European Journal of Political Research **34:** 175–200, 1998.

The impact of constitutional structures and collective and competitive veto points on income inequality in industrialized democracies

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Abstract. This paper presents the first systematic, empirical examination of the impact of constitutional structures on income inequality among eighteen OECD countries. Our pooled time series/cross-sectional panel analysis (n = 18, t = 2) reveals that consensual political institutions are systematically related to lower income inequalities while the reverse is true for majoritarian political institutions. We also make a crucial distinction between 'collective' and 'competitive' veto points. Our multiple regression results provide strong evidence that collective veto points depress income inequalities while competitive veto points tend to widen the inequality of incomes. Thus, some institutional veto points have constraining effects on policy while others have 'enabling' effects.

Introduction

Is there a systematic relationship between formal constitutional structures and income inequality in industrialized democracies? If yes, what are the most crucial institutional structures and in what way do they affect income inequality? If politics can indeed be understood as the process by which private desires are turned into actual public policies, and if there is agreement that constitutional structures are indeed a crucial element of this 'transmission belt', then a major hypothesis invariably emerges: variations in income inequality are a function of the different constitutional structures, *ceteris paribus*.

Despite numerous studies on the determinants of income inequality stressing factors such as levels of economic development (Kuznets 1963), openness of the economy (Phelps-Brown 1957; Cameron 1978), macro-economic variables such as economic growth and unemployment (Kuznets 1955; Olson 1963), socio-structural factors, such as education (Tinbergen 1975), partisan composition of government, (Lenski 1966; Hewitt 1977; Dryzek 1978; Stephens 1979; Jackman 1980; Borg & Castles 1981; van Arnhem & Schotsman 1982; Weede 1982; Korpi 1983; Cameron 1988; Mueller 1989), working class political mobilization in the form of unionization and corporatist structures (Hicks & Swank 1984), voter turnout (Stack 1979), use of fiscal instruments such as personal income taxes (Katz, Mahler & Franz 1983; Cameron 1988), and even the 'age' of democracy (Mueller 1988), no consistent findings have been reported.

Reviewing these studies leads to two striking observations. First, it is remarkable how little agreement there is between the findings of various scholars attempting to isolate the most crucial predictors of income inequality. Explaining the variation of income inequality has become quite a contentious issue with scholars alternatively engaging each other in successive rebuttals without making much progress in resolving the issues in question and with a tendency to convert the expended energies into heat rather than light. Secondly, what all of the studies mentioned above have in common is that they all omit a central predictor variable: the constitutional structures of the countries sampled. The basic contention of this study is that institutional structures do have predictable and statistically significant effects on income inequality even if a host of other alternative hypotheses are controlled for.

Our study will improve on earlier research on two fronts: first, this study will use the most recent and authoritative data on income inequality. It will rely on data published by the various editions of the World Bank Development Report which reports the shares of national income accounted for by quintiles of households within countries.[1] In addition, whenever necessary in order to include countries which the World Bank Development Reports routinely omit, such as Austria, and in order to make our panel study ($n = 18$, $t = 2$) temporally more comparable, we relied on the latest OECD study 'Income Distribution in OECD Countries' (1995) which itself relied heavily on the Luxembourg Income Study (LIS) project.[2] Moreover, for comparison purposes, we have also consulted the most recent dataset, collected by Deininger & Squire (1996).

A second improvement over earlier studies is that we believe that political institutions matter in the process of converting private desires into public policies. The basic proposition tested in this study is that consensual political institutions (Lipjhart 1984; Lijphart & Crepaz 1991), both in their aggregated and disaggregated forms, lead to lower income inequalities than majoritarian political institutions. Hitherto, no empirical study has in a systematic manner taken into account the effect of political institutions on income inequalities.

Nevertheless, some scholars have speculated that there might be a connection between political institutions and the distribution of incomes. In a printed roundtable discussion, which appeared in the edited volume, *Power, Inequality and Democratic Politics* (Shapiro & Reeher 1988), the participants of this roundtable (David R. Cameron, Robert A. Dahl, Herbert A. Kaufman, Charles E. Lindblom, Theodore J. Lowi, and James Tobin) explored the relationship between political inequality and economic inequality. Charles

Lindblom (Ibid., 1988: 156) argued that " . . . neither the market nor pluralist political systems have delivered their benefits except in highly inegalitarian ways to the participants. Markets and pluralist systems have been not only inegalitarian but also exploitative in that favored groups can use these systems to press their own advantages or take advantage of less favored groups in the population". Referring to the American political system and speaking in more institutional terms, Robert Dahl (Ibid., 1988: 166) asserted that "for a very long time, almost throughout my whole career, my institutional concerns have been the undemocratic tendencies of the presidency . . . . I also have grave doubts that the American so-called two-party system is really a very desirable solution. I think I would be much happier with proportional representation and a multiparty system". Dahl's claim was enthusiastically endorsed by a "Hear! Hear!" shout from Theodore Lowi (Ibid., 1988: 166).

What follows is an empirical exploration of the impact of political institutions on income inequality. 'Political institutions' in our context, means the constitutional features of a political system, for instance, what type of electoral system a country has, whether it is presidential or parliamentary, federalist or unitary, unicameral or bicameral. We will use aggregated measures such as consensus democracy (Lipjhart & Crepaz 1991) as well as disaggregated measures in order to tease out the independent effects of particular formal and informal institutional elements, such as the effective number of parties, the proportionality of electoral systems, separation of power systems vs 'fusion' between executive and legislative branches, the number and, more importantly, types of veto-points.

Consensus democracy and income inequality

Lijphart (1984) demonstrated that constitutional structures in industrialized democracies cluster around two types: consensus and majoritarian. If democracy is defined as in Lincoln's formulation, government of the people, by the people, and for the people, who are the people in case of a lack of unanimity, which is almost always the case? 'The people' could either be defined as 'the majority' or 'as many people as possible' (Lijphart 1984: 4).

The institutional elements of consensus democracy are multiparty coalition executives, executive-legislative balance, a multi-party system, a multidimensional party system (in which the parties differ on more than mainly socio-eonomic issues, such as religion, rural-urban, foreign policy issues), a proportional electoral system, and a corporatist form of interest intermediation. Switzerland, the Netherlands, Finland, and Denmark come closest to this ideal-typical definition. Majoritarianism is characterized by the opposite features: a one party majority executive, an executive that dominates over the legislature, a two party system, a one-dimensional party system (in which the two main parties differ mostly on socio-economic grounds), a disproportional electoral system, and a pluralist interest group system. Canada, New Zealand, the United Kingdom, and the USA were seen to represent the most fitting examples of majoritarianism (Lijphart & Crepaz 1991).

Consensual political structures allow broader access of different interests to the political process, mainly through a more proportional electoral system. A proportional electoral system will most likely lead to a multi-party system, which in turn will make coalition governments highly probable (Duverger 1954).[3] Through multi-party systems, both through opposition parties or through parties carrying governmental responsibility in the form of multi-party cabinets, a more diverse group of voters is represented by their parties, than in exclusionary, majoritiarian systems. Crepaz (1996) has demonstrated that parliamentary-PR systems enjoy higher popular cabinet support measured in the sum of percentages of voters whose parties participated in government, than bare-majority, single member district, parliamentary or presidential systems.[4] Majoritarian political systems, such as the United Kingdom, continue to severely distort the mandate of their ruling party insofar as either the Conservatives or Labour generally enjoy clear legislative majority in the House of Commons, but none of the two leading parties commanded a majority in popular votes since 1935.[5] A crucial element then, with regard to access and representativeness is the electoral system, which Giovanni Sartori (1968: 273) once aptly called "the most specific manipulative instrument of politics".

Unfortunately, in some cases, higher representativeness collides with another important element of efficient political institutions: governability.[6] Diamond (1993: 96) explains this trade-off between representativeness and governability quite succinctly: "Representativeness requires that parties speak to and for these conflicting interests; governability requires that parties have sufficient autonomy to rise above them". The extent to which a government is able to effectively achieve particular goals rests to a large degree on the specific executive-legislative relations of which presidentialism and parliamentarism are the two most well known manifestations.

Comparing parliamentarism and presidentialism, Weaver and Rockman (1993: 456, 454) conclude that " ... parliamentary systems appear to have significant potential for superior capabilities [of effective targeting of resources], and " ... tend to perform better at the steering tasks of government than those that diffuse power".[7] The parliamentary principle of 'fusion' between executive and legislative authority is responsible for a higher degree of 'effectiveness' of policy-making than presidential systems, which are often bogged down by 'gridlock'. Referring to the environmental policy field, David Vogel (1993: 271) argues that " ... in most parliamentary systems regulatory officials are more likely to be shielded from direct pressures by environmental interest groups. Precisely because they enjoy more autonomy, they may choose to represent diffuse interests ... ".

Policies aimed at reducing income inequality, such as welfare reforms, are typically 'diffuse' in character in that both the beneficiaries and contributors to welfare expenditures are generally diffuse population groups. This study argues that the combination of parliamentary-PR is superior to a presidential-single member district system or parliamentary-single member district system because it combines both: a parliamentary-PR system not only provides access of various political interests but also tends to include these interests in multi-party executive cabinets 'fused' to the legislature, ensuring representativeness on the one hand, and effectiveness on the other. This allows parliamentary-PR systems to steer a more stable and long term policy path. Despite occasional reshuffling of coalition partners, the general policy path is hardly ever dramatically changed. Diamond (1993: 99) argues convincingly that "whatever the exact shape of a country's policy, it can only work if it is pursued consistently and pragmatically".[8] But Diamond also warns, however, that multi-party coalitions erode representativeness.[9]

The concept of 'access' to the political process is crucial for the logic of our argument. Extension of the franchise greatly increased access to the political system with increased numbers of citizens who would use their newfound powers in the political process to increase their income. Meltzer & Richard (1978: 117) argue that the extension of the franchise is always in the interest of voters with incomes below the median because the spread of the franchise increases the number and proportion of voters who favor redistribution. A related point is made by Stack (1979: 169) who argues that "as voter turnout increases proportionately more persons from the lower social classes are exercising their right to vote and there is more pressure for the election of persons that will represent their interests and for policy that will benefit their group".[10] As larger numbers of citizens take part in the political process, be that in the form of extension of franchise, or when voters turn out in higher numbers to cast their ballots in various elections, policies which tend to increase welfare spending often ensue (Gronbjerg 1977; Janowitz 1976), with a high probability of reducing inequality. Recently, Huber & Powell (1995) found that there is greater congruence between governments and voters in what they called 'proportionate influence systems' as opposed to 'majority control systems'.

Consensual political institutions, consisting of multi-party legislatures, sharing government responsibility through coalitions and collegial executives, and proportional electoral systems have a higher capacity to represent diffuse groups and to be less pressured by special interest groups.[11] Through the principle of 'fusion' consensual political institutions also have a higher capacity to implement policies as well as to escort policies over a longer period of time. Since consensual political institutions allow wider access, more minority groups will use the political process for social amelioration by pushing for 'welfarist' policies, thereby reducing income inequalities. Not all groups will favor expansion of the welfare state; in fact, some will favor cutbacks. But such groups will have to compromise with those who desire a stronger role of the state in redistributing income. Thus, we expect consensual political institutions, both as an aggregate measure (Lijphart & Crepaz 1991) as well as in its disaggregated form, to be negatively associated with income inequality.

Veto points and the sovereignty of governments

What does it take to change the political status quo? It is widely argued that in industrial democracies, the most important political event with regard to policy change is a change in the partisan composition of government itself. The literature on policy change is replete with 'parties do matter' hypotheses (Kirschen 1964; Hibbs 1977, 1987; Castles 1982; Schmidt 1982, to name but a few).

However, recently some new perspectives on the potential for policy change have emerged. These 'neo-institutional' perspectives identify the constitutional structures themselves as crucial determinants of the potential for policy change, emphasizing "... the structures of constitutional democracy as major promoters or inhibitors of radical policy change ... " (Schmidt 1996: 175). Thus, some governments can do more than others, depending on their constitutional structures. Majoritarian governments have a higher capacity to change policy than coalition governments.[12] Huber, Ragin & Stephens (1993) have applied a similar logic in order to predict welfare expenditures; Immergut (1992) used the logic of 'veto points' to explain health expenditures. Schmidt (1996) and Tsebelis (1995) also examine constitutional structures with regard to their capacity for policy change.

Generally, the more players it takes to change the status quo, the lesser the chance that something will be changed. Tsebelis (1995: 293) defines a veto player as " ... an individual or collective actor whose agreement is required for a policy decision". He concludes that the potential for policy change decreases " ... with the number of veto players, the lack of congruence (dissimilarity of policy positions among veto players), and the cohesion (similarity of policy positions among the constituent units of each veto player) of these veto players" (Tsebelis 1995: 289).

The scholars in this brief review share the tenet that the more governmental power is dispersed, i.e., the more veto points various constitutional structures provide, the lower the potential for policy change. The more power is dispersed in governmental institutions, so the argument goes, the easier it is to block legislation. Therefore, the probability of policy change in such systems should be lower than in constitutional systems with less veto points.

At this point, the theory of consensus democracy and the logic of veto points have reached an impasse. The central element of consensus democracy *is* about dispersion of political power, i.e., more, rather than less veto points. In applying the veto point logic, this would mean that income inequality should be higher in consensus systems than in majoritarian systems. Thus, it appears that the literature on consensus democracy and veto points yields contradictory hypotheses. We argue that a closer examination of the substance of veto-points is necessary in order to better understand, and resolve, this impasse between the consensus democracy and veto-point literature.

To exemplify, let us take a closer look at Huber et al. (1993). The concrete constitutional structures they have in mind are federalism, presidential government, strong bicameralism, single-member district electoral systems (SMD), and provisions for referenda. The authors combined all of these features into an additive index which they called 'constitutional structure'. Taking the veto points literature seriously, one of Huber et al. constitutional elements, SMD, is not a good candidate for increased veto points as SMD generally leads to two party systems, which indicates a lower number of veto points than in PR systems where there are generally more parties; thus, in SMD systems, government is less constrained, and thus has more of a potential for policy change.[13]

Conversely, PR leads to multi-party systems, i.e., more veto points; thus, government is more constrained, and therefore, the potential for policy change is smaller. Applied to our theoretical argument, proportional representation should yield more income inequality, because government is more constrained as a result of more parties both in the cabinet as well as in the legislature. Obviously, this prediction is at odds with our emphasis on 'access' and 'representativeness' which PR is supposed to provide, and which was central to our hypothesis above, that consensual systems, of which PR is a crucial element, should depress income inequality.

Not all veto points are created equal. We argue that in order to shed light on the puzzle above, it is necessary to distinguish between 'competitive' and 'collective veto points' which are not only institutionally different but also lead to substantively different policy outcomes. Competitive veto points occur when different political actors operate through separate institutions with mutual veto powers, such as federalism, strong bicameralism, and presidential government. These institutions, based on their mutual veto powers, have a tremendous capacity to restrain government. These are also the same institutions which have the greatest tendency to lead to deadlock, immobilism, and even to shutdowns of whole governments as witnessed by the USA at the end of 1995 and the beginning of 1996.

Collective veto points, on the other hand, emerge from institutions where the different political actors operate in the same body and whose members interact with each other on a face to face basis. Typical examples of collective veto points are proportional electoral systems, multi-party legislatures, multi-party governments, and parliamentary regimes. These are veto points that entail collective agency and shared responsibility. In such an environment, the pressure to produce responsive policies is much greater, and partisan politics is also more muted (Schmidt 1996). In such systems, compromise and extended negotiation will result in more goal oriented policy making as opposed to the more process oriented policy making which is typical for institutions with competitive veto points.

Indeed, institutions with collective veto points should indicate a higher responsiveness to the desires of the voters than institutions with competitive veto points. This is precisely what Huber & Powell (1994) discovered in their pathbreaking article where they showed, contrary to their expectations, that there is a higher congruence of policies between policymakers and the median citizen in their 'proportionate influence model' as opposed to their 'majority control' model.[14]

The Huber and Powell finding means that their proportionate influence model, which is empirically quite similar to our consensus measure and substantively similar to our 'collective veto point' concept, is closer to the desires of the median voter than the majority model. In other words, policies which are created in an institutional arena of PR, multi-party legislators, and multi-party governments, are more responsive than the policies created in majoritarian, single party, bare majority, SMD, systems. Government distance, thus, is a function of the constitutional set up of various countries – the more inclusionary, accessible, and accommodative the constitution, the more responsive government is to the median voter; conversely, the more exclusionary, inaccessible, and competitive the constitution, the less responsive government is to the median voter. The institutions are the cause, the effect is government distance.

The Huber and Powell finding is consistent with our argument. In the section on the impact of consensus government on inequality above, we stressed the concepts of 'access' and 'representativeness' of constitutions with multiple parties and high proportionality of their electoral systems. It is precisely because such institutions allow for a wider access and increased representativeness through PR and multi-party coalitions, where even opposition parties influence government policy-making, that actual governmental policies will be closer to the median voter than in more exclusionary systems. Schmidt (1996: 173) expresses the same concept in different words: "When bargaining and compromise seeking prevail, policy tends to be premised on the lowest common denominator of the coalition partners. That denominator tends to generate policies of continuity rather than discontinuity and it is normally associated with limited short-term elasticity in policy making."

If this logic is applied to our substantive argument on the determinants of income inequality, it is intuitive to argue that collective veto points should create less income inequality than competitive veto points. The main policy instruments which connect the type of veto points and the degree of income inequality are the various kinds of welfare expenditures. Previous research has shown (Crepaz 1996b) that collective veto points tend to buoy welfare expenditures and increase degrees of decommodification while the reverse is true for competitive veto points. It is a well established fact that increased welfare expenditures reduce income inequalities. The focus of this study, however, is to investigate whether differences in the constitutional structures of countries affect the translation of private preferences into political outcomes, independently of given levels of welfare expenditures.

We operationalize collective veto points as the sum of the standardized scores of the effective number of parties and the type of executive/legislative relationship, i.e., whether that relationship is parliamentary or presidential. Similarly, we operationalize the concept of 'competitive' veto points as the sum of the standardized scores of the degree of the symmetry of legislatures and the degree to which countries are either federal or unitary.[15] These hypotheses will be tested next in a pooled time series/cross sectional panel analysis consisting of 18 countries at two time points (n = 18, t = 2).

Hypotheses, research design, and variables

We examine eighteen industrialized democracies at two time points, roughly in the mid to late 1970s and the mid to late 1980s (n = 18, t = 2) yielding a total number of 36.[16] For our dependent variable, two measures of income inequality will be used: first, the income share that accrues to the top quintile of population (top 20%) and secondly, a quintile ratio measure which is the amount of income which accrues to the top 20% divided by the amount of income which accrues to the bottom 40%. This measure, the 'rich-poor' ratio, addresses the question of the size of the gap between the rich and the poor. This ratio is responsive to the two ends of the continuum and by including the bottom two quintiles in the denominator it is not too restrictive in the operational definition of the lower or 'working' class (Jackman 1980). Our study employs the most authoritative measures, relying primarily on the World Development Report data of the World Bank, and the latest OECD study entitled 'Income Distribution in OECD Countries' (1995) which relies on the results of the Luxembourg Income Study (LIS). For comparison purposes, we have also consulted the latest attempt at compiling income inequality data by Deininger & Squire (1996).

Our theoretical, core independent variables are the following:

1. Lijphart's & Crepaz's (LC) (1991) composite measure of consensus democracy consisting of the six elements described above. From the theoretical discussion laid out above, we hypothesize that this consensus measure should systematically depress income inequalities and the rich-poor ratio.

2. Since the LC score is a highly aggregated measure, we want to explore how the constituent elements of consensus democracy affect income inequality and the rich-poor ratio. These disaggregated, individual variables are: executive/legislative relations (parliamentarism vs presidentialism), the effective number of legislative parties (Laakso & Taagepera 1979), the proportionality of the electoral system (Lijphart, 1984), the symmetry of legislatures (strong vs weak bicameralism and unicameralism) (Lijphart 1984), and the degree of federalism and unitarism of different governments. Our theoretical predictions are as follows: lower income inequalities and a lower rich-poor ratio should be associated with parliamentary regimes, a higher effective number of parties, a more proportional electoral system, weak bicameralism or unicameralism, and unitary government as opposed to federalism.

3. Consistent with the theoretical framework above, we predict that the measure of collective veto points (the sum of the standardized scores of parliamentary regimes and the effective number of parties) is negatively related to income inequality and the rich-poor ratio while our measure for competitive veto points (the sum of the standardized scores of the symmetry of legislatures and federalism/unitarism) should yield a positive relationship with our dependent variables. For comparison purposes we also use the data collected by Huber et al. (1993) which they termed 'constitutional structure, Schmidt's data on the institutional constraints of central state government (1996), and the institutional pluralism data by Colomer (1995). Since these three data sources all measure institutional constraints similar to our competitive veto point measure, we predict that all three of these measures should be positively related to income inequality and the rich-poor ratio.

Obviously, differences in income inequalities are not solely the function of institutional structures. Besides examining the bivariate relationship between income inequality and our institutional measures, our task will be to test how institutional structures measure up when alternative hypotheses are introduced. We use six control variables which were used to explain income inequalities in previous studies.

The first of our six control variables is called ‘dominant tendency in government’ and ranges from 1 (bourgeois hegemony) to 5 (social democratic hegemony). These data capture the ‘parties do matter’ hypotheses and are based on Schmidt (1992). Obviously, we expect that more social democratic government will be associated with less inequality and a lower rich/poor ratio.

Secondly, we use voter turnout as an additional control variable. Turnout was identified by Stack (1979) to have a reducing effect on income inequality. These data are from Mackie & Rose (1991) and measure voter turnout as a percentage of the eligible voting population.

Third, Phelps-Brown (1957), and Cameron (1978: 79) have argued that economic openness affects the level of income inequality. Other scholars have gone even further, arguing that institutional structures themselves and the shape of domestic politics are a function of international trade and openness (Gourevitch 1978; Katzenstein 1985; Rogowski 1987). More recently, the deterministic arguments of economic openness have been examined in a more complex fashion by also arguing that “ . . . political institutions can block and refract the effects of internationalization” (Keohane & Milner 1996: 5).

According to Cameron (1978) the more open an economy, the more concentrated its industries, which in turn leads to a larger and more organized labor force and stronger unions, which press for more distributive policies. Thus, as economic openness increases, we predict a reduction in income inequality. Economic openness is operationalized as the amount of foreign trade as a percentage of GDP.[17]

Fourth, three macro-economic variables are introduced. Economic growth and GDP are both expected to reduce income inequalities (Kuznets 1963; Olson 1963). Lastly, we predict that unemployment is a factor which tends to positively affect income inequalities. These data are from the various editions of the OECD Economic Outlook statistics.

The non-institutional predictor variables consisted of the average of approximately ten years before our data point for income inequality occurred. This study uses two time points at which the dependent variables were measured. The first time point is approximately the mid to late 1970s. The second is approximately the mid to late 1980s. For instance, for the first time point in the mid to late 1970s, the average of dominant tendency in government, voter turnout, economic openness, GDP, unemployment and economic growth for 1965 to about 1975 was calculated. This means that we gave around ten years of lead time for each of these variables to work themselves out to potentially affect income inequality. We treated our second time point, the mid to late 1980s identically by calculating the ten year average prior to

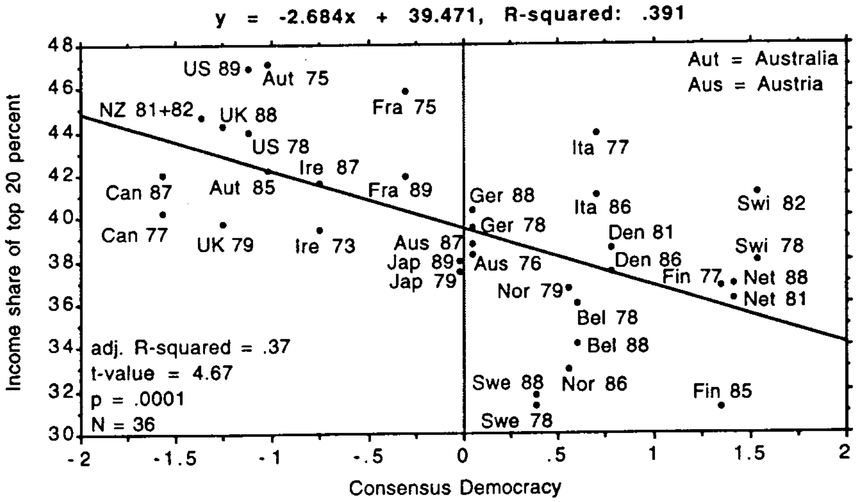

Figure 1. The impact of consensus democracy on the income share of the top 20% of population for 18 countries at two time points (approximately mid to late 1970s and mid to late 1980s).

our measures of income inequality and the rich/poor ratio. The institutional variables themselves did not indicate noticeable variation over our time period of examination. Thus, we treated the institutional variables as temporally invariant.

Table 1 shows our inequality data and the most important institutional data. The range in the top quintile share is quite astounding, from an income share of 31.3% going to the top 20% of population in Sweden 1978 to 47.1% of income going to the top 20% in Australia in 1975.

The rich poor ratio also shows quite some variation. While the top quintile of population has an income of about three times as much as the bottom 40% in Australia (1975), the United Kingdom and the USA, in Finland (1985), Norway (1986), and Sweden the rich/poor ratio is the smallest, with the top 20%'s income being approximately 1.2 to 1.3 times higher than the bottom 40%. Comparison of the two time points indicates that Australia experienced a reduction in income inequality (from 1975 to 1988), while the United Kingdom experienced a sharp increase in income inequality (from 1979 to 1988). A similar trend is observable for the USA where income inequality measured by the income share accruing to the top quintile rose from 44% in 1978 to almost 47% in 1989. These findings are consistent with the results of the OECD Income Study (1995) and Mueller (1989).

Before delving into multivariate analyses we examine graphically the relationship between income inequality and consensus democracy.

Table 1. The top quintile share (top 20%) in percentages, the rich/poor ratio, and the institutional variables (independent variables) for 18 countries at two time points

Country and year	Top quintile share	Rich/poor ratio	Consensus Democracy	Collective veto points	Competitive veto points
Australia 75	47.1	3.06	−1.02	0.037	2.928
Australia 88	42.2	2.74	−1.02	−0.097	2.928
Austria 76*	38.3	1.9	0.04	−0.386	0.418
Austria 87*	38.8	1.9	0.04	−0.261	6.418
Belgium 78	36	1.67	0.60	0.984	0.418
Belgium 88*	34.1	1.36	0.60	2.267	0.418
Canada 77	42	2.9	−1.57	−0.057	1.673
Canada 87	40.2	2.3	−1.57	−0.214	1.673
Denmark 76	37.5	1.88	0.77	1.453	−1.673
Denmark 81	38.6	2.22	0.77	3.347	−1.673
Finland 77*	36.8	1.88	1.35	−0.605	−1.673
Finland 85	31.2	1.15	1.35	0.605	−1.673
France 75	45.8	2.8	0.30	−1.772	−1.673
France 89	41.9	2.41	−0.30	−1.404	−1.673
Germany 78	39.5	1.94	0.05	−0.214	2.928
Germany 88	40.3	2.14	0.05	−0.183	2.928
Ireland 73	39.4	1.94	−0.75	0.021	−1.673
Ireland 87	41.6	2.00	−0.75	0.021	−1.673
Italy 77	43.9	2.51	0.70	0.772	−0.418
Italy 86	41	2.18	0.70	0.725	−0.418
Japan 79	37.5	1.71	−0.02	0.222	−0.418
Japan 89*	38	1.74	−0.02	−0.042	0.418
Netherlands 81	36.2	1.62	1.42	2.447	−0.418
Netherlands 88	36.9	1.73	1.42	0.960	−0.418
New Zealand 81	44.7	2.81	−1.37	−0.558	−1.673
New Zealand 82	44.7	2.81	−1.37	−0.582	−1.673
Norway 79	36.7	1.94	0.55	0.647	−1.673
Norway 86*	33	1.28	0.55	0.647	−1.673
Sweden 78*	31.3	1.17	0.38	0.412	−1.673
Sweden 88*	31.8	1.18	0.38	0.412	−1.673
Switzerland 78	38	1.89	1.54	−0.551	2.928
Switzerland 82*	41.1	1.96	1.54	−0.551	2.928
UK 79	39.6	2.15	−1.26	−0.449	−0.418
UK 88	44.3	3.03	1.26	−0.449	−0.418
USA 78*	44	3.06	−1.12	−2.977	2.928
USA 89*	46.9	3.53	−1.12	−2.977	2.928

*Data from the OECD study 'Income Distribution in OECD Countries' (1995). The other data are from the various editions of the World Bank Development Report, The World Bank. Consensus democracy is the Lijphart & Crepaz (1991: 245) measure. Collective veto points' is the sum of the standardized scores of parliamentarism (1) else (0 = presidentialism) and the effective number of parties. Four of the eighteen countries were classified as having presidential systems (Finland, France, Switzerland, and USA). (Lijphart 1984). 'Competitive veto points' is the sum of the standardized scores of the symmetry of legislatures and federalist vs unitary structures (Lijphart 1984).

Figure 1 strongly indicates that consensus democracy tends to depress income inequality. A one unit increase in standard deviation of consensus democracy[18] reduces the income share of the top 20% of population by almost 2.7%. The relationship is in the hypothesized direction and is statisticaliy significant at the 0.0001 level. The top quintile model can explain 56% of the variation of the dependent variable while the adjusted R-square rises to 64% in the rich/poor ratio model. Figure 1 provides the first strong evidence of our argument that institutions matter in explaining variations in income inequality. But will this relationship hold in a complex multivariate setting?

Findings

This study employs a pooled time series (t = 2), cross-sectional (n = 18) analysis. Since this pooled design consists of only two time periods, autocorrelation is of no great concern.[19] The greatest advantage of pooled designs is that it increases the sample size, allowing for a higher number of variables to be introduced without drastically reducing the degrees of freedom. Still, a number of 36 allows only rather lintited statistical data analysis. Also, our results are reflective of the time periods we have examined. Looking at different slices of time, might yield different results. Given the relative dearth of data however, we would not extend our analysis to a third time point for eighteen countries without compromising the comparability and quality of the data.

A much larger problem is the distortion that outliers and leverage points can bring to small number of analyses. Therefore, we checked every model for both, outliers defined as studentized residuals (residuals divided by their estimated standard deviations), and for leverage points by calculating the diagonal elements of the ‘hat’ matrix (Belseley, Kuh & Welsch 1980).

There are two kinds of outliers and leverage points. The first may be called ‘benign’ outliers and leverage points. This is a situation where the theoretical, core variables display the hypothesized direction and significance in the full model despite the presence of outliers and leverage points, yet retain their direction and significance if those outliers and leverage points are removed. Generally, after dropping these observations from the analysis, the core, theoretical variables display even stronger significance than before. In such a case, we report the full model. Obviously, those outliers and leverage points do not ‘drive’ the model. More problematic are what we might call ‘malignant’ outliers and leverage points. This is a situation where these points ‘drive’ the relationship. Once they are removed from the analysis, the theoretical, core variables lose significance. If we encounter such a problem we will report the findings with the outliers and leverage points removed.

Table 2. Aggregated model using top quintile and the rich/poor ratio as dependent variables

	Top quintile (top 20%)	Rich/poor ratio
Consensus democracy (LC measure)	−1.382 (0.59)*	−0.225 (0.076)**
Dominant tendency in government	−1.638 (0.56)*	−0.178 (0.073)*
Vote turnout	0.011 (0.05)	0.001 (0.006)
Economic openness	−0.065 (0.02)*	−0.011 (0.003)**
GDP	−0.0001 (0.00004)*	−0.0001 (0.000049)*
Unemployment	−0.038 (0.24)	0.015 (0.031)
Economic growth	−1.212 (0.42)*	−0.155 (0.054)**
Intercept	53.27 (4.83)**	3.19 (0.624)**
Adjusted R^2	0.56	0.64
Degrees of freedom	28	28

Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$. Two-tailed tests. LC measure = Lijphart & Crepaz measure (1991).

Yet another outcome may occur when in the full model, the variables of interest are not significant. Upon removal of outliers and leverage points, however, they do become significant. In other words, outliers and leverage points have obscured a valid relationship. In such a case, we will report the findings without the outliers and leverage points. Having stated these caveats let us turn to the findings of our multivariate statistical analysis.

Inspection of the parameters in Table 2 provide strong evidence that consensus democracy, as hypothesized, significantly reduces income inequality even when six other prominent alternative hypotheses are controlled for. Table 2 displays the results of the full models for both, the top quintile as well as the rich/poor ratio.[20] In both models, four of the six control variables also proved to be significant, indicating that more social democratic government, higher economic openness, higher GDP, and higher economic growth tend to depress income inequality.[21]

As mentioned above, our consensus measure is an aggregated one. Thus, we decided to disaggregate consensus democracy and examine how the constituent elements of that measure affect income inequality.

Inspection of Table 3 indicates that among the control variables, dominant tendency, economic openness, GDP, and economic growth are all statistically significant and point in the hypothesized direction. Combined with these control variables, equation 1 in Table 3 indicates that parliamentarism does not systematically influence income inequality. However, equation 2 provides

Table 3. Disaggregated models. Income share of top 20% population is the dependent variable

	1	2	3	4	5
Dominant tendency	−1.88	−1.683	−1.837	−1.694	−1.530
	(0.606)**	(0.584)**	(0.546)**	(0.623)**	(0.556)**
Voter turnout	0.020	0.056	0.032	0.024	0.021
	(0.066)	(0.057)	(0.048)	(0.053)	(0.048)
Economic openness	−0.091	−0.080	0.079	−0.085	−0.067
	(0.023)**	(0.025)**	(0.021)**	(0.023)**	(0.023)**
GDP	−0.0001	−0.0001	−0.0001	−0.0001	−0.0001
	(3.5e-4)**	(4.1e-4)**	(3.1e-4)**	(2.2e-4)**	(3.3e-4)**
Unemployment	0.110	0.330	0.182	0.138	0.034
	(0.255)	(0.276)	(0.231)	(0.251)	(0.231)
Economic growth	−1.478	−0.962	−1.482	−1.441	−1.404
	(0.444)**	(0.592)*	(0.404)**	(0.437)**	(0.401)**
Parliamentarism	0.005				
	(1.46)				
Effective number of parties		−0.813			
		(0.461)*			
Federalism			2.67		
			(1.058)**		
Bicameralism				0.725	
				(0.727)	
Proportionality of					−1.399
electoral system					(0.556)**
Constant:	55.797	51.424	53.479	54.076	53.419
	(5.541)**	(5.745)**	(4.733)**	(5.336)**	(4.740)**
Adjusted R^2	0.48	0.548	0.578	0.496	0.574
Degrees of freedom	28	26	28	28	28

Standard errors in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$. One-tailed tests.

evidence that the higher the effective number of parties, the lower income inequality.[22] Federalism, as shown in equation 3, tends to increase inequality in a statistically significant manner. Similarly, bicameralism also shows a positive sign, however, this variable is not significant. Equation 5 in Table 3, indicates that the more proportional the electoral system, the lower income inequality. This is a statistically significant finding and consistent with our theoretical expectations.

Table 3 finds that three of the five hypothesized relationships proved to be empirically supported. Bicameralism, which was hypothesized to increase income inequality, and parliamentarism, which was hypothesized to depress income inequality, did not behave as expected. However, the reducing effect of income inequality of effective number of parties and the proportionality of the electoral system is consistent with our theoretical argument: the more widespread the access to political institutions, and the more representative the political system, the more citizens will take part in the political process to change it in their favor which will manifest itself, among other things, in lower income inequality. Such consensual political institutions make the government more responsive to the demands of a wider range of citizens. The models in Table 3 explain, on average, roughly 51 percent of the variance of income inequality.

Table 4 takes a closer look at our collective and competitive veto points. It was hypothesized that collective veto points should decrease income inequality while competitive veto points should increase it. Equations 6 and 7 in Table 4 indicate that our expectations are supported by the empirical results which show that both variables display the hypothesized sign and are statistically significant. This finding means that not all veto points automatically have constraining effects on policy. Collective veto points, defined in this study as the sum of the standardized scores of parliamentarism and the effective number of parties, allow for a more active government than institutions characterized by competitive veto points, defined as the sum of the standardized scores of bicameralism and federalism. In the latter case, competitive veto points do make it more difficult to change the status quo as these are separate institutions with mutual vetoes. In such a case, instituting reforms to lower income inequality is more difficult to achieve, hence, compared to countries with collective veto points, we observe higher income inequality in systems with competitive veto points than in systems with collective veto points. In model 8 we entered both, collective and competitive veto points into the equation; both variables retain statistical significance and point in the hypothesized direction.

For comparison purposes we also included three additional measures of constitutional constraints, collected by Huber et al. (1993), Colomer (1995), and Schmidt (1996). Since all of these measures tend to capture the constraining elements of constitutional structures, it is no wonder that they tend to increase income inequality. The Huber et al. (1993) and the Schmidt (1995) measures are statistically significant while the Colomer measure does not reach significance.[23] The six models in Table 4 can explain, on average, approximately 54% of the variation of the income share of the top 20% of population.[24]

Table 4. Disaggregated models. Income share of top 20% population is the dependent variable

	6	7	8	9	10	11
Dominant tendency	−1.843	−1.673	−1.596	−1.688	−1.753	−1.734
	(0.586)***	(0.578)***	(0.577)***	(0.564)***	(0.597)***	(0.572)***
Voter turnout	0.059	0.029	0.108	0.072	0.041	0.042
	(0.059)	(0.050)	(0.066)*	(0.055)	(0.055)	(0.051)
Economic openness	−0.071	−0.080	−0.067	−0.073	−0.085	−0.089
	(0.027)***	(0.022)***	(0.026)***	(0.023)***	(0.023)***	(0.022)***
GDP	−0.0001	−0.0001	−0.0001	−0.0001	−0.0001	−0.0001
	(3.9e4)***	(2.5e-4)***	(3.3e-4)***	(2.8e-4)***	(3.2e-4)***	(3.3e-4)***
Unemployment	0.124	0.170	0.354	0.171	0.067	0.105
	(0.246)	(0.24)	(0.272)	(0.236)	(0.249)	(0.238)
Economic growth	−1.327	−1.443	−1.221	−1.476	−1.604	−1.541
	(0.443)***	(0.416)***	(0.568)***	(0.408)***	0.443)***	(0.417)***
Collective veto	−0.817		−0.909			
points	(0.59)*		(0.60)*			
Competitive veto		0.583	0.455			
points		(0.299)**	(0.312)*			
Constitutional structure				0.714		
(Huber et al. 1993)				(0.320)**		
Institutional pluralism					0.476	
(Colomer 1995)					(0.378)	
Institutional constraints						0.652
(Schmnidt 1995)						(0.33)**
Constant	50.441	53.987	44.99	48.923	53.099	52.692
	(6.32)***	(4.915)***	(7.167)***	(5.64)***	(5.44)***	(5.070)***
Adjusted R^2	0.51	0.54	0.57	0.56	0.51	0.54
Degrees of freedom	28	28	27	28	28	28

Standard errors in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. One-tailed tests.

Conclusions

This empirical study provides strong evidence that in addition to factors such as the partisan coloration of government, economic openness, the level of affluence, and economic growth, the formal constitutional elements of various countries have a systematic effect on the level of income inequality. Theories arguing that voter turnout systematically affects income inequality were not supported by our findings. It also appears that levels of unemployment are not systematically connected to income inequality.

What sets this study apart from other projects explaining income inequality is our explicit focus on political institutions. Our findings strongly support the hypothesis that consensual political institutions tend to reduce income inequalities whereas majoritarian institutions have the opposite effect. The more accessible and representative the political institutions, mostly through proportional electoral systems and multi-party legislatures and multi-party coalition cabinets, the more citizens will take advantage of these institutional incentives and press for group specific policy outcomes. Such coalitions are closer to the median voter than in single party, bare majority cabinets. The policies produced as a result of such coalitions are often the result of hard bargaining and compromising, generally leading to policy outputs which satisfy a wider group of parties, and by extension, their constituents. In more cases than not, redistributive policies will be favored, which tend to reduce income inequalities.

Welfarist policies, which tend to reduce income inequalities, will increase if political institutions allow access of groups which are below the median income level. Income distributions are generally less equal than the distribution of votes. If minority groups gain access to the political process through consensual institutions, they will use this very process to increase their income. As long as the median voter's income is lower than the median income, consensual political structures will exert downward pressures on income inequality as governments will have to be more responsive to the median voter than in majoritarian systems. This theory is supported by our findings which indicate that the higher the effective number of parties, the lower the disparities in income. Similarly, as the disproportionality of the electoral system increases, so does income inequality.

We have also argued that not all veto points are created equal. Most of the veto-point literature has argued that simply the number of veto points is a strong determinant of the degree to which a government is constrained. The more veto points, the more constrained; thus, the more difficult it is to change the status quo. We, on the other hand have argued that it is crucial to examine in which institutional context veto points occur. If institutions are so situated that representatives interact with each other through separate political institutions with mutual veto powers, as is the case in presidential systems, two party systems, or in symmetrical bicameral systems, the chances for minority interests to obstruct legislation are high. We called these constraining veto points, competitive veto points. On the other hand, in multi-party systems, and in parliamentary systems where representatives of different parties share governmental power collectively and face each other on a daily basis, such veto points tend to be more amenable to pro-active and goal oriented policy making. We called such 'enabling' veto points, collective veto points.

The empirical analyses support our theory that some veto points have enabling effects while others have constraining effects. Collective veto points, as operationalized in the sum of the standardized scores of parliamentarism and the effective number of parties, have been shown to reduce income inequalities, while competitive veto points, defined as the sum of the standardized scores of bicameralism and federalism, tend to increase income inequalities. In other words, competitive veto points constrain governments to such a degree that changing the status quo via redistributive policies is very difficult, thus, large disparities in income inequalities tend to prevail.

The purpose of this study was not to argue for policies oriented toward decreasing income inequality. Some economists even argue that disparity in incomes in industrialized democracies provides individuals with one of the strongest incentives to engage in economic activity. Nonetheless, our empirical findings are of relevance to democratic theorists and political economists of all stripes as they consider how constitutional structures mediate political and economic forces. Furthermore, the link we have established between political institutions and income distribution certainly has implications for those who take issues of equality seriously in contemporary democracies. Few would deny the increasingly important role that economic resources play in shaping political outcomes and it is in this light that greater income inequality may be considered a priority for those concerned with preserving the integrity of the democratic process. As Robert Dahl (1996: 646) has recently queried, "if income and wealth are political resources, and if they are distributed unequally, then how can citizens be political equals?" If more consensual, inclusive political institutional arrangements indeed produce lower income inequalities, then perhaps political equality is also strengthened in these societies as wealth would tend to have less of a distortionary impact. These are precisely the questions confronting constitutional engineers and citizens of societies in transition, particularly Eastern Europe, as they design and adopt new constitutions and political institutions. If large gaps between rich and the poor are undesirable, then the obvious institutional preferences would be those of consensus as opposed to majoritarian democracies.

Notes

1. These data are derived from random surveys of each country's population, administered by the national statistical authority in the individual nations. The figures cover total after-tax household income, including wages and salaries, self-employed income, investment income, property income, and current public and private transfers.
2. This project was started in 1983 with the explicit 'aim to increase the degree of cross national comparability ... (OECD 1995: 26). By 1995 seventeen of our eighteen countries had collaborated with the LIS project. The only country missing is Denmark in which case we relied on the World Bank Development Report Data. For further information on the Luxembourg Income Study project, see Smeeding, O'Higgins & Rainwater (1990) and Slottje & Smeeding (1992).

3. Of course there are exceptions to Duverger's 'law'. Austria, despite its electoral system of proportional representation, was characterized by one of the highest degrees of party concentration in the world. This anomaly is explained by a peculiar feature of political culture called Lagermentalität (camp mentality, or pillarization) which marked Austria's post 1918 political culture until the mid 1980s. Adam Wandruszka (1954) called this "... the natural or god-given three-part division" of Austria's political culture. The three camps Wandruszka had in mind were the Christian-Conservative camp, the Socialist Camp, and the Nationalist Camp.
4. This finding is complementary to Huber and Powell's (1995: 324) results who found that " ... governments in the proportionate influence system are on average significantly closer to their median voter than are governments in the majority control and mixed systems".
5. Naturally this tremendous distortion of seats and votes is a direct result of the British first-past-the-post electoral system.
6. Many scholars have argued that PR systems tend to paralyze the effectiveness of political systems insofar as too many parties are represented and, as a result, it becomes increasingly difficult to establish stable coalitions. Some scholars, examining the German Weimar Republic, conclude that its downfall was the result of PR (Hermens, 1940). It is not the purpose of this paper to revisit these arguments. Suffice it to say that *Journal of Democracy* in the fall of 1990 and 1991 printed a major debate over the pros and cons of various institutional structures. For reasons of space, we will not review the main arguments made, but particularly useful are the articles by Linz (1990a, b), Horowitz (1990), Lijphart (1993), Lipset (1990), Quade (1991), and Lardayret (1991).
7. Weaver and Rockman (1993) also concluded that examining only the differential capacities of presidential vs parliamentary regimes is shortsighted, and that additional factors should be included such as regime types, government types, whether a country has a federal or unitary structure, or whether there are bicameral or unicameral legislatures present which can explain differential institutional capacities.
8. The eminent British political scientist S.E. Finer (1975: 30/31) made a similar argument when arguing that economic development requires not so much a "strong hand as a steady one". Gamble & Walkland (1983) attribute the limited effectiveness of British economic policy to Britain's adversarial governmental system, which does not allow a steady policy path to emerge as a result of abrupt alternations of polarized parties in power. Policy moves in fits and starts; what one government built up is dismantled by the next. The time horizon is too short for *any policy*, independent of partisan coloration, to take root.
9. Diamond (1993: 102) argues that "with the fragmentation of the party system [as a result of PR], voters may keep getting virtually the same coalition governments, with minor shifts in cabinet portfolios, no matter how the vote may change among parties. Thus, it becomes difficult truly to change policy, and to 'throw the rascals out'. This may *enhance stability of policy* [emphasis added] even as it leads to frequent changes in government (as in Italy), but at the cost of denying voters clear electoral choice". While Diamond's warnings are certainly in order, he chose a particularly suspect case, namely Italy, to make his point. Even Italy's widely perceived governmental chaos is not that disorderly, and economically, Italy is certainly outperforming the stalwart Westminster system. There is a host of highly successful countries, such as Germany, Austria, the Low and the Nordic Countries, which have employed Parliamentary – PR systems without seriously undermining issues of representativeness.
10. Stack (1979: 169) goes on to explain that " ... groups with relatively low socioeconomic status have more 'liberal' attitudes on economic policies, and are more aware of serious

welfare problems, more concerned with the gap between the rich and the poor and are more supportive of government programs for the poor, we would anticipate that the greater their participation in politics, the greater the probability that government will reduce inequality . . . ".

11. Again referring to the environmental policy field Vogel (1993: 269) argues that "parliamentary systems characterized by proportional representation and coalition governments offer advocates of diffuse interests greater opportunities for access and responsiveness than those generally found in other types of parliamentary system". The reason parliamentary systems are more successful in representing diffuse interests is found in the higher party discipline in such systems. In parliamentary-PR systems, legislators are less pressured by lobbying groups than in electoral arrangements which use single-member district rules where the dangers of pork-barrel politics, parochialism, and where the dangers of falling victim to a policy of selling out to the highest bidder is looming large. Parliamentarians in a parliamentary system have the ability to take nationwide issues into account and are much less susceptible to the temptations of district specific special interest groups. In that vein, Olson (1982: 50) laments that district specific representation yields " . . . incoherent national policies . . . " and espouses stronger parties and party discipline.
12. This is the obverse of what is argued above with regard to the ability of consensual governments (most likely coalition governments) to pursue a stable policy path over a longer time horizon. That, by definition, means that the potential for policy change in coalition governments is smaller, but its policy stability is higher.
13. Huber et al. (1993) operationalized electoral systems as follows: PR systems were scored as 0, modified proportional systems as 1, and single-member district plurality systems as 2. Their constitutional structure index was additive insofar as higher numbers indicated more veto points, i.e., more governmental constraints.
14. The institutional items which constituted the proportionate influence model were the effective number of parties, the proportionality of the electoral system, and the degree of opposition committee influence. The majority control system was made up of the identifiability of future governments, the past government status, single party or a pre-election coalition wins majority, and also the degree of opposition committee influence.
15. Parliamentarism is clearly a candidate for collective veto points as a result of the fusion between the executive and legislature culminating in a collective sharing of responsibility for policy. Presidentialism, based on the principle of separation of powers, obviously is a good example of competitive veto points, i.e., institutions with separate vetoes and responsibility. Effective number of parties (Laakso & Taagepera 1979) captures quite accurately the concept of collective veto points insofar as a higher number of parties, not just in government, but also in the legislature, indicate wider access as opposed to smaller number of effective parties, which is more consistent with competitive veto points.
16. The countries in alphabetical order are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom, and the USA.
17. These data are available in the various OECD country studies.
18. Since consensus democracy uses standardized measures, the units indicate standard deviations with a mean of zero.
19. Since this is an overwhelmingly cross-sectional dominant design (n = 18, t = 2) with a very short time series of only two time periods per unit (panel design), problems of autocorrelation are minimal (Stimson, 1985). Still, we calculated the first-order autocor-

relation coefficients and inspected the dual plots. all of which indicated the absence of autocorrelation.

20. Japan 1979 and Switzerland 1982 proved to be strong leverage points and Sweden 88 proved to be an outlier in the top quintile model. The rich-poor ratio model also contained two leverage points, again Japan 1979 and Switzerland 1982. After dropping these unusual observations from the analyses and re-estimating the model, the strength, direction, and significance of consensus democracy improved as it did for most of the other variables. We chose to report the more conservative outcomes contained in the full model. These two leverage points are of the 'benign' type.
21. All models were also tested for multi-collinearity by examining the Tolerance measure. None of the independent variables exhibited tolerance values which would indicate a serious problem of multi-collinearity.
22. These results were based on removing Japan 1979 and Switzerland 1982 from the analysis which proved to be outliers. The full model, including these two observations, reduces the significance of 'effective number of parties' but it is still significant at the 0.1 level (one tailed test). All other equations in Table 3 report the results of the full model. All models indicated Japan 79 and Switzerland 82 as observations with large leverage. Re-estimating the model after dropping these two observations improved the statistical significance of the institutional variables. Still, we decided to report the more conservative results of the full model.
23. All equations in Table 4 are based on the 'full' models, i.e., all observations were employed. Typically, Japan 1979 and Switzerland 1982 proved to be large leverage points in which case the equations were re-estimated by deleting these observations. The results of these 'restricted' models tended to increase the significance of the various institutional measures leaving the sign intact. Thus, these leverage points did not drive our models. Nevertheless, we decided to report the somewhat weaker results based on the full range of observations.
24. We ran the exact same models for the rich-poor ratio with generally very similar results. Thus, for reasons of space, we are not including the result tables for the rich-poor ratio.

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