

# Patterns of democracy reconsidered: the ambiguous relationship between corporatism and consensualism

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## **Abstract**

Lijphart's *Patterns of Democracy*, similar to most of his work, elicited fierce scientific debate. We replicate some of the analyses proposed in its second edition (2012) in the light of the critiques of the first edition (2009). We primarily examine the relationship between institutional setup and interest group representation, disentangling the effect of consensualism from that of corporatism on issues such as macroeconomic performance and governance capabilities. We further deepen our understanding of the complex causal mechanisms connecting these variables, proposing a more sophisticated empirical investigation that emphasizes selection effects and conjunctural causation.

## **Keywords**

Democracy, Consensualism, Corporativism, Performance, Replication

## Introduction

Arend Lijphart is likely among the most quoted contemporary political scientists (Keman 2011). However, his work is not widely cited because his theoretical approach, empirical results and normative suggestions are universally supported. Quite the opposite. Lijphart is a controversial author, and while his terminology has definitely entered the language of political science, the discipline is divided over his contribution.

The reaction to Lijphart's book, *Patterns of Democracy* (1999; 2012) illustrates this division. In addition to theoretical disputes regarding fallacies in the conceptualization of his two well-known models of democracy – Consensus and Westminster – the volume offers grounds for methodological and empirical disagreement (Bogaards 2000; Schmidt 2002; Pasquino 2011; Ganghof 2010). Methodologically, scholars have often criticized the selection of cases, specifically the inclusion of borderline democracies. Taagepera (2003) further critiqued the (in)consistency between concepts and indices, as well as their logical interconnections and possibility of aggregation (Lane & Ersson 2000). Vatter (2009) directly proposed a series of adjustments to the original measures and operationalizations. Empirically, Lijphart's findings contradict much of the conventional wisdom, arguing, for example, that consensus democracies Pareto dominate majoritarian systems. However, scholars such as Anderson (2001) and Armingeon (2002) arrived at different conclusions. They replicated Lijphart's analyses of the impact of institutional design on macroeconomic performance and the quality of democracy without finding supports for his original claims.

Interestingly, Lijphart has replied both directly (2000; 2002; 2003) and indirectly (2008) to most of the conceptual, methodological and empirical critiques of the first edition of *Patterns of Democracy*, occasionally conceding partial legitimacy to his critics. This concession left most readers with the impression that they could expect relevant revisions in the second edition of his seminal book. These expectations included more in-depth interpretation of the empirical results.

For these reasons, our first goal is to verify whether and how the updated version of *Patterns of Democracy* addresses some of its empirical appraisals and improves our understanding of the link between

institutional factors and policy performance. Moreover, by replicating some of its analyses we will directly tackle one of the major controversies raised by that work, namely the puzzle of the relationship between corporatism and consensualism.

The present article is organized as follows. Section two synthesizes the research strategy and major results presented by Lijphart in 1999, examining more in detail the macroeconomic performance of democracies. Section three reviews the arguments suggested against his interpretation of the empirical evidence. Section four updates the debate, including the innovations introduced by Lijphart in 2012, and faithfully replicates the new analyses in light of previous disagreements. Section five develops the empirical analysis of those data, and the final section concludes.

### **The original research design and empirical results**

When *Patterns of Democracy* first appeared (1999), it was welcomed as a major advance in understanding the impact of different models of democracy. Until then, scholars had primarily evaluated the impact of diverse institutional arrangements using specific institutional elements as independent variables, such as the electoral system or the form of government. Researchers adopted the language and categories of Lijphart's polar types of democracy (dating back to 1984) but translated them empirically in a rather idiosyncratic manner. Without operationalizing the two independent dimensions of majoritarian and consensus democracy advanced by Lijphart (1999), it was impossible to systematically test any hypotheses.

As is well known, Lijphart's recent research covers 36 democracies from all continents belonging to the three waves of democratization typified by Huntington (1991). The data represent parliamentary and presidential systems and homogeneous and plural societies. Most important, the investigation also covers very small (e.g., Iceland and Barbados) and extremely large (e.g., India) countries and poorly and highly developed nations. The choice of dissimilar cases has been often criticized because of the supposedly

insufficient range of control variables included in the final analysis. Although understandable with respect to the requirements of most similar systems' research design<sup>1</sup>, potential distortions resulting from Lijphart's inclusive choices have not been empirically demonstrated. Moreover, many of his econometric analyses were confined to a reduced (and more traditional) set of countries simply because of a lack of consistent data on the dependent variables.

His broad coverage also demanded coherent measures of the ten independent variables necessary to identify the major coordinates of a country along the two-dimensional map of democracies: the executives-parties dimension and the federal-unitary dimension<sup>2</sup>. Regarding this issue, the major critiques focused on the operationalization of the executive-legislative relationship for the first dimension<sup>3</sup> and the discretionary attribution of cardinal values to categorical variables for the second dimension. Because both problems lack an easy solution for the wide range of countries and the long period considered (from twenty to fifty years), critics emphasized the shortcomings but could not propose valid alternatives. They simply resorted to a different sample of cases and a shorter time frame.

Lijphart tested the impact of his models of democracy on what appeared to be a crucial issue: macroeconomic performance. In essence, regarding the executive-party dimension, after controlling for population and development and dropping the outliers, Lijphart (1999) found no systematic effect on growth, debt, unemployment and strike activity. Nonetheless, this confirmation of the null hypothesis was not a failure. Quite the opposite. Normatively, this result represented a small success for power-sharing "supporters" because, contrary to most scholarly assumptions, majoritarian systems performed no better than consensus democracies. Moreover, the latter exhibited clearly superior performance in controlling

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<sup>1</sup> The uncertain democratic status of countries such as Venezuela, Colombia, India or Papua New Guinea has been explicitly addressed by Lijphart, relying on the diverse assessments offered by Polity4 and Freedom House. However, the critiques advanced a deeper concern regarding the overall comparability of democracies with such diverse histories, cultures and traditions, explicitly suggesting that analyses should return to more traditional comparisons among OECD countries.

<sup>2</sup> The first dimension is occasionally termed the shared power dimension, and it collects measures related to the party system, the electoral system, the features of the cabinet, the executive-legislative relationship and the different modes of interest group representation. The second, or divided-power, dimension, groups measures of federalism and decentralization, the structure of the representative assembly, the rigidity of the constitution, the strength of judicial review and degrees of central bank independence.

<sup>3</sup> Lijphart (2002; 2003) admitted not being entirely satisfied by his averaging the two measures of duration of the cabinets to assess this system's dominance.

inflation, which was robust to different operationalization, different periods and different subsets of countries. Inflation was the only positive result recorded even on the federal-unitary dimension. However, in that case, Lijphart conservatively attributed the success to one of the components of the additive index, namely, that measuring central bank independence. Central banks are considered to have greater autonomy when their statutes include controlling prices as their primary (or unique) goal. Moreover, consensus democracy performed systematically better along a wide range of proxies for the quality of democracy, such as equality, representation of minorities, satisfaction of citizens, foreign aid, etc.

### **Empirical assessments and replications**

The empirical evidence presented by Lijphart was striking. Paradoxically, the confirmation of the null hypothesis regarding the effect of the institutional setup on most of the macroeconomic proxies proved more compelling to subsequent authors than the primacy of the quality of democracy indices. There were two major reasons for this preference. First, the former result contrasted with common and scholarly knowledge, especially in the tradition of the veto players approach. Second, some components of Lijphart's additive dimensions appeared to have a peculiar association with the logic of consensualism while, simultaneously, an autonomous impact on macroeconomic performance.

Specifically, corporatism and central bank independence appeared foreign to the core ideas of power-sharing and power-dispersion (Taagepera 2003; Anderson 2001; Vassallo 2002). What does corporatism have in common with the political circuit linking proportional representation, multipartyism, non-minimum-winning cabinets and a balanced relationship between the executive and the legislative? How does central bank independence fit into the political pattern made of a federal and rigid constitution, coupled with an active judicial review ensuring the autonomy of the different levels of government, further represented in a bicameral parliament? Their belonging to the same empirical cluster of variables, as

demonstrated by the correlation matrix and the factor analysis performed by Lijphart (1999: 244-246), is insufficient to ensure that these factors are theoretically congruent with a specific type of democratic system.

Lijphart was aware of the difficulties in linking these variables to the principles of his models of democracy, especially corporatism, which has been a provocative issue in political science and economic sociology since the end of the 1970s. In conjunction with Crepaz, Lijphart wrote two important notes devoted entirely to this issue (Lijphart & Crepaz 1991; Crepaz & Lijphart 1995). In the first note, the two authors quote scholars such as Lehbruch (1979) and McRae (1979), who argue in favor of an isomorphism between consociational and corporatist patterns and emphasize the common disposition among elites towards cooperative decision-making. However, Crepaz and Lijphart simply report the empirical association between proxies operationalizing the two concepts. Keman & Pennings (1995) called attention to this point when they discussed whether the commonality derives from an “empirical coincidence” or from a “structural affinity”. Eventually, they argued that “corporatism and consensus democracy are different concepts. There is neither a theoretical nor an empirical reason to add corporatism to the characteristics of consociationalism” (279).

Crepaz and Lijphart responded to this assertion in the same issue of the journal, disputing the analytical remark that the two modes of decision-making activate different types of actors and producing new tests to support their original empirical association. Crepaz and Lijphart further promised a more theoretical reply, specifically integrating the corporatist system of interest representation into the cluster of consensus political institutions. Unfortunately, the arguments were again mostly empirical and offered little analytical thought. The two authors claimed that “undoubtedly (...) the affinity between corporatism and consensus democracy (...) is compelling, and there is no reason why the interest group system should not be linked to the political and constitutional structure” (287-288). According to their position, the burden of the proof lies in the opposite camp.

Certain scholars continued to believe that the affinity was not particularly compelling. These scholars argued that corporatism has little relationship with the consensual institutional setup, or even that it should be logically connected to Westminster democracies. In their opinion, the concentration of power in peak associations that monopolistically bargain for public goods is a majoritarian element of corporatism, compared with the dispersion of power that is typical of a pluralist system of interest representation.

*Patterns of Democracy* elicited different responses on this issue. Beginning with the dispute over whether corporatism and central bank independence are properly included on the first and second dimensions of consensualism, respectively, scholars analyzed the consistency of the effect of these factors on macroeconomic performance once these variables had been removed from the additive indices. Anderson (2001) estimated two regression models for 18 OECD countries from 1970-1990 that included inflation and unemployment as dependent variables. On the right-hand side of the equation, corporatism and central bank independence were introduced separately from the index synthesizing the four core variables of Lijphart's first dimension of consensualism; ideology and economic openness were further introduced as control variables. Similarly, Vassallo (2002) analyzed a sample of 21 OECD countries in three intervals within the period 1978-1997, and tested each of Lijphart's economic dependent variables. Armingeon (2002) estimated a more complex model for 22 OECD countries for the timespan 1971-1996, employing a broader set of institutional determinants and control variables but maintaining corporatism as a separate covariate. Generally, these scholars determined the following.

- a. Consensus democracy without corporatism had no impact on macroeconomic performance, irrespective of what dependent variable is considered (thus including inflation).
- b. Corporatism systematically reduces both inflation and unemployment (and even debt and strike activity in bivariate analyses).

- c. Central banks have a consistent, independent impact on inflation, but even other institutional variables from Lijphart's second dimension appear to have a systematic effect (contrary to his own interpretation).
- d. In certain multivariate analyses, majoritarianism (not consensualism) is systematically associated with selected positive macroeconomic outcomes, although the evidence is not robust across studies.
- e. The impact of all of these scholars' independent variables, including corporatism and central bank autonomy, appears to decline in magnitude and statistical significance in the most recent years, indicating that increasing economic interdependencies restricted the model's explanatory capacity with respect to political and institutional factors.

These studies not only demonstrate the different impacts of the various components of Lijphart's indices, but also echo the theoretical disputes concerning their different natures.

### **Novelties, updates and retests**

The quoted analyses deserve further reflection. They do not represent a perfect replication of Lijphart's tests because they did not use the same selection of cases, timeframes or control variables. Nevertheless, these studies raise issues that are difficult to avoid. Lijphart (2012) considered some of these issues in preparing the second edition of *Patterns of Democracy*. Although the number of cases and selection criteria remained the same, three countries (Colombia, Venezuela and Papua New Guinea) were replaced with three new countries (Argentina, Uruguay and South Korea). Minor adjustments were introduced in the operationalization of certain variables, but the overall framework remained the same.



The variables that were criticized for being eccentric still appear strongly correlated with the other four variables in their respective dimensions<sup>4</sup>. Their common explanatory power is further applied to a new set of dependent variables measuring the performance of political systems, such as the six Worldwide Governance indicators recently proposed by the World Bank (Kaufman, Kraay & Mastruzzi 2010). The new and updated tests appear to extend the impact of consensualism to issues that were not originally included or for which it was initially impossible to register any significant relationship.

After controlling for population and human development, consensualism has a systematically better performance on the following five of the of six Worldwide Governance indicators: Government effectiveness, Rule of law, Control of corruption, Political stability and Voice and accountability (see tables 1 and 2). Just Regulatory quality fails to achieve statistical significance. In the preceding edition, only inflation, among the indices of macroeconomic performance, was systematically impacted by his inclusive index of consensualism, whereas in 2012 even unemployment (at least on a thirty-year base) is affected. According to Lijphart:

“The results of these tests of the effect of consensus democracy on sound government and decision-making can be summarized as follows: on sixteen of the seventeen measures, consensus democracy has the better record, and these favorable effects are statistically significant for nine of the sixteen measures; majoritarian democracies have a better record on only one measure (per capita growth in 1991—2009) but not to a statistically significant degree. The overall evidence is therefore in favor of the consensus democracies—and disconfirms the conventional wisdom that majoritarian governments are the superior decision-makers” (Lijphart 2012: 268).

We now turn to the replication of these results in light of the responses to the first edition of *Patterns of Democracy*. There is one small but relevant difference between our approach and previous efforts: we will

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<sup>4</sup> In 1999, the range of the correlation coefficients for corporatism varied from 0.38\* to 0.68\*\*, whereas in 2012, the range varied from 0.51\*\* to 0.71\*\*. For central bank independence, the change is minimal: the original range, 0.34\* - 0.57\*\*, becomes 0.34\* - 0.60\*\* (stars representing the usual thresholds for statistical significance).

not introduce any change to the data and models tested except for decomposing Lijphart's additive 5-variable executives-parties index into a 4-variable index, maintaining the 5<sup>th</sup> independent variable on its own<sup>5</sup>.

Table 1 compares the original results (Orig) with those of the replicated analyses that keep the independent variables separate (Repl). The differences are striking. All of the positive impact attributed to consensualism is attributable to corporatism that, alone, generally remains statistically significant. Excluding that mode of interest representation rendered all the coefficients of consensualism insignificant and, in three out of six cases, changed their sign<sup>6</sup>.

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<sup>5</sup> We followed Lijphart even in the use of one-tailed tests, and in not presenting our results for the second dimension. "The effects are so weak that they do not allow any substantive conclusions in favor of one or the other type of democracy" (Lijphart, 2012, p. 273). Interestingly, the independence of central banks (alone or in an additive Federal-unitary index) has no effect, even on inflation.

<sup>6</sup> AIC BIC information criteria mostly recommend preferring the replication models to the original ones. It is fair to say that these results, as well as those of table 2, very much depend on the specific conceptualization, operationalization and measurement of corporatism. Following the suggestion of one referee, we tested the robustness of these models using five different indices, alternative to the one originally proposed by Siaroff (1999), obtaining very different results. Although this article is intentionally constructed using Lijphart's original data and measurements, we acknowledge the alternative operationalization and outcomes in the appendix within the online supplementary material.

Table 1 *Consensualism and Worldwide governance indicators – Original and replicated OLS regressions (s.e. in parentheses)*

	Government Effectiveness 1996-2009		Regulatory quality 1996-2009		Rule of Law 1996-2009		Control of Corruption 1996-2009		Political Stability 1996-2009		Voice and accountability 1996-2009	
	Orig	Repl	Orig	Repl	Orig	Repl	Orig	Repl	Orig	Repl	Orig	Repl
Consensus 5	0.12** (0.071)		0.07 (0.061)		0.15** (0.077)		0.18** (0.095)		0.19*** (0.056)		0.09** (0.044)	
Consensus 4		-0.06 (0.109)		0.12 (0.100)		-0.00 (0.122)		-0.06 (0.146)		0.09 (0.088)		0.03 (0.071)
Corporatism		0.23** (0.099)		0.07 (0.091)		0.20** (0.112)		0.31** (0.133)		0.14** (0.072)		0.08 (0.064)
Adjusted R <sup>2</sup>	0.63	0.66	0.59	0.58	0.55	0.57	0.55	0.59	0.58	0.59	0.56	0.56
N	36		36		36		36		34		36	

Note: \* p<0.1; \*\* p<0.05; \*\*\* p<0.001 (one-tailed test). Control variables and constants not included in the table.

Source data: For all graphs and tables, unless differently specified, <http://polisci.ucsd.edu/faculty/lijhart.html>

Table 2 *Consensualism, macroeconomic performance and democracy – Original and replicated OLS regressions (s.e. in parentheses)*

	Growth		Inflation Consumer price index 1991-2009		Inflation GDP deflator 1991-2009		Unemployment		Budget balance		Economist democracy index	
	1991-2009						1991-2009		2000-2008		2006-2010	
	Orig	Repl	Orig	Repl	Orig	Repl	Orig	Repl	Orig	Repl	Orig	Repl
Consensus5	-0.15 (0.190)		-1.49*** (0.581)		-1.40*** (0.564)		-0.78 (0.666)		0.35 (0.578)		0.26*** (0.105)	
Consensus4		-0.05 (0.325)		-1.42* (0.993)		-1.20 (0.962)		0.50 (1.028)		-0.52 (0.871)		0.05 (0.167)
Corporatism		-0.15 (0.301)		-0.38 (0.917)		-0.51 (0.889)		-1.47** (0.856)		1.04* (0.772)		0.29** (0.148)
Adjusted R <sup>2</sup>	0.21	0.18	0.53	0.51	0.51	0.49	0.13	0.17	0.08	0.11	0.48	0.50
N	31		30		30		29		22		34	

Note: \* p<0.1; \*\* p<0.05; \*\*\* p<0.001 (one-tailed test). Control variables and constants not included in the table.

The results are more varied when replicating some of the analyses of macroeconomic performance (see table 2). Regarding growth, the original indeterminate effect of institutions is confirmed even after decomposing the major components of consensus democracy. This outcome does not contradict Lijphart's position but is at odd with Olson's (1982) argument concerning encompassing organizations (Anderson 2001). According to the original tests, consensualism is extremely effective in combatting price increases. However, including the 5<sup>th</sup> variable in the equation in isolation affects our interpretation somewhat. Although corporatism is unable to systematically control inflation, as reported in Anderson (2001), Vassallo (2002) and Armingeon (2002), the remaining four consensus institutions are only marginally effective.

Unemployment is yet a different issue: the original analyses indicated a systematic, positive effect of consensualism for the three decades from 1981 to 2009 and an unsystematic impact over the past twenty years. However, decomposing the index into our components reveals that only a corporatist system of intermediation can ensure higher levels of employment, whereas the constitutional framework has no effect in this regard. Unexpectedly, the same is observed for budget surplus, which is unrelated to the first four variables of consensualism but, at least during the period 2000-2008, appears to be systematically affected by how functional interests are represented.

We also elected to test another variable that Lijphart only introduced in the last edition, namely, the comprehensive measure of democracy recently proposed by the Economist Intelligence Unit, which has the advantage of offering sufficient variation even among consolidated democracies. This variable was included in the chapter on the quality of democracies and, unsurprisingly, power sharing was systematically correlated with higher levels of the index. However, once we separate the constitutional component from interest group representation, the results are again unexpected: the first variable has no impact, whereas corporatism positively and significantly affects the proposed measure<sup>7</sup>. These results are also surprising

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<sup>7</sup> Applying AIC BIC information criteria here returns some odd results: there is no clear preference for the specification of the replication models, except for Unemployment and the EIU democracy index. The supplementary material, that includes even a

because the Democracy index is based on an in-depth inspection of five different topics: a) electoral process and pluralism; b) functioning of government; c) political participation; d) political cultures; and e) civil liberties. In comparative politics, these issues are usually regarded as explicitly connected to the constitutional system, independent of any normative assumption. Each component could be typical of a different model of democracy, and hence its impact would be eliminated by the aggregation procedure. However, further tests not included in table 2 demonstrate that this expectation does not hold. No single component is associated with one or the other model of democracy once the mode of interest group representation is excluded, whereas this variable is systematically connected (one-tailed and robust s.e.) with four of the five categories composing the aggregated index.

These results further question the inclusion of the pluralist/corporatist dimension in any constitutional model of democracy, although their empirical coincidence is evident. According to these replications, the two factors do not appear to fit into the same framework, and they likely “work” through different mechanisms, often generating different results.

### **Selection, treatment and interaction**

The analyses confirm that the categories used by Lijphart are problematic. Only an in-depth theoretical reflection may solve the puzzle, although additional empirical investigation could usefully orient the pondering. In this final section, we propose a few of these empirical avenues worth exploring. The first concerns the methodological limits of direct comparisons of the performance of consensus-oriented and majoritarian political systems and the likelihood of selection bias. The second research option involves the possibility of an interaction, not merely an additive effect, between constitutional consensualism and

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simple Bayesian analysis with non-informative priors, further confirms the doubts offered by the interpretation of the present Akaike criteria.

corporatism. Although the present data are poorly suited for these new tests, we nevertheless analyze these options to outline future research opportunities.

In the preceding paragraphs, while testing the effects of our variables of interest, we implicitly assumed what is usually labelled “conditional independence” or, in experimental terms, the “independence of assignment and outcome” (Brady 2008). Under this assumption, the groups to be compared differ only because of the “treatment”, i.e., because they are consensus or Westminster systems. Specifically, we assume that there are no variables that originally influenced the institutional choice of the type of democracy that, simultaneously, affect its performance. However, this is a very strong assumption, especially if we consider (as all of these engineering models presume) that certain institutional reforms are adopted in specific contexts precisely to address existing social and policy problems. Similar to other well-known analyses, we should “adjust[...] our estimates of the constitutional effect for ‘self-selection’, that is, for any correlation between selection and performance that remains after controlling for observables” (Persson & Tabellini 2005; see Norris 2008, for a non-technical reflection on the problem of endogeneity).

There is an entire family of models and techniques that address this problem (Guo & Fraser 2010: ch. 4). Some of these models are preferred when the outcome is only observed for a subset of cases (sample selection models such as Heckman’s), whereas others generally address situations in which there is a risk of endogeneity (treatment effect models). These models share a two-step approach, in which the first step estimates whether an observation belongs to one of two groups of cases<sup>8</sup>, and the second step assesses the actual impact on the variable of interest, in our case the performance of different models of democracy. For our problem, once adjusted for the conditions that determined the adoption of one of the two polar types, it is possible that the impacts of consensualism and corporatism on our dependent variables are affected.

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<sup>8</sup> In a quasi-experimental setting, the first step typically determines whether an observation belongs to a treatment or control group, a class of presidential or parliamentary systems, or to majoritarian or proportional systems, as in Persson & Tabellini (2004; 2005).

To verify this possibility, we initially dichotomized the “constitutional choice”. Models of democracy evaluated on the basis of Lijphart’s first four variables can thus only take a value of zero (Westminster) or one (Consensus). First, we modelled this choice as a function of the degree of pluralism in a society and British heritage, as Lijphart proposes (2012: 246-247). Not including other variables likely makes our model underspecified. However, this entails more conservative evaluations of self-selection bias, and thus, each assessment of the differences between the original explanation and our treatment models should become more relevant<sup>9</sup>. The second step consists of comparing the effects of the constitutional choice on both the dependent variable and our covariates of interest. This step is performed by contrasting the averages of the potential outcomes using actual and counterfactual values for the two groups, consensus and majoritarian democracies, and examining the significance, sign and magnitude of the coefficients for the two separate clusters.

We will consider only some of the dependent variables analyzed above to emphasize the effects of this type of control. Specifically, we will review the impact on Government effectiveness and Budget surplus. In table 1, we observed that Lijphart reported a significant impact of consensualism on the index of Government effectiveness proposed by the World Bank. However, when we decomposed Lijphart’s 5-factor index, we noticed that the effect was entirely caused by corporatism, whereas consensualism (4 factors) was insignificant and took the incorrect (negative) sign. In table 3, we obtain further implications.

The upshot of the constitutional choice remains relevant, as it is demonstrated by the significant average treatment effect (ATE). Government effectiveness is approximately 10% of the range higher in consensus democracies compared to majoritarian ones: 0.53 on a scale that goes from -2.5 to +2.5. However, after accounting for this choice, the impact of our variables of interest is unexpected. Consensualism – as a variable – takes a significant, negative coefficient for the majoritarian cluster and an insignificant, positive coefficient for the consensus group. The coefficient for Corporatism is always

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<sup>9</sup> Nevertheless, the double robust estimators with augmented inverse-probability weights that we use in our analysis are considered to partially address a misspecification of the treatment component of the equation.



positive, but insignificant in the first case and significant in the second. This means that, although limited by their origins, Westminster countries should not attempt to partially emulate consensus-oriented systems. A moderate degree of majoritarianism is unproductive. To have an effective government, it is better to adopt institutions that are as close as possible to one's ideal constitutional type: either purely majoritarian, or thoroughly consensus-oriented. Cooperative majoritarianism (Blondel & Battezzorre 2002) or hybrid regimes (Schmidt 2002) are not an option even for a second reason. Corporatism appears to be effective only for the subset of consensus democracies, and it does not exhibit the same systematic properties within other institutional contexts. Within the first realm, social partnership is grounded in the attitudes of political élites, and this permits the bourgeoning of positive sum games. However, Westminster democracies are based on a different political logic, which does not represent a fertile ground for tripartite agreements and their potential outcomes.

Table 3 *Constitutional choice, government effectiveness and budgetary surplus (ATE, and separated models for the two types of democracy)*

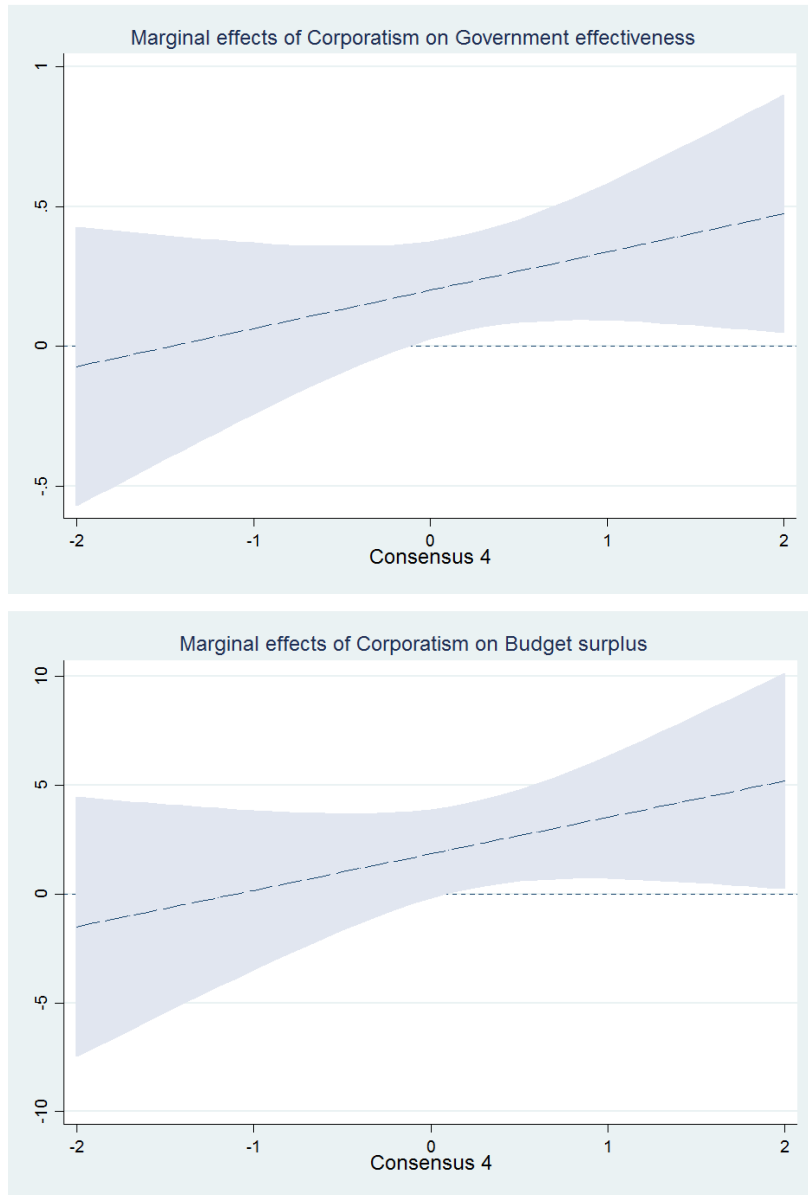
		Government effectiveness		Budgetary surplus	
		coefficient	Robust standard error	coefficient	Robust standard error
Average treatment effect		0.528**	0.240	11.761***	4.350
Westminster democracies	Consensus 4	-0.502**	0.218	-0.356	2.268
	Corporatism	0.047	0.138	-5.480***	1.851
Consensus democracies	Consensus 4	0.019	0.177	0.368	1.775
	Corporatism	0.221***	0.082	2.647*	1.366
N		N = 36		N = 23	

Note: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.001$  (two-tailed test). Control variables, constants and determinants of the treatment not included in the table.

Corporatism can even be counterproductive in a majoritarian environment, as it is evident in the second panel of table 3, where we applied the same treatment model to the explanation of budgetary surplus. Lijphart was originally unable to observe any effect using his models of democracy. In our replication in the preceding paragraph (table 2), we confirmed that his institutional variables had no influence, but we validated the hypothesis that corporatism had some impact. Controlling for constitutional choice, the data presented here suggest a more nuanced picture. The comparison between the potential outcomes (actual plus counterfactuals) of the two groups of countries indicates that consensus democracy might foster a systematically more favorable environment for retaining budgetary discipline, being the average treatment effect positive and significant. However, corporatism does not have a homogenous impact in the two sets of countries. For Westminster systems, it is preferable not to share policy-making responsibilities with social partners, whereas it is appropriate for consensus democracies to establish an inclusive social dialogue with these actors: the coefficient for corporatism is always significant, but with opposite signs among countries belonging to the two polar models.

The observation that our covariates behave differently under different constitutional choices suggests an interaction between them. Corporatism, in this case, should neither be considered part of a consensual institutional system, as proposed by Lijphart, nor a component of a simple additive model, as first suggested by Anderson (2001) and further tested in the previous paragraph. The results of this alternative approach are coherent with the preceding treatment models. Once we combine our continuous covariates and apply them to the two dependent variables employed in the previous analyses, the interaction term is not significant, but this does not disconfirm the same idea of interaction. The graph (figure 1) displays the varying effect of corporatism at different levels of consensualism on Government effectiveness and Budgetary surplus.

Figure 1 *Marginal effects of Corporatism for different levels of Consensualism*



Note: 90% confidence intervals

Marginal effects appear to be significant (and increasing) only in a portion of the range of consensualism, namely in the right-hand side of the graph. The 90% confidence intervals confirm that corporatism has not the same effect in different institutional contexts, and that its impact is not systematic

in the whole array of majoritarian democracies. At least for these two dependent variables, the impression held by certain scholars (Anderson 2001; Vassallo 2002) that the most effective governance is obtained by a combination of a Westminster institutional arrangement and inclusive interest representation is not confirmed.

Unfortunately, the absence of a longitudinal perspective in Lijphart's cross-country data, and thus the relatively small N, offer little opportunity for further minimally sophisticated elaborations. His variables and indices are either computed as an average of repeated observations throughout decades or sensible only if estimated over a long period – e.g., the duration of cabinets. The structure of Lijphart's data is definitively coherent with the overall approach of measuring some consistent underlying quality of a democracy that systematically qualifies the behaviors of its political actors and affects its performance. Several empirical analyses confirm the overall impression that these models of democracy vary only marginally (Vatter 2009; Giuliani 2011; Vatter, Flinders & Bernauer 2014). As a consequence, this approach limits the number of observations to the number of consolidated democracies, i.e., according to Lijphart's criteria, to thirty-six countries. This N is “borderline”: low for most econometric models but high for case-oriented research strategies<sup>10</sup>.

A different option that avoids the shortcomings of the insufficient N is to rely on Boolean logic. Specifically, we briefly explore the possibilities offered by Fuzzy-set qualitative comparative analysis (Ragin, 2000; 2008). Following this methodology, we are not interested in the average marginal effects of the covariates under a probabilistic approach, but in the deterministic identification of multiple and conjunctural paths of causation (Schneider & Wagemann 2012).

Vis, Woldendorp & Keman (2012) applied this method to verify the impact of consensualism and corporatism on macroeconomic performance. However, these scholars used a unique research design without relying on Lijphart's data. The authors used fuzzy-set QCA to identify ideal typical configurations

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<sup>10</sup> We tried to by-pass these shortcomings in our replications contained in the appendix, using bootstrapping on the one-side, and Bayesian analysis on the other. The results are not radically different from what we have presented thus far, but contribute to shed further light on the relationship between the two variables.

of the dependent variable, decade by decade, from 1975 to 2005 for 19 OECD countries. After a careful calibration, overall economic performance is evaluated in terms of the 8 ( $2^3$ ) possible combinations of growth, employment and debt. The miracle model is represented by high growth, high levels of employment and low debt, and the disaster model is represented by the opposite: low growth, low employment and high debt. The analysis revealed that there is no clear pattern regarding consensus or corporatist (compared with majoritarian or pluralist) democracies belonging to one of these opposite macro-economic models. “Other factors are apparently more relevant to understand economic performance than the institutional setup of corporatism and consensus democracy” (Vis, Woldendorp & Keman 2012: 89).

Vis, Woldendorp & Keman use the techniques of qualitative comparative analysis to calibrate and conceptualize their dependent variable. Therefore, these authors simply find that both consensualism and corporatism *alone* are not sufficient causes of good (or poor) economic performance: in QCA terminology, the results produce contradictions. However, Vis and colleagues did not attempt to exploit a major feature of QCA, namely, conjunctural causation. These scholars could have assessed whether the *joint* presence (or absence) of consensualism and corporatism resolves these contradictions, thus identifying a unique outcome.

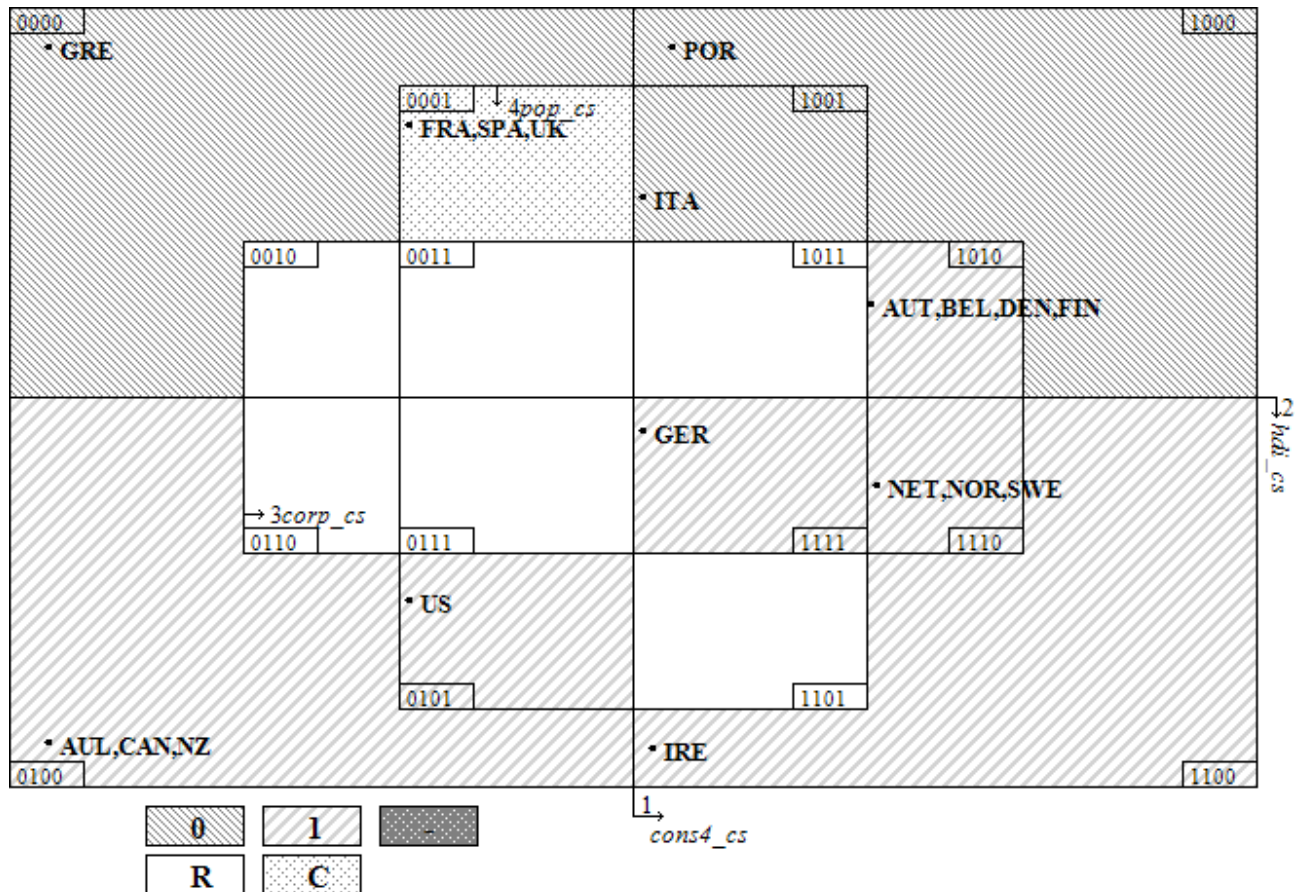
In our crisp and fuzzy set analyses, we follow this approach using the following specifications:

- a. we limit the horizon of our investigation to the same 19 countries used by Vis, Woldendorp & Keman (2012);
- b. we identify an *ex-ante* set of conditions that includes all the (dependent and control) variables used by Lijphart (2012); and
- c. we employ the outcome “government effectiveness” as in our previous tentative evaluation of the effects of interaction.

Figure 2 reports the Venn diagram containing all four conditions taken from Lijphart – consensualism, corporatism, developed, and populated – previously calibrated and dichotomized, with the

associated outcome<sup>11</sup>. The graph thus represents all the 16 (2<sup>4</sup>) combinations of these conditions, and each cell may or may not be occupied by one or more countries. In our case, the six white areas represent combinations that are not empirically covered.

Figure 2 *Venn diagram of Government effectiveness and its causes*



Note: conditions represent the belonging to the (crisp) set of: 1. Consensus, 2. Developed, 3. Corporatist, 4. Populated democracies. See the appendix in the supplementary material for more details

<sup>11</sup> The definition of the thresholds and the calibration of conditions through the so-called “direct method” (Ragin 2008) is included in the appendix in the supplementary material.

Consensual democracies lie in the right part of the graph, highly developed countries are in the lower panel, corporatist countries are located in the internal horizontal rectangle, and highly populated countries lie in the internal vertical rectangle<sup>12</sup>. Moreover, as far as the outcome is concerned, thin lines represent poor government effectiveness (zero), whereas thick lines represent high performance (one).

The intersection of our four conditions already assign most cases to non-contradictory outcomes<sup>13</sup>. However, three important countries – Spain among the “ineffective”, and France and the UK among the “effective” – manifest some inconsistency between conditions and outcome. Belonging to the group of countries with high human development – the nine positive cases in the lower section of the diagram – appears to be the condition most capable of correctly attributing our cases to the outcome. However, the combination of consensualism and corporatism helps to explain why even relatively poorly developed countries can experience an effective government, as it is the case with Austria, Belgium, Denmark and Finland.

The crisp QCA represented in the graph is only a first step in this exploration. We can better understand the different degrees of belonging to the various combinations of conditions using fuzzy sets, and we should further address the treatment of logical remainders (the empty rectangles in the diagram) in the search for “intermediate solutions”. Our objective is not to specify an exhaustive model for explaining effectiveness, but only to shed new empirical light on the complex theoretical connection between corporatism and consensualism.

On the basis of previous analyses, we expect that our four conditions will have the following impact:

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<sup>12</sup> Thus, the majoritarian, poorly developed, pluralist, and low populated combination is located in the upper left corner of the diagram and is labelled “0000”, whereas the consensual, corporatist, highly developed and heavily populated set occupies the lower right corner marked with “1111”.

<sup>13</sup> A contradiction emerges when empirical cases belonging to the same set of conditions exhibit a different outcome.

- a. the greater the extent to which countries belong to the consensus-oriented group, the greater their belonging to the set of effective countries;
- b. the same for the belonging to the set of corporatist countries and to the one of highly developed; and
- c. given the extent of the problems, we expect that a country's population size negatively affects effectiveness.

If we examine the consistency of these conditions, we discover that none of them, individually considered, is necessary for our outcome of interest. However, their various combinations may represent the different causal paths for explaining government effectiveness. Using the logical reminders according to the theory and the previous knowledge, helps identifying four different mechanisms. Table 4 reports the intermediate sufficient solution for Government effectiveness that isolates these four equifinal causal paths, i.e. the combination of two or three conditions reported in each line of the table. Coverage represents the percentage of cases with positive outcome “explained” by each path, whereas consistency “indicates to what degree the empirical data are in line with a postulated subset relation” (Schneider & Wagemann 2012: 324).

Table 4 *Intermediate solution for Effective government from truth table analysis*

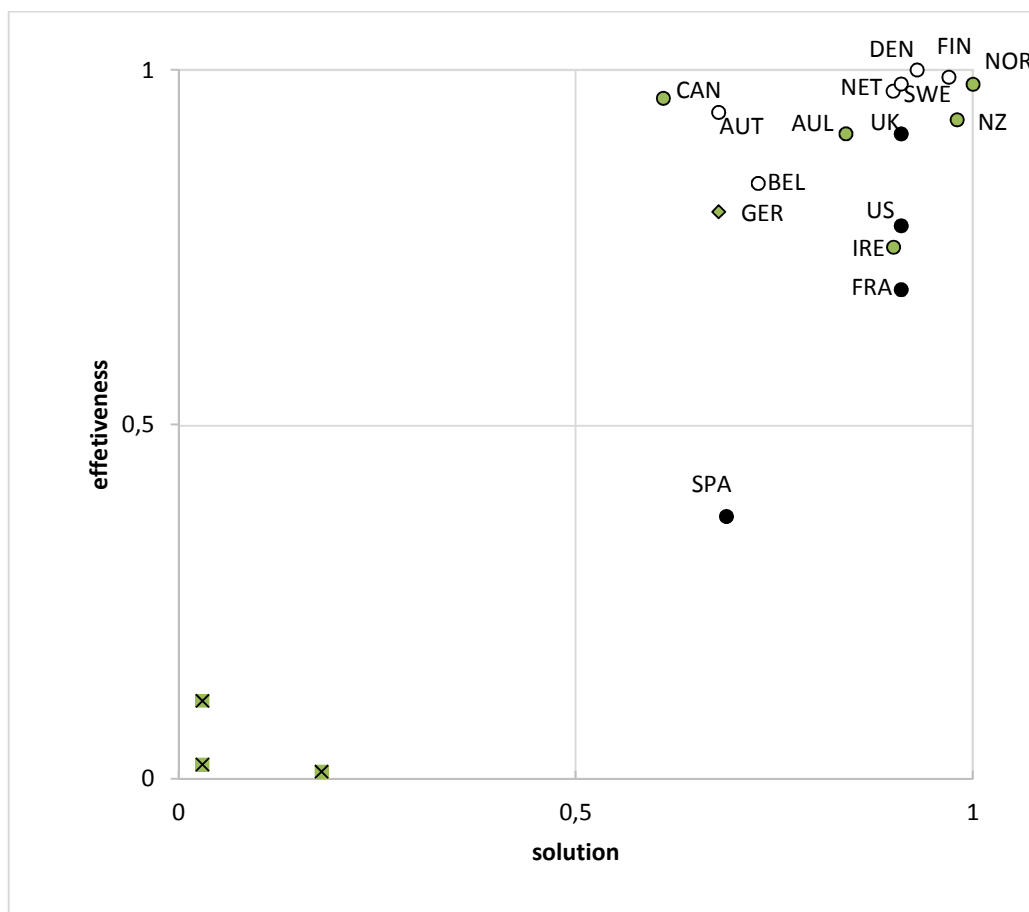
	Raw coverage	Unique coverage	Consistency	Cases with more than 0.5 membership in term
Developed*~Populated	0.451	0.169	0.965	NOR, NZ, IRE, AUL, NET, SWE, CAN
Populated*~Cons	0.256	0.184	0.840	FRA, UK, US, SPA
Developed*Corp	0.292	0.036	0.995	NOR, NET, GER, SWE
~Populated*Corp*Cons	0.453	0.228	0.984	FIN, NOR, DEN, SWE, NET, BEL, AUT
solution coverage: 0.912				
solution consistency: 0.927				

Note: *Algorithm*: Quine-McCluskey ; *frequency cutoff*: 1.00; *consistency cutoff*: 0.85  
*Assumptions*: Consensus (present); Corporatist (present); ~Populated (absent); Developed (present)  
 ~ negates the condition



According to this analysis, consensualism may be effective but only in conjunction with corporatism and for relatively small countries – the fourth path ( $\sim$ Populated\*Corp\*Cons). Otherwise, majoritarianism may be preferred for large countries (Populated\* $\sim$ Cons), although it is important to note that half of the proposed solutions are indifferent to the constitutional setup. Small and highly developed countries have an efficient government irrespective of this choice, and human development combined with corporatism is effective regardless the size of the country or the institutions adopted. These results are further portrayed in the XY plot<sup>14</sup> in figure 3.

Figure 3 XY plot of the solution to the outcome *Effective government*



<sup>14</sup> Where the belonging to the solution is displayed on the X-axis, and that to the outcome on the Y-axis.

Most of the positive cases are correctly located in the upper-right quadrant, with only the case of Spain resulting in a contradiction (as in the crisp analysis). Unfortunately, some of the explained cases are below the bisector  $y = x$ , which indicates that the solution terms are not sufficient for each case. Specifically, the model does not appear to be entirely specified for most majoritarian countries (UK, US and France), where the combination of conditions does not completely trigger the outcome (solid circles), confirming the relatively low consistency of the solution reported in the preceding table. Scandinavian countries (together with Belgium, Austria and the Netherlands) rely on a combination of consensualism and corporatism, which is the best-explained path (hollow circles located above the bisector). The combination of human development in small countries is not entirely satisfactory, with half of the countries below the bisector (grey circle). Finally, Germany appears to have its own, unique path<sup>15</sup>.

The doubts regarding the complex relationship between our central conditions – corporatism and consensualism – are thus further confirmed by the adoption of fuzzy set analysis. The QCA would not be complete if we did not search for the (non-symmetric) solution to the negative outcome. This analysis is presented in the appendix included in the supplementary material, reporting two causal paths. The status of not being corporatist and not being developed appears to be necessary conditions for being ineffective, a conjunctural causation that becomes sufficient for small countries (Portugal and Greece) or consensual ones (Italy)<sup>16</sup>.

## Conclusion

The primary objective of this article was to replicate Lijphart's new empirical analyses concerning the impact of different models of democracy (2012). Several authors argued against the unjustified mishmash of consensualism and corporatism, which would undermine the reliability of Lijphart's investigation.

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<sup>15</sup> The other countries explained by Germany's solution are better included in other causal paths.

<sup>16</sup> Spain is a case of "coverage outliers", i.e., an under-determination of the model. Spain belongs to the group of non-effective governments, but it does not belong to the identified solutions.

Concerted action by the major social partners would oust a consensus-oriented institutional setup with respect to its impact on macroeconomic performance.

Separating these two components in Lijphart's regressions highlights the complexity of their relationship. Corporatism and consensualism are empirically intertwined, but they do not appear to be coordinated elements of a single concept. Their impacts differ, occasionally even consistently. Creating an additive index that collapses these different components is not theoretically congruent. "No quantitative logical model seems to exist to connect them. Moreover, even the qualitative logical tie seems ambiguous. (...) (U)ntil a logical model to express such a tie is formulated, (corporatism) stands apart from the other four measures of the joint-power dimension" (Taagepera 2003: 7). Our replication confirms that most of the positive effects that Lijphart attributed to his 5-factor cluster of consensus-oriented features should be ascribed to the mode of interest representation. These results apply to macroeconomic performance, such as unemployment and debt - for which it is easy to imagine plausible causal mechanisms - but even to the quality of democracy or governance capabilities for which a likely narrative is unavailable.

Thus, the points raised by authors such as Anderson (2001), Vassallo (2002) and Armingeon (2002) appear well founded. Our replication exercise empirically supports their findings, and suggests theoretically reconsidering the relationship between constitutional structure and interest group representation. However, these works also suggest that corporatism has an autonomous impact that is independent of the constitutional choice. Anderson implicitly justifies this hypothesis by referring to the superior public goods provision of encompassing organizations (Olson 1982). If this explanation were correct, we would observe a homogeneous marginal effect of corporatism under any model of democracy, either contrasting or further favoring the impact of other relevant covariates.

Our exploration sheds new doubts on these simplifying assumptions. The proposed treatment models and scrutiny of the interaction effects between consensualism and corporatism suggest that the latter operates differently under different constitutional regimes, being beneficial in certain contexts and detrimental in others. This variance motivated us to explore the insights offered by a different strategy of

inquiry, if not a different epistemology. Boolean logic and fuzzy set qualitative comparative analysis help to identify deterministic paths (instead of probabilistic conditional effects), especially in cases of contextual conjunctural causation. Thus, we analyzed whether the joint presence of consensus-oriented institutions and corporatism were necessary or sufficient conditions for an outcome such as government effectiveness. Northern European countries follow this path, but in other cases (read “under a different set of other conditions”), corporatism alone is sufficient, majoritarianism is effective, or neither of these two variables appear relevant.

Our replication exercise proved to be more than merely a sensitivity analysis using an updated dataset. On the one hand, it is undeniable that corporatism is empirically associated with consensualism, whatever the operationalization of the latter variable. On the other, it is analytically detached and does not belong to the same bounded whole. It does not even trigger the same mechanism, and thus should not be taken as an imperative for policy-makers.

This could suggest taking a step back in our methodological attitude, abandoning the idea of a unique continuum between Westminster and Consensus, and reviving a typological approach. The advantages of a typology that intersects political institutions on one side and functional representation on the other are manifold. It keeps these two dimensions analytically separated, but permits their empirical conjunction. It requires to reason in terms of combinational logic, whose usefulness has been demonstrated by our treatment models and Boolean analysis. It avoids the implicit assumption regarding the constancy of marginal effects, which has been mostly adopted by scholars testing models regarding consensualism or corporatism. Eventually, it does not constrain researchers to adopt a qualitative rather than a quantitative approach<sup>17</sup>.

Yet, these reflections already go beyond the aim of this article. Our study exposed the disadvantages and lack of robustness of prior hypotheses, but also demonstrated the necessity of further

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<sup>17</sup> For example, Doorenspleet & Pellikaan (2013) quantitatively test the performance of eight different types of democracy, combining old and recent dimensions originally advanced by Lijphart.

theoretical assessment. Empirical analysis should always be guided by theory. However, theory is not the result of abstract reflections, relying instead on a continuously improving set of observations and factual evidence. We contributed to this serendipitous journey.

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# Appendix – Supplementary material

## Patterns of democracy reconsidered.

1. *Introduction*
  2. *Robustness...*
  3. *... and bootstrapping*
  4. *Bayesian analysis*
  5. *Qca*
- Appendix References*

### **1. Introduction**

There are two major issues that may affect the validity of the original and replicated outcomes proposed in the article.

The first one has to do with the already noticed limits of the format of Lijphart's data, and thus even of the models that replicate his analyses. The borderline N – between 22 and 36 cases – is a concrete weakness for this kind of econometric test, especially because it restricts the possibility of further including control variables, and even that of testing more sophisticated models.

The second problem has to do with the problematic operationalization of the patterns of interaction between the political system and the major interest groups. Whereas there is a wide agreement on the countries that best represent the two polar types of corporatist and pluralist interest representation (Vis, Woldendorp and Keman 2012), the detailed composition of this variable, and thus its rankings and metrics, varies quite a lot. Already in 2003, Kenworthy listed and compared 42 different indicators, and others have been added in the last decade.

Whereas both these limits don't address directly the aim of our article that replicates Lijphart's analyses using his own dataset and techniques, it is worth further checking the robustness of his and our findings.



## 2. Robustness...

Starting from the second issue, we run a sensitivity analysis using six different operationalization and measurement of corporatism. In addition to Siaroff (1999), we run the appropriate regressions using Vatter (2009), Jahn (2014), Hicks and Kenworthy (1998), Vergunst (2004) and Baccaro (2014) indices. These scholars have been chosen because of their diverse choices of operationalization, and extensive comparative work. Eventually we modeled the explanation of twelve dependent variables as functions of these six indices, checking sign and significance of each variable in the resulting 72 equations.

*Siaroff* (1999) dataset was the one originally used by Lijphart (1999; 2012). Its advantage was twofold: on the one side, it was quite inclusive – 24 Oecd countries (further complemented by Lijphart himself for the remaining 12) – and secondly it covered four different decades. His integrated index – ranging from one (highly pluralist) to five (highly corporatist) – is the average of eight components clustered in three dimension: indicators of social partnership, indicators of coordination at the industry level, and indicators of the overall pattern of national policy-making.

With the aim of expanding Lijphart's analysis, *Vatter* (2009) decided to avoid all the components that – by measuring outcomes, and not only pre-conditions – risked endogeneity problems. More specifically, he proposes an index that sums up standardized variables measuring union density, coverage of collective bargaining, centralization and coordination of the wage formation process. The index empirically goes from -6.12 for the United States to +5.64 for Finland, and is available for 23 countries.

*Jahn* (2014) measurement is a time-variant index covering 42 countries for a long time-period, and thus is probably the most extended index in this field of study. It focuses respectively on the structure, function and scope of this form of interest groups intermediation, using eight different categorical variables whose classes receive specific scores. After the imputation of missing values, the proposed procedure aggregates the eight components through a factor analysis that returns a single dimension, summing up their respective z-scores. The resulting index ranges from a (time-invariant) average of -1.65 for the United States, to 2.06 for Austria.

*Hicks and Kenworthy* (1998) article has been widely conceived as a seminal work in the field. Their composite measure of economic cooperation aggregates seven components (categorical variables and pre-existing indices), assigning to each of them scores of 0, 0.5 and 1. The index has been provided for the last part of the 20<sup>th</sup> century for 18 advanced democracies, and it has been often used as comparison for successive

measurement efforts (see even Kenworthy 2003, from which we have taken the time-invariant original measure).

Vergunst (2004) covers 20 democracies approximately along the same time-span analyzed by Hicks and Kenworthy, and his aim is similar to ours. He neatly separates the analysis of corporatism from the wider cooperative and consensual features of political institutions and their (more or less) tripartite consultations, thus choosing to concentrate exclusively on interest groups (and mostly trade unions). His index is the sum of the standardized scores for centralisation of wage bargaining, coordination of wage bargaining, union density and collective coverage rate.

While Vergunst mostly concentrates himself on the structural elements of corporatism, Baccaro (2014) chooses to focus on its process dimension (Schmitter 1982). More in detail, after a factor analysis confirming that they belong to the same underlying dimension, he simply averages equally wage bargaining coordination on the one side, and the extent of tripartite involvement in macroeconomic, social and labour market policy. His analysis unfortunately covers only 16 countries, and we took his average index for the period 1990-2005.

As it should be clear, the six indices not only represent different operationalization and measurement, but even different conceptualization of corporatism. The dissimilar time-periods, rules of aggregation, and attitude towards the longitudinal variation of the indices, are further guarantees of our robustness exercise. At the same time, these indices do not measure entirely different things. In the next table (Tab. A.1) we show that they are all systematically correlated to each other (and with the constitutional part of consensualism), though with different intensity.

Tab. A. 1 *Pairwise correlations between different indices of corporatism (coefficient, p-value, N)*

	Consensus 4	Siaroff	Vatter	Jahn	Hicks- Kenworthy	Vergunst	Baccaro
Consensus 4	1.00 - 36						
Siaroff	0.697 0.00 36	1.00 - 36					
Vatter	0.618 0.00 23	0.594 0.00 23	1.00 - 23				
Jahn	0.480 0.01 26	0.717 0.00 26	0.820 0.00 22	1.00 - 26			
Hicks- Kenworthy	0.613 0.01 18	0.926 0.00 18	0.717 0.00 18	0.821 0.00 18	1.00 - 18		

Vergunst	0.532 0.02 20	0.760 0.00 20	0.874 0.00 20	0.879 0.00 20	0.817 0.00 17	1.00 - 20	
Baccaro	0.730 0.00 16	0.515 0.04 16	0.823 0.00 16	0.575 0.02 16	0.466 0.08 15	0.617 0.02 16	1.00 - 16

### 3. ... and bootstrapping

The other issue that we should tackle for allowing our robustness check regards the borderline N. Lijphart's analysis is based on 36 cases but, in some of his analyses, the actual number of observations is lower for a series of reasons:

- a) because some countries are too small to be analysed independently (in spite of the logarithm of the population used as control variable);
- b) because we lack the data for some dependent variable;
- c) because there are relevant outliers that we should better leave out of our models.

As far as corporatism is concerned, we already noted that Lijphart discretionally completed his dataset, complementing the original 24 cases covered by Siaroff with other twelve. Compared to his universe of 36 consolidated democracies<sup>18</sup>, the other indices of corporatism are in a worse situation: they cover from 16 (for Baccaro) to 26 (for Jahn) democracies.

We tried to cope with this problem using three different methods.

First of all, we tried to complete our dataset using a multiple imputation strategy. Unfortunately, the results were not encouraging. The imputation had difficulties in converging, and we tried several determinations to avoid that problem. When we managed to do it, and we compared the original averages and distributions to the new ones, the imputations demonstrated themselves not entirely convincing. Probably, the variables that we could use in order to impute the missing cases were not satisfying.

Nonetheless, we compared models using primary and manipulated data, and there were not striking differences, in the sense that most of them did not exhibit statistically significant coefficients. Thus, instead of further discretionally improving our multiple imputation strategy, we decided to directly tackle the problem of the low N.

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<sup>18</sup> It is a universe, and not a sample, because he includes all the countries that fit two criteria: more than 250.000 inhabitants, and continued respect of civil liberties and political rights for at least twenty years.

An effective strategy is to compute bootstrap estimates of the standard errors of the relevant coefficients<sup>19</sup>.

We thus replicated :

- a) the original Lijphart's analyses on the six World governance indicators, as well as on the five macroeconomic variables and on the index of the quality of democracy suggested by the Economist intelligence unit; we used his same data and kept both his independent variable (the index of Consensualism with 5 components on the executive-party dimension) and control ones (population and human development)
- b) our decomposition of his independent variable into an institutional index of Consensualism based on his first 4 components and, separately, his index of corporatism based on Siaroff
- c) this last analysis substituting the original index of corporatism with the five indices described in this Appendix.

To keep the presentation short<sup>20</sup>, we have summarized the results in Table A.2 and A.3. Each row represents a model for the dependent variables located in the columns. Instead of reporting the outcomes, we simply register a “positive” when the coefficient of the variable is significant and has the expected positive sign<sup>21</sup>, “absent” if it is non-significant, and a “negative” if it is significant but negatively influences the dependent variable (i.e. majoritarian and/or pluralist perform better).

Tab. A. 2 *Synthetic results of the bootstrapped replications (significance and expected sign of the coefficients) on WG indicators*

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<sup>19</sup> We followed the suggestions of the Stata manual in choosing a high number of replications (1.000) and we defined the seed (10101) for reproducing the analyses.

<sup>20</sup> Outputs are available on request or can be directly replicated from the dataset.

<sup>21</sup> Lijphart's non-conservative rules are applied, with 1-tail tests and p value up to 0.1. In Table A.2 positive is even the expected sign of each coefficient, whereas in Table A.2 it depends from the variable: the expectations regarding inflation and unemployment are indeed of a negative coefficient.

	Government effectiveness	Regulatory quality	Rule of law	Control of corruption	Political stability	Voice and accountability
Consensualim5	positive	absent	positive	positive	positive	positive
Consensualism4 +Siaroff	absent +positive	absent +absent	absent +positive	absent +positive	absent +positive	absent +positive
Consensualism4 +Vatter	absent +absent	absent +absent	absent +absent	absent +absent	positive +absent	absent +absent
Consensualism4 +Jahn	absent +absent	absent +absent	absent +absent	absent +absent	positive +absent	absent +absent
Consensualism4 +Hicks&Kenworthy	negative +absent	absent +absent	negative +positive	negative +absent	absent +positive	absent +absent
Consensualism4 +Vergunst	absent +absent	absent +absent	absent +absent	absent +absent	absent +absent	absent +absent
Consensualism4 +Baccaro	absent +negative	absent +absent	absent +negative	absent +negative	absent +absent	absent +negative

The good news is that the limited number of the observations is less problematic than expected. The results reported in the article in Table 1 and 2, are fairly similar to the ones obtained through bootstrapping (first two rows). The sign and significance are alike, with just an improvement as far as the impact of corporatism on “Voice and accountability” is concerned, and a decrease in significance of that same variables on “Budget balance”.

The bad news is that the results aren’t stable under different specifications of the variable Corporatism. Let’s check this more in detail.

*Government effectiveness:* No other operationalization returns the same positive impact of corporatism then the one proposed by Siaroff/Lijphart. More than that. Using the index suggested by Baccaro, non-corporatist countries perform systematically better, while controlling for the one advanced by Hix and Kenworthy, majoritarian institutions are the most effective ones.

*Regulatory quality:* the results are stable, but they are even disappointing, never showing any systematic association both with the institutional setup and with interest representation.

*Rule of law:* Lijphart’s good results with Consensualism are never replicated once his fifth variable on interest groups representation is subtracted. In one occasion, majoritarian democracies even perform systematically better. Corporatism positively affects “rule of law” only under Siaroff/Lijphart and Hicks and Kenworthy specifications, whereas it has a negative impact according to Baccaro (and no impact at all under the remaining three operationalization).

As far as *Control of corruption* is concerned, something that had no relationship with Consensualism in the first edition of *Patterns of democracy*, we have not been able to replicate the positive results of the second edition or to confirm the positive impact of Corporatism operationalized by Siaroff/Lijphart. The coefficient for consensual institutional setup is never significant, if not in the wrong direction (4<sup>th</sup> replication); the same happens for Corporatism, which is significant only with the opposite sign using Baccaro.

*Political stability* is even less robust under different operationalization. Consensualism is significant and positively associated only in two of the replications (Vatter and Jahn), whereas corporatism has the expected influence in other two (Lijphart/Siaroff and Hichs and Kenworthy). The two variables are never both significant in the same equation, although they can be both insignificant (as in the remaining two replications) in spite of the positive original correlation.

*Voice and accountability* is similar to Government effectiveness: For Lijphart Consensualism (five components) positively influences this important democratic mechanism; using his measure, (at least) Corporatism remained statistically associated; but in all the other replications we were not able to trace any systematic relationship, if not with the wrong sign.

Tab. A.3 *Synthetic results of the bootstrapped replications (significance and expected sign of the coefficients) on macro-economic performance and quality of democracy*

	Growth	Inflation Consumer price	Inflation GDP deflator	Unemployment	Budget balance	Economist democracy index
Consensualim5	absent	negative	negative	absent	absent	positive
Consensualism4 +Siaroff	absent +absent	negative +absent	absent +absent	absent +negative	absent +absent	absent +positive
Consensualism4 +Vatter	negative +positive	negative +absent	negative +positive	negative +positive	absent +absent	absent +absent
Consensualism4 +Jahn	negative +absent	absent +absent	absent +absent	absent +absent	absent +absent	absent +absent
Consensualism4 +Hicks&Kenworthy	absent +absent	absent +negative	absent +absent	absent +absent	absent +absent	absent +absent
Consensualism4 +Vergunst	negative +absent	absent +absent	absent +absent	absent +absent	absent +absent	absent +absent
Consensualism4 +Baccaro	negative +positive	absent +absent	absent +absent	absent +absent	absent +absent	positive +negative

The overall picture is similar even for the six variables measuring macro-economic performance. The 36 models tested (six dependent variables \* six replications), clustering two independent variables, present the following results:

For Consensualism: 27 non-significant relationship; 5 significant with the expected sign; 4 significant but in the opposite direction (all of them in the model explaining Growth).

For Corporatism: 28 non-significant; 5 significant as expected, 3 significant with the wrong sign.

Overall, we can say that the tested hypotheses are far from being robust upon different operationalization and measurement. Decomposing the original Lijphart's index into two parallel measures, one dedicated to the institutional setup and the other to the functional representation of interest groups had several consequences. Initially, using Siaroff/Lijphart measure for corporatism produced very interesting results for this last variable (and not for the consensual institutional setup). Our further replications in this Appendix, using bootstrapped standard errors to cope with the relatively small N, established that those positive results were highly contingent on the chosen measure. Not only alternative operationalization produced different results for Corporatism, but some of the new equations revived positive effects even for a Westminster institutional setup. The only thing that seems to be robust, is the finding that strictly

defined consensual political institutions (ie. PR+multipartyism+non-predominant coalitions) are less effective (on governance and economic performance) than originally suspected.

#### 4. Bayesian analysis

Following the suggestions of one of the reviewer, we tried to adopt a Bayesian approach. The idea was to respond to the question “what is the probability of consensualism/corporatism having a positive effect on our dependent variable (i.e. government effectiveness, inflation, quality of democracy, etc.) given the collected evidence”? Which is intrinsically different from answering the usual question on the likelihood of observing our evidence given the tested hypothesis.

A Bayesian approach could be an indirect remedy to the limited number of observations, but only if a researcher can rely on well identified prior distributions. “[...] we need a strong enough prior to support weak evidence that usually comes from insufficient data” (Stata 2015, p. 8). Unfortunately, this condition does not apply to our circumstances, and for each model we could only assume non-informative priors<sup>22</sup>.

The major results of our Bayesian analyses for the two alternative models for each of the twelve dependent variables are summarized in Table A.4 and A.5. We decided to present only the probability of very simple interval hypotheses – i.e. a positive (or negative) impact of the relevant variables – and a comparison of the models through the Bayesian informative criteria (DIC)<sup>23</sup>.

Tab. A.4 *Interval probabilities and information criteria for the different Bayesian models predicting WG indicators*

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<sup>22</sup> More in detail, we used a non-informative normal distribution with Jeffrey priors. We checked the results adopting a conjugate prior without obtaining relevant differences. We adopted the same seed (10101) to assure replications, and set the MCMC to 12.500 iterations including the default 2.500 burn-in iterations, thus retaining an MCMC sample size of 10.000. We always obtained (a part from the model regarding “Rule of law”) a sufficient acceptance rate. We further visually tested the convergence of our parameter estimates without finding particular problems or autocorrelation – at least for the interested coefficients (population and human development index had sometimes more problems, as confirmed by their efficiencies).

<sup>23</sup> Since we adopted the same uninformative priors we can rely only on the DIC informative criteria in order to compare different models. “The smaller the DIC is [...] the better” (Stata 2015, pp. 38).



	Government effectiveness		Regulatory quality		Rule of law		Control of corruption		Political stability		Voice and accountability	
	prob>0	DIC	prob>0	DIC	prob>0	DIC	prob>0	DIC	prob>0	DIC	prob>0	DIC
Consensualism 5	0.96	41.66	0.87	31.82	0.98	48.12	0.98	61.76	1.00	15.21	0.98	7.65
Consensualism 4	0.30	39.77	0.56	33.46	0.48	48.01	0.36	60.44	0.88	16.28	0.66	8.60
Corporatism	0.98		0.81		0.95		0.99		0.96			

As an example, the probability that the (random) coefficient of Lijphart’s complete index of consensualism on the executive-party dimension in the explanation of Government effectiveness is positive is 96%. At the same time, the index composed uniquely by the 4 political-institutional elements has only a probability of 30% of being positive, whereas corporatism – in the same model – has a 98% of that same probability. The Bayesian informative criteria DIC for the first model is 41.66, whereas it is 39.77 for the second, signaling that we should prefer the latter to the former.

Tab. A.5 *Interval probabilities and information criteria for the different Bayesian models predicting macro-economic performance and quality of democracy*

	Growth		Inflation Consumer price		Inflation GDP deflator		Unemployment		Budget balance		Economist democracy index	
	prob>0	DIC	prob<0	DIC	prob<0	DIC	prob<0	DIC	prob>0	DIC	prob>0	DIC
Consensualism 5	0.22	94.73	0.99	158.65	0.99	157.22	0.89	150.65	0.75	105.64	1.00	63.18
Consensualism 4	0.47	97.02	0.92	160.96	0.89	159.34	0.30	151.00	0.30	106.16	0.64	63.49
Corporatism	0.32		0.67		0.73		0.95		0.91			

“Because we used a non-informative prior, our results should be similar to the frequentist results apart from simulation uncertainty” (Stata 2015, p. 76). And in fact they are (compare these results to table 1 and 2 in the article). Once we unbundle Corporatism from Lijphart’s original index, the remaining four-institutional components of consensualism are seldom relevant. Their probability of being positive is severely reduced for each model explaining the World governance indicators, and even for most of those accounting for macro-economic performance (apart from Inflation). Corporatism preserves a much high interval probabilities of positively affecting our dependent variables. This is coherent with the significance of its coefficient under the frequentist approach, although only occasionally Corporatism has a positive probability that is higher than the original 5-component index (Government effectiveness, Control of

corruption, Unemployment and Budget balance are the exceptions, plus Growth where the probabilities are extremely low).

At the same time, these results further draw the attention to the ambiguous relationship between Consensualism and Corporatism. Judging from the DIC Bayesian informative criteria, only in three models out of twelve we should prefer to keep Corporatism separated from Consensualism. This is not equivalent to say that they are analytically part of the same compound concept, but certainly suggests that their explanatory power is more often enhanced rather than depressed if political institutions and social partnerships are kept together under the same umbrella.

## 5. Qca

All the analyses have been performed using fsQCA and Tosmana.

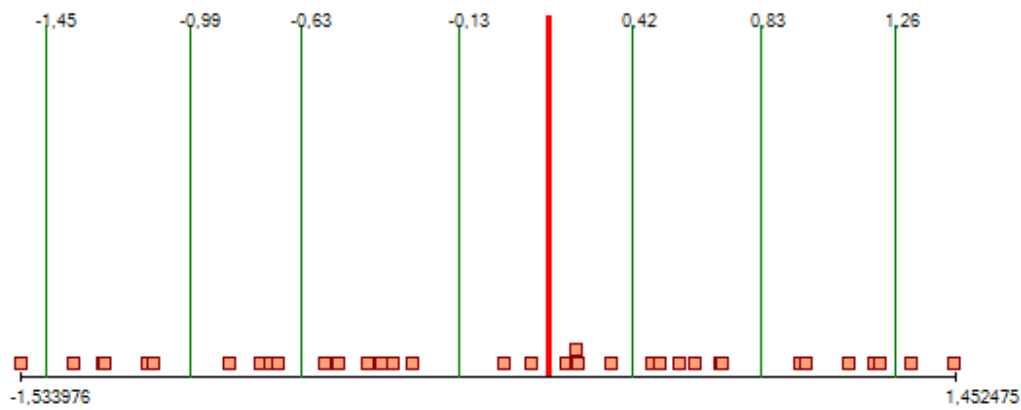
Data have been calibrated (direct method), using the original Lijphart's (2012) data for the 19 included countries.

Thresholds for conditions and outcome are presented in Figure A.1

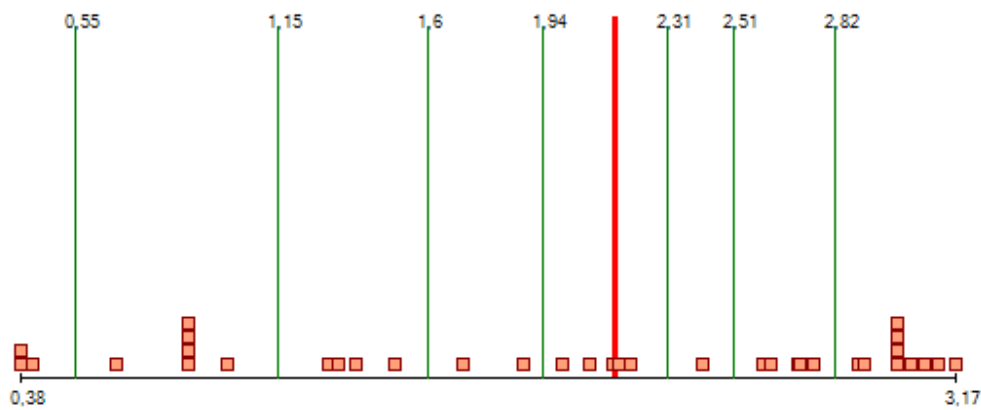
Fig. A. 1 *Anchors (full membership, point of indifference, and full non-membership) for conditions and outcome*

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Consensus (from Lijphart's 4-component index: 0.83, -0.13, -0.99)

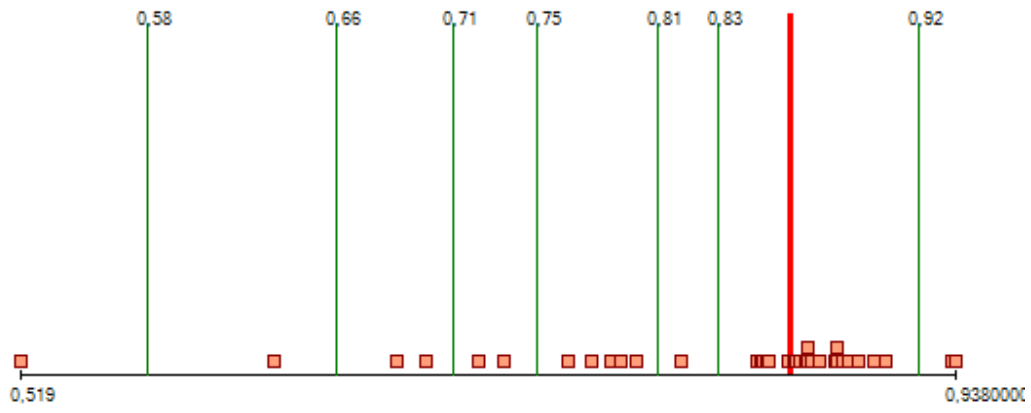


Pluralist (from Lijphart/Siaroff – later reversed for corporatism: 2.51, 1.94, 1.15)

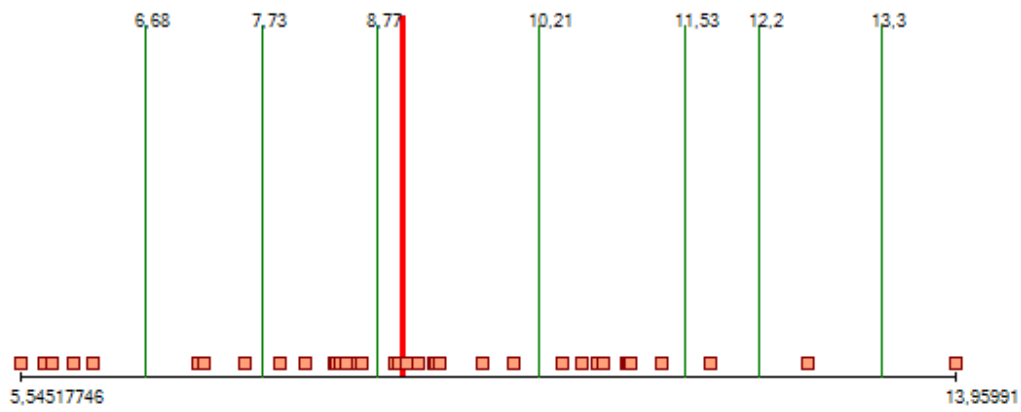




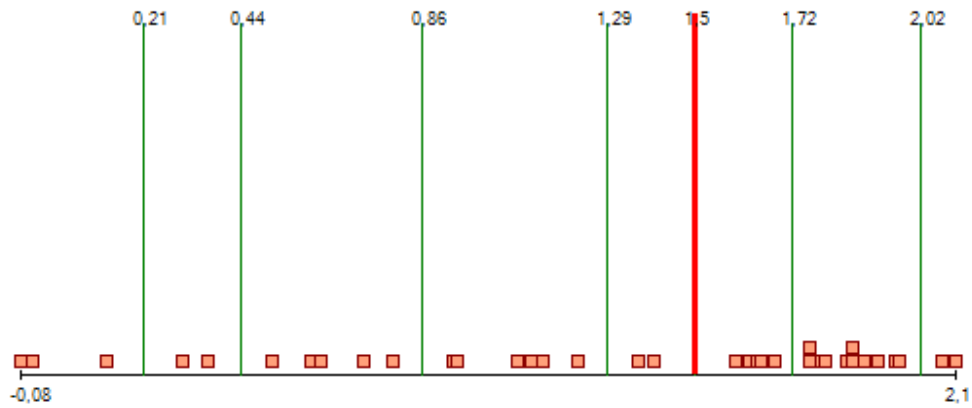
Developed (from the UN Human development index: 0.83, 0.75, 0.66)



Populated (from the Natural logarithm of population: 12.2, 10.21, 7.73)



Effective (From the WGI Government effectiveness: 1.72, 1.29, 0.44)



In table A.6 we present the corresponding fuzzy-set scores used in the analysis.

Tab. A.6 *Fuzzy set membership scores for the four positive conditions and outcome*

Country	Consensus	Corporatist	Developed	Populated	Effective
AUL	0.03	0.29	1	0.16	0.91
AUT	0.68	0.99	0.01	0.01	0.94
BEL	0.99	0.73	0.12	0.03	0.84
CAN	0.02	0.01	0.77	0.39	0.96
DEN	1	0.93	0.11	0	1
FIN	1	0.97	0.21	0	0.99
FRA	0.02	0.02	0.23	0.91	0.69
GER	0.82	0.93	0.68	0.98	0.8
GRE	0.15	0.01	0.02	0.03	0.02
IRE	0.92	0.06	0.9	0	0.75
ITA	1	0.18	0.02	0.89	0.01
NET	0.99	0.9	0.82	0.08	0.97
NOR	0.97	0.99	1	0	0.98
NZ	0.39	0.03	0.98	0	0.93
POR	0.65	0.03	0	0.02	0.11
SPA	0.1	0.01	0.07	0.69	0.37
SWE	0.91	0.99	0.68	0.02	0.98
UK	0	0.01	0.01	0.91	0.91
US	0.09	0.01	0.96	1	0.78

Since in fuzzy set analysis, solutions are not symmetric, in Table A. 7 and Figure A.2 we present the parallel results of the fuzzy set analysis for the negative outcome.

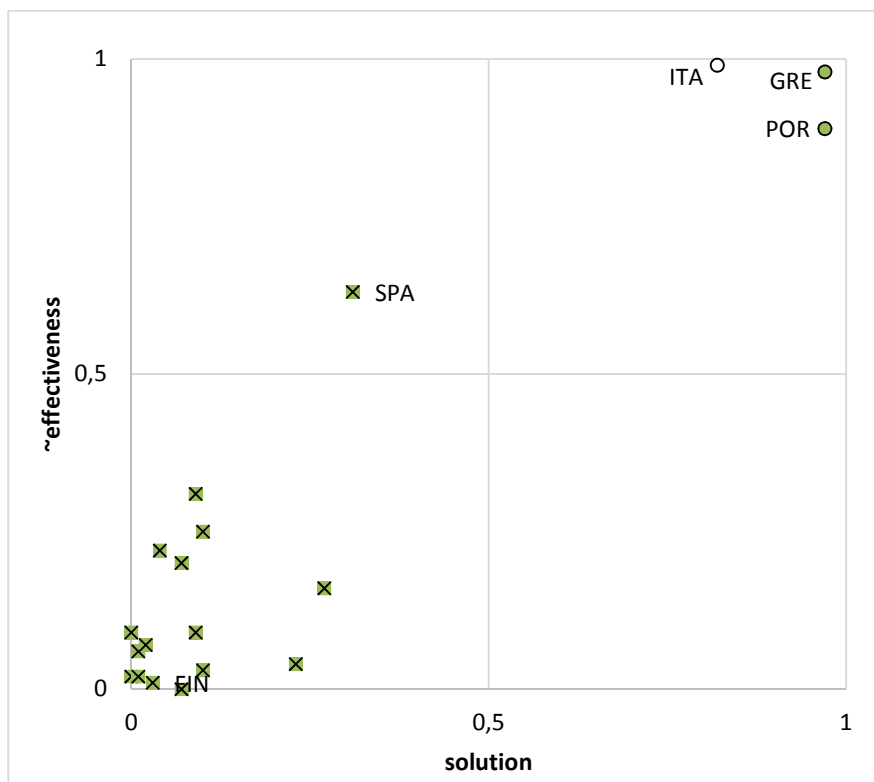
Tab. A.7 *Intermediate solution for Not Effective government from truth table analysis*

	Raw coverage	Unique coverage	Consistency	Cases with more than 0.5 membership in term
~Populated*~Corp*~Developed	0.565	0.287	0.841	GRE, POR
~Corp*~Developed*Cons	0.437	0.158	0.891	ITA
solution coverage: 0.723				
solution consistency: 0.871				

Note: *Algorithm*: Quine-McCluskey ; *frequency cutoff*: 1.00; *consistency cutoff*: 0.85

*Assumptions*: ~Consensus (absent); ~Corporatist (absent); Populated (present); ~Developed (absent)

Fig. A.2 XY plot of the solution to the outcome Not Effective government





## Appendix References

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