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## On the Relative Efficiency of Democratic Institutions

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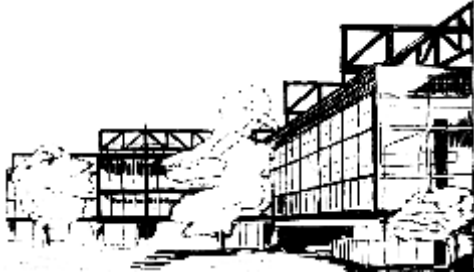
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16

# **On the Relative Efficiency of Democratic Institutions**

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# On the Relative Efficiency of Democratic Institutions

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## **Abstract**

Strengthening elements of direct democracy has become a hotly debated issue especially in purely representative democracies where distrust in political institutions and policymakers has been continually growing in recent years. We develop a compensation model of interest groups seeking a majority for their projects by compensating potential losers. Assuming a centre-left government backed by a parliamentary majority, we apply the model to interest groups of varying size and ideology acting in democratic systems with and without faction discipline. With faction discipline in a representative system, direct democracy is comparatively advantageous and efficiency-enhancing if a leftist interest group initiates a project. For rightist project proposals, direct democracy performs better only if the winning group is small; this observation that indirect democracy has a comparative efficiency advantage for medium-sized and large winning groups can be seen as a demonstration of Olson's encompassing group effect. With faction discipline removed, direct and indirect democracy are generally equivalent. The case in which all members of the governing faction have to be compensated constitutes the only exception for which indirect democracy is superior.

**JEL classification:** H00, P16, P17

## I. Introduction

According to Douglass North's (1981) theory of the state, institutions matter for welfare. Institutional design results from the rulers' utility maximization within given constraints, so it is not necessarily welfare-maximizing. In an open democracy, these constraints are essentially determined by potential political competitors and/or the "exit" option of important groups within the populace [Hirschman (1970)]. Institutional change is usually brought under way to prevent an otherwise expected loss of votes in the next elections or an exodus of factors of production.

Leading politicians in many industrial countries increasingly call for a strengthening of direct-democratic elements in the constitutions. For instance, the secretary general of the ruling Social Democratic Party in Germany, Franz Müntefering (2000), has recently stressed that peoples' satisfaction with the current political system, especially confidence in the political institutions and the *classe politique*, is steadily falling, and this observation is supported by empirical evidence [Putnam, Pharr, and Dalton (2000)]. There are empirical indications that direct-democratic procedures are not only able to boost efficiency and productivity, but also peoples' happiness [Frey and Stutzer (2000)]. This observation calls for a theoretical explanation. The goal of the paper is to contribute to a comparative theory of democratic systems by developing a concept which may be helpful in answering the following narrow but important question: Are globally inefficient projects more likely to be put through successfully in a direct-democratic or in a representative system, the latter both with and without faction discipline? Under which specific conditions can institutional change be expected to be beneficial for the people governed?

The article is structured as follows: Section II gives a short overview of the theoretical and empirical literature on direct democracy. In Section III a compensation model is introduced and then applied to a direct-democratic setting because direct democracy serves as a benchmark case for the analysis of indirect democracy with and without faction discipline. Direct democracy is compared to indirect (or: representative) democracy with faction discipline in section IV and without faction discipline (or: with conscience voting) in section V. In subsections IV.1 and V.1, a leftist interest group initiates a project, with the government having the same political orientation. In subsections IV.2 and V.2, a rightist interest group initiates a project, while the government is from the opposite side of the political spectrum. Section VI summarizes the main findings.

## II. A short sketch of the literature

Among the numerous objections against the introduction of direct-democratic elements, four basic strands of reasoning can be identified.

### *(1) The complexity of the decision-making process*

In general, collective decision-making is very complex, and this complexity may exceed the information processing capacity of the ordinary voter in a direct-democratic setting. As a consequence, there may be a huge amount of inefficient and contradictory decisions due to a quasi-erratic decision-making process. On the other hand, Feld and Savioz (1997), Kirchgässner (2000) and Zimmermann and Just (2000) point to the fact that in practice professional politicians have specialized themselves to such a degree that they possess expert knowledge only in few political fields while being dependent on their colleagues' expertise for other political areas<sup>1</sup>. Moreover, Gersbach (1999) shows that political decisions in an indirect democracy are severely distorted if the voters can only make *ex post*, but no *ex ante* assessments of the competence and motivation of (statesman or populist) politicians. Finally, Bohnet and Frey (1994) hint to the fact that with direct democratic procedures there usually is a higher discussion intensity in the pre-referendum phase which leads to a higher degree of information within the voting population.

### *(2) Additional veto players*

An additional decision-making institution may function as an additional veto-player. Increasing the number of decision-making institutions reduces social and economic flexibility, i.e. the ability to adjust to changing environments, it prolongs the status quo, and it impedes technical progress, that would otherwise increase efficiency by fostering economic growth and institutional change [Moser (1996)]. However, according to Obinger (1998), neither the number of bills passed nor the pace of the decision-making process, but the quality of political innovation matters for the efficiency of political institutions. Moreover, Obinger clarifies that an additional veto-player may also lead to a correction of short-term programs favored by politicians who want to be re-elected and therefore possess a notoriously high marginal rate of

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<sup>1</sup> Former German minister of state Hildegard Hamm-Brücher (1990) estimates that an average member of parliament does not even know what he is voting on in 90% of all voting acts.

time preference<sup>2</sup>. Furthermore, Swiss evidence indicates that even a proposition that was blocked in the referendum process may have a strong indirect effect on the representatives as they learn about the exact distribution of preferences within the electorate and may alter their programs accordingly [Kirchgässner, Feld, and Savioz (1999)].

*(3) Powerful interest groups engaged in rent-seeking*

If voters are rationally ignorant, direct democratic procedures may increase the influence of economically powerful interest groups [Brunetti and Straubhaar (1996)] and bureaucrats [Santerre (1993)], leading to a growing level of rent-seeking activities. More particularly, Gerber (1999) argues that powerful interest groups promote their interests rather by impeding initiatives than by supporting new ones. Undeniably, economic interest groups exert strong influence on the political process, but the laws passed rather reflect the preferences of the broad majority than those of a solvent minority. Gerber's findings imply that a representative system gives interest groups more scope for rent-seeking than a direct democracy. A strengthening of direct democratic elements does not automatically lead to efficient results, but it helps to reduce the number of inefficient solutions - a point which we will discuss at length in the following sections.

*(4) Efficiency-enhancing effects of direct democracy versus specialization gains*

The representative system is based on the assumption that division of labor usually leads to gains of specialization, and that it is often necessary to employ log-rolling practices to succeed in putting bundles of programs through the decision-making process. Direct democracies do not have these benefits [Cairncross (1997); Butler and Ranney (1997)], but a referendum democracy may offer other comparative efficiency gains to over-compensate these losses, which is the basic idea of some interesting theoretical and empirical studies. Since the stronger influence of citizens and voters in a direct democracy ties up the supply of public goods very closely with the preferences of the populace, the median voter preferences are reflected more appropriately than in a representative democracy [Pommerehne (1978, 1990)]. Feld and Savioz (1997) emphasize that the principal-agent problems inherent to all indirect decision-making processes can be reduced by introducing referenda. Both effects are

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<sup>2</sup> A quantitative comparison of the rates of passed to introduced bills reveals an only slightly higher rate in the representative than in the direct procedure. An evaluation of the initiatives at the states level in the U.S. since the year 1904 shows that 794 out of 1920 initiatives (41.4%) have been accepted [Initiative and Referendum Institute (2000)]. In Germany where the political process is totally indirect at the federal level, 1236 out of 2380 introduced bills (by the government, the parliamentary factions of the ruling parties and the opposition, and by the Bundesrat, the chamber of the states) have passed the legislative process from 1990 to 1999 which corresponds to a rate of 51.9% [Deutscher Bundestag/Bundesrat (1999)]. Needless to say that such figures have

expected to promote efficiency in the provision of public goods and to reduce the relative share of the public sector.<sup>3</sup> This result is supported by empirical evidence [Matsusaka (1995); Feld and Savioz (1997); Obinger (1998)].<sup>4</sup> Blomberg and Hess (1999) show that the stronger the direct-democratic elements in the constitution of a U.S. state, the higher is its steady-state growth rate, and the faster is its convergence against the steady state. Similarly, Frey, Kucher and Stutzer (2001) and Frey and Stutzer (2000) report that the stronger the direct democratic elements in Swiss cantons, the higher is economic efficiency and the degree of peoples' happiness, as measured by their indicator.

In the following we intend to enervate an often heard suspicion saying that interest groups could instrumentalize referenda for private purposes. We argue that in a representative democracy with faction discipline the probability of succeeding in putting through globally inefficient projects is clearly higher than in a direct-democratic system. In this case, a lower share of accepted initiatives put to referenda should not be interpreted as the result of mere status-quo orientation but as a higher frequency of rejection of globally inefficient projects..

### III. The compensation model in a direct democracy – the benchmark

The compensation model presented in this section is an extended version of the one in Zimmermann and Just (2000, 2001), drawing on a work by Mancur Olson (1993). The model is based on the following core assumptions:

- A project of an interest group has costs and benefits upon realization. The benefits (B) of the project fall exclusively on the winners' group (the interest group initiating the project) and the costs (C) exclusively on the losers' group. For a project to be realized, the winners' group has to win the majority of votes among the people (direct democracy) or in parliament (indirect or representative democracy). This means that it *can* and *must* compensate a sufficient number of potential losers such that these are not worse off than before realization of the project. By assumption, compensation payments are restricted to the respective losses accruing from the project, and there are no transaction costs. Both

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to be interpreted very carefully because such a quantitative comparison cannot substitute a qualitative judgment.

<sup>3</sup> This does not imply that directly voting citizens favor tax reductions above everything else. 63% of the voting people of Nebraska rejected a proposal to reduce taxes and public expenditures in 1998 [Initiative and Referendum Institute (2000)]. Kirchgässner, Feld, and Savioz (1999) present some examples where tax increases passed direct legislation in Switzerland.

<sup>4</sup> Deller and Chicoine (1993), however, cannot find any significant differences regarding the allocative efficiency of both democratic systems in their study of municipalities in the state of Maine.

assumptions help to keep the analysis simple without changing the results. Note that compensation payments do not depend on a recipient's political orientation.

- Parties aggregate the interests of heterogeneous groups of voters, and voters are *perfectly represented* in parliament. Therefore, neither potential distortions stemming from decision-making in committees nor principal-agent problems are analysed here. Although the absence of principal-agent problems is generally considered as a major advantage of direct over representative democracies, we exclude them from the analysis in order to focus entirely on a comparison of both systems in terms of efficiency.
- Political preferences are one-dimensional and single modal. This implies a two-party-system with a governing and an opposition party.<sup>5</sup> Representation in parliament is isomorphic by assumption, although project-related subgroups may emerge within the political parties. In accordance with the past predominance of centre-left governments in the European Union (and preparing the field for empirical research), we assume that the left-wing party is in power. The results equally hold for the reverse situation.
- Interest groups of both political orientations can put projects onto the political scene, no matter who is in government. With a centre-left government in power, left-wing interest groups can reasonably be expected to bring about more political initiatives than their counterparts. But there may also be exceptions, i.e. right-wing project proposals: If there is an uprising or dominant hidden variable of political and social life (say *Zeitgeist*) or an ongoing economic process (say *globalization*) which runs counter to the ideology of the governing party, interest groups from the opposite part of the political spectrum may put their projects to the political front.

Under these assumptions, the model used in the paper is applicable to both direct and indirect democracy. Since it does not matter from which political side a project is initiated in a direct democracy, and due to the irrelevance of faction discipline in the absence of any factions, we present our results for the direct democracy first, serving as a benchmark case for efficiency comparisons with the indirect-democratic system, be it with or without faction discipline.

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<sup>5</sup> The distinction between leftist and rightist parties is well-established as the dominant criterium in political theory. The majority of the literature follows the definition by Lipset et al. (1954): "Left" describes the striving for social change towards more economic, social and political equality, "right" characterizes a basic aversion against any form of egalitarian policy. Even if there are political theorists who claim that the left/right-distinction has had its day [Giddens (1999)], we stick to it here for reasons of simplicity because only the existence of a two-party-system is necessary for our reasoning.



An interest group (the potential winners) with a share ( $WQ =$  winners' quota) of the total population smaller than the required majority ( $RM$  - usually 50%) can win a majority for their aims (its "project") only if they compensate potential losers. The costs of the project fall on the entire population (100%) minus the winners' quota leading to  $(100 - WQ)$ ; to win majority,  $RM - WQ$  percent of the population have to be compensated which means that this group becomes indifferent towards the project. Therefore, the compensation costs for the winners' group are  $C \frac{RM - WQ}{100 - WQ}$ . Obviously, for any  $RM > WQ$  the group of potential winners will only try to gain approval for their project if the compensation costs are lower than the benefits  $B$  of the winners' group. Therefore, the basic condition seen from the winners' point of view is:

$$B > C \frac{RM - WQ}{100 - WQ} \quad \text{or} \quad \frac{B}{C} > \frac{RM - WQ}{100 - WQ} \quad (1)$$

If  $WQ \geq RM$  holds, the project is a majority project, and there are no compensation costs. This does not imply, however, that the project is globally efficient. Under these conditions, every project (even with  $B < C$ , but always with  $B > 0$ ) makes sense for the interest group and can be carried through. Hence, this can be called the "anything goes" case.

#### **IV. Representative (or indirect) democracy with faction discipline**

Faction discipline (or more generally: party discipline) means that the Members of Parliament voluntarily subjugate under democratically elected faction leaders [Schütt-Wetschky (1983)].<sup>6</sup> In a number of western democracies faction discipline plays a decisive role in legislation. In Germany from 1990 to 1999, there were 932 drafts of a bill submitted to Parliament by the three (different) governments of that period, and 800 bills (or 85.8%) were passed; during the same period, the (different) oppositional factions submitted 405 drafts of a bill, but only 4 (less than 1%) were passed (Deutscher Bundestag/Bundesrat, 1999). Faction discipline is the normal case in German parliamentary practice. It can also be found in other countries such as the UK, Austria and Denmark.

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<sup>6</sup> Subjugation has to be voluntary in Germany since the representative is solely responsible to his/her conscience according to Art. 38,I of the *Grundgesetz*, the German constitution. In practice, a representative literally behaving this way risks his/her career as a professional politician if he/she deviates from the majoritarian opinion of the faction or from the opinion of the faction leaders.

#### IV.1 Left-wing projects in a representative democracy with faction discipline

Faction discipline implies that the entire faction in parliament votes for the project if there is a majority among its members. If the winners' group in the left spectrum is smaller than the majority in parliament, there is possibly a need for compensation. Two cases have to be distinguished:

- (a) If  $WQ < PM/2$  holds, compensation must be paid to the "deficit quota".
- (b) If  $WQ \geq PM/2$  holds, there is no compensation to be paid due to faction discipline, and the project will find acceptance per se.

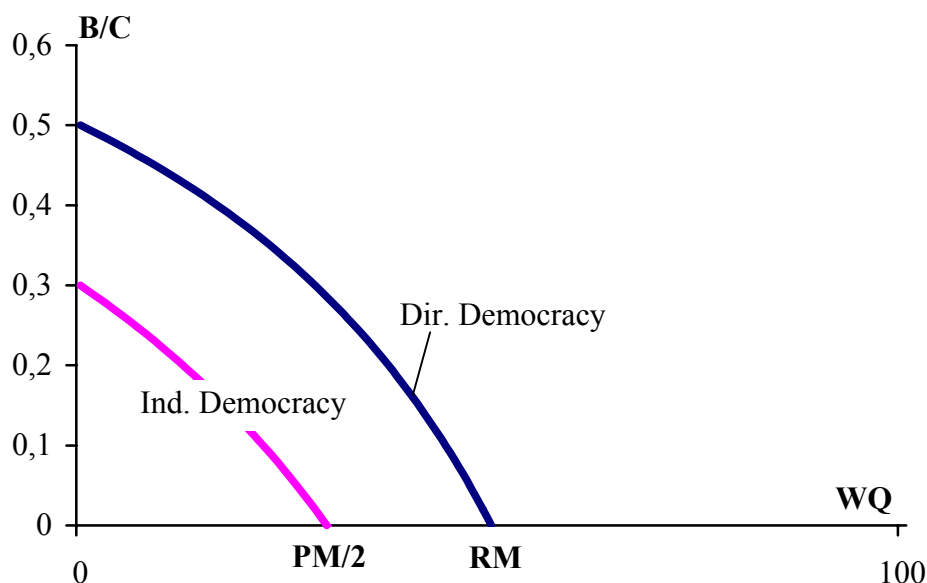
In case (a), the project costs  $C$  are distributed among  $(100 - WQ)$ ,  $(PM/2 - WQ)$  have to be compensated, and always the compensation costs have to be lower than the benefits of the winning group. This leads to

$$B > C \frac{\frac{PM}{2} - WQ}{100 - WQ} \quad \text{or} \quad \frac{B}{C} > \frac{\frac{PM}{2} - WQ}{100 - WQ} \quad (2)$$

In case (b) there is no hypothesis regarding the efficiency of the project -  $C > B$  is clearly possible but as long as  $B > 0$ , every project of the interest group can be realized.

The comparison between direct and indirect democracy can best be illustrated by means of an example with  $WQ = 20$ ,  $PM = 60$  and  $RM = 50$  in order to draw conclusions which B/C-ratios a project must at least fulfill in either democratic setting (see Fig. 1). These critical B/C-ratios may be called "efficiency boundaries" of the corresponding democratic system. A higher B/C-ratio implies a higher level of efficiency of the initiated project and therefore a higher level of overall productivity. This holds only if the ceteris paribus condition is fulfilled with respect to the distribution of the projects in both democratic systems; but unless there is other evidence available, we stick to the principle of insufficient reason and assume that the distribution of projects along the B/C-scale is similar.

**Fig. 1: Left-wing projects in direct vs. indirect democracy with faction discipline**



It is obvious from Fig. 1 that the critical B/C-ratios are below 1 – overall inefficient projects can obtain a majority. This follows directly from the assumption that the benefits are concentrated on the winners' group and the costs are exclusively borne by the losers so that the winners only have to compensate a part of the losers in order to secure a majority. Since a higher efficiency boundary implies a higher minimum requirement of B/C, a comparison of the efficiency boundaries rather implies comparing relative degrees of inefficiency of the democratic systems. Since, on the other hand, B/C-ratios above 1 are of course possible in both systems, the term efficiency boundary seems to be justified.<sup>7</sup>

In both cases the efficiency boundary decreases with an increase of the size of the winners' group (WQ) – contrary to Olson (1965), smaller interest groups guarantee higher levels of

<sup>7</sup> It is obvious that the critical B/C-ratio will increase if we introduce additional "political" compensation due to the individual political distance of the people compensated but that the basic comparative efficiency results will not change. Suppose for instance that the first percentage-point of the losers next to the winning interest group gets exactly the project-related loss of this percentage-point as a compensation, that the second percentage-point gets  $1+d$ , the third  $1+2d$  and the last percentage-point necessary to win a majority  $1+(n-1)d$ . The sum of this special arithmetic progression generally amounts to  $na + n(n-1)d/2$  (with  $a=1$  in our case), and because  $n=RM-WQ$  holds for direct,  $N=PM/2-WQ$  for representative democracy with faction discipline, we get  $B/C > [RM-WQ + d(RM-WQ)(RM-WQ-1)/2] 1/(100-WQ)$  for direct and  $B/C > [PM/2 - WQ + d(PM/2 - WQ)(PM/2 - WQ - 1)/2] 1/(100-WQ)$  for indirect democracy. With  $RM=50$ ,  $PM=60$  and  $WQ=20$ , we get  $B/C > (30+435d)/80$  for direct and  $B/C > (10+45d)/80$  for indirect democracy. This enables us to determine the  $d$ -values for our example which make the project socially efficient ( $B/C \geq 1$ ): In a direct democracy,  $d$  has to be at least 0.1149, but in an indirect democracy  $d$  has to exceed 1.5556. This large divergence of  $d$ -values reveals a particular problem of representative democracy: though it is against the populist trend, it surely pays for society and economy to pay politicians very generously so that the additional "political" compensation dependent on the political distance from the interest group will also be very high - it offers some kind of assurance against inefficient projects. Though the usual argument for high allowances to politicians is to make them not corruptible, we see that it works even if they are corruptible.

efficiency, and the large “encompassing groups“ (Olson, 1982) do not have beneficial effects on efficiency and welfare per se.

It is also evident that in case of a project from the left a direct democracy imposes significantly higher efficiency requirements than an indirect democracy. For all  $RM > PM/2$ , the efficiency boundary of the direct democracy exceeds the efficiency boundary of the indirect democracy by the factor  $(RM - WQ)/(PM/2 - WQ)$ . It is true that direct democracy does not preclude inefficient projects. Even for very small interest groups ( $WQ \rightarrow 0$ ) with  $RM = 50$ , the costs of the project may be double its benefits and the project will still succeed ( $\lim B/C = RM/100$ ). But with regard to the  $WQ$ -scale, the anything-goes-situation where any project can be carried through as long as  $B > 0$  begins much later.

The results from our example can be generalized as follows. The efficiency boundaries of the direct democracy are always higher than those of the indirect process if  $RM > PM/2$ . If one assumes that the same majority rule is applied in both systems (i.e. normally 50%), this condition always holds. A departure from the identity of majority rule in both decision processes can be interpreted as a fundamental protectionism of the predominating political class in the indirect system. Then, the contestability of the “decision market“ cannot be guaranteed. Unsurprisingly, the ruling political class is inclined to prohibit the competing decision process as long as possible. By introducing quorum requirements to the rules governing referenda, the political class can create structural entry barriers in order to achieve this goal.

So far, this analysis was clearly static, and some considerations are apt concerning dynamic aspects. The superiority of direct democracy regarding efficiency vanishes gradually or totally if short-run rationality under faction discipline (getting the majority of the governing faction) is given up in favor of a mid-term or even long-term rationality. Evidently, the compensation of just the missing part of the faction needed to put through the project leaves the rest of the faction uncompensated. This confronts the interest group with a distributional problem which may be severe if the same subgroups of faction members remain uncompensated repeatedly, or if the interest group needs the uncompensated political friends for other projects in the future. In this case, the interest group has to compensate the whole faction of its own political colour such that  $B/C > (PM - WQ)/(100 - WQ)$ . This clearly leads to a higher efficiency boundary than in a direct democracy<sup>8</sup>. But for at least four reasons we do not believe that this

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<sup>8</sup> This kind of efficiency-enhancing “networking“ has to be sharply distinguished from the phenomenon of “*Filz*“ (a German notion for “*manus manum lavat*“ or “one hand deserves another“) which is based on personal one-to-one relationships. In the extreme case, only one person outside the winning group is compensated for the loss through the project. “*Filz*“ - as it is widely spread especially in the teutonic countries Germany and Austria - clearly leads to very low efficiency boundaries and to a comparatively poor economic performance.

medium- or long-term rationality prevails: First, there is always one majority but a number of minorities presenting their projects, and the people compensated (or exploited) are not the same over time, so this distributional problem is of a minor importance. Second, the more projects an interest group plans to put through during a legislature, the earlier this kind of rationality collides with resource constraints forcing it back to a lower-term rationality. Third, interest groups stay but politicians go, which leads to diverging marginal rates of time preference (MRTP). Finally, even if the interest group has a comparatively lower MRTP, it lives in a turbulent political environment and can never be sure that its investment in the compensation of the total faction will be worthwhile - it may have to be depreciated to zero after the next election. In sum, there are good arguments in favor of a prevailing short-term rationality or static profit-maximizing of the interest group, justifying the use of our static model which from our point of view reflects normal situations or business as usual quite well.<sup>9</sup> What may happen if the situation is different from business as usual, will be shown in section V.

#### **IV.2. Right-wing projects in a representative democracy with faction discipline**

Projects can also be initiated by groups that are positioned on the political right. For example, “supply-side economics from the left“ in Germany [Hombach (1998)] or even the “Third Way“ [Giddens (1999)] can be interpreted as an original project from the right that has been turned into a left-wing project. This is in line with the Cukierman and Tommasi (1998) argument saying that it is sometimes easier for a left-wing government to implement a right-wing policy, since the imperfectly informed electorate is more inclined to believe that this policy proposition is motivated rather by reason than by ideology.

For the following analysis, we have to distinguish two cases with two subcases each (see Fig. 2). The two basic cases differ with respect to the size of the right-wing interest group relative to the opposition faction.

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<sup>9</sup> A similar argument is put forth by Besley and Coate (1998). They show in a two-period model of the political process in a representative democracy that public investment meeting standard criteria of economic efficiency is not necessarily adopted in political equilibrium because of “political failures“, that is, fears that compensation needed to cover current costs is not delivered, and the fact that such projects may change the identities and /or policy choices of future leaders. The problem, therefore, is that political preferences extend into the future, but political control does not. The Besley and Coate model is as restrictive as ours so that they are forced to place the questions on the research agenda whether representative democracy is the most desirable institution for

(a) If we first assume that the right interest group is smaller than the opposition ( $WQ < 100 - PM$ ), we have to distinguish two sub-cases:

(a1) Using the same numerical values as above, the left majority is  $PM = 60$  and the size of the right-wing interest group is  $WQ = 20$ . The costs of the project are again borne by  $(100 - WQ)$  of the electorate. In this setting, compensation of representatives of the right party seems to be superfluous at first glance, since the governing party can always win the ballot. In case of faction discipline, the own party appears to be unimportant for a right-wing interest group. This being the case, the main focus of the right interest group is on the left majority. In order to win the ballot, the winners' group from the right has to win the majority of the left faction ( $PM/2$ ), for the rest of the governing party's faction has to follow due to faction discipline. Therefore the critical B/C-ratio for this group is given by:

$$\frac{B}{C} > \frac{PM/2}{100 - WQ} \text{ for } WQ \leq (100 - PM) \quad (3)$$

(a2) There may be exceptions from the irrelevance of the own party for a rightist interest group, however. The interest group may be interested in strengthening the importance of its project (or the political will expressed) by requesting a formal decision within the right party. This is relevant in our context only if the interest group is small, exactly if  $WQ < (100 - PM)/2$ . Faction discipline then implies that  $(100 - PM)/2 - WQ$  from the own party have to be compensated and  $PM/2$  from the governing left majority. The critical B/C-ratio is given by:

$$\frac{B}{C} > \frac{\left(\frac{100 - PM}{2} - WQ + \frac{PM}{2}\right)}{100 - WQ} \text{ or } \frac{B}{C} > \frac{50 - WQ}{100 - WQ} \text{ for } WQ < \frac{100 - PM}{2} \quad (4)$$

If the condition  $(100 - PM) > WQ > (100 - PM)/2$  is satisfied, then there is no need for compensation to the own (right-wing) party because the interest group can realize a formal decision anyway - if it really wants one. This is rather unlikely to happen since such a formal decision might turn the group's project into an opposition party project and may even strengthen the resistance of members of the left-wing majority to accept compensations or to increase the "price" of their votes. But the dependence of the compensation costs on the recipients' political position and rigor can well be ignored here since the size of the

compensation depends exclusively on the loss accruing from the project, as previously assumed.

(b) In the second case, the interest group is larger than the opposition ( $WQ > 100 - PM$ ) – in our example larger than 40 –, which necessitates further differentiation:

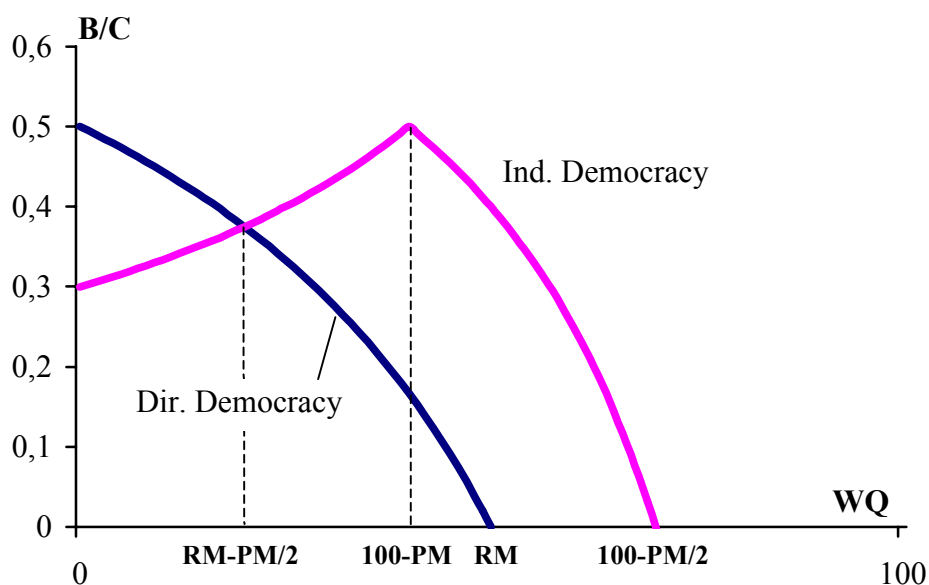
(b1) As long as the interest group is larger than  $(100 - PM)$  but does not comprise the majority of the governing party, the group has to compensate the number of representatives needed to gain a majority. The costs are again borne by  $(100 - WQ)$  and the number of representatives to be compensated is  $(100 - WQ - PM/2)$ . Thus, the critical B/C-ratio for this case can be written as:

$$\frac{B}{C} > \frac{100 - WQ - \frac{PM}{2}}{100 - WQ} \text{ for } \left(100 - \frac{PM}{2}\right) > WQ > (100 - PM) \quad (5)$$

(b2) If the winners' group comprises not only all the right-wing representatives, but also the majority of the left-wing ( $WQ > 100 - PM/2$ ), compensation is not needed; any project with  $B > 0$  can be carried out. However, an interest group of that size can hardly be called genuinely right-wing any longer.

Based on the previous analysis, we can draw some conclusions with regard to the relative efficiency of the two decision processes.

**Fig. 2: Right-wing projects in direct vs. indirect democracy with faction discipline**



Comparing the efficiency boundaries in case of projects proposed by a right-wing interest group, indirect democracy is advantageous by and large, and the “anything goes” situation, in which any project can be implemented as long as  $B > 0$ , is reached for significantly larger groups as well. If, however, the initiating right-wing interest group is smaller than the opposition ( $WQ < 100 - PM$ ), direct democracy has a higher efficiency boundary as long as  $WQ < RM - PM/2$ . This condition follows directly from comparing the numerators of (1) and (3) and implies that more compensation has to be paid in a direct democratic setting than in an indirect democracy and therefore the amount of globally inefficient projects is reduced. The same holds for subcase (a2), in which the right interest group favors a formal decision of the right party, therefore having to compensate members of its own party in addition to members of the governing faction. This kind of action is politically counterproductive, so this subcase is hardly plausible. For any  $WQ > RM - PM/2$ , direct democracy can have higher efficiency boundaries than the indirect democracy only if  $RM > 100 - PM/2$  holds. This result can be easily derived by comparing the numerators of (1) and (5), respectively. As a departure from the majority rule ( $RM = 50$ ) does not seem to be very reasonable, this case can well be ruled out.

Another striking element of this comparison of the efficiency boundaries is the observation that there exists a unique global maximum for a medium sized group in the indirect democracy if we exclude subcase (a2) as being politically implausible. Hence, in the case of a right-wing project in an indirect democracy a kind of “encompassing group effect“ as postulated by Olson (1982) arises, overcoming the dilemma of self-interested small interest groups and the prospective decline of a nation.

#### **V. No faction discipline: Conscience voting in the representative system**

In a few continental European democracies conscience vote prevails at least when fundamental issues or questions with a highly moral or ethical content are being voted on (conscience-driven decisions). In these cases, the faction leaders suspend faction voting, that is, they permit the Members of Parliament to vote rather as an individual than as a party member. This corresponds to the way common citizens vote in a direct democracy.



### V.1 Left-wing projects in a representative democracy with conscience voting

In contrast to the case of faction discipline, now the majority of the governing party is not sufficient to gain a majority for the project. Two sub-cases are considered here:

- (a) all representatives of the left-wing party (PM-WQ) have to be compensated, or  
 (b) only a subset of the representatives of the left-wing party has to be compensated to reach a majority for the project (RM-WQ) which clearly is the cheaper option for the interest group but may also cause a severe distributional problem within the left camp and may endanger cooperation in the future.

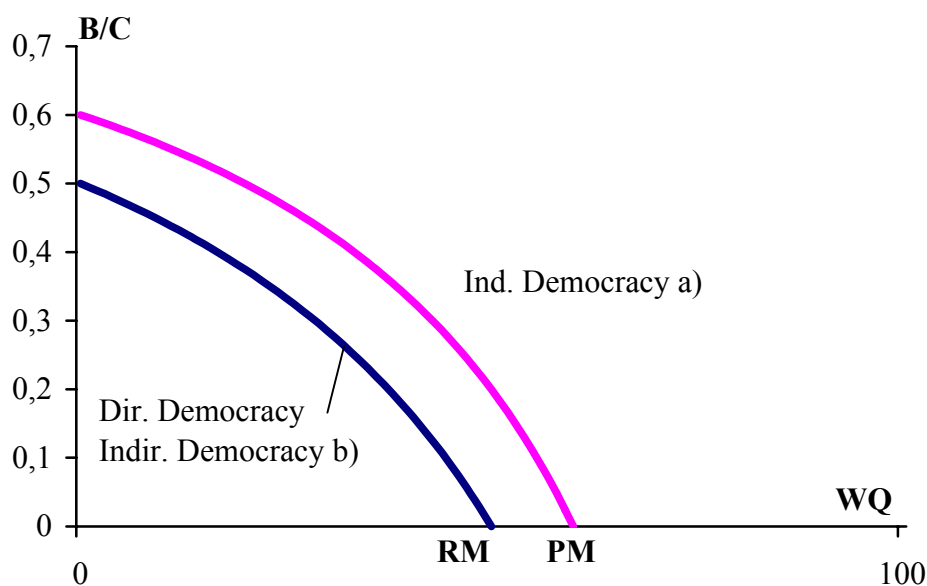
The results can be derived easily:

$$\text{a) } \frac{B}{C} > \frac{PM - WQ}{100 - WQ} \quad \text{or} \quad (6a)$$

$$\text{b) } \frac{B}{C} > \frac{RM - WQ}{100 - WQ} \quad (6b)$$

If  $WQ > PM$  (a) respectively  $WQ > RM$  (b), the project will pass without the need for compensation - again, the only necessary condition for “anything goes” is  $B > 0$ .

**Fig. 3: Left-wing projects in direct vs. indirect democracy with conscience voting**



If we compare these results with the outcome in a direct democracy, then, obviously, for  $RM = 50$  case (b) in an indirect democracy is identical to the case of direct democracy, and the efficiency-boundaries are identical as well. Case (a) yields superior efficiency results compared to direct democracy or to case (b) in an indirect democracy as long as  $PM > RM$ . This can be seen by comparing the numerator of (1) = (6b) and (6a), respectively. Among the cases analyzed in this paper, case (a) yields the strongest efficiency-boundary: For all  $PM > RM$  and  $RM > WQ$ , the efficiency-boundary in an indirect democracy of type (a) is greater than in a direct democracy (or an indirect democracy of type (b)) by a factor of  $(PM - WQ)/(RM - WQ)$ . Only if  $RM > PM$ , the efficiency-boundary is stronger in a direct democracy than in case (a) in an indirect democracy. Because  $PM$  is always larger than 50, the required majority in a direct democracy is greater than 50, but we have excluded this possibility above for reasons of fairness and competition distortions in the “contestable decision market”<sup>10</sup>

## V.2. Right-wing projects in a representative democracy with conscience voting

Abandoning the assumption of faction discipline is equivalent to ignoring the empirical fact that party members are, on average, like-minded individuals and that a representative favors his/her own party to the opposition with respect to ideology. This has an impact on efficiency. If a right-wing project is initiated when the left-wing party holds the majority in parliament, the interest group cannot ignore the right-wing party (parliamentary minority) as it did in case (a1) of subsection IV.2 with faction discipline to realize its project. On the contrary, the interest group has to behave analogously to subcase (a2) from subsection IV.2 (with faction discipline), now trying to compensate *all* potential losers in its own and *some* of the majority’s camp to attain the required majority. This implies identical efficiency-boundaries for indirect and direct democracy: equation (1)  $B/C > (RM - WQ)/(100 - WQ)$  holds for  $WQ < RM$ . If  $WQ > RM$ , no need for compensation will arise<sup>11</sup>.

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<sup>10</sup> Our arguing here concentrates on the abstract effects of a removal of faction discipline, not on the reason why this happened. In case of a fundamental question it can be assumed that the opinion in both political camps is divided, which in turn implies that people from both parties can be expected to vote for the project of the interest group without compensation. This kind of windfall profit reduces the number of people to be compensated. Consequently, the efficiency boundary is lower than in the case of a direct democracy as well as in the case of the two types of indirect democracy discussed above. One may even doubt whether *efficiency* boundary is the appropriate term in the context of the inefficient case discussed here.

<sup>11</sup> If members of the governing party vote on fundamental issues alongside members of the opposition without compensation, the right-wing interest group realizes a windfall profit which reduces its compensation costs and leads to a lower efficiency boundary as in direct democracy, as we argued above.

Summing up, the model yields the previously expected result, that is, direct and indirect democracy are equivalent under conscience voting (or: without faction discipline). The required majority of representatives has to be won for the project, but not a single additional representative exceeding this majority. Only in the extraordinary case (a) above (see subsection V.1), in which all representatives of the governing party (left or right) have to be compensated, an indirect democracy is superior with regard to the efficiency boundaries that cannot to be undercut. In the case of windfall profits for the interest group, the efficiency boundary is always lower than in a direct democracy. These windfall profits can be thought of as the votes of those who suffer losses from the project but who do not demand compensation, which may happen under conscience voting on fundamental issues.

## **VI. Conclusion**

Referring to the case of a left-wing majority in parliament, our main results comparing direct and indirect democracy with faction discipline are the following:

- With a project being initiated by the left, direct democracy yields higher efficiency-boundaries that decline with a rising group size of winners. The “anything goes” situation occurs comparatively later on the WQ-scale.
- With a project being proposed by the right, direct democracy yields greater efficiency for small groups of winners if the interest group is not interested in a formal decision of its own party and hence there is no need for compensation to some political friends.
- With right-wing projects again, for medium (or large) groups of winners indirect democracy has a comparative advantage (declining absolutely with growing group sizes). This can be interpreted as a manifestation of Olson’s idea of “encompassing groups“, although an asymmetric one.
- All results hold for a right-wing majority in parliament in an analogous manner.

We have also shown that with conscience voting and thus without faction discipline the equivalence of direct and indirect democracy normally holds. An indirect democracy is superior in terms of efficiency boundaries only in that case which requires all representatives of the governing party to be compensated.

Our initial key question was whether the probability of succeeding in putting through a globally inefficient project is higher in a direct democracy or in a representative system. The answer was derived under a crucial *ceteris-paribus*-condition: Without other evidence

available, we assumed the distribution of projects along the B/C-scale to be similar in both systems. What the paper offers is an argument why, for instance, the efficiency boundary of a direct democracy is higher than that of an indirect democracy if a number of conditions is met. Thus, this paper delivers results under uncertainty, telling us what *may* happen instead of what *will* actually happen with certainty. Answering this latter question requires some kind of theory on the likelihood of projects with different efficiency boundaries in alternative institutional settings.

## References

- Besley, T. and S. Coate, 1998, Sources of Inefficiency in a Representative Democracy: A Dynamic Analysis. *American Economic Review* 88, 139-156.
- Blomberg, S. B., and G. D. Hess, 1999, *The Impact of Voter Initiatives on Economic Activity* (Wellesley College Working Paper 99-11, Wellesley MA).
- Bohnet, I., and B. S. Frey, 1994, Direct-Democratic Rules: The Role of Discussion. *Kyklos* 47, 341-54.
- Brunetti, A., and T. Straubhaar, 1996, Direkte Demokratie - bessere Demokratie? Was lehrt uns das Schweizer Beispiel? *Zeitschrift für Politikwissenschaft* 6, 7-26.
- Butler, D., and A. Ranney, 1997, Theory, in: Butler, D. and A. Ranney (eds.), *Referendums around the World. The Growing Use of Direct Democracy* (AEI Press, Washington DC) 11-23.
- Cairncross, F., 1997, *The Death of Distance. How the Communication Revolution will Change our Lives* (Harvard Business School Press, Boston MA).
- Cronin, T. E. (1989). *Direct Democracy. The Politics of Initiative, Referendum, and Recall* (Harvard University Press, Cambridge MA).
- Cukierman, A., and M. Tommasi, 1998, When Does it Take a Nixon to Go to China? *American Economic Review* 88, 180-197.
- Deller, S. C., and D. L. Chicoine, 1993, Representative versus Direct Democracy: A Test of Allocative Efficiency in Local Government Expenditures. *Public Finance Quarterly* 21, 100-114.
- Deutscher Bundestag/Bundesrat, 1999, *Stand der Gesetzgebung des Bundes* (GESTA), Loseblattsammlung (Nomos, Baden-Baden).
- Feld, L. P., and M. R. Savioz, 1997, Direct Democracy Matters for Economic Performance: An Empirical Investigation. *Kyklos* 50, 507-38.
- Frey, B. S. and A. Stutzer, 2000, Happiness, Economy and Institutions. *The Economic Journal* 110, 918-938.
- Frey, B. S., M. Kucher, and A. Stutzer, 2001, Outcome, Process and Power in Direct Democracy. New Econometric Results. *Public Choice* 107, 271-293.
- Gerber, E. R., 1999, *The Populist Paradox: Interest Group Influence and the Promise of Direct Legislation* (Princeton University Press, Princeton NJ).
- Gersbach, H., 1999, *Statesmen, Populists and the Paradox of Competence*, mimeo (Heidelberg).
- Giddens, A., 1999, *The Third Way. The Renewal of Social Democracy* (Blackwell Publishers, Oxford UK).
- Hamm-Brücher, H., 1990, *Der freie Volksvertreter – eine Legende?* (Piper, München/Zürich).
- Hirschman, A. O., 1970, *Exit, Voice, and Loyalty* (Harvard University Press, Cambridge MA).
- Hombach, B., 1998, *Aufbruch: die Politik der neuen Mitte* (Econ, München).

- Initiative and Referendum Institute, 2000, [Untitled Document], <http://www.iandrinstitute.org>, 5.4.2000.
- Kirchgässner, G., 2000, Wirtschaftliche Auswirkungen der direkten Demokratie. *Perspektiven der Wirtschaftspolitik* 1, 161-180.
- Kirchgässner, G., L. P. Feld, and M. R. Savioz, 1999, *Die direkte Demokratie. Modern, erfolgreich, entwicklungs- und exportfähig* (Helbing & Lichtenhahn, München).
- Lipset, S. M., P. F. Lazarsfeld, A. H. Barton, and J. Linz, 1954, The Psychology of Voting: An Analysis of Voting Behavior, in: Lindzey, G. (ed.), *Handbook of Social Psychology*, vol. 2 (Addison-Wesley, Reading MA).
- Matusaka, J. G., 1995, Fiscal Effects of the Voter Initiative: Evidence from the Last 30 Years. *Journal of Political Economy* 103, 587-623.
- Moser, P., 1996, Why is Swiss Politics So Stable? *Swiss Review of Economics and Statistics* 132, 31-60.
- Müntefering, F., 2000, *Demokratie braucht Partei*. <http://www.spd.de/events/demokratie/fm.htm>, 05.04.2000.
- North, D. C., 1981, *Structure and Change in Economic History* (W.W. Norton Company, New York NY).
- Obinger H., 1998, Federalism, Direct Democracy, and Welfare State Development in Switzerland. *Journal of Public Policy* 18, 241-263.
- Olson, M., 1993, Dictatorship, Democracy, and Development. *American Political Science Review* 87, 567-576.
- Olson, M., 1965, *The Logic of Collective Action* (Harvard University Press, Cambridge MA).
- Olson, M., 1982, *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities* (Yale University Press, New Haven CT).
- Pommerehne, W. W., 1978, Institutional Approaches to Public Expenditure: Empirical Evidence from Swiss Municipalities. *Journal of Public Economics* 9, 255-280.
- Pommerehne, W. W., 1990, The Empirical Relevance of Comparative Institutional Analysis. *European Economic Review* 34, 458-69.
- Pharr, S. and R. Putnam, 2000, *Disaffected Democracies. What is Troubling the Trilateral Democracies?* (Princeton University Press, Princeton NJ).
- Santerre, R. E., 1993, Representative versus direct democracy: The role of public bureaucrats. *Public Choice* 76, 189-198.
- Schütt-Wetschky, E., 1984, *Grundtypen parlamentarischer Demokratie. Klassisch-altliberaler Typ und Gruppentyp* (Verlag Karl Alber, Freiburg/München).
- Zimmermann, K. W., and T. Just, 2000, Interest Groups, Referenda, and the Political Process: On the Efficiency of Direct Democracy. *Constitutional Political Economy* 11, 147-163.
- Zimmermann, K. W., and T. Just (2001), The Euro and Political Credibility in Germany. *Challenge* 44, 102-120.

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- Kruse, Jörn, Competition in Mobile Communications and the Allocation of Scarce Resources: The Case of UMTS, Nr. 119 (2002), erscheint in: Patrick Rey und Pierre Buigues (Hg.), *European Telecommunications Policy*, Edward Elgar Publishing, 2003.
- Haucap, Justus & Jörn Kruse, Predatory Pricing in Liberalised Telecommunications Markets, Nr. 118 (2002).
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- Kruse, Jörn, Regulierung der Verbindungsnetzbetreiberauswahl im Mobilfunk, Nr. 116 (2002), als Kurzform erschienen in: *Multimedia und Recht*, Januar 2003, S. 29-35.
- Haucap, Justus & Jörn Kruse, Verdrängungspreise auf liberalisierten Telekommunikationsmärkten, Nr. 115 (2002), erscheint in: *Perspektiven der Wirtschaftspolitik* 5, 2004.
- Haucap, Justus & Helmmar Schmidt, Kennzeichnungspflicht für genetisch veränderte Lebensmittel: Eine ökonomische Analyse, Nr. 114 (2002), erschienen in: *Zeitschrift für Wirtschaftspolitik* 53, 2002, S. 287-316.
- Kruse, Jörn & Jörn Quitzau, Zentralvermarktung der Fernsehrechte an der Fußball-Bundesliga, Nr. 113 (2002), erschienen in: *Zeitschrift für Betriebswirtschaft, Ergänzungsheft zur Sportökonomie*, 2002, S. 63-82.
- Kruse, Jörn & Justus Haucap, Zuviel Wettbewerb in der Telekommunikation? Anmerkungen zum zweiten Sondergutachten der Monopolkommission, Nr. 112 (2002), erschienen in: *Wirtschaftsdienst* 82, 2002, S. 92-98.
- Bräuninger, Michael & Justus Haucap, What Economists Think of Their Journals and How They Use Them: Reputation and Relevance of Economics Journals, Nr. 111 (2002), erschienen in *Kyklos* 56, 2003, S. 175-197.
- Haucap, Justus, Telephone Number Allocation: A Property Rights Approach, Nr 110 (2001), erschienen in: *European Journal of Law and Economics* 15, 2003, S. 91-109.
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- Haucap, Justus, Konsum und soziale Beziehungen, Nr. 108 (2001), erschienen in: *Jahrbuch für Wirtschaftswissenschaften* 52, 2001, S. 243-263.
- Bräuninger, Michael & Justus Haucap, Was Ökonomen lesen und schätzen: Ergebnisse einer Umfrage, Nr. 107 (2000), erschienen in: *Perspektiven der Wirtschaftspolitik* 2, 2001, S.185-210.
- Haucap, Justus, Uwe Pauly & Christian Wey, Collective Wage Setting When Wages Are Generally Binding: An Antitrust Perspective, Nr. 106 (2000), erschienen in: *International Review of Law and Economics* 21, 2001, S. 287-307.

- Haucap, Justus, Selective Price Cuts and Uniform Pricing Rules in Network Industries, Nr. 105 (2000).
- Bräuninger, Michael, Unemployment Insurance, Wage Differentials and Unemployment, Nr. 104 (2000) erschienen in: *Finanzarchiv* 75, 2000, S. 485-501.
- Kruse, Jörn, Universaldienstlast etablierter Postunternehmen, Nr. 103 (2000) erschienen in: *Zeitschrift für Betriebswirtschaft*, Ergänzungsheft 3, 2002, S. 99-117.
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- Carlberg, Michael, Europäische Währungsunion: Der neue Policy Mix, Nr. 5/1999, erschienen in *Wirtschaftswissenschaftliches Studium (WiSt)* 29(1), 2000, S. 8-13.
- Carlberg, Michael, European Monetary Union: The New Macroeconomics, Nr. 4/1999, erschienen in: Gerhard Rübel (Hg.), *Real and Monetary Issues of International Economic Integration*, Berlin 2000, S. 155-175.
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- Reither, Franco, A Monetary Policy Strategy for the European Central Bank, Nr. 2/1999 erschienen in: Rolf Caesar und Hans-Eckart Scharrer (Hg.), *European Economic and Monetary Union: Regional and Global Challenges*, Baden-Baden 2001, S. 213-226.
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- Holm-Müller, Karin & Klaus W. Zimmermann, Einige Anmerkungen zur Internalisierungsstrategie mit dem produktorientierten Konzept der Pigousteuer, 2002, erschienen in: *Zeitschrift für Umweltpolitik und Umweltrecht* 25, 2002, S. 415-420.
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- Josten, Stefan, Das Theorem der Staatsschuldneutralität. Eine kritisch-systematische Rekonstruktion, 2001, erschienen in: *Jahrbuch für Wirtschaftswissenschaften* 53, 2002, S. 180-209.
- Zimmermann, Klaus W., Komplikationen und Fallstricke in der Pigou-Analyse von Externalitäten, 2001, erschienen in: *Jahrbuch für Wirtschaftswissenschaften* 53, 2002, S. 245-267
- Josten, Stefan, National Debt in an Endogenous Growth Model, 2001, erschienen in: *Jahrbuch für Wirtschaftswissenschaften* 53, 2002, S. 107-123.
- Hackmann, Johannes, Vom Ehegattensplitting zum Partnerschaftssplitting?, 2001, erschienen in: Volker Arnold (Hg.), *Wirtschaftsethische Perspektiven VI*, Schriften des Vereins für Socialpolitik 228/VI, 2002, S. 189-222.
- Zimmermann, Klaus W. & Tobias Just, Politische Glaubwürdigkeit und der Euro: Eine verfassungsökonomische Perspektive, 2000, erschienen in: Fritz Söllner & Arno Wilfert (Hg.), *Die Zukunft des Steuer- und Sozialstaates*, Physica, 2001, S. 373-397.
- Josten, Stefan, National Debt, Borrowing Constraints, and Human Capital Accumulation in an Endogenous Growth Model, 2000, erschienen in: *FinanzArchiv* 58, 2001, S. 317-338.

- Zimmermann, Klaus W. & Tobias Just, The Euro and Political Credibility in Germany, 2000, erschienen in: *Challenge* 44, 2001, S. 102-120
- Josten, Stefan, Public Debt Policy in an Endogenous Growth Model of Perpetual Youth, 1999, erschienen in *FinanzArchiv* 57, 2000, S. 197-215.
- Zimmermann, Klaus W., Internalisierung als Nirwana-Kriterium der Umweltpolitik, 1999, erschienen in: Kilian Bizer, Bodo Linscheidt & Achim Truger (Hg.), *Staatshandeln im Umweltschutz. Perspektiven einer institutionellen Umweltökonomik*, Duncker & Humblot, 2000
- Hackmann, Johannes, Die unterlassene Besteuerung der Nutzungswerte selbstgenutzten Wohnungseigentums: Vergebene Reformpotentiale, 1999, erschienen in: R. Lüdeke, W. Scherf & W. Steden (Hg.), *Wirtschaftswissenschaft im Dienste der Verteilungs-, Geld- und Finanzpolitik*, Festschrift für A. Oberhauser, Berlin 2000, S. 387-412.
- Zimmermann, Klaus W. & Tobias Just, Interest Groups, Referenda, and the Political Process: On the Efficiency of Direct Democracy, 1999, erschienen in: *Constitutional Political Economy* 11, 2000, S. 147-163.
- Josten, Stefan, Staatsverschuldung und Wirtschaftswachstum in einem Diamond-OLG-Modell mit AK-Technologie, 1999, erschienen in: *Jahrbuch für Wirtschaftswissenschaften* 51, 2000, S. 237-254.