

# The Economic Effects of Direct Democracy – A Cross-Country Assessment<sup>1</sup>

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*Abstract:*

*This is the first study that assesses the economic effects of direct democratic institutions on a cross country basis. Most of the results of the former intra-country studies could be confirmed. On the basis of some 30 countries, a higher degree of direct democracy leads to lower total government expenditure (albeit insignificantly) but also to higher central government revenue. Central government budget deficits are lower in countries using direct democratic institutions. As former intra-country studies, we also find that government effectiveness is higher under strong direct-democratic institutions and corruption lower. Both labor and total factor productivity are significantly higher in countries with direct democratic institutions. The low number of observations as well as the very general nature of the variable used to proxy for direct democracy clearly call for a more fine-grained analysis of the issues.*

*JEL classification: H1, H3, H5, H8.*

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## **The Economic Effects of Direct Democracy – A Cross-Country Assessment**

### **1 Introduction**

A number of empirical studies have shown that direct democratic institutions have significant and robust effects on economic outcomes. Matsusaka (2005, 185ff.) sums up the available evidence writing “Direct Democracy Works”. Some other recent studies (e.g. Bodmer 2004) have been more reluctant to assign substantial effects to direct democratic institutions in general but have hypothesized that it is very specific institutions, such as the fiscal referendum, that make the difference. Yet, to date all empirical studies have been constrained to analyzing the effects of direct democratic institutions within countries, most of these studies dealing either with the U.S. or Switzerland.

Here, we are interested in assessing the economic effects of direct democratic institutions on a cross-country basis. This is a timely question as direct democratic institutions have been created the world over and are more frequently used than ever before: between 1991 and 2004, 517 popular votes on the national level have been documented (Institute & Referendum Institute Europe 2005b, 106). Although the majority of them was held in Europe (317), the spread of direct democracy seems to be a universal phenomenon: 85 took place in the Americas, 54 in Africa, 32 in Asia and 30 in Oceania (ibid.).<sup>2</sup> The question could hence be rephrased as “does direct democracy work in general” or – probably more to the point – “under what conditions does direct democracy work”?

In their book-length study on the economic effects of constitutions, Persson and Tabellini (2003) have analyzed the effects of constitutional institutions on a number of variables, including (1) fiscal policy, in particular the size of the government, the composition of government spending, and the size of the budget deficit; (2) rent extraction by the government, in particular the perceived corruption of government and the effectiveness with which government provides public goods and services; and (3) composite measures of growth-promoting policies such as the protection of private property rights that should then be reflected in labor as well as total factor productivity.

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<sup>2</sup> According to the Search Engine for direct democracy (<http://www.sudd.ch>), 432 referenda and initiatives were observed between 1985 and 1994 the world over. This number increased to 492 in the decade from 1995 to 2004.

Persson and Tabellini did not analyze the effects of direct democratic institutions. But it seems to make sense to use their endogenous variables in order to ensure the comparability of our results with theirs. We hence decided to use exactly the same endogenous variables here as long as there were no compelling reasons for some modification. The indicator used to proxy for “direct democracy” is provided by the Initiative & Referendum Institute Europe and contains information on 43 European countries. By and large, our results are in line with the conventional wisdom gained on the basis of intra-country studies: concerning fiscal policy, more direct democracy does not translate into significantly lower central government expenditure and/or central government revenue. Yet, total government expenditure is lower when direct democratic institutions are strong, although in an insignificant way. Still referring to fiscal policy, the central government budget deficit is lower with increasing degrees of direct democracy. Turning to government effectiveness, more direct democratic institutions are correlated with lower levels of evaluating tax-cheating as justified. As expected, government effectiveness is higher and corruption levels are lower in countries with broad direct-democratic institutions. Both output per worker and total factor productivity are higher in countries with direct democratic institutions. All of these results should, however, be taken with a grain of salt due to a number of methodological problems concerning the number of countries recognized, the length of time that the direct-democratic institutions have been in existence and the method used to code for direct-democratic institutions.

The rest of the paper is organized as follows: section 2 surveys the empirical literature, the following section deals with possible transmission channels through which direct democratic institutions could have an impact on economic outcomes, section four describes the data and the estimation approach used here. Section 5 contains the actual estimates and offers some possible interpretations. Section 6 concludes and suggests a number of questions for further research.

## **2 Survey of the Literature**

In real world societies beyond a certain size, representative and direct democracy are not an alternative. Rather, a different degree of direct democratic institutions is combined with representative institutions as no sizeable society can decide directly on all issues. The authors of the Initiative & Referendum Institute Europe (2005b, 228) define direct democracy as the right of citizens to directly decide on substantive political issues by means of popular votes, i.e. independently of the wishes of the government or parliament. They emphasize two implications of that definition: (1) direct democracy is to do with decisions on substantive issues – and

not on people; rights of recall and direct election of mayors and presidents are hence not part of direct democratic institutions. (2) The independence from the wishes of the governing implies that plebiscites which are often used by the governing to have their policies reconfirmed are not considered as forming part of direct democratic institutions either.

With regard to the kind of institutions that qualify, referenda are usually distinguished from initiatives. The constitution can prescribe the use of referenda for passing certain types of legislation. Usually, optional referenda are distinguished from obligatory referenda. Here, agenda setting powers remain with parliament, but the citizens need to give their consent. Initiatives, in turn, allow the citizens to become agenda setters: the citizens propose a piece of legislation that will then be decided upon given that they manage to secure a certain quorum of votes in favor of the initiative. Initiatives can aim at different levels of legislation (constitutional vs. ordinary legislation), and their possible scope can vary immensely (some constitutions prohibiting, e.g., initiatives on budget-relevant issues).

In a paper on the effects of direct democratic institutions in Switzerland, Frey (1994) argues that there is a “*classe politique*” that would tend to cartelize against the interest of citizens. Given that direct democratic institutions exist, citizens have the competence to constrain the power of this cartel. He observes that in 39% of the referenda that took place in Switzerland between 1848 and 1990, the majority of the population was different from the majority in Parliament (ibid., 73) which is interpreted as a proof of the hypothesis of a better reflection of voters’ preferences via referenda. If one assumes that politicians have an incentive not to be corrected by referenda, then they would try to anticipate the result of the referendum and vote accordingly. Under this assumption, the number of 39% is a truly stunning figure.

Matsusaka (1995, 2004) has estimated the effects of the right to an initiative on fiscal policy among all U.S. states except Alaska. He finds that states that have that institution have lower expenditures and lower revenues than states that do not. With regard to Switzerland, Feld and Kirchgässner (2001) have dealt with the effects of a mandatory fiscal referendum on the same variables. They find that both expenditure and revenues in cantons with the mandatory referendum are lower by about 7 and 11 percent compared to cantons without mandatory referenda. Pommerehne showed already in 1978 that tax rates are *ceteris paribus* lower when tax-payers decide themselves on the bundle of public goods supplied. Matsusaka (2004, ch. 4) also deals with the question whether initiatives have any

effect on the distribution of government spending between the state and the local level and finds that initiative states spend 13 percent less per capita at the state level than non-initiative states but spend 4 percent more on the local level. Proponents of direct democracy would interpret this finding as evidence in favor of the hypothesis that under direct democracy, government spending is more in line with the preferences of the citizens. Recently, Bodmer (2004) has poured some water into the wine of those arguing that direct democratic institutions would substantially reduce government growth by showing that during the 1990ies, direct democracy had no effect on spending and deficits among the Swiss cantons.

The next question we are interested in is whether direct democratic institutions have any effects on rent extraction, i.e. the perceived level of government corruption as well as the efficiency with which public goods are provided. With regard to U.S. states, Alt and Lassen (2003) find that initiative states have significantly lower levels of perceived corruption than non-initiative states. Pommerehne (1983, 1990) dealt with the effects of direct democracy on the efficiency with which government services are provided. More specifically, he found that waste collection in Swiss towns with both a private contractor and direct democratic elements is provided at lowest cost. Some of the cost-effectiveness is lost when waste collection is provided by the town itself and additional efficiency losses materialize if waste collection is provided in towns without direct democratic elements. Blomberg et al. (2004) ask whether there is any significant difference in the effective provision of public capital between initiative and non-initiative states among the 48 continental U.S. states during the period from 1969 until 1986. They find that non-initiative states are some 20 percent less effective in providing public capital than initiative states.

Finally, do direct democratic institutions have any discernible effects on productivity and thus on per capita income? Feld and Savioz (1997) find that per capita GDP in cantons with extended democracy rights is some 5 percent higher than in cantons without such rights.

Frey and his various co-authors argue that one should not only look at the outcomes that direct democratic institutions produce, but also at the political process they induce (e.g. in Frey and Stutzer 2006). Kirchgässner and Frey (1990) speculate that the readiness of voters to incur information costs would, *ceteris paribus*, be higher in democracies with direct-democratic institutions because they participate more directly in the decisions (ibid., 63). The authors obviously believe their conjecture to be an advantage of direct-democratic institutions.

Supporters of representative democracy would supposedly claim that this was a disadvantage because voters had to incur high information costs. Direct democracy would thus be a decision procedure in which resources were wasted whereas representative democracy would make use of the welfare enhancing principle of the division of labor. Frey and Kirchgässner (ibid, 65) themselves emphasize that time is scarce and the number of questions that could usefully be decided by referenda was naturally limited in number.

Benz and Stutzer (2004) have recently provided evidence in favor of the conjecture that citizens in states with direct-democratic institutions are better informed than citizens in purely representative states. Some European states used referenda to pass the Maastricht treaty whereas others did not. Relying on Eurobarometer data, Benz and Stutzer find that citizens in countries with a referendum were indeed better informed both objectively (i.e. concerning their knowledge about the EU) as well as subjectively (i.e. concerning their feeling about how well they were informed). The paper is also interesting because it is one of the very few papers that deals with the effects of direct-democratic institutions in a cross-country setting. Most prior studies have focused on differences between Swiss cantons (or towns) or between U.S. states (or towns). More cross-country studies are clearly a desideratum.

### **3 Some Theory**

In their paper on the effects of direct democratic institutions on total factor productivity in Switzerland, Feld and Savioz (1997, 515) argue that due to the lack of theoretically convincing transmission channels, it would make sense to opt for the large picture, namely to inquire whether the presence of direct-democratic institutions leads to higher total factor productivity.<sup>3</sup> In other papers (e.g. Matsusaka 2005) three possible transmission channels are rehearsed again and again: principal-agent problems, asymmetric information and issue bundling. We confine our considerations to the principal-agent problem and issue bundling here.

In a principal-agent framework, the citizens are the principals who are only very imperfectly able to control their agents – namely the government. Direct

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<sup>3</sup> They write: “... , there seems to be no simple theoretical reason how direct democracy should affect economic performance. It seems to be more interesting to analyze the contribution of political decision making mechanisms in terms of efficiency. This hints towards the composition of revenue and expenditure, the efficiency of the revenue system in terms of tax evasion as well as the efficiency of the provision of public services.”

democratic institutions can now have two effects, namely a direct effect which enables the principals to override the decisions of unfaithful agents and an indirect effect where the threat of drawing on direct-democratic institutions might already be sufficient to induce agents to behave according to the preferences of the median voter. Potentially, the reduction of the principal agent problem due to the existence of direct democratic institutions could affect all of the endogenous variables already mentioned in the introduction: if citizens prefer an expenditure level that is higher/lower than the government, they should get it via direct-democratic institutions. It is often assumed that governments prefer higher expenditure levels than citizens, in this case, we would expect lower expenditure levels the more important direct democratic institutions are in a country.

But if it could also be the other way round, namely that citizens prefer higher expenditure levels than government, we cannot say anything about the sign of the coefficient anymore. This argument can also be applied to government revenue, the budget surplus/deficit, but also the composition of the government budget. But if direct democratic institutions can lead to both higher as well as to lower government expenditure, we should specify the conditions under which either outcome is plausible. It appears reasonable to assume that left-of-center governments have a higher propensity to spend than the median voter and that right-of-center governments have a lower propensity than the median voter. This condition needs, hence, to be controlled for.

Feld und Matsusaka (2003) use a very simple spatial model to point out the possible effects of direct democratic institutions. The model is based on the assumption that government wants to spend more than the median voter. The nice thing about this model is that it enables us to compare the effects of various institutions. Call 0 the status quo expenditure level, the ideal point of the median voter is indicated by  $M$  and that of the (median member of) parliament by  $P$ . Under purely representative democracy (institutional setting 1), parliament will implement its most preferred spending level. This spending reduces the utility level of the median voter: the spending level  $2M$  makes him indifferent between the status quo and  $2M$ , spending level in excess of  $2M$  thus lead to a lower utility level. Given that parliament needs to get the budget approved by the population (mandatory referendum; institutional setting 2) the voters would reject any proposal that would make them worse off than under the status quo. Parliament anticipates this and proposes a budget that will not be rejected which means that it will be very close to the level  $2M$ . How do results change if the referendum is not mandatory but optional, i.e. voters have to collect signatures in favor of a referendum which is, of course, costly? If parliament knows the costs (which is

assumed here), this third institutional setting enables parliament to spend more than under mandatory referendum. The difference in spending between these two institutional settings is exactly the amount of costs the voters have to incur for collecting the signatures necessary for having an optional referendum. This is expenditure level  $2M+C$  in the graph.

The last institutional setting to be introduced is the initiative. The crucial point here is that agenda setting changes from parliament to the population at large. If it ever comes to an initiative, spending level  $M$  would be realized. Kicking off an initiative is, however, not costless either and an initiative will only take place if there is a net gain to the voters after having taken the costs ( $K$ ) into account. The higher the percentage of the voters who need to consent to an initiative the higher  $K$ . Parliament can avoid an initiative by proposing a spending level  $M+K$ .

If we assume that the costs of collecting the signatures for an initiative  $K$  are smaller than the increase in the expenditure level preferred by the median voter (i.e. smaller than the axial sections  $0M$  and  $M2M$ ), we can rank order spending levels as “representative democracy” > “optional referendum” > “mandatory referendum” > “initiative”.

0	M	2M	2M+C	P	exp.level
status		mand	opt	repr	
quo		ref.	ref.	democracy	

Of course, the ideal points need not to be ordered in the way assumed here. It might, e.g., be the case that the ideal spending level of a conservative parliament is lower than that of the median voter. This would still imply that direct democratic institutions lead to outcomes that are closer to the preference of the median voter than purely representative institutions. But the possibility that the population at large wants higher spending levels than the median member of parliament should be taken into account explicitly.

We now turn to issue (un-)bundling. Given that different actors have different intensities in their preferences concerning various issues, the bundling of issues – also called log-rolling - can ideally make many actors better off and additional

welfare benefits can be reaped. Empirically, it remains, however, heavily disputed if log-rolling is not systematically misused in order to realize spending levels far beyond the optimal level of the median voter (Mueller 2003, 104-27 sums up both the theoretical as well as the empirical evidence). If this is the case, then the unbundling of issues can potentially be welfare enhancing. This argument need not be confined to fiscal policy: if direct democratic institutions prevent politicians from an inefficient bundling of issues, this could also increase government effectiveness and labor as well as total factor productivity.

Until now, the theoretical arguments have closely followed the prevailing literature in which two aspects, namely (i) tax evasion and (ii) government corruption have played a minor role at best. With regard to tax evasion, the argument that direct democratic institutions improve the process of collective decision-making (as opposed to its results) that has been stressed by Frey and his co-authors becomes relevant: if citizens believe that they have a say in collective decision-making, this increases the legitimacy of the political system. If citizens view the political system as “their” system, the readiness to accept its decisions will be higher. This could translate into a lower propensity to cheat on taxes.

High levels of government corruption are often seen as the result of low transparency of the collective decision-making process as well as low accountability of politicians for the results of their actions. Higher levels of transparency would, hence, be correlated with lower corruption levels. The transparency of the political process is argued to be higher under direct democratic institutions, at least with regard to the issues that could potentially be subject to a referendum or an initiative: decision-making will be subject to public debate and it will be more difficult to hide corrupt practices from the voters.<sup>4</sup>

At the end of the day, economists are interested on the effects of institutions on income levels. Given that public goods are provided more efficiently and that corruption levels are lower, this should also be reflected in labor productivity. But *ex ante*, we cannot exclude the possibility that direct democracy impacts on economic variables in ways still different from those explicitly mentioned here. If this is a possibility, then direct democratic institutions could have an effect on both labor as well as on total factor productivity even though they have no relevant effect on the other endogenous variables.

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<sup>4</sup> It could be argued that the institutional possibility to kick out specific politicians by way of direct democratic institutions after they have proven to be corrupt could be an even more relevant check on corruption. An empirical test of this hypothesis is left to future work though.

In the introduction, the question was raised whether certain conditions can be named that need to be given if direct democracy is to have any effects. It seems almost self-evident that direct democratic institutions will not add much in systems that cannot be called democratic in general. Additionally, it has been conjectured (Kaufmann et al. 2005, 179) that direct democracy will only work if the country has functioning media and the state operates under the rule of law. The media seem to be important for direct democracy as much of the discussion concerning the issues that the population will decide by way of popular vote will take place there. If the media are government-run or government-controlled, serious discussion seems unlikely.

As far as we can see, there have not been any systematic attempts to explain the emergence of direct democratic institutions.<sup>5</sup> Having a look at Central and Eastern Europe and realizing that most of the recently passed post-socialist constitutions preview for some direct democratic element, the age of the constitution appears to be one possible explanatory variable. Constitution-making occurs in waves and also reflects the dominant thinking of the time in which constitutions are passed. Another variable that has intuitive appeal are other elements of the constitution such as whether it has a federal or an unitary structure. These are nothing more than a number of ad hoc conjectures and more work is certainly needed.

#### **4 Data Description and Estimation Approach**

Before describing the data actually used in this study, we want to list a number of variables that would be of interest in future studies:

- does the country know (i) a referendum, (ii) an initiative, or (iii) both;
- what is the relevance of mandatory referenda as compared with optional referenda
- how difficult is it to kick off an initiative? (the higher the percentages of signatures needed from the entire electorate, the more difficult (“costly”) it will be to kick off the process, and the less teeth it can be expected to have);<sup>6</sup>

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<sup>5</sup> See also Matsusaka (2005, 197) who writes: “A difficulty in developing instruments is that we do not yet understand why certain states adopted the process and others did not.”

<sup>6</sup> Kaufmann (2004, 179ff.) contains a host of additional variables such as time allowed for collection of signatures, modus of signature collection, wording of initiatives/referenda, legal requirements. Most of them are difficult to quantify and it appears questionable how much additional information their recognition would really incorporate.

- how difficult is it to mobilize a sufficiently high proportion of the electorate such that the results of the referendum (of the initiative) are a binding constraint on politicians?
- how difficult is it to change policies by way of direct democratic institutions? (what are the relevant majorities? Supposedly expressed in percent of all eligible voters; do the politicians have any chance to circumvent the results of referenda/institutions?)
- on what state-level are direct democratic institutions used? Most countries that have direct-democratic institutions do not use them on the top-level but only on the state or local level.
- Are entirely policy areas excluded from direct democratic institutions? Are other policy areas subject to mandatory referenda? Obviously, the larger the areas excluded, the lower the expected relevance, the higher the number of areas included mandatorily, the higher the expected relevance.
- How long have the direct democratic institutions been into place? This is obviously an important aspect if the possibility that the effects will only show in the medium or even long run cannot be excluded.
- Lastly, it is a well known fact that formal institutions are often not in line with their factual use. It might thus be useful to explicitly analyze the factual use of direct democratic institutions (taking, e.g., into account the number of times, courts have deemed initiatives to be not in conformity with the constitution etc.).

Feld and Matsusaka (2003, 2706) notice that “many studies combine several institutional features into an ad hoc index of direct democracy” and point out that this does not allow to answer questions concerning the institutional details that possibly affect economic outcomes. This is why we also propose to look at single aspects of direct democratic institutions.

In this study, we rely on the “Country Index on Citizen law-making 2004” as provided by the Initiative & Referendum Institute Europe. The index is based on four different categories (very fundamental, fundamental, important, and useful elements of direct democracy; the complete list of criteria can be found in the appendix). 43 European countries are then grouped into one of seven categories. These are (1) the radical democrats, (2) the progressive, (3) the cautious, (4) the hesitant, (5) the fearful, (6) the beginners, and (7) the authoritarians. Again, the precise definitions as well as the countries belonging to the various categories are made explicit in the appendix.

This index has definite advantages and disadvantages: an advantage of the index is that the authors have attempted to rely not only on the legal foundations of direct democracy in a given country but also to explicitly take its experiences with direct democracy as well as its entire political culture into account. This means that this indicator should not be subject to the fallacy of putting too much trust in the formal legal rules of a country. A definitive disadvantage is that the criteria used for weighing the different criteria remain completely opaque. Another disadvantage is the rather limited number of countries for which information is provided. Additionally, many of these countries are part of Central and Eastern Europe, where direct democratic elements have only been introduced relatively recently which means that it is probably too early to show up in the economic variables. A desideratum for future research hence almost suggests itself: generate a database with completely transparent coding criteria for a larger number of countries.

Yet, in order to ascertain whether direct democratic institutions have any clear-cut effects at all, it appears completely straightforward to begin with IRI's Index. Compared to intra-country studies, cross-country studies pose a number of problems that one should at least be aware of. In intra-country studies, the *ceteris paribus* condition is often a lot better satisfied than in cross-country studies: many factors that differ across countries can be safely assumed not to display large degrees of variation within countries. This means that the number of control variables used in cross-country studies should be higher than in intra-country studies. The problem of our dataset is, of course, that it is relatively small to begin with and the simultaneous inclusion of many control variables thus overly reduces our degrees of freedom.

The estimation approach used is straightforward and follows directly from the theoretical part. We are interested in estimating the dependent variable  $Y$  that can stand for (i) fiscal policy, (ii) government effectiveness or (iii) economic productivity of a country. The vector  $M$  is made up of a number of standard variables conventionally used to explain  $Y$ . The variable  $DD$  is our measure of direct democratic institutions and the  $Z$  vector is composed of a number of control variables that can be both economic as well as institutional. Models in which institutional variables serve as explanatory variables are always subject to serious endogeneity issues. We believe that these issues are particularly relevant with regard to government effectiveness and the economy's productivity. The so-called Lipset hypothesis (1960) assumes that the level of economic development of a country has a direct effect on its likelihood to be democratic. Hence, it appears crucial to use instruments with regard to both government effectiveness and both

labor and total factor productivity. It has, however, not been argued that the fiscal policy of a country could induce it to be more or less democratic which means that it appears less crucial to introduce instruments with regard to the models in which fiscal policies serve as dependent variable. This is why we regress effectiveness and productivity relying on an instrument variable (IV) approach and fiscal policy with an OLS approach.<sup>7</sup> The instruments used are spelled out below.

$$Y_i = \alpha_i + \beta M_i + \gamma DD_i + \delta Z_i + \varepsilon_i$$

But before presenting the regression results, it might make sense to have a look at the bivariate correlations of the indicator with other political institutions. Table 1 reveals that most of the correlations are not particularly strong. The two states with the strongest direct democratic institutions, namely Switzerland and the U.S., are federal states and it almost seems to suggest itself that there might be a strong correlation between making sub-units strong and giving the citizens a direct say in political decision-making processes. The correlation between the two is, however, only a meagre 0.212 and, on top of it, it has the “wrong” sign. If one wants to attribute any meaning to this finding at all, it would mean that federalism and direct democracy are substitutes, rather than complements.<sup>8</sup>

The next four correlations all deal with the two institutions that occupy center-stage in Persson and Tabellini (2003), namely the electoral system and the form of government. It seems that states with strong direct-democratic institutions are more likely to have proportional rule than majority rule. It also seems that strong direct democratic institutions are more likely to come along with parliamentary than with presidential systems. As the combination between majority rule and presidential system was found to have huge effects (e.g. on the fiscal policy of a state, in Persson and Tabellini), it is particularly interesting to ask whether strong direct democratic institutions can work as a corrective device in states that have a combination of parliamentary systems with proportional rule.

Additional aspects of the electoral system that were taken into account by Persson and Tabellini (2003) dealt with the share of legislators that were elected in national districts and the size of the districts expressed as “districts/seats”. The

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<sup>7</sup> The robustness of the results was tested by using an IV approach with regard to fiscal policy and an OLS approach with regard to both government effectiveness and productivity.

<sup>8</sup> Most indicators of federalism have been quite controversial. If one uses the dummy constructed by Treisman (2000) based on Riker (1964) and Elazar (1995) instead of the Adserà indicator, the coefficient turns negative but remains insignificant.

conjecture motivating the inclusion of these variables is that transparency of what the legislators do and subsequently their accountability to the constituents are supposed to be higher if only a small share is elected in national districts and if district magnitude is small. Concerning the correlation of these two variables with the direct democratic indicator, one could expect that direct democratic institutions are a signal for attributing transparency and accountability an important place and would hence expect that more direct democratic institutions should be correlated with a small share of legislators elected in national districts and small district magnitude. This is, indeed, the case.

The variable “first year of democratic rule” indicates the first year in which a country has been rated as democratic without interruption. It could be conjectured that higher levels of direct democracy enable countries to better implement democracy in general. If this was the case we would see a positive coefficient which is indeed the case. Alternatively, we have tested the correlation between the age of the current constitution and the indicator of direct democracy. The positive coefficient means that the older the constitution, the higher the degree of direct democracy. This is somewhat of a surprise given that the notions of more direct citizen participation seem to have developed rather recently.

More generally, direct democratic institutions could be expected to go hand in hand with more democratic regimes and higher degrees of freedom.<sup>9</sup> This is indeed the case and the two correlations are the highest in the entire table. We further tested whether there is a correlation between the factual independence of a country’s judiciary and its direct democratic institutions. Based on 30 observations, the two are almost perfectly uncorrelated. Finally, one could expect people in countries with a high degree of direct democracy to be happier than those who only enjoy low degrees of direct democracy. This does, indeed, seem to be the case.

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<sup>9</sup> The Gastil-Index used here is a combination of the two indicators that distinguish between political freedom and civil liberties. It thus covers a broad concept of freedom. The Index is coded from 1 (most democratic) to 7 (least democratic). All countries in the sample have scores of 5 and better except one, namely Belarus and Azerbaijan that are both coded 6.

**Table 1: Bivariate Bravais-Pearson Correlations of Direct Democracy (1-7; 1=radical democrats) and other Country Characteristics<sup>1</sup>**

	Source	Correlation	N
Federalism (0,1; 1=federal structure)	Adserà et al. 2001.	0.212	30
Electoral System (0,1; 1=plurality rule)	Persson/Tabellini 2003	0.361*	32
Form of Government (0,1; 1=presidential regime)	Persson/Tabellini 2003	0.398*	32
Share of legislators elected in national districts	Seddon et al. 2001	0.501**	28
District Magnitude (Districts/Seats)	Persson/Tabellini 2003	0.396*	32
Gastil Index (1-7; 1=highest degree of freedom)	Freedom House 2000	0.684**	32
First year of democratic rule (year)	Persson/Tabellini 2003	0.448**	32
Age of Constitution (year)	Own calculation	0.417**	38
De Facto Independence (0-1; 1= very independent)	Feld/Voigt 2003	0.018	30
Happiness (0-10; 0=not happy)	Veenhoven 2004	-0.559**	37

- 1) All the data – except the last three indicators – on other country characteristics are available on the homepage provided by Persson and Tabellini: [http://www.igier.uni-bocconi.it/whos.php?vedi=1168&tbn=albero&id\\_folder=177](http://www.igier.uni-bocconi.it/whos.php?vedi=1168&tbn=albero&id_folder=177) 5. ‘\*\*\*’, ‘\*’ or ‘(\*)’ show that the estimated parameter is significantly different from zero on the 1, 5, or 10 percent level, respectively

After having become familiar with the bivariate correlations between the indicator of direct democracy used here and various other variables of interest, we now turn to the econometric evidence.

## 5 Estimation Results and their Interpretation

Table 2 contains a number of (broadly delineated) fiscal policy variables as dependent variables. Based on OLS-regressions, the direct democratic indicator is used as one of the independent variables and we are interested in ascertaining the effects of direct democratic institutions. Empirical studies from Switzerland and the U.S. have usually found that the stronger the institutions of direct democracy, the lower the government expenditure, but also government revenue and the

budget deficit. The picture that we get from the cross-country analysis points into the same direction but is not nearly as clear-cut as that from the former studies: The effect of direct democratic institutions for explaining differences in total government expenditure has the expected sign but does not reach conventional levels of significance. The very high level of significance of the presidential regime variable appears noteworthy: It means that presidential regimes have a significantly higher total government expenditure expressed as a share of GDP than non-presidential (i.e. parliamentary) systems.<sup>10</sup>

Notice that Persson and Tabellini (2003) do not use total but central government expenditure. We prefer total over central expenditure here as direct democratic institutions often do not play a role on the top level but rather on the levels below.<sup>11</sup> Matsusaka (1995, 608f.) noticed that within the U.S., the existence of initiatives affected the composition of government expenditures between the state and the local level: whereas state level spending was reduced, local level spending was significantly higher in initiative states. It would thus be desirable to have a closer look at government expenditures at lower government levels.

Column 2 displays the regression in which central government revenue serves as the dependent variable. If the theoretical conjecture is that direct democratic institutions lead to less expenditure, one would expect that they should also lead to less revenue. Yet, the negative coefficient indicates that more direct democratic elements are correlated with higher government revenues. The direct democratic variable is now marginally significant. Furthermore, it is noteworthy that the dummy variable indicating whether a system is presidential or parliamentary loses its significance if direct democracy is estimated simultaneously. Hence, the Persson and Tabellini results where this variable was significant on the one

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<sup>10</sup> This result sheds some doubt on the robustness of the Persson and Tabellini (2003) results with regard to the lower propensity to spend of presidential systems. If one does not confine the analysis to the central level (as Persson and Tabellini do) but looks at the total amount of spending, their results are exactly reversed. Given that these results carry over to larger samples, one would have to inquire into the transmission mechanism that leads to higher amount of government spending on the lower levels in presidential systems. This is, however, a topic for a different paper.

<sup>11</sup> Regressing central government expenditure on direct democracy leads to a negative sign of the coefficient (implying that higher levels of direct democracy lead to more expenditure). Again, this is not significant on a conventional level.

percent level does not appear robust to the inclusion of other institutional variables.<sup>12</sup>

Having a look at the central government budget deficit (column 3) shows that stronger direct democratic institutions are correlated with lower deficits. This is in line with theoretical expectations and statistically, the effect is highly significant. The economic significance seems to be substantial too: Every one-step improvement of direct democracy (remember that there are seven groups) goes along with a reduction of the central government budget deficit of more than one percentage point.

The variable social services and welfare spending (column 4) is defined as the central government expenditures consolidated on social services and welfare as a percentage of GDP. As it refers to central government expenditures, direct democracy should not be expected to have a substantial influence as that should rather show up in the lower levels. This is indeed the case. As expected, the single most significant explanatory variable of social security and welfare spending is the share of the population beyond the age of 65. In line with Persson and Tabellini, presidential regimes spend significantly less on social services and welfare on the central level than do parliamentary systems.

The last dependent variable in table 2 is not based on hard numbers (as the other variables) but rather on subjective evaluations. It deals with the issue whether persons polled think that cheating on taxes is justified. The variable is based on a question of the World Values Survey (“Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: .... Cheating on tax if you have the chance [% “never justified” code 1 from a ten-point scale where 1= never and 10 = always])). It has been argued that direct democratic institutions improve the process of political decision-making and would hence improve the legitimacy of political decisions. If that hypothesis were correct, more direct democracy should be correlated with a lower propensity to cheat on taxes. This is indeed the case. The economic effect is, however, rather small: a jump from the group of countries with the least use of direct democracy into the group that rely on direct democratic institutions most heavily would only result in an improvement of one category (out of ten) with regard to considering cheating on taxes as justified. Additionally, it is worth

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<sup>12</sup> In order to ensure comparability of the results, all the control variables used in Persson and Tabellini were also controlled for here (see the bottom of table 2 for details).

mentioning that people in presidential regimes have a significantly higher propensity to cheat on taxes than people in parliamentary regimes.

**Table 2: Direct Democracy and Fiscal Policy (OLS-Regressions)**

Dependent Variable Independent Variables	Total Government Expenditure/GDP <sup>3</sup>	Central Government Revenue/GDP <sup>1</sup>	Central Government Budget surplus <sup>1</sup>	Social Services and Welfare Spendings <sup>1</sup>	Cheating on Taxes <sup>2</sup> (1-10; 1=not justif.)
	(1)	(2)	(3)	(4)	(5)
GDP per Capita 1990 in log form <sup>3</sup>	-29.736** (3.016)	3.599 (0.617)	-2.758 (1.113)	4.196 (0.820)	-0.083 (0.135)
Sum of Exports and Imports/GDP <sup>1</sup>	0.100** (2.961)	0.047(*) (1.722)	0.040** (3.881)	0.011 (0.505)	0.007** (3.529)
% of Population above the age of 65 <sup>1</sup>	1.320* (2.246)	0.851 (1.351)	-0.290 (1.204)	0.845* (2.036)	0.130** (3.147)
Federalism (0,1; 1=federal structure) <sup>1</sup>	-1.551 (1.394)	-6.386* (2.068)	1.629 (0.966)	0.768 (0.617)	-0.342(*) (1.924)
Presidential Regime (0,1; 1=presidential) <sup>1</sup>	9.045** (6.307)	-7.023 (1.555)	-1.106 (0.847)	-3.046(*) (1.869)	0.805** (5.745)
Direct Democracy (1,7; 1=radical democrats) <sup>4</sup>	1.073 (1.365)	-1.953(*) (1.636)	-1.096** (2.714)	-0.932 (1.099)	0.133* (2.549)
Constant	195.08	1.94	20.77	-25.18	0.30
Adjusted R <sup>2</sup>	0.576	0.548	0.394	0.416	0.377
SER	4.969	5.744	2.265	3.980	0.406
J.-B.	0.809	0.100	1.242	1.127	0.477
Observations	28	27	27	28	27

All models are robust to the inclusion of age of democracy, percentage of population between 15 and 64, OECD-Membership, a plurality rule dummy (all from Persson and Tabellini), Press Freedom (Freedom House), the Rule of Law (Heritage Foundation) as well as a Political Conflict Index (CNTS Database).

1) Persson/Tabellini 2003 ([http://www.igier.uni-bocconi.it/whos.php?vedi=1168&tbn=albero&id\\_folder=177](http://www.igier.uni-bocconi.it/whos.php?vedi=1168&tbn=albero&id_folder=177));  
2) World Value Survey 2001; 3) Heston et al. 2002 (Penn World Tables 6.1); 4) Kaufmann 2004/2005 (IRI).  
The numbers in parentheses are the absolute values of the estimated t-statistics, based on the White heteroscedasticity-consistent standard errors. ‘\*\*’, ‘\*’ or ‘(\*)’ show that the estimated parameter is significantly different from zero on the 1, 5, or 10 percent level, respectively. SER is the standard error of the regression, and J.-B. the value of the Jarque-Bera-test on normality of the residuals.

Persson and Tabellini test whether their variables are robust to the inclusion of a host of additional variables. Since we are interested in achieving comparability of our results with theirs, we test for the robustness of our results by including many additional variables. All specifications are robust to the inclusion of: age of Democracy, percentage of population between the age 15 and 64, OECD-

Membership, and a Plurality Rule Dummy (all from the Persson/Tabellini Data Set). The inclusion of the Gastil-index, hence a very broad indicator for the quality of political institutions, makes the direct democratic-indicator lose its significance in estimation 2, whereas it keeps its significance in both estimations 3 and 5.<sup>13</sup>

It has been argued that direct democracy would only be relevant in certain more general environments in which governments generally adhere to the rule of law, the press can freely criticize government etc. This is why we also included variables proxying for Press Freedom (Freedom House), the Rule of Law (Heritage Foundation) as well as a Political Conflict Index (CNTS Database). The Political Conflict Index is composed of eight single variables, namely the number of assassinations, the number of general strikes, the occurrence of guerilla warfare, the occurrence of government crises, purges, riots, revolutions, and anti-government demonstrations. The estimated results are, however, robust to the inclusion of all of these variables.

We now turn to the estimates that deal with the effect of direct democratic institutions on political rents and productivity. As already mentioned above, endogeneity problems loom large here. This possibility is especially severe within the dataset used here as it contains many Central and Eastern European countries that have ratified their constitutions within the last decade. This is why we work with instrumental variables with regard to both political rents and productivity. The problem of adequate instruments is particularly severe in this case as the theory of endogenous direct democratic institutions is virtually non-existing. This is why we have opted for two different very pragmatic approaches: on the one hand, we use the age of democracy as a single instrument. When discussing some bivariate correlations above, it was already noted that older democracies tend to draw more heavily on direct democratic institutions; there is a highly significant correlation between age of democracy and direct democracy – and only a low one between age of democracy and the error term.

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<sup>13</sup> Hungary is an outlier; if it is excluded from the estimations, the results become stronger. It is noteworthy that the indicators for both presidential system and majority rule become insignificant as soon as direct democracy is introduced instead of the Gastil-index as a control variable. In other words: had Persson and Tabellini (2003) introduced direct democracy as a control variable instead of the Gastil-index would their results have been less significant – at least based on the sample of countries used here.

On the other hand, we draw on a paper by Tavares and Waziarg (2001) who identified a number of variables that had a significantly positive effect on the observed level of democracy (in general – not specifically with regard to direct democracy), namely the log of per capita income (in this case for 1990), the growth rate between 1990 and 2000, the distribution of wealth in a country (operationalized by way of the GINI coefficient), the level of education (primary and secondary school enrollment), and the given degree of ethno-linguistic fractionalization. The estimates based on these two different approaches are very similar. Here, we only report the results based on the “age of democracy” instrument as no problem with over-identification occurs.

The first model shows that stronger direct democratic institutions are marginally significant for explaining variation in government effectiveness over the 30 countries for which information was available. Many studies interested in the analysis of corruption rely either on the data contained in the World Bank’s Governance Indicators (Kaufman et al. 2003) or on the meta-survey published annually by the NGO Transparency International. As a sort of robustness test we regress either indicator (columns 2 and 3) on our direct democracy variable. In both estimates, the coefficient has the expected sign (implying that more direct democracy leads to lower levels of perceived corruption) but the significance level is only 10 percent in case of the Kaufman indicator (and only in a one-tailed test). Note, however, the very high values for the determination coefficient. We finally deal with the relationship between direct democracy and productivity. With regard to both output per worker and to total factor productivity, direct democracy has the expected sign: higher levels of direct democracy are correlated with higher productivity. Here, the direct democratic variable is significant in both estimates. It is, however, noteworthy to point out that the number of countries for which data are available is only 24 in these cases, which means that the results should be taken with a grain of salt.

**Table 3: Direct Democracy and Political Rents and Productivity (TSLS-Regressions)**

Dependent Variable Independent Variables	Government Effectiveness <sup>1</sup> (0-10; 0=good)	Perception of Corruption <sup>1</sup> (0-10; 0=little)	Corruption Index (CPI) <sup>1</sup> (0-10; 0=little)	Output per Worker 2000 in log form <sup>2</sup>	Total Factor Productivity 2000 <sup>3</sup>
	(1)	(2)	(3)	(4)	(5)
GDP per Capita 1990 in log form <sup>2</sup>	-1.592 (1.367)	-1.690 (1.426)	-2.078 (1.195)	-	-
Sum of Exports and Imports/GDP <sup>1</sup>	0.008(*) (1.615)	0.014* (2.324)	0.018* (2.148)	-	-
Natural logarithm of total population <sup>1</sup>	0.129 (1.272)	0.396* (2.389)	0.735** (3.080)	-	-
Primary and secondary school enrollment <sup>1</sup>	-0.034 (1.429)	-0.033 (1.562)	-0.062(*) (1.962)	-	-
Gastil-Index of Freedom (1-7; 1=free) <sup>1</sup>	0.792** (3.426)	0.764** (3.728)	0.292 (1.277)	-	-
Frankel-Romer forecasted trade share <sup>1</sup>	-	-	-	0.044 (1.151)	0.214* (2.530)
Distance from the equator (in degrees) <sup>1</sup>	-	-	-	0.529 (1.404)	-1.240 (1.640)
Presidential Regime (0,1; 1=presidential) <sup>1</sup>	-	-	-	0.037 (0.616)	-0.471** (3.155)
Direct Democracy (1,7; 1=radical democrats) <sup>4</sup>	0.580(*) (1.883)	0.487 (1.550)	1.062* (2.299)	-0.169** (2.926)	-0.264* (2.449)
Constant	13.51	13.23	17.02	7.35	1.83
Adjusted R <sup>2</sup>	0.851	0.851	0.795	0.483	0.349
SER	0.706	0.743	1.090	0.152	0.279
J.-B.	3.086	2.258	0.607	1.148	0.666
Observations	30	30	29	24	24

All models are robust to the inclusion of OECD-Membership, a federalism dummy, ethnolinguistic fractionalization, share of protestants among population, a plurality rule dummy, a presidential regime dummy, district magnitude (all from Persson and Tabellini), Press Freedom (Freedom House), as well as the Rule of Law (Heritage Foundation) as well as a Political Conflict Index (CNTS Database).

1) Persson/Tabellini 2003 ([http://www.igier.uni-bocconi.it/whos.php?vedi=1168&tbn=albero&id\\_folder=177](http://www.igier.uni-bocconi.it/whos.php?vedi=1168&tbn=albero&id_folder=177)); 2) Heston et al. 2002 (Penn World Tables 6.1); 3) Modified Hall/Jones 1999 4) Kaufmann 2004/2005 (IRI). The numbers in parentheses are the absolute values of the estimated t-statistics, based on the White heteroscedasticity-consistent standard errors. ‘\*\*\*’, ‘\*’ or ‘(\*)’ show that the estimated parameter is significantly different from zero on the 1, 5, or 10 percent level, respectively. SER is the standard error of the regression, and J.-B. the value of the Jarque-Bera-test on normality of the residuals.

It was already pointed out that both presidential form of government and majority rule turned out to be insignificant as soon as direct democracy was controlled for in explaining fiscal policy. This also holds with regard to both political rents and productivity. This sheds, of course, an entirely new light on the Persson and Tabellini (2003) results as they are much less robust than they seem to be according to the authors.

## **6 Conclusion and Outlook**

This paper is the first attempt to analyze the effects of direct-democratic institutions on a cross-country basis. Most results are by and large compatible with prior studies that have focused on the analysis of Switzerland and the U.S. The results presented here can only be a very first step towards the analysis of the effects of direct-democratic institutions on a cross-country basis. Natural extensions include (i) to increase the number of countries represented in the data set, (ii) the use of more fine-grained indicators that allow for the analysis of single components which would enable us to identify the institutional settings that make a difference with more precision. It has, e.g., been conjectured that broad initiative rights could lead to more government spending whereas the institutional of a fiscal referendum could cause the exact opposite (Bodmer 2004). Hence, a precise separation between the individual institutions appears crucial. Taking these additional conjectures into account, it is amazing how clear-cut the results attained here are.

There are a number of questions that have not been dealt with in the intra-country studies but that could be relevant nevertheless. It has already been mentioned that the spending propensity of a government might not only be determined by institutional factors but also by ideological factors namely by the issue whether a government is left (right) of center and has a higher (lower) propensity to spend. Another question that seems to be worth pursuing is whether the kind of revenues gathered by governments are also determined by the degree of direct democracy realized in a country.

Additional aspects that have, at least to our knowledge, never been dealt with include the question whether political business cycles are “flattened” if voters have the means to do so. Conceptually, this would seem strange as the explanations for the existence of such cycles point out that additional spending would increase the likelihood of government to be re-elected. Frey and Stutzer (2000) have found that Swiss citizens who live in cantons with a high degree of direct democracy are happier based on micro-data and, hence, controlling for a

host of relevant variables such as occupational status, marital status, health conditions etc. It would be interesting to replicate this result on a cross-country level, yet micro-data is more difficult to come by on this level. But we have included bivariate correlations between direct democratic institutions and happiness and they are highly significant.

In this paper, we have referred to the work of Persson and Tabellini (2003) a number of times. At the end of the day, we are, of course, not interested in the effects of constitutional institutions in isolation but of their effects when they are analyzed as part of an entire constitution consisting of many different institutions. It has been noted that some of the strong effects found by Persson and Tabellini turned out not to be robust as soon as direct democracy was accounted for. This could be due to the low number of observations. But the more interesting question seems to be whether there are any systematic interaction effects between the various constitutional institutions. We have looked at some interaction effects in our dataset but they are not particularly high.

Suppose that a more extended analysis of the economic effects of direct democracy still shows that there are a number of significant effects. It would then be interesting to go one step back and ask: why do some constitutions heavily rely on direct democratic institutions whereas others do not at all. It would, in other words, be interesting to endogenize direct democracy. It has been mentioned (Matusaka 2005, Fn. 7) that the current state of knowledge is rather deplorable: „A difficulty in developing instruments is that we do not yet understand why certain states adopted the process and others did not.“ Lots of work remains, hence, to be done.

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#### Appendix 1:

Criteria on which IRI Europe's Country Index is based:

Category 1: Very fundamental elements

Exclusions on issues, entry hurdles, time limits, majority requirements/quorums, the way signatures are collected.

Category 2: Fundamental elements

Role of parliament, finances and transparency, supervision

Category 3: Important elements

Periods of time, additional tools of direct democracy

Category 4: Useful elements

Support by administration, communicative infrastructure, intermediate results remain undisclosed.

#### Appendix 2:

The seven categories of the country-rating

Category 1: The Radical Democrats

Citizens have access to a broad spectrum of direct-democratic procedures. As well as the binding popular initiative, these include the right of facultative referendum and obligatory referendums for alterations to the Constitution and state treaties.

Country: Switzerland

#### Category 2: The Progressive

Citizens have, at least in part, the possibility of initiating national referendums without the express permission of the organs of the state (parliament, government, president). There are also procedures for obligatory referendums.

Countries: Denmark, Ireland, Slovenia, Slovakia, Netherlands, Italy, Lithuania

#### Category 3: The Cautious

The electorate does have practical experience of popular initiatives and /or national referendums. But these procedures are essentially plebiscitary in nature, i.e. they are not protected or controlled by the citizens themselves or by the law, but are controlled “from above” by parliament (political parties) or by the executive.

Countries: Luxembourg, Bulgaria, Portugal, Czech Republic, Belgium, France, Spain, Austria, Norway, Poland, Liechtenstein.

#### Category 4: The Hesitant

The political elites in the countries of this category appear to be afraid of popular participation in political decision-making, whether out of fear of having to share power or because of concrete historical experiences. Even here, however, there are still some traces of statutory I&R procedures, which may form the basis for future improvement

Countries: Hungary, Sweden, Britain, Finland, Estonia, Germany, Romania, Malta

#### Category 5: The Fearful

Almost entirely lacking institutional procedures and practical experience, the countries in this category make it very hard for themselves to complement indirect democracy. In addition, the political and cultural circumstances scarcely provide a stimulus for the introduction or the strengthening of elements of popular decision-making. Nonetheless, the issue is occasionally debated.

Countries: Croatia, Iceland, Greece, Cyprus

#### Category 6: The Beginners

These countries have only recently started their democratization process, including a respect for basic freedoms and human rights. Parliaments have been elected by the people, but there is still a great deal of mistrust between governments and governed, making the introduction of additional instruments like direct democracy extremely difficult.

Countries: Bosnia, Serbia, Albania, Macedonia, Moldova, Georgia, Turkey

#### Category 7: The Authoritarians

In the countries belonging to this category, there is at present no basis at all for the development of direct democracy.

Countries: Russia, Armenia, Azerbaijan, Belarus, Ukraine.