of the leveraged vote is limited, the number of parties contesting free elections is not.

Electoral competition almost everywhere involves a multitude of parties. To screen out



Leverage = Maximum turnout – valid vote

Figure 2: Leverage with maximum turnout

Sources: European Journal of Political Research Yearbook and public official sources; see Appendix B (grlevbycntry.do)

parties of no electoral consequence, we here count only those parties that have received at least one percent of the vote at the last national election.³ In Britain, once the European paragon of a two-party system, six parties won at least one percent of the popular vote at the most recent UK election. Malta and the United States are abnormal in keeping competition to two parties at their most recent election (Figure 3). The maximum number of parties securing at least one percent of the vote is 12 in Latvia and in eight countries 10 or 11 parties competing. The median number of parties winning at least one percent of the vote at a national election is eight.

In a multi-party parliamentary system with proportional representation, the electoral system will produce a number of gainers and losers. If an odd number of parties compete, then the number of parties with their vote rising will necessarily differ from the number having their vote fall. In an eight-party contest, four parties could have their vote rise and four have it fall. In such circumstances, the impact of a change in turnout on any one party is likely to be diminished and its net gain or loss will depend on which party it is compared with.

When votes are spread among eight parties, it is extreme to assume that only one party would be supported by all non-voters. The alternative extreme would be to assume that maximizing turnout would result in the leveraged vote being distributed equally; for example, in an eight-party system each party would be one-eighth of that vote. A realistic assumption is that maximizing turnout would result in votes being dispersed unequally among all parties. This places a ceiling on the net gain that could be obtained by the party gaining the largest portion of the leveraged vote. It is the difference between its share of the vote distributed among half a dozen parties or more, and the party that is its chief competitor.

6 The party preferences of non-voters

Maximizing turnout necessarily increases civic engagement, but if it is also to have an effect on an election outcome then, as Hypothesis 5 emphasizes, the party preferences of non-voters must be distributed differently than the preferences of voters.

Lijphart's (1997: 3ff) analysis of the 'democratic dilemma' rests on the empirical assumption that there is a 'class bias' in turnout, creating a 'clear nexus between socio-economic status on the one hand and party choice on the other'. If voters tend to favour the party of the right and non-voters the party of the left, an election outcome will be 'highly unequal', a judgment that assumes both a substantial amount of leverage among non-voters as well as of class bias in voters. The APSA Task Force (2004) similarly assumes a link between non-voters and policy preferences. However, a systematic analysis of American policy preferences on taxation, social policy and other issues finds that there are surprisingly limited or insignificant differences between high and low income groups

3 If a cut off point of five percent were used, the mean number of parties would be five. Not only would this eliminate from consideration parties winning seats where the PR threshold is less than five percent but also it would substantially increase the vote in the Other category, the total vote cast for all parties receiving less than 5.0 percent cut off point.

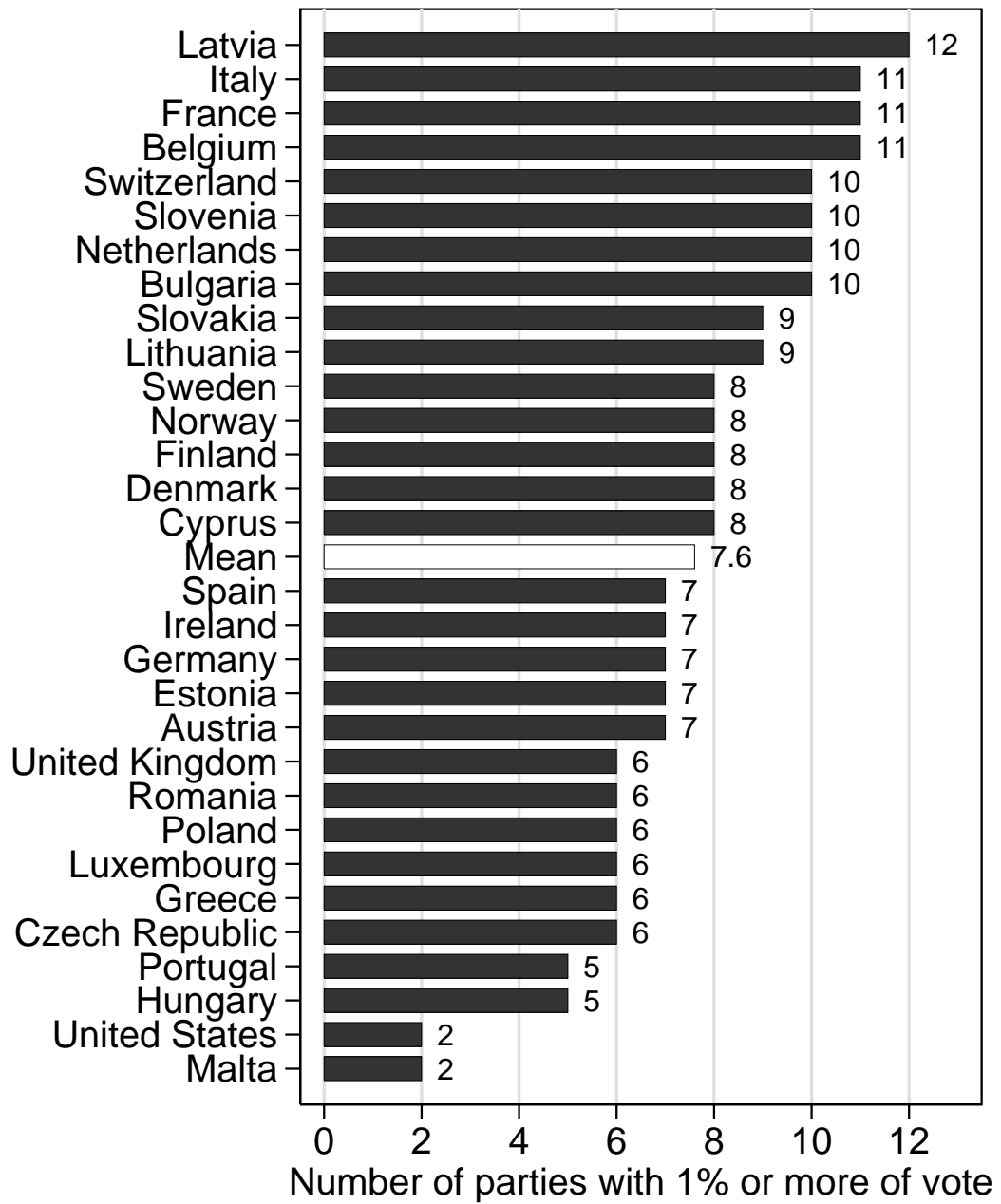


Figure 3: Number of parties dividing leveraged vote

Sources: European Journal of Political Research Yearbook and public official sources; see Appendix B (grpartynum.do)

(Soroka and Wlezien 2008), and Martinez and Gill (2005: 1248) report the degree of partisan differences between American voters and non-voters has ‘steadily ebbed with the erosion of class cleavages’.

Since the concept of left and right originated in Europe and Lijphart believes his arguments have European relevance too, these assumptions can be tested with data about the left-right placement of citizens in 23 countries in the 2004/5 round of the European Social Survey (ESS)⁴. In the pooled ESS survey, 13 percent are disengaged electors who do not know where to place themselves on this scale. Equally important, the use of an 11-point scale offers a mid-point, so that electors are not forced to take a position on the left or the right, as is the case in a 10-point scale (Klingemann 1995: 191; Norris 2004: 118ff). The largest group of electors, 30 percent, place themselves at the exact centre of the 11-point scale (Figure 4). Thus, 43 percent of the European electorate is uncommitted in left-right terms, being either at the centre point or else disengaged and in ten countries the uncommitted are an absolute majority of the electorate. Moreover, an absolute majority of non-voters, 57 percent, are uncommitted (Table 1).

Lijphart’s hypothesis that non-voters tend to the left while voters tend to the right can be tested empirically by grouping respondents in six categories—left (points 0-2), centre-left (3-4), centre (5), centre-right (6-7), right (8-10) and other (don’t know or no answer given). This pattern roughly approximates party competition in the Nordic countries. The Other category is a reminder that parties are not restricted to appealing for votes on socio-economic grounds; they can also campaign for protest votes.

The ESS survey data rejects Lijphart’s assumption that non-voters are more likely to be on the left (Figure 4). In fact, the most favoured position among non-voters is the centre, endorsed by 34 percent. The second most favoured position of non-voters is disengagement: 23 percent are unable to place themselves on the scale. In 19 countries the largest bloc of non-voters place themselves in the centre; in the four exceptions—the Czech Republic, Greece, Portugal and Slovenia—the largest group are disengaged. Furthermore, the centre-right and centre-left groups of non-voters are more numerous and, at points 3-4 and 6-7 closer to the centre than the limited minorities who show a clearcut commitment (0-2 to 8-10) to the left or the right. Thus, if turnout were to be maximized, it would not tilt the outcome from right to left (see also Bernhagen and Marsh 2007: 554). Instead, well over half the leveraged vote would be distributed to parties that would be neither on the left nor the right.⁵

Instead of a one-dimensional model of polarized party competition, the University of Michigan model of party preferences is multivariate. It postulates that party identification, attitudes on issues, confidence in the personality and competence of parties and candidates influence the preferences of voters (Campbell et al. 1960; Lewis-Beck et al. 2008). In

4 <http://www.europeansocialsurvey.org>

5 Donovan’s (2007: 682ff) systematic analysis of political attitudes of Americans identifying themselves as independents also rejects Lijphart’s dichotomy, arguing that the chief exclusion in America is the absence of a centrist party that appeals to the ‘missing middle’ of the electorate. However, Black (1958) and Downs (1957) challenge Lijphart’s assumption by arguing that both parties compete to represent the median voter. Kidd’s (2008) content analysis of American party platforms finds empirical support for this view.

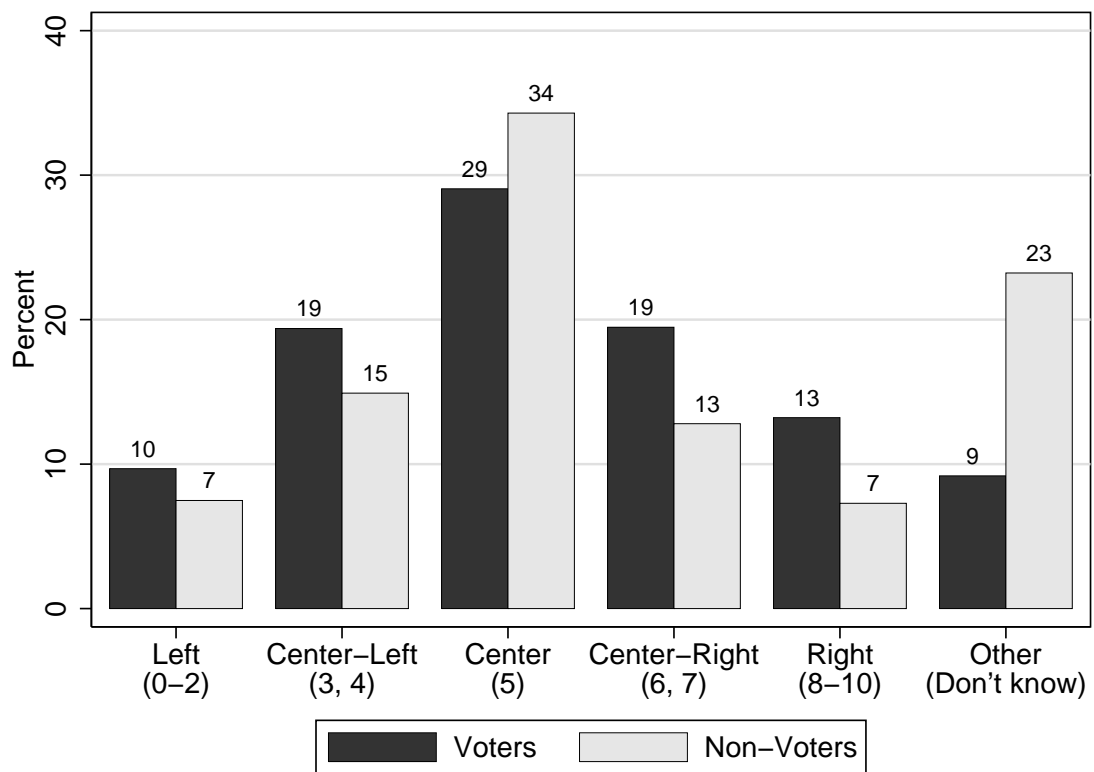


Figure 4: Left-right self-placement of voters, non-voters

Sources: European Social Survey 2004/5, Edition 3. Interviews with 41,957 respondents in 24 countries. For further details see <http://www.europeansocialsurvey.org> (anlr_by_voteing1.do)

addition to socio-economic cleavages, differences in religion, race, ethnic identity and language may also influence voting (Lipset and Rokkan 1967; Dalton 2006).

The party preferences of American non-voters at elections since the 1950s have been subjected to detailed multivariate analyses by many researchers (see e.g. Grofman et al. 1999; Brunell and DiNardo 2004, Lewis-Beck et al. 2008: chapter 5, and articles cited therein). Results usually show that ‘nonvoters, on average are slightly more likely to support the Democratic Party’. However, when election turnout actually does rise from one presidential election to the next, this does not help the Democrats (Grofman et al. 1999). Moreover, there is no statistically significant correlation at the .05 level between turnout at the state level and the Democratic Party’s share of the vote in 2000 or 2004.

Bernhagen and Marsh (2007: 549) draw on 28 surveys of the Comparative Study of Election Systems to compare the party preferences of voters and non-voters throughout Europe and beyond. The variables used to predict party preferences go well beyond basic socio-economic indicators; they include incumbency effects, economic attitudes, social characteristics such as gender, church attendance and language and thermometer scales showing attitudes toward parties and candidates. Their assumption of 100 percent turnout increases the leveraged vote greatly, for example from the 19 percent available under conditions of maximum turnout to 33 percent in a hypothetical election in which there are no absent voters and no invalid votes.

The main conclusion of the Bernhagen and Marsh analysis (2007: Table 3) is that 100 percent turnout would make no difference to the share of the vote of hundreds of parties. Half the parties included in the CSES surveys would see no difference between their share of the actual vote and the hypothetical vote, and another quarter would gain or lose no more than one percent of their vote. For the great majority of parties, the estimated change in vote share from maximizing turnout would be less than sampling error and the standard errors for variables used to impute choices. They conclude, ‘There is no significant pattern of left-wing gains or right-wing losses’ (ibid., p.554). In short, non-voters are usually ‘vicariously represented’, because their views tend to be very similar to those of voters.

7 Reducing or closing the gap?

The gap between the leader and runner up⁶ determines the critical threshold that the runner up must pass if maximizing turnout is to change the outcome of an election. As hypothesis 6 emphasizes, if the gap between contenders is very small, then a small change in party preferences benefiting the runner up could have a big effect. However, if the gap is large, then a gain in votes by the runner up could reduce the front runner’s lead but leave the election outcome unchanged.

The transformative potential of maximizing turnout in first past the post systems depends on where turnout rises as well by how much it may change nationally. In France, winning the presidency requires an absolute majority of the national vote. In an FPTP

6 We use the term leader and runner up to designate the parties or candidates finishing first and second respectively or doing best in a contest for a single office, whether president or representative of a single-member district.

parliamentary system, the critical threshold is the number of seats required to gain control of government. The advantages of incumbency limit the number of districts where the leader's margin is small. Since marginal seats tend to have higher turnout and safe seats depress turnout, the leverage of non-voters tends to be greater where the gap is greatest and least where a district is closely fought. Winning the American presidency requires a majority of votes in the Electoral College rather than the popular vote. Each state casts its vote as a bloc, and its weight is not strictly proportional to its share of the national electorate or of the valid vote at a given election. In 2000 Al Gore could have won the presidency even though losing Florida if he had been able to achieve a net gain of 50,173 by boosting turnout among the 921,781 nonvoters in President Clinton's home state of Arkansas or a net gain of 80,230 by boosting turnout among the 1,766,701 non-voters in his home state of Tennessee.

The change in vote necessary to give a party one additional seat is low in Proportional Representation systems; it varies with the mechanics of the electoral system as well as the distribution of the vote. The critical threshold that a party must cross to qualify for any seats in parliament is as low as 0.67 percent of the national vote in the Netherlands while it is 5.0 percent of the national vote in Germany. Bernhagen and Marsh (2007: 554) find evidence that small parties attract more support among non-voters than among voters. If increased turnout puts a small party over the threshold to claim seats this will reduce the seats of larger parties.

The determination of government office in PR systems is the outcome of inter-party negotiations about forming a coalition. When more than two parties compete for votes, there are multiple gaps. Since the party coming first can claim first call in trying to form a coalition government, the gap in votes between the first and second largest party is the critical threshold. If the maximization of turnout produces a net benefit to the runner up smaller than this gap, it will not alter the election outcome.

To estimate what is required to close the gap we need to take into account the size of the leveraged vote and the number of parties and how the leveraged vote is distributed among them as well as the initial gap between the leading and the runner up party (for details of the method, see Appendix A). The gap between the leader and the runner up is usually not large: the range is from 1 to 17 percentage points and the median gap is 5 percentage points (Table 1). The multitude of parties competing in European elections means that usually neither the leading party nor the runner up gets anywhere near half the vote. In the median country the party coming first took one-third of the vote.

In three-quarters of countries, the leveraged vote is greater than the gap between the first two parties. In the column headed 'Runner up needs', the estimate shows the percentage of the leveraged vote required in order to come first in the popular vote. The runner up's potential to benefit depends not only on the size of the leveraged vote but also on the number of parties among which it is distributed (see Figure 1). This not only reduces what the runner up gains but also awards some votes to the party that has been the leader. In this estimation, we assume that the leader and each of the other also ran parties receives the same share of whatever leveraged vote is left over after the runner up party passes the critical threshold to come first. The column headed 'Leader should gain' is the percentage of the leveraged vote that each of the other parties would obtain. For example, in Finland,

Election	Turnout of valid voters	Level-age	Observed quantities			To close the gap ...	
			Parties > 1%.	Winner %	Runner up %	runner up needs	leader should gain ≤
Change possible							
Finland ('07)	65	22	8	23	22	15	12
Hungary ('06)	67	19	5	43	42	23	19
Estonia ('07)	61	25	7	28	26	18	14
United States ('04)	60	26	2	51	48	53	47
Latvia ('06)	60	26	12	20	17	15	8
United Kingdom ('05)	61	25	6	35	32	23	15
Lithuania ('04)	45	41	9	28	21	19	10
Austria ('06)	77	9	7	35	34	22	13
Czech Republic ('06)	64	22	6	35	32	24	15
Romania ('04)	55	31	6	37	31	24	15
Switzerland ('07)	47	39	10	29	19	20	9
Change unlikely							
Poland ('07)	53	33	6	42	32	29	14
Slovakia ('06)	54	32	9	29	18	27	9
Bulgaria ('05)	54	32	10	31	20	27	8
Greece ('07)	72	14	6	42	38	33	13
Change most improbable							
Spain ('04)	75	11	7	43	38	42	10
Cyprus ('06)	84	2	8	31	30	43	8
Portugal ('05)	62	24	5	46	30	55	11
Ireland ('07)	66	20	7	42	27	55	7
Germany ('05)	76	10	7	34	28	58	7
Netherlands ('06)	80	6	10	27	21	75	3
Norway ('05)	77	9	8	33	22	92	1
Change impossible							
Sweden ('06)	81	6	8	35	26	>100	-
Italy ('06)	81	5	11	31	24	>100	-
France ('07)	83	4	11	31	26	>100	-
Denmark ('07)	86	0	8	26	25	>100	-
Luxembourg ('04)	87	0	6	36	23	>100	-
Belgium ('07)	86	0	11	19	13	>100	-
Malta ('03)	96	0	2	52	48	>100	-

Table 1: What non-voters would have to do to close the gap

Sources: Own calculations; see Appendix A for details (anc12.do)

the leveraged vote is 22 percent of the electorate and the gap between the two leading parties is only one percent, thus make change possible though not certain. By contrast, in Spain a changed outcome is improbable because the leveraged vote is only 11 percent and the gap between the first two parties is five percent. In our 30 countries, the potential for change distributes as follows:

- No change possible: (7 countries). In four countries where maximum turnout has already been achieved, it would be impossible to change the outcome since there is no leveraged vote to distribute. In France, Italy and Sweden the gap between the two front-running parties is greater than the leveraged vote, it is also not possible to alter the result by maximizing turnout.
- Change improbable: (7 countries). Where the gap in the leveraged vote is greater than the leader's margin, a change in outcome is not impossible. However it is improbable if it requires the runner up to win anything from four to 25 times the vote of the leading party and other competitors. In the extreme case of the Netherlands, the gap between the two leading parties is only 5.3 percent, but the leveraged vote is only 5.9 percent and is competed for by 10 different parties.
- Change unlikely: (4 countries). In this category are countries in which the leveraged vote is high but so is the gap between the leading and the runner up party. Hence, in order to tip the result the runner up would need from twice to more than three times as many preferences of non-voters as are gained.
- Change possible: (11 countries). In countries in which the leveraged vote is usually more than 25 percent and the gap between the two leading parties only a few percentage points, it is possible to envisage an election outcome changing if turnout was maximized. If there are many parties, as in Latvia and the leveraged vote is above average, then the share of the leveraged vote that the runner up requires need not be large. If only two parties contest and the gap is small, which sometimes happens in the United States but sometimes does not, then the runner up needs to win just over half the leveraged vote.

8 The contingency of turnout

Our model identifies six vectors that can influence election outcomes. The preceding sections have shown that each of these conditions varies across national boundaries and some vary across time within a country. The consequences of maximizing turnout are contingent rather than certain and there can be unintended and even unwanted consequences of electoral reform (Schaffer 2008). Furthermore, a model of the dynamics of introducing change must take feedback into account.

The biggest difference across national boundaries is in the offices at stake. In the United States and France, the chief office is that of the president, whereas 28 countries give most importance to electing a parliament. The electoral system in use also differs in kind between the FPTP Electoral College used in American presidential elections and one or

another form of Proportional Representation in use in continental Europe. The difference in the number of parties competing differs in degree in proportional representation system and in kind from the two-party systems of the United States and Malta. There is a difference in kind between countries where turnout is already maximized and those where it is not, and within this latter group major differences in the size of the leveraged vote. Systematic comparison shows American electoral competition is exceptional, in its two-party character and Electoral College mechanics even more than in turnout—and thus unsuitable for use as a basis for generalizing about the effects of turnout on election outcomes.

Generalizations about the effects of turnout within a country often assume that all other conditions remain equal, that is, there is stability from one election to the next. Changes over time in offices and electoral systems are infrequent, and within a country turnout tends to fluctuate up as well as down by a few percentage points, thus keeping the level of leveraged vote relatively stable too (Rose 1998; Franklin 2004: 9ff). In well institutionalized parliamentary party systems, the number of parties tends to alter little from one election to the next. Paradoxically, the two-party system of the United States is especially vulnerable to changes in the number of candidates. In eight of ten successive presidential elections since 1964 the intervention or withdrawal of a third-party candidate has had a significant influence on the distribution of the vote.

The gap between the leading and the runner up party tends to fluctuate up and down from one election to the next. In the United States, for example, the president's margin of victory went from 0.2 percent in 1960 to 22.6 percent at the next election, 0.3 percent in 1968 and 23.2 percent in the following contest. Brunell and DiNardo (2004: 28) conclude that maximizing turnout could not have altered the election outcome with 'two possible exceptions 1980 and 2000'. However, they do not substantiate their statement by relating it to Electoral College votes.⁷ In Britain between 1970 and 2007 the Conservatives won five elections with leads of between 3.3 and 14.8 percent and Labour won five elections with leads of between 12.5 percent and -0.7 percent, when the Conservative Party won more votes but fewer seats. In PR elections, the critical threshold to qualify for participation in a coalition government is even more subject to variation because of the many permutations of a multitude of parties.

In successive pairs of elections, the electorate can be divided into three main groups: those who behave the same on both occasions, those who move in and out of the ranks of non-voters, and those who switch between parties.⁸ A funnel of causality model of voting identifies a multiplicity of influences, some persisting and some fluctuating (Campbell et al. 1960; Lewis-Beck et al. 2008: chapter 2). These include party identification; influences subject to variance from one election to the next, such as the state of the economy (van der Brug et al. 2007); and short-term influences such as personalities of particular party leaders and events of an election campaign.

Non-voters are likely to be less committed to any party because of low political interest, education and youth (Lewis-Beck et al. 2008: 94ff), and thus to be more affected by fluc-

7 In the Electoral College in 1980 Ronald Reagan's margin of victory over Jimmy Carter was 489 to 49 and Carter carried only five states and the District of Columbia.

8 In addition, there is a demographic turnover due to the addition of a young cohort of electors and deaths among the oldest cohorts.

tuating and short-term influences. The inclination of American non-voters to favour the Democratic Party has varied from an insignificant 0.2 percent to 6.1 percent (Brunell and DiNardo 2004: 41) and may be declining (Martinez and Gill 2005). Thus, evidence of non-voters preferring the Democrats at a single election cannot be regarded as evidence of a stable commitment (see Grofman et al. 1999: 369ff). In the 2004 European Social Survey there is a correlation of 0.25 between an individual's interest in politics and voting and low education is also associated with non-voting (Wattenberg 2002; Highton 2004: 511; Fieldhouse et al. 2007). Because non-voters are disproportionately young, they have yet to develop the habit of voting or a firm party identification (Goerres 2007).

There is empirical evidence that non-voters are inclined to favour anti-incumbent parties (Bernhagen and Marsh 2007: Table 1). The rotation of parties in and out of office makes the parties vulnerable to an anti-incumbency vote vary. It also means that partisan steps by a governing party to increase turnout could backfire by mobilizing an anti-incumbency vote.

Introducing measures to maximize turnout ought to have feedback effects on electors and on party leaders. Indeed, Lijphart (1997) argues that compulsory voting would make people previously uninterested in politics take more interest and Lau (2003: 42ff) has shown that greater information can lead individuals to change their party preferences. The greater the leverage, the greater the likely feedback effect on political parties, as party strategists pay more attention to new voters who had previously not counted (Verba et al. 1995: 493).

Empirical analysis indicates that fears of a 'democratic dilemma' are much exaggerated. The outcome of most democratic elections provides vicarious representation of non-voters, whether ad hoc absentees at a single election or confirmed non-participants. Moreover, partisan effects are contingent; thus, when the economy was booming and the prime minister or president popular, increasing turnout could even increase the gap between the leading and the second-place party.

The normative debate about whether citizens have a duty as well as a right to vote cannot be resolved by empirical analysis. Proponents of civic obligations can use this principle to justify the introduction of compulsory voting, while libertarians can counter this with principled argument that people should be free to choose what they do on election day. The normative choice is not between what is good and bad for democracy but between competing definitions of which is better, more participation or more freedom from compulsion.

References

- APSA Task Force (2004): American democracy in an age of rising inequality. *Perspectives on Politics*, 2(4), 651–666.
- Barber, B. R. (1984): *Strong Democracy: Participatory Politics for a New Age*. Berkeley: University of California Press.
- Bernhagen, P., Marsh, M. (2007): The partisan effects of low turnout: Analyzing vote abstention as a missing data problem. *Electoral Studies*, 26, 548–560.
- Black, D. (1958): *The Theory of Committees and Elections*. Cambridge: Cambridge University Press.
- Blais, A. (2000): *To Vote or Not to Vote: the Merits and Limits of Rational Choice Theory*. Pittsburgh: University of Pittsburgh Press.
- Brady, H. E. (2004): Symposium: U.S. elections: How the rules you choose and the way you count determine the winners you get. *Perspectives on Politics*, 2(3), 489–550.
- van der Brug, W., van der Eijk, C., Franklin, M. (2007): *The Economy and the Vote*. New York: Cambridge University Press.
- Brunell, T. L., DiNardo, J. (2004): A propensity score reweighting approach to estimating the partisan effects of full turnout in American presidential elections. *Political Analysis*, 12, 28–45.
- Bullock, C. S. I., Dunn, R. E. (1996): Election roll-off: a test of three explanations. *Urban Affairs Review*, 32(1), 71–86.
- Campbell, A., Converse, P. E., Miller, W. E., Stokes, D. E. (1960): *The American Voter*. New York u. London: Wiley.
- Cox, G. W. (1997): *Making Votes Count: Strategic Coordination in the World's Electoral Systems*. New York: Cambridge University Press.
- Dahl, R. A. (1961): *Who Governs? Democracy and Power in an American City*. New Haven: Yale University Press.
- Dalton, R. B. (2006): *Citizen Politics: Public Opinion and Parties in Advanced Industrial Democracies*. Washington: CQ-Press.
- Donovan, T. (2007): A goal for reforms: Make elections worth stealing. *PS: Political Science and Politics*, 40(4), 681–686.
- Downs, A. (1957): *An Economic Theory of Democracy*. New York: Harper & Brothers.
- Electoral Commission (2005): *Understanding Electoral Registration*. London: The Electoral Commission.
- Electoral Commission (2006): *Compulsory Voting around the World*. London: The Electoral Commission.
- Farrell, D. M. (2001): *Electoral Systems: A Comparative Introduction*. Basingstoke: Palgrave.
- Fieldhouse, E., Tranmer, M., Russell, A. (2007): Something about young people or something about elections? *European Journal of Political Research*, 46(6), 797–822.
- Franklin, M. N. (2004): *Voter Turnout and the Dynamics of Electoral Competition in Established Democracies since 1945*. New York: Cambridge University Press.
- Goerres, A. (2007): Why are older people more likely to vote. *British Journal of Politics and International Relations*, 9(1), 90–121.

- Golder, M. (2005): Democratic electoral systems around the world, 1946-2000. *Electoral Studies*, 24, 103–121.
- Grofman, B., Owen, G., Collete, C. (1999): Rethinking the partisan effects of higher turnout: So what's the question? *Public Choice*, 99, 357–376.
- Highton, B. (2004): Voter registration and turnout in the united states. *Perspectives on Politics*, 2(3), 489–550.
- Hillygus, D. S., Nie, N., Prewitt, K., Pals, H. (2006): *The Hard Count: The Political and Social Challenges of Census Mobilization*. New York: Russel Sage Foundation.
- IDEA (1998): *Voting Turnout from 1945 to 1997: a Global Report on Political Participation*. Stockholm: International Institute for Democracy and Electoral Assistance.
- IDEA (2004): *Voter Turnout in Western Europe since 1945*. Stockholm: International Institute for Democracy and Electoral Assistance.
- Jackman, S. (2001): Voting: Compulsory. In Smelser, N., Baltes, P., eds., *International Encyclopedia of the Social and Behavioural Sciences*, Oxford: Elsevier, pp. 16,314–16,318.
- Kavanagh, D., Butler, D. (2005): *The British General Election of 2005*. Basingstoke: Palgrave Macmillan.
- Kidd, Q. (2008): The real (lack of) difference between republicans and democrats. *PS: Political Science and Politics*, 41(3), 519–523.
- Klingemann, H.-D. (1995): Party positions and voter orientations. In Klingemann, H.-D., Fuchs, D., eds., *Citizens and the State*, Oxford: Oxford University Press, pp. 183–205.
- Lacroix, J. (2007): A liberal defence of compulsory voting. *Politics*, 27, 3.
- Ladewig, J. W., Jasinski, M. P. (2008): On the causes and consequences of and remedies for interstate malapportionment of the U.S. House of Representatives. *Perspectives on Politics*, 6(1), 89–107.
- Lau, R. R. (2003): Models of decision-making. In Sears, D., Huddy, L., Jervis, R., eds., *The Oxford Handbook of Political Psychology*, Oxford: Oxford Univeristy Press, pp. 19–59.
- Laver, M., Shepsle, K. (1996): *Making and Breaking Governments*. New York: Cambridge University Press.
- Lewis-Beck, M. S., Jacoby, W., Norpoth, H., Weisberg, H. F. (2008): *The American Voter Revisited*. Ann Arbor: University of Michigan Press.
- Lijphart, A. (1997): Unequal participation: Democracy's unresolved dilemma - presidential address 1996. *American Political Science Review*, 91(1), 1–14.
- Lipset, S. M. (1960): *Political Man*. New York: Doubleday.
- Lipset, S. M., Rokkan, S. (1967): Cleavage structures, party systems and voter alignments: an introduction. In *Party Systems and Voter Alignments: Cross-National Perspective*, New York: Free Press, pp. 1–64.
- Lutz, G., Marsh, M. (2007): Introduction: Consequences of low turnout. *Electoral Studies*, 26, 539–547.
- Mackerras, M. (2005): Australia. *European Journal of Political Research*, 44, 929–939.
- Mackerras, M., McAllister, I. (1999): Compulsory voting, party stability and electoral advantage in Australia. *Electoral Studies*, 18, 217–233.
- Martinez, M. D., Gill, J. (2005): The effects of turnout on partisan outcomes in U.S. Presidential

- elections 1960–2000. *Journal of Politics*, 67(4), 1248–1274.
- Massicotte, L., Blais, A., Yoshinaka, A. (2004): *Establishing the Rules of the Game: Election Laws in Democracies*. Toronto: University of Toronto Press.
- McAllister, I., White, S. (2008): Voting 'against all' in postcommunist Russia. *Europe-Asia Studies*, 60(1), 67–87.
- Mead, L. (2004): The great passivity. *Perspectives on Politics*, 24, 671–675.
- Hirczy de Mino, W. (2000): Compulsory voting. In Rose, R., ed., *The International Encyclopedia of Elections*, Washington: CQ Press, pp. 44–47.
- Hirczy de Mino, W. P. (1995): Explaining near-universal turnout: The case of Malta. *European Journal of Political Research*, 27, 255–272.
- Norris, P. (2004): *Electoral Engineering: Voting Rules and Political Behavior*. New York: Cambridge University Press.
- Pateman, C. (1970): *Participation and Democratic Theory*. Cambridge: Cambridge University Press.
- Piven, F., Cloward, R. A. (2000): *Why Americans still Don't Vote: and why politicians want it that way*. Boston: Beacon Press.
- Rallings, C., Thrasher, M. (2005): *Election 2005: the Official Results*. Plymouth: LGC Elections Centre University of Plymouth/The Electoral Commission.
- Rose, R. (1998): Evaluating election turnout. In IDEA, ed., *Voter Turnout from 1945 to 1997: a Global Report on Political Participation*, Stockholm: International IDEA, pp. 35–46.
- Schaffer, F. C. (2008): *The Hidden Costs of Clean Election Reform*. Ithaca: Cornell University Press.
- Shugart, M. S., Wattenberg, M. P. (2001): *Mixed Member Electoral Systems: The Best of Both Worlds?* Oxford: Oxford University Press.
- Soroka, S. N., Wlezien, C. (2008): On the limits to inequality in representation. *PS: Political Science and Politics*, 41(2), 309–327.
- Trechsel, A. (2007): Internet voting in the March, 2007 parliamentary elections in Estonia, European University Institute Paper, Florence.
- Verba, S. (1996): The citizen as respondent. *American Political Science Review*, 90(1), 1–7.
- Verba, S., Scholzman, K. L., Brady, H. (1995): *Voice and Equality*. Cambridge: Harvard University Press.
- Wattenberg, M. P. (2002): *Where Have All the Voters Gone?* Cambridge: Harvard University Press.

A Procedures for estimating what runner up needs to close the gap

In calculating the tipping point shown in table 1 we took into account the closeness of the race between the first and the second party, the leverage, and the number of parties. The actual formula was

$$\text{Tipping Point} = \frac{W - R + \frac{L}{K-1}}{L + \frac{L}{K-1}}$$

with K being the number of parties, L is the absolute number of leveraged votes, and W and R are the absolute number of votes for the winning and the runner up party. The formula has been derived as follows: Let W , and R be the absolute number of valid votes of the winning and runner up party respectively, and L be the Leverage. Assume that the proportion p of the non-voters vote for the runner up party. Then the new number of votes for this party will be

$$R^* = R + pL$$

Assume further that all other parties will get the same number of votes from the remaining non-voters. The vote proportion of these other parties will then be

$$W^* = W + \frac{(1-p)L}{K-1}$$

Now, how large must p be that the difference between R^* and W^* becomes zero, hence

$$\begin{aligned} R + pL - \left(W + \frac{1-p}{K-1}L \right) &= 0 \\ R - W + pL + \frac{(1-p)L}{1-K} &= 0 \\ R - W + \left(L + \frac{L}{K-1} \right) p + \frac{L}{1-K} &= 0 \\ R - W + \frac{L}{1-K} &= - \left(L + \frac{L}{K-1} \right) p \\ \frac{W - R + \frac{L}{K-1}}{L + \frac{L}{K-1}} &= p \end{aligned}$$

B Sources and definitions

- Total Turnout = $\frac{\text{Total Ballots Cast}}{\text{Registered Electorate}} \times 100$.
 - Registered electorate:
 - ES LT LU SI: European Journal of Political Research Yearbook 2005.
 - DE UK NO PT : European Journal of Political Research Yearbook 2006.

AT BE BG CH CY CZ DK EE IE FI GR HU IT LV MT NL PL SE SK:

<http://www.ipu.org/parline-e/parlinesearch.asp>
(PARLINE Database).

FR: http://en.wikipedia.org/wiki/List_of_election_results
(Wikipedia).

RO: <http://www.idea.int/vt/> (IDEA).

US: <http://elections.gmu.edu/> (United States Elections Project).

– Total ballots cast

ES LT LU SI: European Journal of Political Research Yearbook 2005.

DE UK NO PT : European Journal of Political Research Yearbook 2006.

BE BG CH CY CZ DK EE IE FI HU IT LV MT NL PL SE SK:

<http://www.ipu.org/parline-e/parlinesearch.asp>
(PARLINE Database).

FR: http://en.wikipedia.org/wiki/List_of_election_results
(Wikipedia).

US: <http://elections.gmu.edu/> (United States Elections Project).

AT: <http://www.bmi.gv.at/Wahlen/> (Bundesminister des Inneren).

GR: http://www.ekloges.yypes.gr/pages_en/index.html
(Ministry of the Interior).

RO: http://www.bec2004.ro/documente/Tvot_CD.pdf (Biroul Electoral Central).

- Invalid Votes = $\frac{\text{Number of invalid votes}}{\text{Registered electorate}} \times 100$.

ES LT LU SI: European Journal of Political Research Yearbook 2005.

DE UK NO PT : European Journal of Political Research Yearbook 2006.

BE BG CH CY CZ DK EE IE FI HU IT LV MT NL PL SE SK:

<http://www.ipu.org/parline-e/parlinesearch.asp> (PARLINE Database).

FR: http://en.wikipedia.org/wiki/List_of_election_results
(Wikipedia).

US: <http://elections.gmu.edu/> (United States Elections Project).

RO: <http://www.idea.int/vt/> (IDEA).

AT: <http://www.bmi.gv.at/Wahlen/> (Bundesminister des Inneren).

US: Invalid votes calculated by subtracting the sum of votes for candidate from the number of voters given by the United States Election project.

GR: http://www.ekloges.yypes.gr/pages_en/index.html
(Ministry of the Interior).

- Valid turnout = $\frac{\text{Number of valid votes}}{\text{Registered electorate}} \times 100$.
- Leverage = Maximum Turnout – Turnout
- Maximum Turnout is 100% – absent electors (9.1) – invalid votes (4.8) = 86.1. Absent electors are stipulated to be 9.1 percent of the electorate and invalid votes 4.8 percent. For details see section 4
- Number of parties: Number of parties receiving 1.0 percent or more of the valid vote.

- Votes for party:

AT: <http://www.bmi.gv.at/Wahlen/> (Bundesminister des Inneren).

BE: http://verkiezingen2007.belgium.be/nl/cha/results/results_tab_etop.html (Federale Portaal site)

BG: <http://www.2005izbori.org/results/index.html> (Wikipedia).

CH:

http://en.wikipedia.org/wiki/Elections_in_Switzerland (Wikipedia).

CY: http://en.wikipedia.org/wiki/Elections_in_Cyprus (Wikipedia).

CZ: <http://www.volby.cz/pls/ps2006/ps2?xjazyk=EN> (Election to the Chamber of Deputies of the Parliament of the Czech Republic).

DE: http://www.bundeswahlleiter.de/bundestagswahl2005/ergebnisse/bundessergebnisse/b_tabelle_99.html (Der Bundeswahlleiter).

DK: http://en.wikipedia.org/wiki/Elections_in_Denmark (Wikipedia).

EE: http://en.wikipedia.org/wiki/Elections_in_Estonia (Wikipedia).

ES: European Journal of Political Research Yearbook 2005.

FI: http://192.49.229.35/E2007/e/tulos/tulos_kokomaa.html (Ministry of Justice).

FR: <http://www.conseil-constitutionnel.fr/dossier/presidentielles/2007/documents/tour1/resultats.htm> (Conseil Constitutionnel).

UK: <http://www.parliament.uk/commons/lib/research/rp2005/rp05-033.pdf> (House of Commons 2005:92).

GR: http://www.ekloges.ypes.gr/pages_en/index.html (Ministry of the Interior).

- HU:** http://en.wikipedia.org/wiki/Elections_in_Hungary
(List votes, 1st round from Wikipedia).
- IE:** http://www.ipu.org/parline-e/reports/2153_E.htm (IUP).
- IT:** <http://elezionistorico.interno.it/>.
- LT:** http://en.wikipedia.org/wiki/Elections_in_Lithuania
(Wikipedia).
- LU:** European Journal of Political Research Yearbook 2005.
- LV:** http://en.wikipedia.org/wiki/Elections_in_Latvia
(Wikipedia).
- MT:** http://www.ipu.org/parline-e/reports/2203_E.htm (IUP).
- NL:** http://www.kiesraad.nl/tweede/virtuele_map/uitslag-van-de
(Dutch Electoral Council, “De Kiesraad”).
- NO:** European Journal of Political Research Yearbook 2006 and
http://en.wikipedia.org/wiki/Elections_in_Norway
(Wikipedia).
- PL:** http://en.wikipedia.org/wiki/Sejm_of_the_Republic_of_Poland
(Wikipedia).
- PT:** European Journal of Political Research Yearbook 2006.
- RO:** http://www.bec2004.ro/documente/Tvot_CD.pdf (Biroul
Electoral Central).
- SE:** <http://www.val.se/val/val2006/slutlig/R/rikeroster.html>
(Swedish election authority “Valmyndigheten”).
- SI:** European Journal of Political Research Yearbook 2005 and
http://volitve.gov.si/dz2004/en/html/rez_si.htm (Ministrstva
za javno upravo).
- SK:** [http://www.statistics.sk/nrsr_2006/angl/obvod/
results/tab3.jsp](http://www.statistics.sk/nrsr_2006/angl/obvod/results/tab3.jsp) (Statistical Office of the Slovak Republic).
- US:** <http://www.fec.gov/pubrec/fe2004/tables.pdf> (Federal
Election Commission).

The Research Area “Education, Work, and Life Changes” comprises the Research Units “Labour Market Policy and Employment”, “Inequality and Social Integration” and “Skill Formation and Labor Markets”, the Research Groups “Public Health” and “Education and Transitions into the Labour Market”, the Research Professorships “Demographic Development, Social Change, and Social Capital” and “Social and Political Theory”, and the Emmy Noether Junior Research Group “‘Love’, Work, Recognition – Recognition and Inequality in Dual-Career Couples”.

Research Unit Inequality and Social Integration

Discussion Papers 2008

Petra Böhnke, Ulrich Kohler
Well-being and Inequality
Order No.: SP I 2008 – 201

Jens Alber, Ulrich Kohler
**The inequality of electoral participation
in Europe and America and the
politically integrative functions of the
welfare state**
Order No.: SP I 2008 – 202

Ulrich Kohler, Richard Rose
**Election Outcomes and Maximizing
Turnout: Modelling the Effect**
Order No.: SP I 2008 – 203

Marco Albertini, Chiara Saraceno
**Contact between adult children and
their divorced parents: Italy in a
comparative perspective**
Order No.: SP I 2007 – 204

Jens Alber
**Where Turkey stands in Europe and
why it should be admitted to the EU**
Order No.: SP I 2007 – 205

Discussion Papers 2006

Stein Ringen
Reflections on Inequality and Equality
Order No.: SP I 2006 – 201

Discussion Papers 2007

Richard Rose
**Evaluating Democratic Governance: A
Bottom Up Approach to European
Union Enlargement**
Order No.: SP I 2007 – 201

Petra Böhnke
**Poverty and Social Integration in the
Enlarged Europe**
Order No.: SP I 2007 – 202

Petra Böhnke
**Policy or Privacy – What Matters Most
for Individual Well-Being?**
Order No.: SP I 2007 – 203

Discussion Papers 2005

Ricarda Nauenburg
**Globalisierung und rechtspopulistische
Wahlerfolge**
Order No.: SP I 2005 – 201

Eckhard Priller, Jana Sommerfeld
**Wer spendet in Deutschland? Eine
sozialstrukturelle Analyse**
Order No.: SP I 2005 – 202

Jan Delhey
**A trade-off between enlargement and
integration? An analysis of trust
between EU nationalities**
Order No.: SP I 2005 – 203

Jan Delhey, Ulrich Kohler
From Nationally Bounded to Pan-European Inequalities? On the Importance of Foreign Countries as Reference Groups

Order No.: SP I 2005 – 204

Discussion Papers 2004

Jan Delhey
European Social Integration. From convergence of countries to transnational relations between people
Order No.: SP I 2004 – 201

Jan Delhey, Kenneth Newton
Social Trust: Global Pattern or Nordic Exceptionalism?
Order No.: SP I 2004 – 202

Ulrich Kohler
Empirische Untersuchung zweier Individualisierungshypothesen mit Querschnittsdaten aus 28 Ländern
Order No.: SP I 2004 – 203

Discussion Papers 2003

Harold L. Wilensky
Postindustrialism and Postmaterialism? A Critical View of the “New Economy”, the “Information Age”, the “High Tech Society”, and All That
Order No.: SP I 2003 – 201

Wilhelm Hinrichs
Ausländische Bevölkerungsgruppen in Deutschland. Integrationschancen 1985 und 2000
Order No.: SP I 2003 – 202