Quantitative Indicators of Corporatism

ABSTRACT: In this article, it is assumed that corporatism consists of various types of institutional arrangements whereby important political-economic decisions are reached via negotiation between, or in consultation with, peak-level representatives of employees and employers (or other interest groups and the state). The article offers an overview of the forty-two prominent or useful indicators of corporatism suggested in the literature. All these indicators are compared, and the correlations among them are examined. The results produced by the various measures in a set of otherwise identical regression analyses of the relationship between corporatism and unemployment show the sensitivity of empirical findings in this field. Students of corporatism have not always paid sufficient attention to the impact of indicator choice on empirical results.

Corporatism has been a key political-economic institution in a number of affluent capitalist nations since the 1960s. It has thus been of substantial interest to macro-comparative sociologists (Hicks and Kenworthy 1998; Western 2001), political scientists (Hall and Franzese 1998; Iversen 1999; Scharpf 1987), and economists (Bruno and Sachs 1985; Calmfors and Driffield 1988; OECD 1997; Soskice 1990). After being “almost universally regarded as defunct” (Ferner and Hyman 1998: xii) in the early 1990s, corporatism is now back in the limelight. Despite its genuine, if sometimes overstated, decline in perhaps its most celebrated national context, Sweden, corporatism’s prominence and stature have rebounded considerably in recent years. Corporatist pacts dealing with issues such as wage growth and employment have played a prominent role in two countries widely viewed as European economic success stories over the past decade—the Netherlands and the Ireland. Similar pacts have been forged or renewed in Norway, Finland, Belgium, and Italy, while less explicit variants of corporatism continue largely unabated in nations such as Austria, Germany, and Switzerland. Not surprisingly, these developments have rejuvenated academic interest in the topic (e.g., Auer 2000; Hassel and Ebbinghaus 2000; Pochet and Fajertag 1997; Regini 2000; Visser and Hemerijck 1997).

Quantitative measures of corporatism have played a central role in the corporatist literature since the early 1980s. There have been numerous attempts to score or rank the eighteen or so most affluent Organization for Economic Cooperation and Development (OECD) countries on a corporatism scale, including a variety of composite indexes that aggregate other scorings. This article offers a survey and assessment of forty-two quantitative corporatism indicators.

The article has three distinct aims. The first is simply to provide an inventory of existing indicators, which have grown so numerous as to perhaps overwhelm even seasoned researchers in the field. The first section of the article offers an overview of the forty-two indicators, each of which is described in detail in the Appendix. The coverage here is not fully exhaustive. I have, however, attempted to include what in my view are the most prominent and useful indicators in the literature. Definitions of corporatism are many and varied, as two examples from recent studies will attest. One, by Franz Traxler (1999: 56), is quite brief: “Corporatism means that the state shares its public-order function with organized business and labor.” The other, by Alan Staroff (1999: 177–79) in the same journal and year, includes twenty-two elements, ranging from labor and business centralization to low industrial conflict to state activism to political consensus. My own conception is closer to Traxler’s. In my view, corporatism consists of various types of institutional arrangements whereby important political-economic decisions are reached via negotiation between or in consultation with peak-level representatives of employees and employers (or other interest groups and the state). However, I will not impose this definition here. Instead, I consider quantitative indicators of anything that is explicitly or implicitly referred to by its creator or users as corporatism. All of the indicators I examine are available in a Microsoft Excel file, which can be downloaded from my Web page at www.emory.edu/SOC/ikenworthy/.

The second aim of the article is to briefly consider the general features of these indicators. There has been considerable development in this field in recent years, with an array of new measures appearing. But are the newer indi-
Interest Group Organization

In the mid-1970s, Philippe Schmitter instigated the modern renaissance of interest in corporatism (Schmitter 1974). There were two principal interest groups of concern: labor and business. As a mode of interest group organization ("interest intermediation"), there are two chief dimensions to such organization: centralization and concentration. And there are two principal interest groups of concern: labor and business.

The third aim is to consider the sensitivity of empirical findings in this field. Like their counterparts in many other areas, students of corporatism have not always paid sufficient attention to the impact of indicator choice on empirical results. In the fourth section I compare the results produced by the various measures in a set of otherwise identical regression analyses of the relationship between corporatism and unemployment.

An Overview of Corporatism Indicators

Developments in the quantification of corporatism have been shaped by trends in the corporatist literature's analytical focus. Early studies, from the mid-1970s to the early 1980s, were conducted primarily by scholars interested in corporatism per se. Since roughly the mid-1980s or so, most research on corporatism has been carried out by scholars interested in corporatism's economic (and sometimes political) performance effects. This swing in emphasis generated a shift from general definitions of corporatism to a focus on income policies and wage setting. The most notable early quantitative measures of corporatism were those of Schmitter (1981) and Cameron (1984), which focused on, respectively, the organization of interest groups and the participation of such groups in policy making. Measures developed beginning in the mid-1980s by, for example, Cameron (1984), Bruno and Sachs (1985), and Calmfors and Driffill (1988) turned the focus toward centralization and concentration of unions and wage setting. Among those interested in wage setting, Soskice (1990) then instigated something of a turn toward measures of wage coordination.

Indicators of corporatism can be grouped into four categories according to their main focus: (1) interest group organization; (2) wage setting arrangements; (3) interest group participation in policy making; and (4) political-economic consensus. A fifth category consists of composite (i.e., aggregated) measures. This section offers an overview of existing indicators in each of these categories.

Interest Group Organization

Philippe Schmitter, who instigated the modern renaissance of interest in corporatism in the mid-1970s (Schmitter 1974), conceptualized corporatism as a mode of interest group organization ("interest intermediation"). There are two chief dimensions to such organization: centralization and concentration. And there are two principal interest groups of concern: labor and business.

Union centralization refers to the authority that union confederations have over their members. This authority may vary, of course, depending on the issue or arena. There are two existing indicators of union centralization: one by David Cameron (1984) and the other by Schmitter (1981). Both are subjective, time-invariant measures. To these I add here a third indicator, utilizing data from the "Union Centralization among Advanced Industrial Societies" data set assembled by Miriam Golden, Peter Lange, and Michael Wallerstein (1997, henceforth "GLW"). This new measure is based on objective, time-varying information on the powers and capacities of the main union confederation in each country—specifically, whether or not the confederation has power to appoint affiliates, to veto wage agreements by affiliates, to veto strikes, and whether or not it has its own strike funds.

Union concentration (sometimes referred to as associational monopoly) has two elements: across confederations and within confederations. The former refers to the extent to which union members belong to a single confederation rather than being divided among multiple confederations. The latter refers to the extent to which the membership of the union confederation(s) is concentrated within a small number of affiliates rather than being spread out across a large number of affiliates. Schmitter (1981) and Cameron (1984) each provided subjective, time-invariant measures of overall union concentration in the early 1980s. More recently, objective, time-varying data for each of these two facets of concentration have been assembled by Golden, Lange, and Wallerstein (1997).

A third dimension of labor organization is union density—the share of employees who are union members. Because this is never treated by itself as a measure of corporatism, I do not include it among the indicators examined here. It is, however, sometimes used in composite corporatism indicators.

To my knowledge there is only one existing quantitative measure of business centralization or concentration, by Hicks and Kenworthy (1998). It is a subjective, time-varying measure of business organization, combining the degree of concentration among business confederations and the degree of centralized authority of confederations over their members. To this I add here a second measure, constructed from several variables in the GLW data set. It is an indicator of employer centralization based on objective, time-varying data on the existence of a peak employer confederation and the powers and capacities of the confederation. The latter include the power to appoint affiliates, veto wage agreements, veto lockouts, and have its own conflict funds.

Wage Setting/Bargaining Arrangements

Wage setting or bargaining arrangements have always been prominent in the corporatism literature, as wage formation is one of the areas in which organized
interest groups have been most extensively and regularly involved in decision making. Initially some researchers used union centralization or concentration as a proxy for wage arrangements, but many soon turned to creation and use of indicators of the structure of wage bargaining itself. Such indicators focus on either the centralization or the coordination of the wage formation process. All are (at least partly) subjective. For a more extensive review of the features and relative merits of these measures, see Kenworthy (2001b).

Wage centralization refers to the level(s) at which wages are bargained or set. Three principal elements must be considered in determining the degree of centralization in a given country-year. The first is the level itself. Three tend to be most salient: peak/central/intersectoral, sector/industry, and company/enterprise. The second is the share of the workforce for which wages are determined at each level. If a central wage agreement covers only 10 percent of the workforce, it hardly makes sense to consider the wage bargaining process to be highly centralized. The third is the degree of "horizontal" centralization. For example, in Sweden during the 1970s wages were negotiated mainly at the peak level. However, they were often bargained separately by one peak organization representing private-sector blue-collar workers (LO) and another representing private-sector white-collar and professional workers (PTK).

Cameron (1984) and Calmfors and Drifflil’s (1988) each created time-invariant measures of the degree of wage bargaining centralization. Cameron’s measure is an index ranging from 0 to 1, parallelizing his measures of union centralization and concentration. Calmfors and Drifflil’s is a rank ordering. The OECD (1997) has developed a wage centralization index ranging from 1 to 3, measured in the years 1980, 1990, and 1994. The Golden-Lange-Wallestein data set includes three time-varying centralization measures: (1) an index of confederation involvement in wage bargaining; (2) an index of government involvement in wage setting; (3) a summary index of the degree of wage setting centralization. Because centralization can result either from bargaining between union and employer confederations or from government involvement (participation in bargaining, imposition of a wage schedule or freeze, mediation, arbitration), or both, the first two of these indexes are combined to yield the third. Among the various wage centralization indicators, the GLW summary centralization index is the only one that explicitly measures the centralization of wage bargaining by taking into account situations in which there is government-imposed centralization; others are measures of the centralization of wage bargaining. More recently, Torben Iversen (1999) and Franz Traxler, Sabine Blaschke, and Bernhard Kittel (2001) have created time-varying centralization measures.

In an influential 1990 article, David Soskice (1990) argued that the focus of those interested in the effects of wage setting/bargaining should be on coordination rather than centralization. Centralization is only one means, albeit an important one, of achieving wage coordination. A second is state-imposed centralization, as in Belgium, the Netherlands, and Denmark in some years and even Canada and the United States in a few. A third is guidance of industry or firm-level bargaining by peak union and employer confederations, as in Switzerland, Austria prior to the mid-1980s, Norway in a number of years, the Netherlands since 1983, and Italy since 1993. This might usefully be termed "informal centralization." A fourth means of achieving coordination is pattern setting led by a powerful sector, as in Germany, or by a group of influential firms, as in Japan. Wage coordination refers to the degree of intentional harmony in the wage setting process—or, put another way, the degree to which minor players deliberately follow along with what the major players decide. "Major" players include, for example, peak-level union and employer confederations in countries such as Norway and pre-1983 Sweden, the metalworkers union and its employer counterpart in Germany, and a set of influential large firms in Japan.

Coordination was the focus of Crouch’s (1985) earlier dichotomous indicator of wage bargaining arrangements. Soskice himself offered coordination scores, but for only eleven countries. The Soskice scores have been updated and extended to a larger set of nations by Layard, Nickell, and Jackman (1991; Layard and Nickell 1994; Nickell 1997) and by Hall and Franzese (1998). There are three time-varying indicators of wage coordination. One is an OECD measure, which is available only for 1980, 1990, and 1994. The second is a categorical measure by Traxler, Blaschke, and Kittel (2001), which identifies the type of wage coordination in each country without attempting to create a rank ordering or scale.

The third time-varying coordination indicator is my own (Kenworthy 2001a), which is a revised and updated version of an earlier measure used in Hicks and Kenworthy (1998). Unlike previous coordination indicators, it does not attempt to capture the degree of actual wage coordination in each country. In practice it is not easy to measure the degree to which the various actors involved in the wage setting process deliberately harmonize their bargaining. To do so in an accurate fashion, the researcher must factor in both the share of the workforce whose wages are deliberately pegged to the agreement(s) reached by the major player(s) and the degree to which minor players follow along (i.e., do they adhere more closely or less?). This information is not easily discernible, much less readily available. Existing measures thus tend to be highly impressionistic. My scores are based instead on a set of expectations about which institutional features of wage setting arrangements are likely to generate more or less coordination. This avoids the problem of limited information about the intentions of various actors in the wage setting process and the difficulty in ranking those intentions even if such information were readily available.
Also relevant to wage setting is the share of the workforce that is covered by collective bargaining agreements. In some nations this figure is essentially the same as the share that belongs to unions, but in others extension laws or practices make the coverage rate much higher than the unionization rate (Traxler et al. 2001: ch. 12). Like union density, however, the coverage rate is never treated as an indicator of corporatism per se.

Interest Group Participation in Policy Making

Although much of the focus in the corporatism literature has been on wage bargaining, many scholars have conceived of corporatism as participation by organized interest groups in various types of public policy making. Surprisingly, however, to my knowledge only three attempts have been made to quantify this broader conception. Each focuses on participation by one of the major interest groups, unions, in one type of policy arena, economic policy.

The first is Gerhard Lehmbruch’s (1984) time-invariant measure of union participation in economic policy making, which includes but is not limited to wage setting. This follows from Lehmbruch’s focus on policy concertation as the core of corporatism. The second is Hugh Compston’s (1997) time-varying measure of union participation in economic policy making exclusive of wage setting. Compston excludes wage setting arrangements “because these represent government participation in union policy making rather than union participation in government policy making” (Compston 1997: 736). The third is from Traxler, Blaschke, and Kittel (2001). It too varies over time and excludes union involvement in wage bargaining.

There is only one existing indicator of business participation in policy making. The issue here is, of course, participation by organized business—that is, employer confederations—rather than by individual firms. The measure is from Traxler, Blaschke, and Kittel’s (2001). Unfortunately, the data are not shown in their book, and they are available to the public only at a substantial cost. I thus do not include them here.

Political-Economic Consensus

Some analysts consider political or economic consensus to be a key component of corporatism (e.g., Katzenstein 1985; Keman 1984; Schmidt 1982). This is plainly a difficult concept to operationalize. Although several composite indicators include consensus as an element, I am aware of only two indicators that focus on consensus alone: a dichotomous measure by McCallum (1983, 1986) and a three-category index by Paloheimo (1984). Both are time-invariant, and both rely heavily on strike rates.

Composite Measures

I include thirteen composite corporatism measures here: from Alvarez, Garrett, and Lange (1991), Bruno and Sachs (1985), Cameron (1984), Hicks and Kenworthy (1998), Hicks and Swank (1992), Keman (1984), Lehner (1988), Lijphart and Crepez (1991), Schmidt (1982), Schmitter (1981), Swank (2001), and Western (1997). There are others, but these thirteen seem to be a reasonably representative sample. Some are relatively narrow. Those of Cameron and Schmitter, for instance, are essentially just aggregations of their union centralization and concentration measures. Others, such as those of Bruno and Sachs, Hicks and Swank, and Schmidt, combine four or more elements. The Lijphart-Crepaz measure is an unabashedly atheoretical aggregation of a dozen previous measures.

General Features of the Indicators

Any useful quantitative measure should be valid, in the sense of accurately tapping the underlying theoretical construct. Other desirable features of corporatism indicators include being (1) based on careful scrutiny of extensive data, though in most instances by necessity relying in part on subjective judgment, (2) scored for all of the eighteen OECD countries commonly used in quantitative comparative research, (3) time varying and measured annually, (4) scored for the years 1960 up to the very recent past, (5) measured using a metric scale rather than as a rank ordering, and (6) narrowly targeted rather than an aggregation of various elements. Only a few of the forty-two indicators meet all six of these criteria.

Objective measures of political-economic institutions are almost always preferable, but they often are impossible to create. Creating quantitative indicators for many institutions, such as state structure or central bank independence, tends to require judgment. The same is true for most indicators of corporatism. The Golden-Lange-Wallerstein measures of union concentration are one exception, and they represent a clear improvement over earlier subjective measures. But in scoring wage coordination or centralization, union participation in policy making, and consensus, an element of subjectivity is unavoidable. The two indicators of consensus partially escape subjectivity because they are based largely on strike frequency data. Yet judgment nonetheless enters in the decision about where to draw the line between high and low categories. Moreover, by measuring consensus using what is presumably an effect of it—low strike frequency—this type of measure loses some conceptual utility. It is also worth noting that strike data are somewhat problematic due to distortions and context-dependent measurement problems (Shalev 1978).
Although virtually all corporatism indicators are subjective, they are not all equally valid. There is a substantial difference between scorings that are (by choice or necessity) somewhat impressionistic and those based on a wealth of detailed and reliable data. In this respect, recently developed indicators are likely to be superior to earlier ones. Information about interest group organization, wage setting arrangements, and participation by unions in policy making is much more extensive and readily available today than was the case a decade or two ago. Thus, the Golden-Lange-Wallerstein, Iversen, and Traxler-Blaschke-Kittel (TBK) wage centralization indicators are almost certainly more accurate than those of Cameron or Calmfors and Drifill. The same is true of the Compston and TBK scores for union participation in economic policy making as compared to Lehbruch's.

There are nineteen countries that have a population of at least 3 million, have a level of per capita GDP at least half that of the United States, and have been continuously democratic throughout the post–World War II period. One of these, Israel, is not a member of the OECD and thus lacks comparable data for many of the variables of interest in quantitative analysis. The others comprise the “OECD-18” nations commonly used in quantitative analyses involving corporatism: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States. A number of the existing indicators—twenty-seven of the forty-two assessed here—do not cover all of these countries. The most frequently missing nations, by far, are New Zealand and Ireland.

It has frequently been argued that corporatism, like many other institutions, is “sticky” over time and is thus appropriately treated as constant. Yet wage setting arrangements and union participation in policy making have in fact changed quite a bit over time in some countries. Only fifteen of the forty-two indicators vary over time and are measured annually. There is no time-varying measure of consensus and only two such composite measures. Given the recent appearance of a variety of time-varying corporatism indicators, there is no longer much justification for using measures that do not incorporate change over time. Several studies have found that the effects of corporatism appear to vary across different periods (e.g., Crepaz 1992; Kenworthy 1996; Kittel 1999; Traxler, Blaschke, and Kittel 2001). But if a time-invariant indicator of corporatism is used, it is impossible to know whether such a finding owes to changes in corporatist effects or rather to (unmeasured) changes in the degree of corporatism itself. Time-invariant indicators are also less likely to be based on careful attention to fine details of institutional arrangements such as corporatism. Such attention is necessary in the creation of time-varying scores, in order to know whether a change has occurred from one year to the next.

Time-invariant indicators are more prone to be based on an overall “feel.” Indeed, many time-invariant indicators appear to have been created as such precisely because lack of information rendered the assignment of scores for each individual year impossible.

If the effects of corporatism do change over time, and if researchers are to have some hope that their analyses may impact policy, it is vital that they be able to examine the very recent past. Unfortunately, relatively few corporatist indicators are measured past the early 1990s. Exceptions include the Traxler-Blaschke-Kittel measures (available through 1998) and the Kenworthy measure of wage setting coordination (through 2000). Miriam Golden and Michael Wallerstein are in the process of extending the Golden-Lange-Wallerstein measures through the year 2000. It is also worth noting that several of the time-varying corporatism indicators—those of Iversen, Traxler-Blaschke-Kittel, and Compston—begin only in the early 1970s. Given that OECD data for many measures of economic structure and performance begin in 1960, this is a potential limitation for researchers.

A number of corporatism indicators during the initial wave of quantification in the early 1980s were rank orderings, while more recent indicators have typically been scale measures. Given the limited data available to creators of the earliest measures, it is understandable that researchers would opt for a ranking. However, the greater volume and improved quality of data now available seem sufficient to justify the use of scales in the newer measures—which is not to say that all researchers will agree with the particular scale used for any given one of these indicators. Quantitative analyses using rank-ordered variables are less susceptible to outliers than those using scale measures. Yet this problem can be remedied via standard regression diagnostics or “jackknife” analyses, in which the data are reanalyzed with cases dropped one at a time. Rankings tend to be less valid in the sense that they hide the true degree of difference in centralization between countries. In particular, when treated as scale variables, as they frequently are in statistical analyses, rank orderings may artificially inflate the degree of variation between countries on the high and low ends. In addition, rankings are difficult to keep consistent for a measure that varies over time.

Composite indicators of corporatism are widely used in quantitative research. I include thirteen such measures here. Elements that have been aggregated to form these composite measures include, among others, union centralization, union concentration, union density, employer centralization, shop-floor autonomy, the presence of works councils, strike frequency, union participation in policy making, left party political strength, societal consensus, and commitment to a partnership ideology. Sometimes these measures are summed or averaged, sometimes they are combined using different weights, and in other...
instances the composite measure is based on the results of factor analysis.

There is an obvious logic to such aggregation. Most theoretical discussions and qualitative analyses of corporatism treat it as a multidimensional concept. In attempting to quantify corporatism while remaining true to the theoretical and qualitative literatures, it is therefore tempting to aggregate. The temptation is accentuated by the fact that the small number of cases—eighteen or fewer—used in the typical cross-sectional regression analysis of corporatist effects allows for inclusion of very few independent variables. Furthermore, a number of the elements that tend to be combined are highly correlated with one another: countries with centralized unions tend to have centralized employers, strong left parties, low strike rates, and so on.

Yet the use of composite measures in quantitative analysis may hide more than it reveals. As Robert Flanagan (1999: 1167–68) has noted: “The focus on a single aggregated measure may obscure the exact effect of common institutional factors producing the correlation and at the same time may suggest an influence on economic outcomes for some elements of the index that have no influence at all.” Narrowly targeted measures may therefore be preferable. Consider, for instance, the question of whether or not corporatism helps to reduce unemployment. There are a number of channels through which a straightforward effect (i.e., ignoring nonlinearities and interactions with other institutions such as government partisanship or central bank independence) of this type might occur: (1) Encompassing, organized interest groups may reduce rent-seeking— the lobbying of government for special favors that benefit only narrow segments of the population—thereby contributing to faster growth and lower unemployment (Olson 1982). (2) Centralized or coordinated wage setting may generate wage moderation, by forcing union negotiators to “internalize” the unemployment costs of high wage increases (Flanagan 1999, Franzese 1999; OECD 1997); it may also promote government efforts to reduce unemployment in exchange for union wage restraint (Pizzorno 1978). (3) Union participation in economic policy making may lead to more aggressive or effective antiunemployment policies (Boreham and Compston 1992; Compston 1997). (4) Consensus could help to reduce joblessness in a variety of ways—via wage restraint, more effective government policies, or less rent seeking (McCallum 1986). A composite measure is unable to distinguish between these channels and may in fact be conceptually inappropriate for examining any of them.

Methodological constraints no longer necessitate the use of composite measures, if they ever did. The recent development of time-varying corporatism measures enables use of pooled cross-section time-series regression, which substantially increases the number of observations and thereby alleviates the need for hyperparsimony in the choice of explanatory variables. Where corporatism serves merely as a control variable in analyses that focus on other aspects of the political economy, there seems little harm in utilizing a composite measure. But otherwise the preference, in my view, should be for narrowly targeted indicators.

**How Closely Do the Indicators Correlate with One Another?**

Table 1 summarizes the correlations among forty-one of the indicators. The Traxler-Blaschke-Kittel measure of wage coordination is excluded because it is categorical. For the indicators that vary over time I have used a period average over 1974–89, because this is the approximate time period covered by most of the time-invariant indicators.

Among the interest group organization indicators, a number of findings are worth highlighting. First, the three union centralization measures correlate fairly closely with each other (.62 to .84). Second, that is not true of the measures of union concentration. This stems mainly from the fact that the two dimensions of concentration highlighted in the Golden-Lange-Wallerstein data, across confederations and within confederations, are inversely related. The correlation between them is -.53. This casts considerable doubt on the validity of the Cameron and Schmitter measures, which attempt to combine these two dimensions. Concentration across union confederations is negatively correlated with every other type of corporatism indicator. This is due largely to the existence of a single main union confederation in several nations in which interest group organization, and corporatism more broadly, is otherwise relatively minimal: Australia, the United Kingdom, and the United States. Third, the Cameron and Schmitter measures of union centralization and concentration are moderately to strongly correlated with their measures of union concentration (.50 to .77). However, the new time-varying measure of union centralization I have created based on the GLW data is only weakly correlated with both of the GLW measures of union concentration (.14 and .18). This suggests that these two dimensions of labor organization may be less similar empirically than has heretofore been believed. Fourth, the two business organization indicators correlate strongly (.82) with one another, despite the fact that one is a measure of centralization alone while the other incorporates both centralization and concentration. However, the correlations between these measures of business organization and the time-varying measures of union centralization and union concentration range from -.43 to .57. This suggests little support for the common presumption that business and labor organization tend to go hand in hand (e.g., Schmitter and Streeck 1999; Stephens 1979).

The Calmfors-Drifill indicator has been by far the most commonly used in empirical analyses of the impact of wage centralization on economic performance. Yet its validity has been questioned (e.g., Soskice 1990; Traxler and
Table 1

Summary of Correlations Among Corporatism Indicators

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(continued)
It correlates relatively strongly with the Cameron, OECD, and Iversen centralization measures but only modestly with the Golden-Lange-Wallerstein and Traxler-Blaschke-Kittel measures. This suggests some cause for skepticism regarding findings based on the Calmfors-Driffill indicator. The same conclusion can be drawn about the OECD centralization indicator, which in the past several years has replaced Calmfors and Driffill’s as the most popular. The wage coordination indicators correlate fairly strongly with one another. In particular, the Soskice, OECD, Hall-Franzese, and Kenworthy indicators correlate at .89 or better. This is not surprising, as the latter three draw heavily on Soskice (1990). In general, the wage centralization indicators are only moderately and sometimes very weakly correlated with the wage coordination indicators. For instance, the GLW overall centralization index correlates between .32 and .52 with the six coordination indicators. This suggests that these two types of measure are not interchangeable; it may matter a great deal in terms of empirical findings which of the two is used. Conceptually, centralization measures seem closer to the essence of what most analysts consider to be corporatism, but coordination seems more likely to be related to wage restraint and thus to macroeconomic performance outcomes (Flanagan 1999; Soskice 1990; Traxler and Kittel 2000).

There are three indicators of union participation in policy making. The Compston and Traxler-Blaschke-Kittel measures are time-varying (in principle, at least) and appear to be based on more careful scrutiny of policy making processes than is true of Lehmbuch’s measure. Yet they correlate at only .32. This appears to stem largely from differing judgments. It may also be a product of the fact that the TBK measure incorporates very little variation over time. Like the Lehmbuch measure it is in practice largely static.

In contrast, the two indicators of economic consensus are highly correlated with each other. These two measures were each created in the mid-1980s and based heavily on strike rates, so this congruence is not surprising.

Given that the composite measures vary widely in the elements they aggregate, the correlations among them are reasonably strong. More than half of these correlations are larger than .70, and only a few are below .50.

For which countries is there the least agreement among the various corporatism indicators? Figure 1 shows the standard deviations for each country’s mean score across all of the (standardized) indicators. Among the countries with the greatest variation in scores are Japan, Switzerland, and Germany. These nations are average or below average in their degree of interest group and wage centralization, yet each manages to achieve a relatively extensive degree of coordination through other channels. This highlights what is perhaps the fundamental divide among conceptions of corporatism. In one view the central component is formal centralization of interest groups and...
Figure 1. Standard Deviations for Mean Country Scores Across Corporatism Measures

How Sensitive Are Empirical Findings to the Choice of Indicator?

Probably three-quarters of the empirical research on corporatism since the early 1980s has involved attempts to assess its effect on macroeconomic performance outcomes. One of the striking features of this literature is the general lack of attentiveness to the impact of indicator choice. In this section I examine the sensitivity of findings to the choice of corporatism measure. I regress the most commonly analyzed performance outcome in the literature, unemployment, on each of the corporatism indicators and a set of control variables over the period 1974-89. Because the time-invariant indicators were intended to apply to the late 1970s and/or the 1980s and because most of the time-varying indicators extend only through the early 1990s, this is the most reasonable time period upon which to focus. Ireland and New Zealand are not included, as a number of the wage setting measures do not provide scores for either or both of these countries. The same group of sixteen nations is thus included in most of the regressions.

I use a straightforward linear specification of the relationship between corporatism and unemployment. I include a set of commonly used control variables: growth of real GDP, real long-term interest rates, trade (exports plus imports as a share of GDP), union density, and left government (share of cabinet seats held by left parties). The data for these variables are from OECD (2001), Golden, Lange, and Wallerstein (1997), and Swank (n.d.). Because unemployment rates are sticky over time, I also include lagged unemployment as a regressor.

The regressions are pooled cross-section time-series analyses based on two periods: 1974–79 and 1980–89. Separating the two periods adds degrees of freedom and is substantively sensible given the possibility of period-specific effects. For the time-invariant corporatism indicators the scores for any given country are, by necessity, the same in each period. I estimate the models using ordinary least squares (OLS) with heteroskedasticity-consistent standard errors. A dummy for the 1980s is included, but country dummies are not insofar as many of the time-invariant corporatism measures would be perfectly collinear with country dummies. In this circumstance the best course of action is to focus the analysis entirely on the cross-sectional variation by including year dummies without country dummies (Beck and Katz 2001; Traxler et al. 2001: 27–28). This is consistent with the cross-country focus of most existing research on this issue.

One need not agree with the model specification or estimation technique I use for these regressions. The aim here is to draw conclusions about the sensitivity of results to indicator choice, not about the substantive impact of corporatism on unemployment outcomes. The key, therefore, is simply that the same (not necessarily the “correct”) model and estimation procedure be used for all of the corporatism measures.

The coefficients for the corporatism indicators are displayed in Figure 2. I standardized each of the indicators in order to make the size of the regression coefficients directly comparable. The indicators are presented in the same order as in the Appendix, and the number on each bar can be used to identify the particular measure by referring to the appendix. The bars for coefficients that reach statistical significance at the .10 level or better (one-tailed test) are shown in bold.

A host of studies have concluded that corporatism is conducive to low unemployment. Other analyses conclude that corporatism is largely unrelated to unemployment outcomes (e.g., Smith 1992, 2000; Therborn 1987; Western 2001). Support for either of these views can be found in the results here, depending on the indicator used. Except for consensus, for which there are only two (very similar) measures, each type or aspect of corporatism has one or more measures that produce the expected statistically significant negative coefficient but others
Figure 2. Regression Coefficients for Corporatism Indicators

Note: Numbers on the bars identify the wage setting measures; see Appendix. 1–3 = union centralization. 4–7 = union concentration. 8–9 = employer centralization/concentration. 10–17 = wage centralization. 18–24 = wage coordination. 25–27 = union participation in economic policy making. 28–29 = political-economic consensus. 30–42 = composite corporatism measures. The Traxler-Blaschke-Kittel measure of wage coordination (number 23) is not included because it is categorical. Coefficients statistically significant at the .10 level (one-tailed test) are shown in bold.

that yield a nonsignificant negative coefficient or a positive one. And among the significant negative coefficients, the magnitude often varies substantially. This inconsistency highlights the need for more careful attention in empirical studies to the impact of indicator choice.

Conclusion

Quantitative research on corporatism is a relatively well-developed field—one of the most influential in comparative political economy over the past several decades. Yet in some respects it is still in its infancy. Theoretical development has advanced considerably in recent years, but a number of uncertainties and disagreements persist (Flanagan 1999; Franzese 1999). Since the mid-1990s, quantitative indicators of corporatism have also improved a great deal. However, as we have seen, these indicators are not without flaws. The principal conclusions that emerge from this survey are as follows:

Indicators of corporatism abound. Given that there are various elements or types of corporatism and that each can be measured in different ways, this should be viewed in a positive light. The chief potential ill effect of such a proliferation of measures is chaos in the field. One of the aims of this study is to help bring some order to it.

Interest group organization, wage setting arrangements, interest group participation in policy making, and political-economic consensus are the principal aspects or types of corporatism as it is commonly conceptualized. In this respect the existing set of indicators is adequate in its overall scope. Yet a few noteworthy gaps remain. One is the lack of objective measures of concentration across and within employer confederations. A second is the lack of an accessible measure of participation in policy making by organized business. A third is the lack of a time-varying measure of consensus. A fourth is the lack of indicators of subnational corporatism. Paradoxically, as national economies become more closely integrated, subnational (regional and local) economic institutions may come to play a more prominent and important role in determining economic outcomes (Streeck and Schmitter 1991). The early corporatist literature paid a good deal of attention to "mesocorporatism" (Cawson 1985), but there has been little effort to construct quantitative indicators of corporatist arrangements at the subnational level (for one attempt, see Leicht and Jenkins 1998).

The relatively weak correlations between recent time-varying indicators of interest group organization, wage setting arrangements, and union participation in policy making and some of their time-invariant predecessors from the early corporatist literature cast doubt on the accuracy of the latter. Given the availability of time-varying indicators for most aspects of corporatism, and given that most of these indicators suggest a nontrivial degree of change over time in a number of countries, there is now little rationale for using time-invariant measures in empirical analyses. This does not mean that researchers are obliged to exploit—fully or even partially—the longitudinal component of the data in their research. Single-period cross-section analyses and pooled analyses using period averages continue to play an important role in comparative political economy research, and deservedly so (e.g., Traxler et al. 2001; Western 1997). However, to ensure greater accuracy, period averages should be created using time-varying measures.

Unfortunately, many of the recently created time-varying measures do not cover all eighteen of the countries commonly used in quantitative research on the political economy of affluent democratic capitalism. Studies utilizing these measures therefore run the risk of selection bias. In addition, for time-varying measures to be of optimal utility, it is imperative that they be regularly updated. That is not an easy task with subjective indicators; it takes quite a bit of work. But it needs to be done.

Many quantitative indicators of corporatism are composite measures. Yet creators and users of such measures have not, in my view, offered a compelling explication of how the effects of corporatism are generated in such a way
that they are more accurately captured by aggregated indicators than by narrowly targeted ones.

Which of the narrowly targeted corporatism indicators would I recommend for use in empirical research? Among the three indicators of union centralization, the new one I have created here seems preferable as it is based on the reliable Golden-Lange-Wallerstein data and varies over time. The same is true for the two GLW measures of union concentration. The two measures of business organization seem of comparable quality; the choice of which to use should be guided by whether one prefers a measure that focuses on centralization alone or a measure that attempts to combine centralization and concentration. The Iversen and Traxler-Blaschke-Kittel indicators are likely the most valid and reliable measures of wage bargaining centralization, for reasons spelled out in more detail in Kenworthy (2001b). Unfortunately, the Iversen measure only extends through 1993. For wage coordination, the only indicators that vary over time and are measured annually are the Traxler-Blaschke-Kittel categorical measure and the Kenworthy index. Among the indicators of union participation in policy making, the Compston measure is likely to be the most useful, as it is measured annually and appears to capture the genuine variation over time within countries. On the other hand, Compston’s scores are available only through 1992. Unfortunately, both of the existing indicators of consensus are time-invariant and are based largely on strike rates. As noted earlier, these two features make these measures of questionable utility.

Finally, given the plentitude of corporatism indicators and the fairly extensive variation in results in Figure 2 across indicators of the same aspect or type of corporatism, empirical studies need to be more attentive to the effects of choice of measure. Perhaps making this relatively comprehensive set of quantitative indicators of corporatism easily accessible will facilitate that.

Notes

1. After creating this measure I discovered that a similar one had been created by Duane Swank and Cathie Jo Martin (2000).

2. In Schmitter’s early conceptualization this was “corporatism 2” (also called “concertation”), with “corporatism 1” referring to interest-group organization (1982: 262–63).

References


Schmitter, Philippe C., and Wolfgang Streeck. 1999. “The Organization of


Appendix: Indicator Descriptions

Interest Group Organization

Union Centralization


3. Kenworthy union centralization. Index ranging from 0 to 4. Calculated as the number of the following powers/capacities that the main union confederation has: power of appointment of affiliates, veto over wage agreements by affiliates, veto over strikes, confederation has its own strike funds. Varies over time; measured annually. Time period covered: 1950-92. Missing OECD-18 countries: Ireland, New Zealand. My construction from Golden, Lange, and Wallerstein (1997, variables = CON11, CON12, CON13, CON14).

Union Concentration


6. Golden-Lange-Wallerstein (GLW) union concentration—across confederations. Herfindahl index of union concentration across union confederations. This indicates the extent to which union members belong to a single confederation rather than being divided among multiple confederations. Varies over time; measured annually. Time period covered: 1950–92. Missing OECD-18 countries: Ireland, New Zealand; also Belgium (selected years), Finland, (prior to 1968), Italy (prior to 1977), Netherlands (selected years) (Golden, Lange, and Wallerstein 1997, variables = EMCONV1, EMCONV2, EMCONV3, EMCONV4, EMCONV5).

Wage Bargaining/Setting Arrangements

Wage Centralization

10. Cameron wage bargaining centralization. Index ranging from 0 to 1. "Nations were assigned values between 0 and 1.0 on a seven-point scale that, in ascending order, moves from restricted collective bargaining (as in Spain in the Franco era), to highly centralized company-level bargaining with company unions, to decentralized bargaining with national unions, to partially centralized bargaining with company and regional or multi-employer negotiations, to partial industry-wide bargaining, to full industry-wide bargaining, and finally to industry-wide bargaining with economy-wide formally negotiated agreements.” Time invariant. Time period covered: 1965–80. Missing OECD-18 countries: New Zealand (also includes Spain) (Cameron 1984: pp. 164–65, variable = scope of collective bargaining).


13. Golden-Lange-Wallerstein (GLW) involvement by union and employer confederation(s) in wage setting. Index with 11 categories: 1 = confederation(s) uninvolved in wage setting in any of the subsequent ways; 2 = confederation(s) participates in talks or in formulation of demands for some affiliates; 3 = confederation(s) participates in talks or in formulation of demands for all affiliates; 4 = confederation(s) negotiates nonwage benefits; 5 = confederation(s) negotiates a part of the wage agreement, such as the cost-of-living adjustment; 6 = confederation(s) represents affiliates in mediation with centralized ratification; 7 = confederation(s) represents affiliates in arbitration; 8 = confederation(s)
bargains for affiliates in industry-level negotiations; 9 = confederation(s) negotiates national wage agreement without peace obligation; 10 = confederation(s) negotiates national wage agreement with peace obligation; 11 = confederation(s) negotiates national wage agreement with limits on supplementary bargaining. Varies over time; measured annually. Time period covered: 1950–92. Missing OECD-18 countries: Ireland, New Zealand (Golden, Lange, and Wallerstein 1997, variable = CONINV); for discussion see Wallerstein (1999).

14. Golden-Lange-Wallerstein (GLW) government involvement in wage setting. Index with 15 categories: 1 = government uninvolved in wage setting; 2 = government establishes minimum wage(s); 3 = government extends collective agreements; 4 = government provides economic forecasts to bargaining partners; 5 = government recommends wage guidelines or norms; 6 = government and union negotiate wage guidelines; 7 = government imposes wage controls in selected industries; 8 = government imposes cost-of-living adjustment; 9 = formal tripartite agreement for national wage schedule without sanctions; 10 = formal tripartite agreement for national wage schedule with sanctions; 11 = government arbitrator imposes wage schedules without sanctions; 12 = government arbitrator imposes national wage schedule with sanctions; 13 = government imposes national wage schedule with sanctions; 14 = formal tripartite agreement for national wage schedule with supplementary local bargaining prohibited; 15 = government imposes wage freeze and prohibits supplementary local bargaining. Varies over time; measured annually. Time period covered: 1950–92. Missing OECD-18 countries: Ireland, New Zealand (Golden, Lange, and Wallerstein 1997, variable = GOVIN); for discussion see Wallerstein (1999).


16. Iversen wage bargaining centralization. Index ranging from 0 to 1 (actual range of scores is from .071 to .654). Calculated as \( \sum (w_j p_j) / \sum w_j \), where \( w_j \) is the weight accorded to each bargaining level \( j \sum w_j = 1 \) and \( p_j \) is the share of workers covered by union (or federation) \( i \) at level \( j \). (The square root is used simply to heighten somewhat the difference in scores between decentralized cases.) The index combines a measure of the prevalent level of bargaining \( (w_j) \) with a measure of union concentration \( (p_j) \). There are 7 weight scores for bargaining level (each with a weight for centralized, intermediate, and decentralized, respectively): 0, 0.1, 0.9 = plant- and firm-level bargaining pre-
dominates with some elements of industry-level bargaining; 0.1, 0, O.9 = national associations and the government set nonenforceable targets for plant-level bargaining, but local organizations retain rights to bargain and to call strikes or lockouts; 0, 0.8, 0.2 = industry-level organizations monopolize bargaining and strike/lockout decisions, and agreements are enforceable. Local bargaining is permitted subject to a peace clause; 0, 0.7, 0.2 = national associations and/or the government set nonenforceable targets for lower-level bargaining, but industry-level organizations retain rights to bargain enforceable agreements. Local bargaining is permitted subject to a peace clause; 0.4, 0.3, 0.3 = national associations negotiate central agreements with some capacity for enforceability, but industry-level organizations retain the right to bargain separate agreements without adherence to a peace clause; 0.8, 0, 0.2 = national associations monopolize wage bargaining and agreements are enforceable. Local bargaining is permitted subject to a peace clause; 1, 0, 0 = national associations monopolize wage bargaining and agreements are enforceable. Lower-level bargaining is banned. Varies over time; measured annually. Time period covered: 1973–93. Missing OECD-18 countries: Ireland, New Zealand (Iversen 1999: 48–57, 83–85; data at www.people.fas.harvard.edu/~iversen/centralization.htm).

17. Traxler-Blaschke-Kittel (TBK) wage bargaining centralization. Index of centralization of bargaining level, with ranking based on the most important level and special scores in case of equally important levels. There are 12 categories (I reversed the scores so that higher scores indicate greater centralization): 1 = company and plant, with group-specific bargaining; 1.5 = company and plant, with all groups and group-specific bargaining equally important; 2 = company and plant, with all groups bargaining jointly; 3 = combination of industry and company and plant, with group-specific bargaining; 3.5 = combination of industry and company and plant, with all groups and group-specific bargaining equally important; 4 = combination of industry and company and plant, with all groups bargaining jointly; 5 = industry, with group-specific bargaining; 6 = industry, with all groups bargaining jointly; 7 = combination of central, industry, company, and plant, with group-specific bargaining; 7.58 = combination of central, industry, company, and plant, with all groups bargaining jointly at the central level and group-specific bargaining at all other levels; 8 = combination of central, industry, company, and plant, with all groups bargaining jointly; 9 = central and industry, with group-specific bargaining; 10 = central and industry, with all groups bargaining jointly; 11 = central, with group-specific bargaining; 12 = central, with all employees bargaining jointly. Varies over time; measured in three- to five-year periods. Time period covered: 1970–98. Missing OECD-18 countries: none (also includes Portugal and Spain) (Traxler, Blaschke, and Kittel 2001: 114, 307, variable = BCEN).
Wage Coordination


19. Soskice wage coordination. Index ranging from 0 to 5. United States and United Kingdom (0): zero employer and union coordination. France (1.5): tacit government coordination via public services and large nationalized industry sector. Italy (2): informal employer coordination via big employers, especially Fiat, IRI, and some regional employer associations; some help from union confederations, CGIL and CISL. Netherlands (3): strong employer organizations and informal coordination between giant companies; occasional differences between giants and industry organizations; medium union coordination. Germany (3.5): strong employer organizations, with considerable coordination across industries; medium-strong union coordination. Sweden (4): powerful centralized employers organization; generally strong coordination across industries, with some divergence of interests; centralized union confederations with some internal conflicts. Norway (4): as Sweden, with government playing an additional coordinating role. Switzerland (4): very powerful employer organizations, playing tacit coordinating role; unions weak and pliant. Austria (5): very powerful union, with centralized coordinating role; medium-strong employer organizations. Japan (5): very powerful tacit employer coordination across large companies, in more or less centralized way, with backing from industry employer organizations; weak and pliant unions. Time invariant. Time period covered: mid-to-late 1980s. Missing OECD-18 countries: Australia, Belgium, Canada, Denmark, Finland, Ireland, New Zealand (Soskice 1990: 55).


24. Kenworthy wage coordination. This variable represents a set of predictions about the degree of coordination likely to be generated by wage bargaining arrangements in various countries. Index with 5 categories: 1 = fragmented wage bargaining, confined largely to individual firms or plants (Canada, Ireland 1960–69 and 1981–87, New Zealand since 1988, United Kingdom since 1980, United States); 2 = mixed industry- and firm-level bargaining, with little or no pattern setting and relatively weak elements of government coordination such as setting of basic pay rate or wage indexation (Australia since 1992, France, Italy in most years); 3 = industry-level bargaining with somewhat irregular and uncertain pattern setting and only moderate union concentration (Denmark in most years since 1981, Finland in a few years, Sweden since 1994); government wage arbitration (Australia prior to 1981, New Zealand prior to 1988); 4 = centralized bargaining by peak confederation(s) or government imposition of a wage schedule/freeze, without a peace obligation (Belgium and Finland in most years, Ireland 1970–80 and 1987–93); informal centralization of industry- and firm-level bargaining by peak associations (Italy since 1993, Netherlands since 1983, Norway in some years, Switzerland); extensive, regularized pattern setting coupled with a high degree of union concentration (Germany, Austria since 1983); 5 = Centralized bargaining by peak confederation(s) or government imposition of a wage schedule/freeze, with a peace obligation (Denmark 1960–80, Ireland since 1994, Norway in some years, Sweden 1960–82); informal centralization of industry-level bargaining by a powerful, monopolistic union confederation (Austria prior to 1983); extensive, regularized pattern setting and highly synchronized bargaining coupled with coordination of bargaining by influential large firms (Japan). Varies over time; measured annually. Time period covered: 1960–2000. Missing OECD-18 countries: none (Kenworthy 2001a).

Interest Group Participation in Policy Making

25. Lehmbruch union participation in economic policy making. Includes, but is not limited to, wage setting. Index with 4 categories: 1 = pluralism; 2 = weak corporatism; 3 = medium corporatism; 4 = strong corporatism. Time


**Political-Economic Consensus**


**Composite Corporatism Measures**


35. Keman composite corporatism measure. Index with 5 categories, ranging from no corporatism to strong corporatism. The scoring is based on the degree to which there exists an ideology of social partnership and the degree to which the state plays an active part in shaping the system of industrial relations. Time invariant. Time period covered: 1967–81. Missing OECD-18 countries: none (Keman 1984).


38. Schmidt composite corporatism measure. Index with 3 categories: 1 = weak; 2 = medium; 3 = strong. “Strong Corporatism” covers all those countries in which (a) the trade union leadership and the employers associations are committed to a social partnership ideology; (b) the state, the trade unions,
and the employers’ associations cooperate in some economic policy areas; (c) the strike volume between 1974 and 1978 is very low; (d) no authoritarian incomes policy was enacted by the state” (Schmidt 1982: 257). Time invariant. Time period covered: 1974–78. Missing OECD-18 countries: none (Schmidt 1982: 245).


40. Swank composite corporatism measure. An index of standardized scores for union density, union confederation power (e.g., control over strike funds, involvement in wage bargaining), and the level of wage setting, with each of these three components weighted by a factor score loading. Varies over time; measured annually. Time period covered: 1962–94. Missing OECD-18 countries: Ireland, New Zealand (Swank 2001; using data from the GLW data set).

41. Tarantelli composite corporatism measure. Index ranging from 3 to 15, which is a sum of 1–5 scores for 3 dimensions: (1) the degree to which there is not only a high ideological and political consensus but also a high integration and cooperation of trade unions and employers’ representatives with the political and economic machinery of the government; (2) the degree of centralization of wage setting; (3) the process of dispute settlement. Time invariant. Time period covered: 1968–83. Missing OECD-18 countries: Ireland, Switzerland (Tarantelli 1986: 12–13, “degree of centralization of the industrial relations system”).