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HOW TO USE INDICATORS FOR 'CORPORATISM' IN EMPIRICAL APPLICATIONS

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Abstract

There exist many indicators for corporatism. Using a latent variables approach, we extract common aspects in 29 corporatism indicators which have been suggested in the literature and find two factors that can be identified as the degree of coordination between employers and trade unions, and the organizational power of labour. Using these factors in the model of Hall and Franzese (1998) employing data for 16 OECD countries, we find that the organizational power of trade unions does not affect inflation. Likewise, the interaction between central bank independence and coordination does not affect unemployment.

JEL Classification: J51.

Keywords: corporatism, latent variables, unemployment, inflation.

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1 Introduction

A large literature examines the relationship between the institutional settings of the labour market and the economic performance of the country concerned. In this context, the concept of corporatism plays an important role. Often corporatism refers here to the degree of centralization of wage bargaining. There is a debate whether corporatism monotonically improves economic performance or whether the relation has an inverted U-shape. Bruno and Sachs (1985) report a monotonic relation between their index of corporatism and the so-called misery index, i.e. the sum of the rise in inflation and the slowdown in real GDP growth. In contrast, Calmfors and Driffill (1988) argued that employment is worst in national single-industry bargaining, the argument being that both highly centralized and highly decentralized bargaining systems force unions to internalize the external effects of wage increases.¹ Many subsequent studies have criticized this conclusion. For instance, Layard et al. (1991) argue that union coverage is a much more important factor affecting unemployment than centralization of wage bargaining. It has even been posed that corporatism may not be beneficial for employment growth. Proponents of what may be called the eurosclerosis view (Padovani and Gali, 2002), argue that corporatism distorts the allocative efficiency of markets, thereby reducing competitiveness and employment. The results of Woldendorp (1997) are in line with this hypothesis.²

Although the concept of corporatism plays a crucial role in various studies, the concept is not very well-defined: different authors use diverging interpretations of corporatism. For instance, whereas Calmfors and Driffill argue that the degree of centralization of wage bargaining is crucial, Tarantelli (1996) posits that centralization is not the only relevant feature of industrial relations: the degree of consensus is also important. Here, consensus refers to a situation where the relevant groups broadly agree on the distribution of income. Clearly, corporatism is a multi-faceted concept (Padovani and Gali, 2002). For instance, Siaroff (1999) distinguishes six characteristics of corporatism, including unionization and the degree of centralization of wage bargaining. Unfortunately, most authors generally refer to a specific aspect or definition of corporatism, which reduces the comparability of the various studies on corporatism.

In a recent strand of literature, the standard inflationary bias model of monetary policy is combined with the literature on labour market institutions, see Berger et al. (2001). One of the first contributions is from Hall and Franzese (1998). They argue that the character of wage bargaining conditions the impact of central bank independence (CBI). Greater independence can reduce inflation without major employment effects where bargaining is coordinated, but it brings higher levels of unemployment where bargaining is uncoordinated.

In all of the studies referred to so far, some indicator for corporatism is used. There exists, however, a long list of empirical proxies for corporatism

¹Likewise, Alesina and Perotti (1997) find that the degree of shifting of labour taxation is a hump-shaped function of the degree of centralization of labour markets, peaking in countries with an intermediate degree of centralization.

²See Teulings and Hartog (1998) for an extensive discussion of the literature on corporatism.

and it is often not obvious that a certain indicator has to be preferred. Some authors have therefore tried to use the information available in the existing indicators for corporatism to come up with some kind of ‘summary index’. For instance, Siaroff (1999) tries to disentangle the concept of corporatism using 23 indicators and suggests to replace it by an alternative indicator. However, there are shortcomings in his analysis. First, Siaroff does not take into account the fact that several indicators are based on each other. Second, he transforms the values of the different indicators of corporatism to a scale of 1 to 5. In doing so, a lot of numerical information is thrown away.

In this paper, we examine 29 indicators of labour market institutions that have been suggested in the literature, mainly referring to the 1970s and early 1980s. Our sample consists of 18 OECD countries.³ We examine the similarities and differences between these indicators, and try to extract common aspects using a latent variables approach. We consider the various indicators as imperfect measures of ‘corporatism’ and set out to find values for the parameters expressing the relation between the latent variable and the indicators. For this purpose, we apply factor analysis. This way, a set of variables is combined into a single variable that best reflects the original data, using all information that is available in the indicators. Since the concept of corporatism is not uniformly defined by the different authors, it is not possible to capture it using one factor only. Instead, we find two factors that can be identified as the degree of coordination between employers and trade unions, and the organizational power of labour. Accordingly, we construct two new indicators for the institutional settings of the labour market of the countries in our sample. Finally, for illustrative purposes, we apply the resulting measures in the models of Hall and Franzese (1998) for inflation and unemployment. In contrast to various previous studies we find that the organizational power of trade unions does not affect inflation and unemployment. We also do not find support for the hypothesis of Hall and Franzese that interaction effects between the levels of CBI and coordination play an important role, in particular with respect to unemployment.

The remainder of the paper is organized as follows. Section 2 reviews the indicators of ‘corporatism’, while section 3 outlines our methodology. Section 4 presents the results of our factor analysis, which are used in section 5 in an empirical model for inflation and unemployment. The final section offers some concluding comments.

2 Indicators of ‘corporatism’

Many researchers have constructed indicators for the institutional setting of the labour markets in various countries in order to test if and how labour market institutions matter for a country’s economic performance. Instead of creating another new indicator, we focus on the information contained in the existing ones. The indicators we use in this paper are listed in table A1 in Appendix 1

³Greece, Iceland, Luxembourg, Spain and Portugal have been excluded due to lack of available data.

along with the studies in which they have been published, in chronological order of publication. Their numerical values can be found in table A2. Table A3 gives the correlations between the indicators, as well as the number of countries, N , for which they are available. It follows that many of the indicators are highly correlated. At the same time, it is also clear that some correlations are rather low. In other words, the various indicators may not refer to the same concept. Alternatively, errors in measurement can be responsible for these low correlations. After all, subjective judgement plays an important role in deciding upon indicator scores for the various countries. Since the latent variables approach is very well suited to deal with problems of this type, we use it in order to extract the common aspects in the indicators.

3 Latent variables approach

The main idea of this paper is to consider the different indicators described in the previous section as imperfect measures of the unobservable concept of corporatism. It is possible that the unobservable concept cannot be captured completely in one factor but more factors are extracted, corresponding to different aspects of the phenomenon. Then, the indicators are assumed to be generated by the following model, known as the *multiple factor analysis* model:

$$x_{ni} = \tau_i + \lambda_i' \xi_n + \delta_{ni}. \quad (1)$$

If the number of factors is k , x_{ni} denotes *indicator* i for country n and ξ_n is a k -vector containing the aspects of the unobservable concept (the *factors*) that the indicators are supposed to measure, for country n . τ_i is the parameter that captures the mean of indicator i , while λ_i is a k -vector of parameters (the *factor loadings*) that capture both the scale of indicator i and the strength of its relation to the factors, and δ_{ni} is a random measurement error. Further, δ_{ni} and δ_{nj} are assumed uncorrelated for $i \neq j$, and both are assumed uncorrelated with the factors ξ_n .

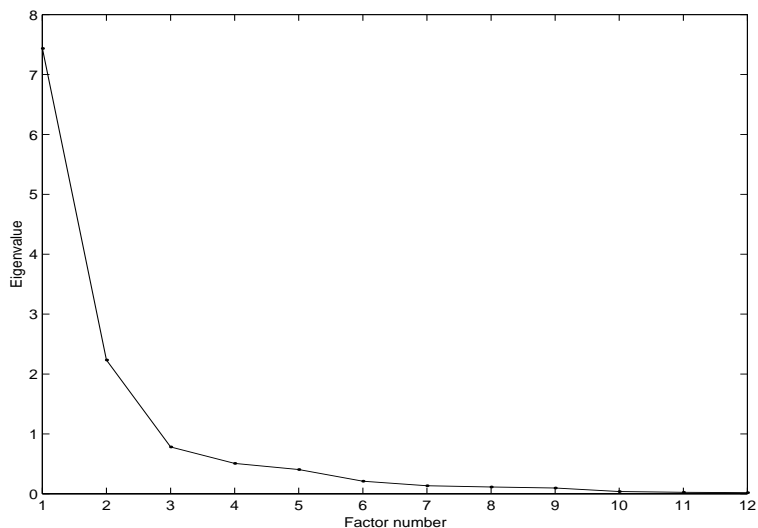
The problem with the 29 indicators of corporatism is that although different authors use different criteria to define and quantify corporatism, there are also a lot of similarities. This is apparent from the correlation matrix in table A3, and indicates that there may be a conflict with the model assumptions that the measurement errors are uncorrelated. There are two ways to solve this problem. The first is to augment the model with variables reflecting the covariance between the measurement errors. Since this would mean the inclusion of a lot of additional variables in our case, and our sample consists of only 18 countries, this would seriously reduce the number of degrees of freedom. Therefore, we have applied the second solution: to choose from clusters of correlated indicators one as the preferred indicator and omit the others from the analysis. As selection criterion we have mainly focused on the number of countries for which the indicators are available, as well as the fact that the selected indicators should more or less refer to the same time period. A detailed description of the selection procedure can be found in Appendix 2.

Using the above selection procedure, we end up with a subset of 12 indicators: BLY, CAM, KEM, PAL, BRS, TAR, LNR, LNJ and the four OECD-indicators ODE, OBA, OCE and OCO. Unfortunately, not all selected indicators are available for Ireland and New Zealand. Therefore, we exclude these countries in our empirical applications, leaving a sample of 16 OECD countries for which we perform our factor analysis.

4 Results of the factor analysis

In this section we present the results of the factor analysis. In order to see how many factors are needed, we examine the scree plot in figure 1, which plots the number of factors against their eigenvalues.

Figure 1: Scree plot of the factor analysis



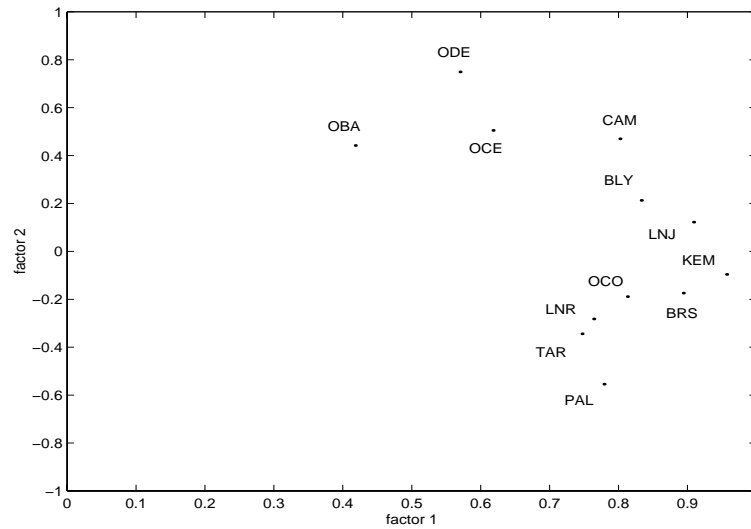
There are two commonly applied rules for the choice of the number of factors, see Wansbeek and Meijer (2000, p. 170). The first rule says that relevant factors correspond to eigenvalues larger than 1. The second rule concentrates on a 'kink' that is often found in the scree plot, and states that the number of factors is the number of eigenvalues before the kink. Using these rules, we conclude that we would need two or three factors in order to capture the information contained in the indicators. Since the solution using three factors is very difficult to interpret, we apply a factor analysis using two factors. The parameters in model (1) are estimated using maximum likelihood. Table 1 gives the resulting factor matrix, the elements of which can be interpreted as correlations of the indicators with the factors. The χ^2 -statistic, which compares the proposed model to an unrestricted alternative, has a value of 48.0 with 43 degrees of freedom, which lies well below the 5% critical value of 59.3. According to this measure, the model fits very

Table 1: Unrotated factor matrix.

Indicator	Factor	
	1	2
BLY	.833	.213
CAM	.802	.470
KEM	.957	-.096
PAL	.779	-.554
BRS	.894	-.174
TAR	.747	-.344
LNR	.764	-.282
LNJ	.909	.122
ODE	.570	.749
OBA	.418	.442
OCE	.618	.505
OCO	.813	-.189

well, see Wansbeek and Meijer (2000, chapter 10) for an elaborate discussion of fit measures. A graphical representation of the factor loadings is shown in figure 2.

Figure 2: Unrotated factor loadings



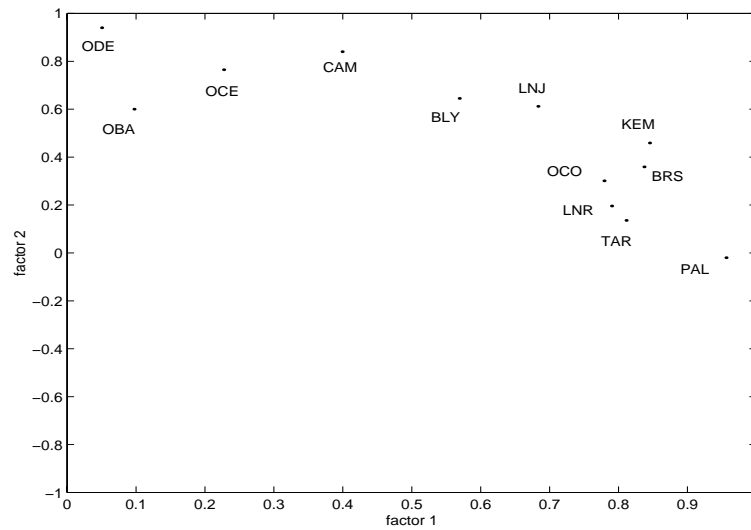
It is not easy to give an interpretation to the two factors in table 1. One of the main problems is that the scores on the second factor are low for almost all indicators. In order to see whether the two factors can be polarized more, we have applied several so-called rotation methods. For an overview of these methods, see Wansbeek and Meijer (2000). The rotation method most frequently

used with factor analysis is Varimax rotation, the results of which are shown in table 2 and figure 3.

Table 2: Rotated factor matrix.

Indicator	Factor	
	1	2
BLY	.569	.645
CAM	.399	.840
KEM	.845	.459
PAL	.956	-.020
BRS	.837	.359
TAR	.811	.136
LNR	.790	.196
LNJ	.683	.612
ODE	.050	.940
OBA	.097	.600
OCE	.227	.765
OCO	.779	.301

Figure 3: Rotated factor loadings



Using the rotating factor matrix, we can try to interpret the two factors. The first factor correlates highly with the indicators of Keman, Paloheimo, Bruno and Sachs, Tarantelli, Lehner and the OECD coordination indicator. Since all these indicators mainly reflect coordination issues, we label this factor *coordination*. The second factor correlates highly with the indicator of Cameron and the OECD density indicator, which both focus on power resources of labour.

Therefore, we label this factor *organizational power of labour*. Using the results of the factor analysis, we can combine the indicators in order to get constructs that have maximum correlation with the two aspects of corporatism as reflected by the factors. To calculate the scores of these constructs we apply the so-called Bartlett predictor, which uses GLS estimation to produce the best linear unbiased predictor of the factors.⁴ The resulting *factor scores* are given in table 3 for each country in the sample. These are standardized scores, with mean zero and variance one. It is shown that, for instance, coordination is high in

Table 3: Factor scores.

Country	Coordination	Organizational power of labour
Australia	-0.909	0.235
Austria	1.229	0.710
Belgium	-0.550	0.545
Canada	-1.189	-0.774
Denmark	0.095	1.325
Finland	-0.769	1.612
France	-0.275	-1.122
Germany	1.013	-0.659
Italy	-1.216	-0.018
Japan	1.072	-1.488
Netherlands	0.996	-0.790
Norway	1.095	0.748
Sweden	0.754	1.669
Switzerland	1.135	-0.890
United Kingdom	-1.463	0.099
United States	-1.017	-1.200

Austria and Switzerland, but low in the United Kingdom and the United States. Organizational power of labour is high in the Scandinavian countries, but low in France and Japan. An overview is given in figure 4.

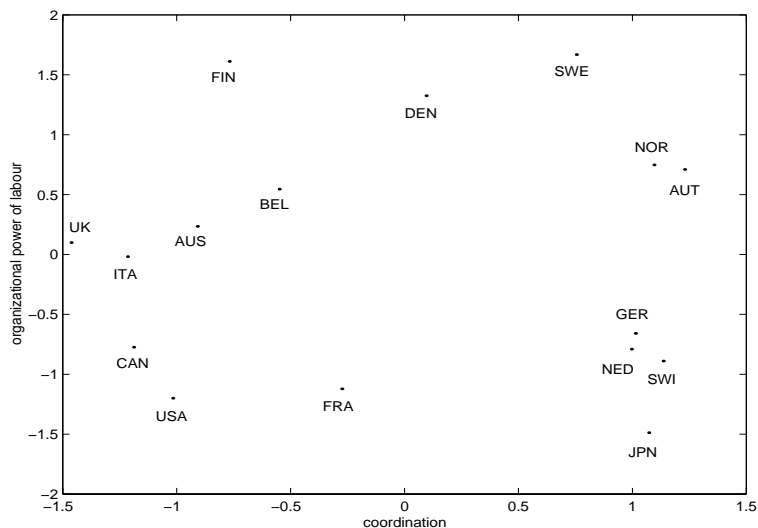
5 An application

To show how the results of the approach described in the previous section can be applied in practice, we present a simple empirical model. As seen in table A4 in Appendix 1, most studies analyze the relation between aspects of corporatism and inflation and/or unemployment. Of these studies, we use the influential paper by Hall and Franzese (1998) as a benchmark. We use their model as well as methodology mainly for illustrative purposes.

Instead of using Hall and Franzese's regressors coordination of wage bargaining and union density, we examine whether the two aspects of corporatism ex-

⁴See Wansbeek and Meijer on how exactly this is done.

Figure 4: Values of coordination and organizational power of labour



tracted by the factor analysis, coordination and organizational power of labour, have a significant impact on inflation and unemployment. We start with a cross-sectional model for the period 1970–1985, since most indicators of corporatism that have been constructed refer to the 1970s and early 1980s. We use rates of inflation (computed on the basis of the GDP-deflator) and internationally comparable unemployment rates, provided by Hall and Franzese.

The following control variables are included in the models for inflation and unemployment:

- Trade openness, defined as the sum of imports and exports divided by real GDP
- Left cabinet participation, defined as the percentage of cabinet seats held by left wing parties
- The degree of central bank independence (CBI)

Hall and Franzese expect interaction effects between the level of central bank independence and the level of wage coordination, especially with respect to the level of unemployment. Therefore, the cross product of coordination and CBI is included in the model. In the model for unemployment, the impact of international economic conditions on unemployment is analyzed by including the terms of trade, defined as export prices divided by import prices, as a control variable. Also, the cross product of the terms of trade and trade openness is included.⁵

⁵Hall and Franzese include this cross product since domestic unemployment is expected to benefit from positive terms of trade shocks to the degree the economy is open to foreign trade. Terms of trade is not included in the inflation models since terms of trade movements are essentially defined as movements in domestic inflation relative to foreign inflation.

In addition to a cross-sectional analysis, Hall and Franzese examine two dynamic specifications: a pooled model that aggregates for different decades, and an annual model. We have also replicated these specifications, using a three-period model instead of the decade model, for the periods 1970–1973, 1974–1979 and 1980–1985.⁶ Following Hall and Franzese, an AR(1) process is incorporated in the residuals of the three-period model for inflation to allow for the temporal dependence in the observations. In the corresponding unemployment model, adding an autoregressive term does not improve the specification. The annual models are estimated as *pseudo-error correction* models with Beck-Katz panel-corrected covariance (PCSE) matrices, see Beck and Katz (1995, 1996) for details. Finally, Hall and Franzese also use logged real GDP per capita as a control variable in both static and dynamic models. We do not think this is the appropriate control variable for a model examining the impact of aspects of corporatism on inflation and unemployment. Instead, we include the output gap in our dynamic specifications, which is defined as real GDP growth minus Hodrick-Prescott filtered GDP growth. Data on central bank independence are taken from De Haan et al. (2002), where an indicator for CBI is constructed using factor analysis. In this field, essentially the same measurement error problems arise as in the case of corporatism.⁷ The CBI indicator varies over time, something that Hall and Franzese do not take into account. Data on the other control variables have been obtained from the IMF's International Financial Statistics and from Hall and Franzese. The models are estimated using least squares and White's heteroskedasticity-consistent covariance matrix, and the results are shown in table 4.

Since the models include interaction terms, interpretation of the t -statistics for the coefficients of the variables that are also included as cross-products should be done with caution. The estimated effect of a unit increase in coordination, for instance, is not given simply by its estimated coefficient: the coefficient of its cross-product with CBI times the level of CBI has to be added to this. In these cases, the significance of the estimated coefficient can not be derived from the value of its t -statistic in a straightforward manner. However, the t -value gives an *indication* of the significance of a coefficient.

It follows from table 4 that organizational power of labour does not have a significant impact on inflation. The t -statistics corresponding to the coefficients of CBI and coordination, on the other hand, indicate that these variables influence inflation rates. Also, the interaction term of coordination and CBI is shown to have a significant impact on inflation. However, in the model for unemployment we do not find any significant interaction effects between the level of CBI and our variable for labour market coordination. This result contrasts with the findings of Hall and Franzese. The effect of CBI on unemployment does not seem very significant, either. Furthermore, the results show that coor-

⁶We have chosen these periods instead of dividing the sample into the periods 1970–1974, 1975–1979 and 1980–1985 since values of most economic variables change dramatically from 1973 to 1974 due to the 1973 oil crisis.

⁷De Haan et al. construct an indicator for CBI by combining information on five different CBI indicators that are often used in the literature, applying a latent variables approach.

Table 4: Regression results for inflation and unemployment.

Regressor	Inflation			Unemployment		
	average	period	annual	average	period	annual
Output gap	–	2.19 (1.90)	–0.19 (–1.75)	–	–1.97 (–3.16)	–0.25 (–8.15)
Trade openness	–0.03 (–1.70)	–0.03 (–2.47)	0.04 (0.76)	0.02 (3.43)	0.18 (1.99)	0.06 (2.07)
Terms of trade	–	–	–	–	4.40 (1.21)	1.95 (1.41)
Terms of trade × Openness	–	–	–	–	–0.15 (–1.70)	–0.08 (–2.76)
Left cabinet %	1.49 (0.66)	1.15 (0.67)	0.54 (0.64)	1.94 (1.03)	0.17 (0.11)	0.22 (1.10)
CBI	–2.16 (–4.51)	–2.25 (–5.24)	–0.88 (–2.07)	–0.13 (–0.34)	–0.10 (–0.26)	–0.04 (–0.66)
Coordination	–0.99 (–2.30)	–1.30 (–2.31)	–0.51 (–1.67)	–2.19 (–5.00)	–1.87 (–3.63)	–0.16 (–2.90)
Org. power	0.33 (0.97)	0.53 (1.16)	0.11 (0.44)	–1.01 (–1.87)	–0.82 (–1.69)	–0.10 (–2.18)
Coordination × CBI	0.96 (2.20)	1.07 (3.18)	0.43 (1.57)	–0.54 (–1.55)	–0.55 (–1.91)	–0.02 (–0.40)
# observations	16	48	256	16	48	256
Adjusted R^2	0.79	0.65	0.30	0.72	0.59	0.59
DW-statistic	–	2.29	1.98	–	1.71	1.97

dination generally lowers unemployment, while organizational power of labour only has a significant impact in the annual unemployment model. Our general conclusions do not change when we add squared terms for our indicators (results are available on request).

6 Conclusion

In this paper, two new indicators for the institutional settings of the labour market are constructed using the information provided by indicators for corporatism that have been suggested in the literature. By following a latent variables approach, the two indicators that we label *coordination* and *organizational power of labour* are obtained. For illustrative purposes, these measures are applied in the models of Hall and Franzese for inflation and unemployment. In contrast to their results, we find no evidence that interaction effects between the level of central bank independence and coordination play an important role with respect to unemployment. Also, the impact of organizational power of labour on inflation and unemployment, which has been reported in various previous studies, is not found in our regressions.

Appendix 1 Indicators for labour market institutions and their properties

Table A1 lists all indicators used in this study, their sources and a short description. In table A2 the numerical values of the indicators are shown for the different countries in our sample, and table A3 displays the correlations between the indicators. Table A4 lists whether and how the original sources have used the indicators in empirical applications, as well as the time period to which they refer. Finally, table A5 gives some specific properties of the countries in the sample.

Appendix 2 Selection of the indicators

Based on the information in table A3, our selection procedure is as follows.

- The indicators by Cameron and Schmitter are constructed in a very similar way. We prefer Cameron's indicator since it is available for a larger number of countries.
- The indicators by Lehmbruch and Lehner are based on the one by Czada, hence the high correlation between the three. Since the scaling of Lehner's indicator is the most detailed, and since the indicator is available for all 18 countries, we prefer this one.
- The indicator by Schott is largely based on the ones by Schmitter and Lehmbruch and is therefore excluded.
- The indicator of Lijphart and Crepaz is an average of standardized values of a number of other indicators, so it does not provide additional information.
- The indicators by Wiarda and Schmidt (1986) are largely based on the one by Lehmbruch and are therefore excluded.
- The indicator by Hall and Franzese is based on Soskice, while missing values have been extrapolated using Layard, Nickell and Jackman and Crouch.
- The indicators by Braun, Soskice, Compston and Wiarda are available for only a small part of our set of countries.
- The indicator by Bruno and Sachs is largely based on the one by Crouch. Bruno and Sachs use a more detailed scaling, but their indicator is not available for Ireland whereas Crouch's is. We have no clear preference in this case.

Based on these arguments, we have first decided to exclude the indicators of Schmitter, Braun, Czada, Lehmbruch, Schott, Schmidt (1986), Soskice, Lijphart

and Crepez, Compston, Wiarda and Hall and Franzese, leaving a set of 18 indicators.

However, table A3 shows that there are two more clusters of highly correlated variables:

- The indicator of Keman is highly correlated with the one by McCallum. In addition, the indicator of McCallum is highly correlated with Crouch's indicator. Moreover, all three are available for the 18 countries in our sample. If we select McCallum's indicator, we would lose both the indicators by Keman and Crouch, while a selection of the Keman indicator only results in the loss of the one by McCallum. Therefore, the Keman indicator is the preferred one.
- The indicators by Cameron, Garrett and Lange and Calmfors and Driffill are highly correlated. Garrett and Lange has the lowest data availability, but a choice between Cameron and Calmfors and Driffill is not straightforward. However, a closer inspection the correlation table shows that the indicator by Calmfors and Driffill is, in general, correlated more strongly with the remaining indicators. Therefore, we select the indicator by Cameron.

With the 14 remaining indicators we perform a factor analysis, but we do not obtain a feasible solution. Hence, we exclude the indicator by Marks, since this is the one which has the largest amount of missing values. Now, we get a feasible solution if we apply factor analysis, but the model fit is not very good. Therefore, we exclude another indicator from the set. Of the different specifications we attempt, the one excluding Schmidt's 1982 indicator has the best fit. Thus, our final set of indicators consists of the following twelve: Blyth, Cameron, Keman, Paloheimo, Bruno and Sachs, Tarantelli, Lehner, Layard, Nickell and Jackman, OECD-density, OECD-bargaining, OECD-centralization and OECD-coordination.

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Table A1: Indicators for labour market institutions

Name	Source	Focus
BLY	Blyth (1979)	Ranking of centralization of structure: extent to which trade union and employer organizations are federated or joined into strong central bodies at national level with substantial executive powers.
SMT	Schmitter (1981)	Ranking of social corporatism.
BRA	Braun (1983) ^a	Summary scale of neo-corporatism.
CZA	Czada (1983)	Classifications of neo-corporatism.
SD1	Schmidt (1983)	Ranking of corporatism.
CAM	Cameron (1984)	Ranking of power resources concerning organizational power of labour, defined as the sum of confederation power in collective bargaining and organizational unity of labour, divided by unionized labour force %.
KEM	Keman (1984) ^a	Ranking of neo-corporatism, using degree of social partnership and state intervention.
LHM	Lehmbruch (1984)	Cumulative scale of corporatism.
PAL	Paloheimo (1984)	Ranking of economic consensus.
SCT	Schott (1984)	Ranking of corporatism.
BRS	Bruno and Sachs (1985)	Ranking of corporatism using degree of union centralization, extent of shop-floor union power, employer coordination and presence of work councils.
CRO	Crouch (1985)	Dichotomous scale of corporatism.
GAR	Garrett and Lange (1986)	Ranking of corporatism using leftist participation in cabinet and labour organization.
MKS	Marks (1986)	Ranking of neo-corporatist incomes policy.
MCL	McCallum (1986)	Classification of economic consensus based on strike levels and corporatist institutions.
SD2	Schmidt (1986)	Classification of policy co-ordination.
TAR	Tarantelli (1986)	Ranking of neo-corporatism which reflects a key role of consensus.
CFD	Calmfors and Driffill (1988)	Index of centralization of wage bargaining.
LNR	Lehner (1988)	Summary-scale of public-private interaction.
SSK	Soskice (1990)	Ranking of economy-wide co-ordination.
LNJ	Layard, Nickell and Jackman (1991)	Scores of union and employer coordination in collective bargaining.
LYP	Lijphart and Crepaz (1991)	Combination of twelve neo-corporatist rankings.
CMP	Compston (1997)	Ranking of union influence over economic policy.
ODE	OECD (1997)	Trade union density, measured as % of workers belonging to trade unions.
OBA	OECD (1997)	Bargaining coverage, measured as % of workers covered by collective agreements.
OCE	OECD (1997)	Ranking of centralization of wage bargaining.
OCO	OECD (1997)	Ranking of co-ordination of wage bargaining.
WRD	Wiarda (1997)	Ranking of corporatism.
HFR	Hall and Franzese (1998)	Ranking of co-ordination of wage bargaining.

^aThe indicators of Braun (1983) and Keman (1984) are taken from the appendix of Keman et al. (1985)

Table A2: Values of the indicators

	AUS	AUT	BEL	CAN	DEN	FIN	FRA	GER	IRE	ITA	JPN	NED	NZL	NOR	SWE	SUI	UK	USA
BLY	2	3	2	1	3	3	1	2	1	1	2	1	3	3	3	3 ^a	1	1
SMT	.	26	18	8	20.5	20.5	6	15	8	3	.	19	.	23.5	20.5	9	5	8
SD1	2	3	2	1	2	2	1	2	1	1	3	2	2	3	3	3	1	1
BRA	.	3	2	.	3	2	1	2	2	1	.	3	.	3	3	2	1	.
CZA	1	3	2	1	2	2	2	2	2	2	1	3	1	3	3	2	2	1
CAM	28	90	66	10.8	64.8	65.8	4.8	32	25.6	16.4	4.8	33.6	.	97.5	105	24	31.5	8.4
KEM	2	5	2	1	4	3	2	3	1	2	3	4	3	5	5	4	1	1
LHM	1	4	3	1	3	3	.	3	3	2	.	4	1	4	4	3	2	1
PAL	1	3	2	1	2	1	2	3	1	1	3	3	.	3	3	3	1	1
SCT	1	3	2	1	2	2	1	2	1	1	3	2	.	3	3	3	1	1
BRS	0	4	0.5	0	3	1.5	0	4	.	0.5	1.5	4	0.5	4	4	2	0	0
CRO	1	2	1	1	2	2	1	2	1	1	1	2	1	2	2	2	1	1
GAR	2	4	2	1	4	3	1	2	.	1	1	2	.	4	3	.	2	1
MKS	.	4	4	1	2	3	1	2	2	1	.	3	.	4	4	1	2	1
MCL	0	4	0.5	0	3	1.5	0	4	0	0.5	1.5	4	0.5	4	4	4	0	0
SD2	1	3	2	1	2	2	2	3	2	1	3	2	1	3	2	3	1	1
TAR ^b	7	12	6	6	9	7	4	11	2	1	10	7	5	9	9	10	2	6
CFD	4	6	4	2	4.75	4.75	3.25	4.5	.	3.25	3	4.25	4	5	5	3	3.25	2
LNR	3	4	3	1	3	3	1	3	3	2	5	4	.	4	4	5	2	1
SSK	.	5	.	.	.	.	1.5	3.5	.	2	5	3	.	4	4	4	0	0
LNJ	3	6	4	2	6	6	4	5	3	2	4	4	3	6	6	4	2	2
LYP	-1.02	1.6	0.26	-1.34	0.52	0.43	-0.73	0.48	-0.53	-0.85	0.05	1.01	-1.11	1.53	1.4	0.51	-0.86	-1.34
CMP	.	9.7	5.3	.	6.9	7.1	3	4.4	6.1	6.6	.	5.9	.	6.9	9.2	8	3.8	.
ODE	48	56	56	36	76	70	18	36	57	49	31	35	56	57	80	31	50	22
OBA	88	98	90	37	69	95	85	91	.	85	28	76	67	75	86	53	70	26
OCE	2.25	2.25	2.25	1	2.25	2.5	2	2	.	1.75	1	2	2	2	3	2	2	1
OCO	2.25	3	2	1	2.5	2.25	1.75	3	.	1.5	3	2	1.5	2.5	2.5	2.25	1.5	1
WRD	.	3	.	.	2	.	1	2	.	1	.	3	.	.	3	.	2	.
HFR	0.25	1	0.5	0	0.75	0.75	0.25	0.75	0	0.25	0.75	0.5	0.25	1	1	0.75	0	0

Note: a dot (.) denotes that for that country the value of the indicator is missing.

^aAlthough Blyth does not include Switzerland explicitly in his ranking tables, it is classified as strongly corporatistic in his paper

^bThe original scaling of the indicator of Tarantelli is opposite to the scaling of the other indicators. For ease of exposition, we have reversed its scaling here.

Table A3: Correlations between measures of corporatism * 100%

	BLY	SMT	SD1	BRA	CZA	CAM	KEM	LHM	PAL	SCT	BRS	CRO	GAR	MKS	MCL	SD2	TAR	CFD	LNR	SSK	LNJ	LYP	CMP	ODE	OBA	OCE	OCO	WRD	HFR
BLY	100																												
SMT	82	100																											
SD1	81	84	100																										
BRA	62	88	75	100																									
CZA	26	64	39	76	100																								
CAM	65	85	53	77	74	100																							
KEM	78	82	87	84	64	64	100																						
LHM	41	82	68	91	96	81	77	100																					
PAL	52	63	81	66	57	36	82	82	100																				
SCT	81	84	95	75	52	54	88	84	86	100																			
BRS	59	77	75	86	74	68	91	91	83	81	100																		
CRO	63	81	64	77	70	67	84	79	65	72	88	100																	
GAR	84	89	64	80	67	89	75	74	40	62	66	81	100																
MKS	56	79	66	69	76	95	61	81	48	66	66	50	79	100															
MCL	65	74	81	75	67	61	92	82	86	87	98	89	66	55	100														
SD2	48	66	72	51	51	31	67	82	85	83	75	64	47	46	74	100													
TAR	65	79	84	66	28	38	75	60	79	83	75	73	58	43	78	77	100												
CFD	65	86	54	78	72	88	75	78	43	52	74	71	93	84	65	42	46	100											
LNR	66	71	91	77	45	42	78	84	78	89	73	60	55	61	78	76	73	41	100										
SSK	84	82	94	79	34	35	81	79	84	94	68	56	50	63	72	84	81	42	86	100									
LNJ	75	90	73	75	63	71	84	80	66	78	79	82	82	69	77	75	72	83	59	74	100								
LYP	58	86	73	94	86	74	87	96	81	85	91	86	79	72	88	80	68	78	76	78	88	100							
CMP	80	65	75	61	47	53	73	51	34	75	55	63	76	38	59	39	55	56	71	90	61	69	100						
ODE	55	57	25	51	41	79	35	41	-5	26	41	36	82	67	25	04	05	75	19	35	48	41	51	100					
OBA	24	42	17	04	52	57	27	48	10	13	34	36	44	60	29	24	19	69	09	24	50	45	15	42	100				
OCE	62	69	40	50	49	77	48	50	13	32	37	50	76	74	34	19	27	77	28	32	67	53	53	71	72	100			
OCO	62	78	81	71	42	46	74	72	73	79	75	64	59	63	73	83	88	64	75	88	81	76	56	30	41	44	100		
WRD	52	77	85	84	89	87	80	94	76	85	79	78	71	98	79	45	62	75	95	70	58	82	60	44	27	67	56	100	
HFR	80	85	89	75	60	65	93	79	79	92	88	81	74	65	89	78	82	75	76	89	91	88	74	37	41	53	89	68	100
N	18	15	18	13	18	17	18	16	17	17	17	18	15	15	18	18	18	17	17	11	18	18	13	17	17	17	17	8	18

Table A4: Empirical application of the indicators

	Period	Empirical application of corporatism measure
BLY	1970s	No empirical application
SMT	1958–1975	No empirical application
SD1	1974–1980	Correlation between corporatism, unemployment and inflation
BRA	1970s	No empirical application
CZA	1970s	Correlation of aspects of corporatism with unemployment and income policy
CAM	1965–1982	Correlation of organizational power of labour with inflation and unemployment
KEM	1965–1982	Impact of corporatism on inflation and unemployment
LHM	1950–1980	No empirical application
PAL	1960–1981	Price inflation, wage inflation and economic growth for different levels of corporatism
SCT	1970s	Ranking of countries by economic performance criteria and political arrangements
BRS	1973–1979	Impact of corporatism on inflation
CRO	mid–1970s	Qualitative analysis of impact of neocorporatism on inflation and unemployment
GAR	1974–1982	Impact of level of domestic political structures index on changes in economic growth
MKS	1950–1980	No empirical application
MCL	1980–1984	Impact of corporatism on unemployment
SD2	1960–1984	Relation between corporatism and Okun’s Misery Index (inflation plus unemployment)
TAR	1968–1983	Impact of neocorporatism on the Misery Index
CFD	1960–1979	Correlation of aspects of corporatism with inflation and unemployment
LNR	1960–1979	Phillips curve analysis for different levels of corporatism
SSK	1985–1989	Impact of economy-wide coordination on unemployment
LNJ	1956–1988	Impact of different aspects of corporatism on unemployment
LYP	1950–1980	Impact of consensus democracy and dominant tendency in government on corporatism
CMP	1972–1993	Impact of union participation on unemployment
ODE		
OBA	1978–1982	Correlation of aspects of corporatism with measures of economic performance, such as unemployment, price inflation and wage inflation. Also regression results
OCE		
OCO		
WRD	1950–1995	No empirical application
HFR	1955–1990	Impact of level of wage-bargaining coordination on inflation and unemployment

Table A5: Specific properties of the countries.

Country	Specific properties
Australia	Weak economic consensus.
Austria	Very powerful unions, centralized coordinating role. Medium strong employer organizations.
Belgium	Medium economic consensus, highly centralized collective bargaining.
Canada	Weak economic consensus.
Denmark	Medium economic consensus.
Finland	Weak economic consensus, highly centralized collective bargaining.
France	Tacit government coordination, some sectoral corporatism. Essentially pluralist.
Germany	Medium strong union coordination, strong employer organizations.
Italy	Informal employer coordination. Some help from union confederations.
Japan	Very powerful tacit employer coordination, more or less centralized. Weak unions. Properties also described as paternalistic-liberal capitalism.
Netherlands	Medium union coordination, strong employer organizations.
Norway	Powerful centralized employer organizations, centralized union confederations. Additional coordinating role by the government.
Sweden	Powerful centralized employer organizations, centralized union confederations.
Switzerland	Very powerful employer organizations, weak decentralized unions. Weak centralization of government. Properties also described as liberal capitalism.
United Kingdom	Zero employer and union coordination.
United States	Zero employer and union coordination.