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Schakel, Arjan Hille

University of Amsterdam

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A Postfunctionalist Theory of Regional Government
An Inquiry into Regional Authority and Regional Policy Provision

ACADEMISCH PROEFSCHRIFT

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door

Arjan Hille Schakel

geboren te Amsterdam

promotor: prof.dr. G.W. Marks
copromotor: prof.dr. E.A.E.B. Hooghe

4 Validation of the Regional Authority Index

4.1 Introduction

The purpose of this chapter is to validate the Regional Authority Index. One could distinguish between two reasons for assessing (internal) validity of measurements. First, by validating measurements, *commonalities* come to the fore. In how far do the measures measure the same? This is how assessing (internal) validity is usually understood. Another reason, however, may lie in exploring *differences* between measurements. When do measures of the same concept disagree? The answer to this question reveals information which might be helpful in deciding when or how to use one or the other measurement. In this chapter the validity of the Regional Authority Index is assessed by looking at the commonalities as well as the differences between the Regional Authority Index and other, widely used, regionalization and decentralization indices.

Three types of indices exist: indices measuring institutional decentralization/regionalization, indices of fiscal decentralization/regionalization or indices that combine institutional and fiscal components. Institutional indices have been developed by Mohammad Arzaghi and J. Vernon Henderson (2005), Dawn Brancati (2006), Liesbet Hooghe and Gary Marks (2001), Jan–Erik Lane and Svante Ersson (1999), Arend Lijphart (1999) and Daniel Treisman (2002). Fiscal indices have been introduced by Dietmar Braun (2000), Frank Castles (1999), Dan Stegarescu (2005a), Jean–Philippe Meloche, François Vaillancourt and Serdar Yilmaz (2004), Robert Ebel and Serdar Yilmaz (2002), Ruben Enikolopov and Ekaterina Zhuravskaya (2007), and Wallace Oates (1972). Some authors combine the two types into one index, as does Jaap Woldendorp, Hans Keman and Ian Budge (2002).

Despite the abundance of indices, there is little systematic comparison of their validity (an important exception is Rodden (2004)). This chapter focuses on two types of validity (Ray 2007; Bollen 1989)¹:

- *Convergent validity* assesses whether a given indicator is empirically associated with other indicators that conform to theoretical expectations: it involves comparing alternative measures of the same concept or comparing measures of different concepts (Ray 2007: 12). Measurements of the same concept, in our case, decentralization, should converge, that is, they should correlate across a given set of cases.
- *Content validity* assesses the degree to which an indicator captures the content of the measured concept (Adcock and Collier 2001: 537). This is a “qualitative type of validity where the domain of the concept is made clear

¹ Bollen (1989) and Ray (2007) distinguish between four types of validity. In addition to the two mentioned types of validity they identify criterion validity and construct validity. Criterion validity “involves the comparison of a measure with some other generally accepted measure of the same concept” (Ray 2007: 12). A given measure is compared to a ‘golden standard’. Since there is no ‘golden standard’ for decentralization, criterion validity cannot be assessed. Construct validity “assesses whether a measure relates to other observed variables in a way that is consistent with theoretically derived predictions” (Bollen 1989: 188). Construct validity is not assessed because theoretically derived predictions relating to the effects of regionalization and decentralization are imprecise.

and the analyst judges whether the measures fully represent the domain” (Bollen 1989: 185). Testing for content validity “does not involve the comparison of a measure with any other quantitative data, and can be employed even before any data is collected” (Ray 2007: 12). Content validity means that scholars agree on the definition of decentralization, or agree on how decentralization can be broken down into different types of decentralization. The measurements may differ in their ‘content’ because different theoretical assumptions underly them.

I assess convergent validity for the Regional Authority Index by comparing the index with seven institutional-type regionalization and decentralization indices commonly used in the literature. I do not use fiscal indices to examine convergent validity of the Regional Authority Index because there are major caveats with respect to content validity. I point out two caveats with conceptualizing and operationalizing fiscal decentralization.

In the next section, I introduce and compare seven institutional measures. Can decentralization be conceived as a single, continuous dimension? What is the common structure underlying these measures? I then test several hypotheses for explaining variation among the different measures, and I analyze the strongest cases of disagreement in greater detail. In the last section, I examine the content validity of fiscal indicators of decentralization.

4.2 Decentralization indices

I conceive of decentralization as a single, continuous dimension ranging from centralization in which the central government monopolizes decision-making authority to decentralization in which subnational governments have extensive decision-making authority that falls short of a monopoly over authority. It is important to note that this is a simplification. Some authors differentiate among vertical vs. horizontal decentralization, or decentralization with respect to decision-making, appointment, electoral, fiscal or personnel (Treisman 2002), or between fiscal, political and administrative decentralization (Schneider 2003).

The Regional Authority Index is consistent with these understandings in that it too is composed of different components: institutional depth, policy scope, fiscal autonomy, representation, and law making, executive control, fiscal control and constitutional reform. However, the Regional Authority Index differs from some (but not all) indices in that it focuses on regional tiers, i.e. the intermediate tiers with a minimum average jurisdictional population size of 150,000. Several decentralization indices that I discuss here consider the dispersion of power across all subnational tiers, thus including the local tier, and sometimes they also include dispersion of power to interests groups (i.e. corporatism).

I compare the Regional Authority Index with the following indices:

Arzaghi and Henderson (2005)²

These authors present a “nuanced index of ‘institutional’ decentralization, or effective federalism” (Arzaghi and Henderson 2005: 1176) which they construct by assessing fiscal, political, and administrative responsibilities of subnational government. This index is an average of six indicators, each of which ranges from 0 to 4:

- Unitary (0) or federal (4) government structure;
- Election of a regional executive: no (0) or yes (4);
- Election of a local executive: no (0) or yes (4);
- Ability of the center to suspend lower levels of government or to override their decisions: no (4) or yes (0);
- Revenue raising authority of lower level governments: no (0), limited (2) or full (4);
- Revenue sharing: no (0), limited (2) or full (4).

The dataset consists of scores for five-year intervals between 1960–1995 for 16 European and OECD countries that overlap with the Regional Authority Index dataset.³

Brancati (2006)

This index measures *political decentralization*, which is understood as the vertical division of authority among subnational levels of government that have independent decision-making power over at least one issue area.

The index consists of three components, which together construct a scale ranging from 0 to 5:

- Subnational elections: 1 point when there are subnational elections;
- Subnational legislative control over policies: 1 point each for tax authority, education and public order/police;
- Subnational veto over constitutional amendments: 1.

The dataset consists of 40 European, Balkan and OECD countries⁴, for the years 1985–2000.⁵

² The dataset, from which the Arzaghi and Henderson (2005) scores are derived, was kindly provided by Christine A. Kearney.

³ Australia, Canada, France, Germany, Greece, Hungary, Italy, Japan, the Netherlands, Poland, Romania, Russian Federation, Spain, Turkey, United Kingdom, and the USA.

⁴ Australia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Macedonia, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the USA.

⁵ Seventeen country scores were provided by Brancati (2006) herself (i.e. Belgium, Bosnia and Herzegovina, Canada, Estonia, Finland, Greece, Lithuania, Norway, Poland, Romania, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States). Twenty-three countries were scored by the author on the basis of information provided by Brancati in personal communication.

Hooghe and Marks (2001)

The Hooghe and Marks index is the only of seven which focuses on *regional autonomy*—rather than decentralization—within a country. This is an additive index of four components, ranging between 0 and 12:

- Constitutional federalism (0–4), which taps constitutional or legal provisions relating to regional government in the state. One point is assigned for each of the following characteristics (Hooghe and Marks 2001: 194):
 - Existence of a functioning regional tier of government;
 - Extensive authoritative competencies, including control over two or more of the following: taxation; police; education policy (including tertiary education); cultural policy; transport and communications policy; economic development; local government; and determination of regional political institutions (e.g., administrative hiring, budget process, timing of regional elections);
 - Specific regional competencies that are constitutionally guaranteed;
 - A federal state in which constitutional change is co-decided by the central state and regions.
- Special territorial autonomy (0–2), which refers to constitutional or legal provisions for home rule in special territories. The score is derived by multiplying the score for the extent of authoritative competencies in a special territory with a score that varies by the relative population size of the special territory, so that larger special territories weigh more heavily on the country score (Hooghe and Marks 2001: 200):
 - Scope of competencies:
 - ★ 0.5 = weak competencies;
 - ★ 1 = extensive competencies (see the list above).
 - Population coverage:
 - ★ 1 = less than 10 percent of the population;
 - ★ 2 = more than 10 percent of the population.
- Role of regions in central government (0–4), whereby the authors distinguish between legislative and executive power sharing:
 - Legislative power sharing, if there is a chamber in the national legislature composed of representatives of regional governments or parliaments:
 - ★ 0 = no chamber in the national legislature composed of representatives of regional governments or parliaments;
 - ★ 1 = chamber without wide-ranging veto power;
 - ★ 2 = chamber with wide-ranging veto power.
 - Executive power sharing:
 - ★ 0 = no regular intergovernmental meetings between central state and regional executives;
 - ★ 1 = regular meetings without authority to reach binding decisions;
 - ★ 2 = regular meetings with authority to reach binding decisions.
- Regional elections (0–2):
 - 1 = the regional assembly is indirectly elected;
 - 2 = the regional assembly is directly elected.

The dataset covers 14 West–European countries⁶, with for each country four time–points of evaluation: 1950, 1970, 1990 and 2000.

Lane and Ersson (1999)

This is an index of decentralization which is understood as “the territorial location of public decision and implementation functions at various levels of government” (Lane and Ersson 1999: 207).

The index consists of four discrete components for a total of 10 points:

- Extent of federalism (0–3);
- Special territorial autonomy (0–2);
- Functional autonomy (0–2);
- Local government discretion (0–3).

The dataset contains scores for 18 West–European countries⁷, and has one data point capturing decentralization in the post–Second World War period⁸.

Lijphart (1999)

Lijphart measures federalism and decentralization which he conceives as one dimension. The index consists of five ordinal categories which construe a scale that ranges from 1 to 5:

- 1 = unitary and centralized;
- 2 = unitary and decentralized;
- 3 = semi–federal;
- 4 = federal and centralized;
- 5 = federal and decentralized.

This dataset consists of 36 countries, of which 24 West–European and OECD countries overlap with the Regional Authority Index.⁹ There is one score which is an average evaluation of the post–Second World War period.¹⁰

Treisman (2002)

Treisman focuses on decentralization, and he measures different types: vertical, decision–making, appointment, electoral, fiscal and personnel decentralization.¹¹

⁶ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

⁷ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

⁸ The authors do not refer to a precise time point but since their book concerns the 1945–1995 period it is reasonable to assume that they consider scores to be an average for this time period.

⁹ Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and the USA.

¹⁰ Lijphart (1999) presents average scores for the years 1945 to 1996.

¹¹ Vertical decentralization is operationalized as the number of tiers in a country (Treisman 2002: 5 and 14). The Pearson correlation with the Regional Authority Index is 0.546 ($p < 0.01$; $N = 38$). Appointment decentralization is conceptualized as the extent to which executive appointments are made by actors at the same (or lower) tier, rather than from above (“for each appointment that was made by an actor at a higher

Decision-making decentralization comes closest to the definition of decentralization used in this chapter, and I therefore use it to validate the Regional Authority Index.

An index of decision-making decentralization can be made by summing three components of decentralization identified by Treisman, which creates a scale ranging from 0 to 3¹²:

- Weak autonomy = 1: the constitution reserves to subnational legislatures the exclusive right to legislate on at least one specific policy area or if subnational legislatures have residual authority;
- Residual autonomy = 1: the constitution gives subnational legislatures the exclusive right to legislate on policy areas not specifically assigned in the constitution;
- Subnational veto = 1: there is a regionally-elected upper chamber that has the constitutional right to block legislation.

The dataset covers 41 European, Balkan and OECD-countries¹³, and the scores reflect the situation in the mid-1990s.

Woldendorp, Keman and Budge (2000)

Their autonomy index measures “how independent the non-central units of government are as regards policy making” (Woldendorp, Keman and Budge 2000: 35). The autonomy index consists of four components, which combine in a scale from 0 to 8.

tier, one point is assigned for each tier that the appointer was above the appointee” Treisman 2002: 17). Electoral decentralization is operationalized as the extent to which subnational officials are elected (“percentage of subnational tiers at which the executive was chosen by direct election or selected by a directly elected legislature” Treisman 2002: 18). Appointment and electoral decentralization appear to have affinity with the representation dimension of the Regional Authority Index, i.e. *executive* and *assembly*, respectively. The Pearson correlations are low: -0.144 (not significant; N = 38), respectively 0.215 (not significant; N = 39). Fiscal decentralization is the share of subnational government in total tax revenues or the share of subnational government in public expenditures. Both are fiscal indicators, and as I argue below, they raise important concept validity concerns. Personnel decentralization is the share of subnational governments in total government administration employees (Treisman 2002: 19). The Pearson correlation between this indicator and the Regional Authority Index is 0.562 ($p < 0.01$; N = 32).

¹² The decision to sum three types of decision making decentralization is mine. Treisman is reluctant to combine the various measures of decentralization into a single index. For example, he notes that “the right of subnational actors to interfere in central legislative decisions will not necessarily coincide with their autonomy from central interference, so it makes more sense to use [the] different types of indicators separately than to combine them” (2002: 9–10). This is a defensible position, theoretically or empirically, it is perfectly possible that these different decentralization rights not coincide. The starting point in this chapter, and in the dissertation as a whole, is that decentralization is a multifaceted phenomenon which is best captured by combining measures of diverse components. The Regional Authority Index introduced in this dissertation differentiates between self-rule and shared rule, and these concepts resemble Treisman’s notions of subnational autonomy from central interference and subnational actors right to interfere in central legislative decisions respectively. Just as the Regional Authority Index is a summation of self-rule and shared rule, it seems sensible to combine the two indicators of decision-making decentralization into a single measure.

¹³ Albania, Australia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Macedonia, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the USA.

- Central fiscalization (0–2)¹⁴:
2: if a country has a degree of fiscal centralization lower than 75%;
1: if a country has a degree of fiscal centralization between 75% and 90%;
0: if a country has a degree of fiscal centralization equal to or more than 90%.
- Regional autonomy (0–2):
2: if regional autonomy is formally laid down (as is the case in federalist states);
1: if the country is a semi-federalist system;
0: neither.
- Centralization (0–2):
2: if the state is not considered to be centralized;
1: if the state is considered to be medium centralized;
0: if the state is considered to be highly centralized.
- Local government autonomy (0–2):
2: if three conditions are met: local government is mentioned in the constitution, its autonomy is recognized, and it is guaranteed own representation;
1: if one of these conditions is met;
0: all other cases.

The dataset contains 37 European, Balkan and OECD-countries¹⁵, and there is one time-point of evaluation which reflects the post-Second World War period.¹⁶

4.3 Factor analysis

To see whether these diverse measures of a single concept—decentralization—have a common structure, a principal axis analysis is employed (Marks, Hooghe, Steenbergen and Bakker 2007).¹⁷ Since the number of countries for which we have scores differs per decentralization index, I perform four separate factor analyses so that I can maximize the number of cases.

The factor analyses in table 4.1 reveal that the indices do indeed have a common structure. In each analysis, the principal axis has an eigenvalue well above one, and the explained variance is 75% or more. The Regional Authority Index measure loads strongly on the principal axis in all four analyses. Lijphart's and Hooghe and Marks', and to a lesser extent Brancati's and Treisman's measure also load heavily on the principal axis.

¹⁴ The operationalization of central fiscalization diverges somewhat from the one published in Woldendorp, Keman and Budge (2000). The adjustments were made after communication with Hans Keman and Jaap Woldendorp.

¹⁵ Australia, Austria, Belgium, Bulgaria, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and the USA.

¹⁶ The authors do not specify a particular time point, but since their book covers the 1945–1998 time span it seems reasonable to assume that their scores average the situation for the duration of this time period.

¹⁷ The Pearson correlations between the decentralization indexes are given in appendix 4.1.

Table 4.1: Factor analyses of seven decentralization indices and the Regional Authority Index

Decentralization index	Factor analysis I	Factor analysis II	Factor analysis III	Factor analysis IV
Regional Authority Index	0.996	0.934	0.920	0.910
Arzaghi and Henderson (2005)	0.748	—	—	—
Brancati (2006)	0.771	0.840	0.917	0.906
Hooghe and Marks (2001)	0.945	0.924	—	—
Lane and Ersson (1999)	0.809	0.740	—	—
Lijphart (1999)	0.894	0.923	0.931	—
Treisman (2002)	0.824	0.884	0.869	0.906
Woldendorp, Keman, and Budge (2000)	0.920	0.789	0.874	0.866
N	7	14	23	36
Eigenvalue	6.017	5.232	4.072	3.209
Explained Variance	75%	75%	81%	80%

Notes: All indices are standardized. Shown are the factor loadings resulting from a principal axis analysis. The following time periods are compared with each other: Regional Authority Index (average for 1950–2006); Arzaghi and Henderson (average score of eight, five-year intervals between 1960–1995); Brancati (one score for 1985–2000); Hooghe and Marks (average of four time points: 1950, 1970, 1990, 2000); Lane and Ersson (one score for 1945–1995); Lijphart (one score for 1945–1996); Treisman (one score for the mid–1990s); Woldendorp, Keman, and Budge (one score for 1945–1998).

4.4 Sources and cases of disagreement

In this section, I explore the sources of disagreement between the decentralization indexes and I pay close attention to the most important cases of disagreement.

The decentralization indices can be considered as expert judgments. As can be seen from the description of the indices, each expert uses her/his own criteria. Although there are commonalities in these criteria, there are also many differences. Furthermore, experts differ in their level of knowledge for different countries. One may hypothesize that this all leads to different evaluations of subnational autonomy in countries.

4.4.1 Sources of disagreement

To explore the structure of disagreement between the Regional Authority Index and the other measures, the Regional Authority Index is regressed on each decentralization index.¹⁸ By exploring the residuals from regressing the Regional Authority Index on one of the other decentralization indices one can see when the measures disagree. I am interested in *systematic* sources of bias or error—not in random error. Where can we expect to observe larger residuals, that is to say, where can we expect the scores of the Regional Authority Index to differ systematically from one of the other indices?

4.4.2 No regional tier

One major difference between the Regional Authority Index and all but one of the alternative seven indices is that the Regional Authority Index only captures intermediate regional tiers, not local government. The Regional Authority Index also excludes regional tiers with an average population size below 150,000 people. Six of the seven other indices consider local as well as regional government in assessing decentralization. So the Regional Authority Index is designed to measure regional government, and this, one would expect, is somewhat *conceptually* distinct from decentralization, which the other indices measure.

It seems reasonable, then, to expect negative residuals for countries which have only one subnational government tier, which are countries with local government only. That is to say, the Regional Authority Index should under-estimate decentralization in countries that have only a local tier.

4.4.3 Federal versus non-federal countries

The fine-grained character of the Regional Authority Index allows for capturing graduations in the extent of regional autonomy—even in countries with highly autonomous regions, such as federal countries. This is different from most indices, which usually employ a sharply discontinuous measure, sometimes simply dichotomous, that distinguishes federal from non-federal countries. Lijphart, for example, assigns all federal countries a score of 5 whereas only Austria scores a 4.5. All federal countries, except Austria, thus receive the highest score while non-federal countries are allowed to have more differentiated scores (between 1, 2, and 3).

The Regional Authority Index is more sensitive to variation within the federal category: the range among federal countries is 14, from about 17 (Austria and the Russian Federation) to almost 30 (Germany) up to about 31 (Bosnia and Herzegovina). This range is about the same as it is for non-federal countries which vary between 0 (multiple countries) to about 14 (the Netherlands and Sweden).

¹⁸ The approach is similar to the one developed by Marks, Hooghe, Steenberghe and Bakker (2007) in cross-validating several measures of party positioning.

Other indices, however, work exactly the opposite way: they tend to treat the non-federal countries more as a homogenous group and allow more variation among the federal countries. Treisman's measure, for example, gives only six out of 33 non-federal countries a score higher than zero, whereas all eight federal countries score between 1 and 3.

Differential sensitivity in measurement should produce systematic differences in scoring. That is to say, for some indices, such as Lijphart's, one would expect the residuals with the Regional Authority Index to be larger for federal countries than for non-federal countries. Conversely, for other indices such as Treisman's, the residuals should be smaller for federal countries and larger for non-federal ones.

These different biases in scoring become apparent when one compares, for each index, means, standard deviations and ranges for federal with those for non-federal countries (see table 4.2). All decentralization indices are able to differentiate between federal and non-federal countries, i.e. the mean score for non-federal countries is significantly different from the mean for federal countries. This means that all decentralization indices pick up *between-group* differences.

But not all measures are equally suited to capture *within-group* differences. The ratio measure in table 4.2 gives a sense of this. The ratio is calculated by dividing the standard deviation of federal countries by that of non-federal countries. A ratio larger than one indicates that the decentralization index is biased to capturing variation among federal countries, a ratio smaller than one indicates the opposite. One can see that the Regional Authority Index, Arzaghi and Henderson and Woldendorp, Keman and Budge differentiate equally between countries *within each group*. Hooghe and Marks and Lijphart tend to treat the federal countries as a homogenous group whereas Brancati, Lane and Ersson and Treisman tend to treat non-federal countries as a homogenous group.

One may expect differences in scoring to lead to negative residuals (underestimation by the Regional Authority Index) for federal countries for the Hooghe and Marks and Lijphart measures whereas it should lead to positive residuals (overestimation by the Regional Authority Index) for federal countries for the Brancati, Lane and Ersson and Treisman measures.

4.4.4 Asymmetry and regionalizing

A last source of disagreement might be expected for countries that, for some reason or another, are complicated to evaluate. This may be so when a country has asymmetrical regions which depart from the general country pattern, or when decentralization in a country has been in flux recently. The vertical state structure is not necessarily uniform within a single country at a certain point in time *and* across time. A country might have a special autonomous region which has more autonomy than other subnational units, for example *Grønland* and the *Færøerne* in Denmark and *Åland* in Finland. There might also be differences between units of the same subnational tier. Examples are the historic communities versus the other *autónomas comunidades* in Spain and the special statute regions versus the ordinary regions in Italy.

Table 4.2: Comparison of means, standard deviations, and ranges between federal and non-federal countries for eight decentralization indices (standardized)

Decentralization index	Federal countries				Non-federal countries				Ratio
	Mean	St. dev.	N	Min – Max	Mean	St. dev.	N	Min – Max	
Arzaghi and Henderson (2005)	0.873	0.776	5	-0.892 – 1.400	-0.397	0.825	11	-1.351 – 0.942	0.941
Brancati (2006)	1.203	0.863	9	-0.318 – 2.616	-0.349	0.736	31	-2.274 – 1.638	1.173
Hooghe and Marks (2001)	1.829	0.323	8	1.527 – 2.131	-0.305	0.700	48	-0.890 – 1.829	0.423
Lane and Ersson (1999)	1.259	1.033	3	0.663 – 2.452	-0.252	0.809	15	-1.127 – 1.259	1.277
Lijphart (1999)	1.539	0.128	6	1.278 – 1.592	-0.513	0.483	18	-0.917 – 0.400	0.265
Treisman (2002)	1.396	0.821	8	0.525 – 2.848	-0.319	0.727	33	-0.636 – 1.687	1.129
Woldendorp <i>et al.</i> (2000)	1.468	0.690	7	0.616 – 2.243	-0.342	0.709	30	-1.554 – 0.616	0.973
Regional Authority Index	1.477	0.547	9	0.896 – 2.340	-0.409	0.652	33	-1.030 – 1.452	0.839

Notes: The ratio score is obtained by dividing the standard deviation for federal countries by the standard deviation of non-federal countries. A ratio of more than 1 indicates that federal countries vary more in their scores than non-federal countries. A ratio score of less than 1 indicates that non-federal countries vary more than in their scores than federal countries. The following countries were considered federal for most of the time during their democratic existence in the post-Second World War period: Australia, Austria, Bosnia and Herzegovina, Canada, Germany, Russian Federation, Serbia and Montenegro, Switzerland and the United States.

Decentralization is a moving target. Subnational tiers may be created or abolished, autonomy may be deepened or revoked. In France, for example, the *régions* were institutionalized in 1964 and across time were granted more autonomy. How scholars evaluate these differences at a certain point in time may differ, and this, one would expect, should lead to variation in scoring.

4.4.5 Explaining disagreement

Testing these expectations requires that disagreement is operationalized. I use as measure the residuals from regressing the Regional Authority Index on the other decentralization indices.

The first two sources of disagreement—presence or absence of a regional tier and federal or non-federal—are operationalized as dummy variables.¹⁹ To measure asymmetry and dynamic regionalization, I construct an additive index (0–2), whereby I allocate a value of 1 to a country that has (had) asymmetric regions²⁰, and a value of 1 to a the country that has experienced radical regionalization²¹ in the post-Second World War period. The Regional Authority Index is regressed on the decentralization indices and the residuals are subsequently regressed on the sources of disagreement variables.²² I begin by considering absolute residuals and than look at raw residuals (taking the sign into account).

The absolute residual analysis in table 4.3 shows that the sources of disagreement differ across decentralization indices. The strongest predictor of disagreement for Brancati and Treisman is the ‘no regional tier’ variable. The federal–non federal variable is effective in explaining disagreement with the Treisman index and the asymmetry/regionalized variable explains disagreement with the Lijphart variable. None of the factors appeared significantly associated with the

¹⁹ *No regional tier*: whether the country has a regional tier or not (0 = country has a regional tier; 1 = country has no regional tier, i.e. Cyprus, Estonia, Iceland, Latvia, Luxembourg, Macedonia, Malta, and Slovenia). *Federal–non federal*: whether the country has been a federal or non-federal country for the largest part of the post-Second World War period (since becoming democratic) (0 = non-federal country; 1 = federal country, i.e. Australia, Austria, Bosnia and Herzegovina, Canada, Germany, Russian Federation, Serbia and Montenegro, Switzerland and the United States).

²⁰ Countries which scored one point: Australia (Territories versus States), Belgium (*gemeenschappen* versus *gewesten*), Canada (territories versus provinces), Denmark (*Færøerne* and *Grønland* versus *amter*), Finland (*Åland*), Italy (*regioni a statuto speciale* versus *regioni a statuto ordinare*), Portugal (*Açores* and *Madeira*), Spain (*Ceuta* and *Mellila*; historic *autónomas comunidades* versus the other *comunidades*), United Kingdom (Northern Ireland, London Regional Authority, Scotland and Wales versus Regions) and the United States (Alaska, Hawaii and Washington D.C. versus states).

²¹ The cut-off point of having regionalized is to have had an absolute cumulative change of at least 10 in the Regional Authority Index country score over the post-Second World War period. The following countries meet this criterion: Belgium, France, Italy, Spain and the United Kingdom. Since most changes involve more autonomy, I call this variable ‘regionalized’, though for the United Kingdom there are almost as many negative as positive changes (because of the suspension of the parliament of Northern Ireland and the abolishment of the counties in Northern Ireland, Scotland, Wales and parts of England). This does not need to concern us since the variable should indicate whether there is difference cross-sectionally and across time. Differences increase the likelihood of disagreement.

²² The Pearson correlations between the sources of disagreement and between the residuals of the different decentralization indices are given in appendix 4.1 (tables 4.1B and 4.1C).

Table 4.3: Analysis of the *absolute* residuals of the regression of the Regional Authority Index on the different decentralization indices (all indices are standardized)

Source of disagreement	Arzaghi and Henderson (2005)	Brancati (2006)	Hooghe and Marks (2001)	Lane and Ersson (1999)	Lijphart (1999)	Treisman (2002)	Woldendorp <i>et al.</i> (2000)
No regional tier	—	0.673*** (0.196)	—	0.321 (0.341)	0.199 (0.154)	0.361*** (0.131)	0.071 (0.160)
Federal–non–federal	–0.032 (0.128) ^a	0.276 (0.172)	–0.087 (0.245) ^a	0.547* (0.296)	0.044 (0.112)	0.314** (0.126)	0.012 (0.153)
Asymmetry/ regionalized	–0.046 (0.081) ^a	0.047 (0.109)	–0.051 (0.090) ^a	0.197 (0.139)	0.193*** (0.066)	0.037 (0.077)	0.028 (0.090)
N	98	40	51	18	24	41	37
R ²	0.02	0.26	0.02	0.22	0.30	0.23	0.01
Adj. R ²	—	0.20	—	0.05	0.20	0.17	–0.08

Notes: * p < 0.10; ** p < 0.05; *** p < 0.01. The residuals are regressed on the different sources of disagreement. Shown are the beta-coefficients and their standard errors.

^a Cluster corrected standard errors (Arzaghi and Henderson (2005): 16 countries x 8 time points; Hooghe and Marks (2001): 14 countries x 4 time points).

Table 4.4: Analysis of the raw residuals of the regression of the Regional Authority Index on the different decentralization indices (all indices are standardized)

Source of disagreement	Arzaghi and Henderson (2005)	Brancati (2006)	Hooghe and Marks (2001)	Lane and Ersson (1999)	Lijphart (1999)	Treisman (2002)	Woldendorp <i>et al.</i> (2000)
No regional tier	—	-1.093*** (0.256)	—	-0.221 (0.514)	-0.304 (0.259)	-0.766*** (0.209)	-0.493** (0.238)
Federal–non–federal	0.413* (0.233) ^a	0.457** (0.225)	-0.232 (0.356) ^a	0.910* (0.446)	-0.144 (0.187)	0.180 (0.201)	0.318 (0.228)
Asymmetry/ regionalized	-0.169 (0.152) ^a	0.133 (0.143)	0.057 (0.156) ^a	0.387* (0.210)	0.289** (0.111)	0.157 (0.123)	0.120 (0.134)
N	98	40	51	18	24	41	37
R ²	0.20	0.48	0.05	0.35	0.38	0.38	0.24
Adj. R ²	—	0.44	—	0.21	0.29	0.33	0.17

Notes: * p < 0.10; ** p < 0.05; *** p < 0.01. The residuals are regressed on the different sources of disagreement. Shown are the beta-coefficients and their standard errors. A negative sign means underestimation and a positive sign means overestimation of the Regional Authority Index.

^a Cluster corrected standard errors (Arzaghi and Henderson (2005): 16 countries x 8 time points; Hooghe and Marks (2001): 14 countries x 4 time points).

residuals for Arzaghi and Henderson, Hooghe and Marks, Lane and Ersson, and Woldendorp, Keman and Budge.

I repeat the same analysis for raw residuals and report the results in table 4.4. The most striking result is that all beta-coefficients are negative for the ‘no regional tier’ variable which means that the Regional Authority Index systematically *underestimates* subnational autonomy of countries which have no regional tier.

4.4.6 Cases of disagreement

It is not only interesting to see what the sources of disagreement are but also whether disagreement is caused by certain countries. What are the outliers? I define a ‘case of disagreement’ as having a residual score of two standard deviations or more. Table 4.5 shows thirteen cases of disagreement involving nine countries.

The differences in scoring for Cyprus, Finland, Luxembourg and Macedonia can be explained by the fact that the Regional Authority Index does not measure local government while the other decentralization indices do. But the precise scoring of these cases still raises some questions.

Cyprus and Luxembourg score 1 (out of 3) on the Treisman measure since the constitution of these countries reserves to subnational legislatures the exclusive right to legislate in at least one specific policy area. For Luxembourg this is birth, marriage, and death certificates²³ and for Cyprus it is town planning.²⁴ This kind of scoring leads to some curious bedfellows: Australia and Russia also score 1 on Treisman’s index, and yet it would be difficult to sustain that the states of Australia and the *federacii subwekty* in the Russian Federation have the same autonomy as the municipalities in Cyprus and Luxembourg. Treisman’s index, then, may not be discriminatory enough to tap the full range of variation in decentralization.

A similar observation could be made for the Macedonian score on Brancati’s index. Macedonia scores 3 out of 5, because local governments have authority over taxation (+1) and education (+1) and they have an elected assembly (+1). However, the 1995 Law on self-government strongly curtailed these powers as Brancati notes herself.²⁵ Macedonia’s score of 3 ranks on par with the *regioni* in Italy, the *autónomas comunidades* in Spain, the Australian states, the Russian federal subjects and the Belgian *gemeenschappen/gewesten*.

Woldendorp, Keman and Budge give Macedonia a score of 4 (out of 7). The score reflects that local government is mentioned in the constitution in combination with independent rights and its own representative body (+2 points) and that fiscal centralization is lower than 75% (+2 points). The latter part of the scoring is contested by several more recent studies which highlight the limited tax autonomy of Macedonian local governments. Woldendorp, Keman and Budge measure fiscal centralization as “Central Government Revenues as a % of General Government” (2000: 32–38) which is for Macedonia 44% (meaning that the local governments collect 66% of general government revenue). Financial governmental data for Macedonia is hard to find but the new Law on Local Government Finance (2002)

²³ Art. 108 (dataset from Treisman).

²⁴ Art. 176 (dataset from Treisman).

²⁵ Data provided by Brancati (*pers. comm.*).

Table 4.5: Cases of disagreement between the Regional Authority Index and seven decentralization indices

Country	Sign	Decentralization Index
Belgium	+	Brancati (2006)
Belgium	+	Hooghe and Marks (2001)
Cyprus	-	Brancati (2006)
Cyprus	-	Treisman (2002)
Finland	-	Woldendorp, Keman and Budge (2000)
Germany	+	Brancati (2006)
Germany	+	Lane and Ersson (1999)
Luxembourg	-	Treisman (2002)
Macedonia	-	Brancati (2006)
Macedonia	-	Woldendorp, Keman and Budge (2000)
Poland	-	Arzaghi and Henderson (2005)
Serbia and Montenegro	+	Brancati (2006)
Sweden	+	Hooghe and Marks (2001)

Notes: A case of disagreement is defined as having a residual of above two standard deviations. The sign of the residual is also given. A positive sign signifies overestimation and a negative sign signifies underestimation of the Regional Authority Index. There are no cases of disagreement between the Regional Authority Index and Lijphart's (1999) measure.

assigns the levy of various taxes on property to local government units together with 3% of the personal income tax and access to an equalisation fund equal to 3% of value added taxes (Davey 2004). Local governments share in government expenditures as a percentage of general government expenditures was 7% in 2003 (Davey 2004). In light of this data the scoring of Macedonia by Woldendorp, Keman and Budge is questionable for the post-2000 period but appears plausible for the 1991-1998 period (but see Todorovski 2001 for the late 1990s).

The higher score for Finland for Woldendorp, Keman and Budge has to do with the fact that the Regional Authority Index does not measure local government. Finland scores high on subnational autonomy, a component of the Woldendorp, Keman and Budge measure, which brings it on par with the Scandinavian as well as with the federal countries. Unlike its Scandinavian neighbors, Finland had no

significant regional (or county) level of government before 1993, which is why the Regional Authority Index underestimates decentralization in Finland but not in the other Scandinavian countries.

A case where the source of disagreement lies in a different definition of the boundaries of the country is Serbia and Montenegro which is scored relatively lower on decentralization by Brancati than the Regional Authority Index. The main reason, it appears, is that Brancati focuses primarily on *Serbia* during 1985–2000, while the Regional Authority Index considers *Serbia and Montenegro* as a unit.²⁶

Three cases of disagreement concern differences in whether particular tiers are included or excluded.

The first is Belgium, which Hooghe and Marks give a lower score than the Regional Authority Index in 1970 and in 1990. The main reason for this disagreement is that Hooghe and Marks focused on one government tier—the most autonomous tier at a given time point—rather than on all intermediate tiers. In 1970, the most autonomous tier consisted of the provinces, and by 1990—their next time point—it was the communities. The Regional Authority Index, on the other hand, evaluates all intermediate tiers of government present at any time point. Belgium is also a case of disagreement with the Brancati measure. The main reason is that Brancati also focused on one tier of government, namely the regions/communities but not the provinces. This results in a lower scoring by Brancati.

A third case of divergence, also with the Hooghe and Marks measure, is Sweden which is scored higher by the Regional Authority Index in 1950 and 1970. Hooghe and Marks consider the county governments in the Scandinavian countries as local and do not include them because their measure concerns regional autonomy. Hooghe and Marks therefore do not include the *län* in Sweden whereas the Regional Authority Index does²⁷, resulting in a lower scoring by Hooghe and Marks.

The remaining disagreements cannot be reduced to the local government factor, to country definition or to inclusion/exclusion of particular tiers.

A first and second case of divergence is Germany, which Lane and Ersson and Brancati score significantly lower on decentralization than the Regional Authority Index. Lane and Ersson give Germany 4 (out of 10), which places Germany at the same level as Denmark, Finland and the Netherlands. The main reason for this is Lane and Ersson's unusually expansive operationalization of decentralization: not only does it include local governance (+3 for Denmark and Finland), but also functional, neo-corporatist autonomy (+2 for the Netherlands).

Brancati scores Germany 3 (out of 5) as she estimates that the *Länder* do not have control over public order/police (–1) and constitutional amendments do not require *Länder* approval (–1). Both coding decisions are contestable. Public order/police is actually a concurrent power (Watts 1999; Swenden 2006; and appendix 3.1). On constitutional change, *Länder* approval of constitutional amendments is indispensable due to their dominance in the *Bundesrat* (appendix

²⁶ The other decentralization indexes do not include Yugoslavia and/or Serbia and Montenegro for the time period in question.

²⁷ The upper chamber with *län* representation was abolished in 1971 and the Regional Authority Index score decreases for subsequent time periods. Therefore the time points 1990 and 2000 do not lead to a case of disagreement.

3.1). Brancati does not measure shared power exercised via an upper chamber but the Regional Authority Index does.

Another case of disagreement with the Brancati measure concerns Cyprus. Brancati scores Cyprus 3 out of 5, while the Regional Authority Index scores it 0. The disagreement lies in the operationalization of decentralization. Closer examination shows that Brancati includes consociational arrangements laid down in the Constitution which decentralize authority to the Greek and Turkish Communities while the Regional Authority Index excludes decentralization to non-territorial actors.

A fourth and final case of disagreement is Poland which Arzaghi and Henderson score higher than the Regional Authority Index. The difference in opinion appears to be whether the central government has the ability to suspend or to override subnational decisions. According to Arzaghi and Henderson, the answer is no, and so Poland receives a score of 4 instead of 0 for this sub-indicator. The scoring of Poland seems to be incorrect. The highest regional tier, the *województwa*, have gained directly elected councils and more autonomy since the end of communism, but their decisions are still subject to central sanctioning (Council of Europe 2000: 47–48 and Kowalczyk 2000: 228; appendix 3.1). Central control is even greater for the lower regional tier, *powiaty*, and for local government, the *gminy*, for which the central government has the right to override decisions and has the authority to suspend the councils (Council of Europe 2000: 46–51; Glowacki 2002: 113–114; Okraszewska and Kwiatkowski 2002: 201–202; Kowalczyk 2000: 222–228).

4.5 Content validity of fiscal indicators

Fiscal indicators are widely employed as an overall measure of decentralization (see for example Braun 2000b; Castles 1999; Fisman and Gatti 2002; Lane and Ersson 1999; Oates 1972; and Stegarescu 2005b). These indicators are based upon two extensively used sources: the Governance Finance Statistics database by the International Monetary Fund and Historical and/or National Accounts and/or Revenue Statistics of the Organization of Economic Cooperation and Development. Many different operationalizations exist but the most broadly used operationalizations are the following:

- a. *subnational share of total government expenditures;*
- b. *intergovernmental grant share (i.e. grants from higher tier governments) as a percentage of total subnational revenue;*
- c. *subnational own revenue (i.e. revenues from taxes plus fees and levies) as a percentage of total subnational revenue;*
- d. *subnational tax revenue share as a percentage of total subnational revenue;*
- e. *subnational tax revenue share as a percentage of total government tax revenue.*

One can categorize the different operationalizations in two broad classes: expenditure (a and b) and revenue (c, d and e) aggregate fiscal indicators. Both classes of fiscal indicators raise two main caveats/problems with respect to content

validity. First of all, fiscal indicators do not differentiate very well between decision-making authority and the authority to implement²⁸ and, therefore, cannot be used to measure subnational decision-making authority. The second caveat is that fiscal indicators do not measure effectively differences in subnational implementation powers.

Caveat 1: Expenditure and revenue fiscal indicators fail to capture how much decision-making authority subnational governments have and do not differentiate between decision-making and implementation.

To exemplify this caveat one may differentiate between *regulatory policies* and *policies involving the direct expenditure of public funds* (Majone 1994). This distinction helps us to tell apart policies with a direct bearing on the public budget, for example welfare state policies, from policies that are not expensive for government budgets but have considerable impact on society through the rules they impose, for example civil and criminal law. While the cost of expenditure programmes is borne by the public budget, the cost of most regulatory policies is borne by citizens and firms (Majone 1994).

To the extent that regions have control over regulatory policies, expenditure fiscal indicators would tell us nothing about decentralization. Imagine two countries, one in which subnational governments have the authority to implement expenditure policies (country A) and one in which subnational governments have authority regarding regulatory policies (country B). An expenditure fiscal indicator will score country A higher than country B on subnational decentralization. However, it would be wrong to conclude that country A is more decentralized than country B or that subnational governments in country A are more autonomous than those in country B. In fact, subnational governments in country B might have much more autonomy than those in country A since regulatory policies have the capacity to affect society deeply.

Fiscal indicators on the expenditure side are particularly problematic for capturing decision-making decentralization, since it does not tell us whether the expenditure comes from conditional or unconditional grants, whether the central government determines how the money should be spent, whether it sets the framework legislation within which subnational governments implement, or whether—indeed—subnational governments spend the money autonomously (Akai and Sakata 2002; Breuss and Eller 2004; Ebel and Yilmaz 2002; Fisman and Gatti 2002; Panizza 1999; Sharma 2006).

The argument can be shown empirically in a scatter plot of the Regional Authority Index against the subnational share of total government expenditure (see figure 4.1). Subnational governments in Scandinavian countries have the same (or higher) shares of total government expenditures than their peers in federal countries. To conclude from this that Scandinavian countries are as decentralized as federal

²⁸ The distinction between the authority to decide and the authority to implement is based upon Braun's (2000b) 'Right to Decide' and 'Right to Act' respectively. "The Right to Decide refers to who may decide *what* will be done (policy formulation and decision-making). The Right to Act refers to who may decide on *how* it will be done (policy implementation)" (Braun 2000b: 29; original italics).

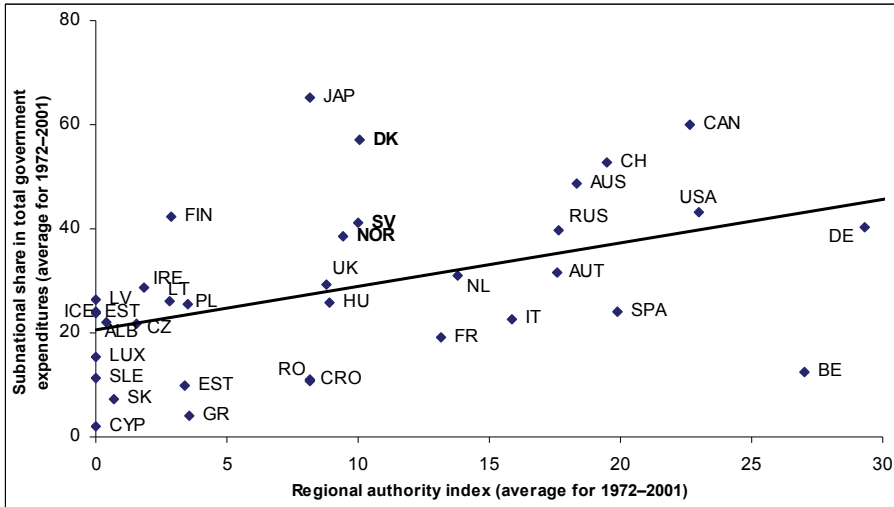


Figure 4.1: Subnational expenditure share as a percentage of total government expenditures plotted against scores on the Regional Authority Index (averages for 1972–2001)

Notes: The Pearson correlation between the two measures is 0.459 ($p < 0.01$; $N = 35$). Source: *World Bank* (2006).

countries would be wrong. Subnational governments in Scandinavian countries have less decision-making authority over policies, less taxation power, and they do not enjoy power sharing.²⁹ The national government decides policies and local and regional governments implement them (Rodden 2004).

One could ‘correct’ the indicator for subnational share by looking at the share of intergovernmental grants (Akai and Sakata 2002; Breus and Eller 2004; Oates 1972; Stegarescu 2005b). This indicator measures the amount of central government involvement in subnational provision of policies. Often a distinction is made between conditional (specific) and unconditional (general) grants, whereby it is generally assumed that central government involvement is higher with conditional grants as a conditional grant ties expenditure to particular strings (conditions) imposed by the central government (Shah 2007). But taking the intergovernmental grants into account does not solve the problem. Aside from data availability regarding unconditional and conditional grants (Rodden 2004), there is the problem that intergovernmental grants do not seem to differentiate between federal and non-federal countries (see figure 4.2), as an one-way Anova analysis as regards to average (1972–2001) subnational intergovernmental grant share as a percentage of total subnational revenue bears out ($N = 35$; $F = 0.50$; $p = 0.482$)³⁰.

²⁹ Sweden counties (*län*) were represented in an upper chamber before the 1971 parliamentary reform. The data reflect the 1972–2001 period.

³⁰ The following countries were considered to be federal Australia, Austria, Belgium, Canada, Germany, Russia, Spain, Switzerland and the United States of America. Excluding Belgium and Spain from the federal group does not lead to different conclusions (oneway ANOVA analysis: $N = 35$; $F = 1.85$, $p = 0.182$).

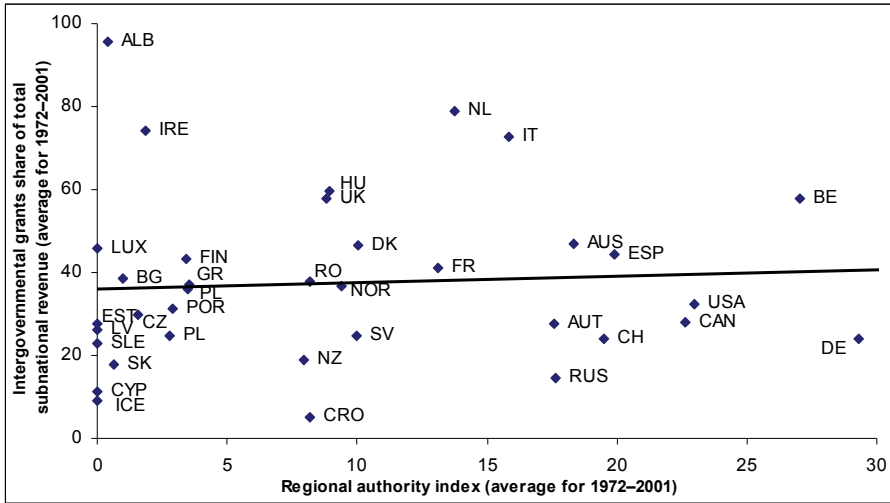


Figure 4.2: Intergovernmental grant share as a percentage of total subnational government revenue plotted against scores on the Regional Authority Index (averages for 1972–2001)

Notes: The Pearson correlation between the two measures is 0.034 (not significant; N = 36). Source: World Bank (2006).

Fiscal indicators on the revenue side are not biased against direct expenditure or regulatory policies. But they generate their own problems of concept validity. Revenue fiscal indicators do not help us figure out whether authorities that can tax autonomously can also decide autonomously what to do with the money (Ebel and Yilmaz 2002; Marlow 1988; Martinez–Vazquez and McNab 1997; Panizza 1999).

While the revenue might be collected freely, it may have to be spent on policies laid down by the central government. There is no direct, theoretical or empirical, link between the authority to collect revenues and the authority to decide and implement policies.

This is apparent in figure 4.3 which plots the average Regional Authority Index score for 1972–2001 against the subnational tax revenue as a percentage of total government tax revenue (averages for 1972–2001). The correlation is moderate and significant (Pearson $r = 0.47$, $p < 0.01$, $N = 36$). But a closer look at individual countries reveals that Sweden and Denmark are ranked at the same level as the USA and, to a lesser extent, the Russian federation and Switzerland, all three of which are federations. The counties in Denmark and Sweden may set the rate of income tax within central government parameters (appendix 3.1). But it would be wrong to conclude that the subnational tiers in Sweden and Denmark have the same policy and institutional autonomy as their peers in the USA, the Russian federation and Switzerland.

The fundamental difference between the subnational tiers in Sweden and Denmark and the constituent units in federal countries is that the central government retains full decision–making rights regarding tax powers in the former—and can unilaterally change the rules if and whenever it so desires—while it is constitutionally bound to respect regional tax powers in the USA, Switzerland, and

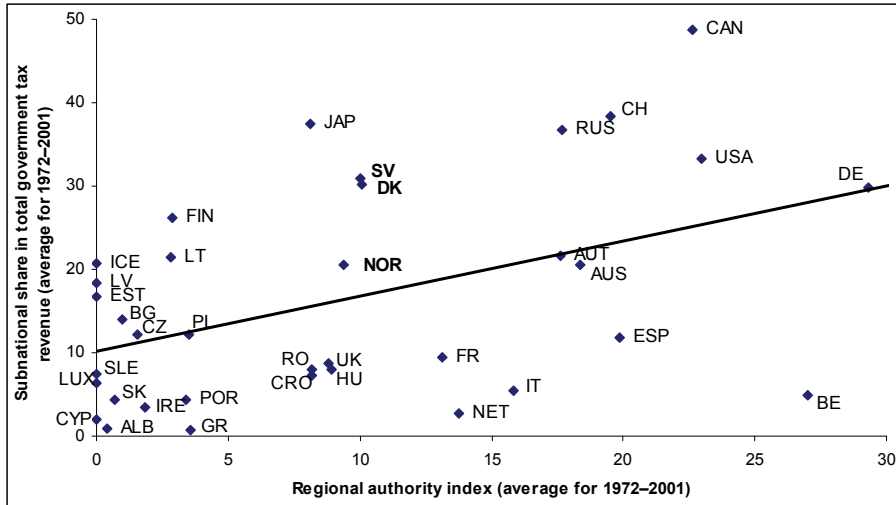


Figure 4.3: Subnational tax revenue share as a percentage of total government tax revenue plotted against scores on the Regional Authority Index (averages for 1972–2001)

Notes: The Pearson correlation between the two measures is 0.472 ($p < 0.01$; $N = 36$). Source: *World Bank (2006)*.

arguably even in semi-democratic Russia. Moreover, regional authorities in Sweden and Denmark have primarily administrative powers over a broad range of policies within a national legislative framework. In the USA, Switzerland and the Russian Federation subnational tiers have principal authority over a swathe of policies.³¹

Caveat 2: Fiscal indicators do not necessarily measure differences in implementation authority.

There are two reasons. First, one cannot differentiate whether observed differences in fiscal centralization are due to genuine decentralization or whether they reflect differences in political economy. The argumentation is given by Oates (1972: 199–200):

“... even if there exists an identical allocation of functions among levels of government across two countries, their centralization ratios will generally differ if they do not have the same relative expenditure patterns on these functions. A country, for example, with an unusually large portion of its resources devoted to national defense will have, other things being equal, a relatively high degree of fiscal centralization. centralization ratios may differ because certain services provided publicly in one economy are provided in the private sector in another”

Note that this argument applies to the Regional Authority Index too but that fiscal indicators, and especially direct expenditure policies, are vulnerable to this problem. In the Scandinavian countries, a large proportion of government expenditure is devoted to welfare state policies, and these are often provided by

³¹ One could extend this argument to the other countries in the dataset.

subnational governments. In market-liberal Anglo-Saxon countries, welfare state functions tend to be privatized. So a difference in political economy explains higher expenditure (and revenue) in Scandinavian countries than in Anglo-Saxon countries whereas the allocation of functions among levels of government might be identical. The Regional Authority Index is not wholly invulnerable to the risk of conflating expenditure with authority, but since it relies on legal documents to gauge the allocation of functions rather than fiscal data, it avoids this problem to some extent.

Second, fiscal measures conflate whether an increase in fiscal numbers is the result of a shift in functions or resources between government tiers, or whether it simply reflects a change in the size of government activities (Stegarescu 2005a). An increase in fiscal decentralization might be due to a relative increase in either the *volume* or the *range* of public goods provided by subnational governments. In the former, authority has not increased; in the latter, it has. Imagine a country in which a subnational government provides unemployment benefits. If the following year the subnational government provides sickness pay as well as unemployment benefits, there will have been an increase in authority. This will coincide, presumably, with an increase in subnational expenditure share and/or in an increase in subnational tax share (to finance the increased expenditure). However, subnational expenditure (or revenue) could also have increased *without* an expansion of authority, for example, if unemployment had increased.

4.6 Conclusion

A comparison of the Regional Authority Index with seven decentralization indices in the literature shows a great amount of agreement. A single underlying factor accounts for about three-quarters of the variance. This is remarkable given the diverse ways of operationalizing a fluid concept such as decentralization.

An analysis of residuals (by regressing the Regional Authority Index on the seven decentralization indices) shows that the most consistent source of disagreement comes from the fact that the Regional Authority Index focuses on regional government to the exclusion of local government, while most decentralization indices include local government. A second source of difference relates to the sophistication of the measures. The more fine-grained Regional Authority Index is able to capture greater variation among both federal and unitary countries than most decentralization indices. Finally, countries-on-the-move, which have undergone major regionalization/federalization in the post-Second World War period, and countries with asymmetrical regions tend to generate more diverse scores differ across decentralization indexes than countries with greater architectural stability.

Finally, an analysis of the content validity of fiscal indicators examined the shortcomings of fiscal indicators as a measurement of subnational authority or decentralization. Two caveats were considered. First, fiscal indicators fail to capture whether subnational governments can decide autonomously what to do with the money. Second, we cannot tell whether differences in fiscal decentralization is due to genuine political decentralization or due to differences in political economy and/or a change in the size of government activities. Their value as a proxy for decentralization appears therefore limited.

References

- Achen, Christopher H. 2000. Why lagged dependent variables can surpass the explanatory power of other independent variables. Paper presented at the annual meeting of the American Political Science Association, July 20–22, at the University of California, Los Angeles.
- Adcock, Robert, and David Collier. 2001. Measurement validity: a shared standard for qualitative and quantitative research. *American Political Science Review* 95 (3): 529–546.
- Adelberger, Karin. 2001. Federalism and its discontents: fiscal and legislative power-sharing in Germany 1948–99. *Regional and Federal Studies* 11 (2): 43–68.
- Ahmad, Ehtisham, Daniel Hewitt and Edgardo Ruggiero. 1997. ‘Assigning expenditure responsibilities.’ In *Fiscal federalism in theory and practice*, ed. Teresa Ter-Minassian. Washington: International Monetary Fund, 25–48.
- Alesina, Alberto and Enrico Spolaore. 2003. *The size of nations*. Cambridge: The MIT Press.
- Alesina, Alberto, Ignazio Angeloni and Ludger Schuknecht. 2005. What does the European Union do? *Public Choice* 123 (3/4): 275–319.
- Althusius, Johannes [1603] *Politica*, edited and translated by Frederick S. Carney (Indianapolis: Liberty Fund, 1995), chapter I, sections 1–33, 17–25.
- Akai, Nobuo and Masayo Sakata. 2002. Fiscal decentralization contributes to economic growth: evidence from state-level cross-section data for the United States. *Journal of Urban Economics* 52 (1): 93–108.
- Amoretti, Ugo M. 2004. ‘Italy: political institutions and the mobilization of territorial differences’. In *Federalism and territorial cleavages*, eds. Ugo M. Amoretti and Nancy Bermeo. Baltimore, The John Hopkins University Press, 181–200.
- Amoretti, Ugo M. and Nancy Bermeo. eds. 2004. *Federalism and territorial cleavages*. Baltimore: The John Hopkins University Press.
- Annett, Anthony. 2001. Social fractionalization, political instability, and the size of government. *IMF Staff Papers* 48 (3): 561–592.
- Arikan, G. Gulsun. 2004. Fiscal decentralization: a remedy for corruption? *International Tax and Public Finance* 11 (2): 175–195.
- Arzaghi, Mohammad and J. Vernon Henderson. 2005. Why countries are fiscally decentralizing. *Journal of Public Economics* 89 (7): 1157–1189.
- Bahl, Roy. 1999. Fiscal decentralization as development policy. *Public Budgeting & Finance* 19 (2): 59–72.
- Bakke, Kirsten M. and Erik Wibbels. 2006. Disparity and civil conflict in federal states. *World Politics* 59 (1): 1–50.
- Baldi, Brunetta. 1999. Beyond the federal-unitary dichotomy. Working Paper. Institute of Governmental Studies, University of California, Berkeley.
- Ballendorf, Dirk A. 2002. ‘The federated states of Micronesia’. In *Handbook of federal countries 2002*, ed. Ann L. Griffiths, Montreal: McGill–Queen’s University Press, 208–219.

- Banting, K.G. 2005. 'Canada: nation-building in a federal welfare state'. In *Federalism and the welfare state: new world and European experiences*, eds. Herbert Obinger, Stephan Leibfried and Francis G. Castles. Cambridge: Cambridge University Press, 89–137.
- Bardhan, Pranab. 2002. Decentralization of governance and development. *Journal of Economic Perspectives* 16 (4): 183–205.
- Bardhan, Pranab and Dilip Mookherjee. 2006. Decentralisation and accountability in infrastructure delivery in developing countries. *The Economic Journal* 116 (508): 101–127.
- Beck, Nathaniel and Jonathan N. Katz. 1995. What to do (and not to do) with time-series cross-section data. *American Political Science Review* 89 (3): 634–647.
- Beck, Nathaniel and Jonathan Katz. 1996. Nuisance vs. substance: specifying and estimating time-series-cross-section models. *Policy Analysis* 6: 1–36.
- Beck, Nathaniel and Jonathan Katz. 2001. Random coefficient models for time-series-cross-section data: the 2001 version. Paper presented at the 2001 annual meeting of the society for political methodology, Emory University, July 17.
- Beck, Nathaniel. 2001. Time-series-cross-section data: what have learned in the past few years? *Annual Review of Political Science* 4: 271–293.
- Besley, Timothy and Stephen Coate. 2003. Centralized versus decentralized provision of local public goods: a political economy approach. *Journal of Public Economics* 87 (12): 2611–2637.
- Blair, Harry. 2000. Participation and accountability at the periphery: democratic local governance in six countries. *World Development* 28 (1): 21–39.
- Blom-Hansen, Jens. 1999. Avoiding the 'joint-decision trap': lessons from intergovernmental relations in Scandinavia. *European Journal of Political Research* 35 (1): 35–67.
- Bollen, Kenneth. 1989. *Structural equations with latent variables*. New York: Wiley.
- Borck, Rainald. 2002. Jurisdiction size, political participation, and the allocation of resources. *Public Choice* 113 (3/4): 251–263.
- Bolton, Patrick, and Gerard Roland. 1997. The breakup of nations: a political economy analysis. *Quarterly Journal of Economics* 112 (4): 1057–1090.
- Brancati, Dawn. 2005. Pawns take queen: the destabilizing effects of regional parties in Europe. *Constitutional Political Economy* 16 (2): 143–159.
- Brancati, Dawn. 2006. Decentralization: fueling the fire or dampening the flames of ethnic conflict and secessionism? *International Organization* 60 (3): 651–685.
- Brancati, Dawn. 2008. The origins and strengths of regional parties. *British Journal of Political Science* 38 (1): 135–159.
- Braun, Dietmar. 2000a. Territorial division of power and public policy-making: an overview. In *Public Policy and Federalism*, ed. Dietmar Braun. Aldershot: Ashgate, 1–26.
- Braun, Dietmar. 2000b. 'The territorial division of power in comparative public policy research: an assessment'. In *Public Policy and Federalism*, ed. Dietmar Braun. Aldershot: Ashgate, 27–56.
- Braun, Dietmar. ed. 2000c. *Public Policy and Federalism*. Aldershot: Ashgate.
- Breuss, Fritz and Markus Eller. 2004. The optimal decentralization of government activity: normative recommendations for the European constitution. *Constitutional Political Economy* 15 (1): 27–76.

- Brusis, Martin. 2002. Between EU requirements, competitive politics, and national traditions: re-creating regions in the accession countries of central and eastern Europe. *Governance* 15: 531–59.
- Campbell, Henry. 1979. *Black's law dictionary: definitions of the terms and phrases of American and English jurisprudence, ancient and modern*. St. Paul: West Publishers Co.
- Caramani, Daniele. 2004. *The nationalization of politics. The formation of national electorates and party systems in Western Europe*. Cambridge: Cambridge University Press.
- Castles, Francis G. 1999. Decentralization and the post-war political economy. *European Journal of Political Research* 36 (1): 27–53.
- Cederman, Lars-Erik, Jan Ketil Rød and Nils Weidmann. 2006. Geo-referencing of ethnic groups: creating a new dataset. Paper presented at the GROW workshop, February 10–11, Peace Research Institute Oslo (PRIO), Norway. Available at: http://www.prio.no/cscw/growconf/Cederman_Rod_Weidmann_06.pdf (consulted January 2008).
- Chhibber, Pradeep K. and Ken Kollman. 2004. *The formation of national party systems. Federalism and party competition in Canada, Great Britain, India, and the United States*. Princeton: Princeton University Press.
- Christensen, Jørgen Grønnegaard. 2000. The dynamics of decentralization and recentralization. *Public Administration* 78 (2): 389–408.
- Cornes, Richard and Todd Sandler (1999) *The theory of externalities, public goods and club goods*. Cambridge: Cambridge University Press.
- Council of Europe. 1996–2006. Structure and operation of local and regional democracy: forty country reports. Strasbourg: Council of Europe. Available online at http://www.coe.int/t/e/legal_affairs/local_and_regional_democracy/documentation/library/StructureOperation/default.asp#TopOfPage (last accessed October 19, 2007).
- Council of Europe. 2000. *Structure and operation of local and regional democracy: Poland*. Strasbourg: Council of Europe.
- Crook, Richard C. and James Manor. 1998. *Democracy and decentralization in South Asia and West Africa. Participation, accountability and performance*. Cambridge: Cambridge University Press.
- Dahl, Robert. 1968. Power. *The International Encyclopedia of the Social Sciences*, 12: 405–415.
- Davey, Kenneth. 2004. *Fiscal decentralisation in South-Eastern Europe*. Budapest: The Local Government and Public Reform Initiative.
- Davoodi, Hamid and Heng-fu Zou. 1998. Fiscal decentralization and economic growth: a cross-country study. *Journal of Urban Economics* 43 (2): 244–257.
- De Mello, Luiz R., Jr. 2004. Can fiscal decentralization strengthen social capital? *Public Finance Review* 32 (1): 4–35.
- De Vries, Michiel. 2000. The rise and fall of decentralization: a comparative analysis of arguments and practices in European countries. *European Journal of Political Research* 38 (2): 193–224.
- De Winter, Lieven and Huri Türsan, eds. 1998. *Regionalist parties in western Europe*. London: Routledge.

- De Winter, Lieven, Margarita Gómez-Reino and Peter Lynch. eds. 2006. *Autonomist Parties in Europe: Identity Politics and the Revival of the Territorial Cleavage. Volumes I and II*. Barcelona: Institut de Ciències Polítiques i Socials.
- Dear, M, Ruth Fincher and Lise Curie. 1977. Measuring the external effects of public programs. *Environment and Planning A* 9 (2): 137–147.
- Dikshit, Ramash D. 1975. *The political geography of federalism*. New York: Halsted Press.
- Dinan, Desmond. 2005. *Ever closer union. An introduction to European integration. 3rd edition*. Houndmills: Palgrave Macmillan.
- Duchacek, Ivo D. 1970. *Comparative federalism. The territorial dimension of politics*. New York: Holt, Rhinehart and Winston.
- Eaton, Kent. 2004. *Politics beyond the capital: The design of subnational institutions in South America*. Palo Alto, CA: Stanford University Press.
- Ebel, Robert D. and Serdar Yilmaz. 2002. On the measurement and impact of fiscal decentralization. Policy Research Working Paper 2809, Washington: World Bank.
- Ederveen, Sjef, Henri L.F. De Groot and Richard Nahuis. 2006. Fertile soil for structural funds? A panel data analysis of the conditional effectiveness of European cohesion policy. *Kyklos* 59 (1): 17–42.
- Elazar, Daniel J. 1987. *Exploring federalism*. Tuscaloosa: The University of Alabama Press.
- Elazar, Daniel. 1997. Contrasting unitary and federal systems. *International Political Science Review* 18 (3): 237–51.
- Enikolopov, Ruben and Ekaterina Zhuravskaya. 2007. Decentralization and political institutions. *Journal of Public Economics* 91 (11/12): 2261–2290.
- Escobar-Lemmon, Maria. 2001. Fiscal decentralization and federalism in Latin America. *Publius: The Journal of Federalism* 31 (4): 23–41.
- Eshet, Tzipi, Mira G. Baron, Mordechai Shechter and Ofira Ayalon. 2007. Measuring externalities of waste transfer stations in Israel using hedonic pricing. *Waste Management* 27 (5): 614–625.
- Faletti, Tulia G. 2005. A sequential theory of decentralization: Latin American cases in comparative perspective. *American Political Science Review* 99 (3): 327–346.
- Fearon, James D. 2003. Ethnic and cultural diversity by country. *Journal of Economic Growth* 8 (2): 195–222.
- Fearon, James D. and Pieter van Houten. 1998. The politicization of cultural and economic difference: a return to the theory of regional autonomy movements. Paper presented at the Annual APSA Meeting, Boston.
- Fillipov, Mikhail, Peter C. Ordeshook, and Olga Shvetsova. 2004. *Designing federalism. A theory of self-sustainable federal institutions*. Cambridge: Cambridge University Press.
- Fisman, Raymond and Roberta Gatti. 2002. Decentralization and corruption: evidence across countries. *Journal of Public Economics* 83 (3): 325–345.
- Glowacki, Viktor. 2002. ‘Regionalization in Poland’. In: *Regionalization for development and accession to the EU: a comparative perspective*, ed. Gérard Marcou. Budapest: The Local Government and Public Reform Initiative, 105–140.

- Griffiths, Ann L. 2002. 'St. Kitts and Nevis'. In *Handbook of federal countries 2002*, ed. Ann L. Griffiths, Montreal: McGill–Queen's University Press, 269–281.
- Hansen, Tore. 1993a. 'Intermediate-level and the development of the Norwegian welfare state'. In *The rise of meso government in Europe*, ed. L. Jim Sharpe. London: Sage Publications, 154–81.
- Hansen, Tore. 1993b. 'Appendix: meso-government in Denmark and Sweden'. In *The rise of meso government in Europe*, ed. L. Jim Sharpe. London: Sage Publications, 312–18.
- Hesse, Joachim Hesse, ed. 1991. *Local government and urban affairs in international perspective. Analysis of twenty western industrialized countries*. Baden–Baden: Nomos Verlagsgesellschaft.
- Heston, Alan, Robert Summers and Bettina Aten. 2006. Penn World Table Version 6.2. Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, September 2006. Available online at: <http://pwt.econ.upenn.edu> (last accessed September 19, 2007).
- Hoehler, Fred K. 2000. Bias and prevalence effects on kappa viewed in terms of sensitivity and specificity. *Journal of Clinical Epidemiology* 53 (5): 499–503.
- Hooghe, Liesbet, ed. 1996. *Cohesion policy and European integration. Building multi-level governance*. Oxford: Clarendon Press.
- Hooghe, Liesbet. 2004. 'Belgium: hollowing the centre'. In *Federalism and territorial cleavages*, eds. Umberto M. Amoretti and Nancy Bermeo. Baltimore: The John Hopkins University Press, 55–92.
- Hooghe, Liesbet and Gary Marks. 2001. *Multi-level governance and European integration*. Oxford: Rowman & Littlefield.
- Hooghe, Liesbet and Gary Marks. 2003. Unraveling the central state, but how? Types of multi-level governance. *American Political Science Review* 97 (2): 233–243.
- Hooghe, Liesbet and Gary Marks. 2009a. Does efficiency shape the territorial structure of government? *Annual review of Political Science* (advance access publication).
- Hooghe, Liesbet and Gary Marks. 2009b. A postfunctionalist theory of European integration: from permissive consensus to constraining dissensus. *British Journal of Political Science* 39 (1): 1–23.
- Hooghe, Liesbet, Gary Marks and Arjan H. Schakel, eds. 2008. Regional Authority in 42 democracies, 1950–2006: a measure and five hypotheses. *Regional and Federal Studies* 18 (2/3): 111–302.
- Horváth, Tamás M. ed. 2000. *Decentralization: experiments and reforms. Volume 1*. Budapest: Local Government and Public Sector Reform Initiative.
- Hough, Dan and Charlie Jeffery, eds. 2006. *Devolution and electoral politics*. Manchester: Manchester University Press.
- Huber, Evelyne and John D. Stephens. 2001. *Development and crisis of the welfare state. Parties and policies in global markets*. Chicago: University of Chicago Press.
- Hughes, James, Gwendolyn Sasse, and Claire Gordon. 2004. *Europeanization and regionalization in the EU's enlargement to Central and Eastern Europe. The myth of conditionality*. Houndmills: Palgrave Macmillan.

- Inglehart, Ronald. 1990. *Culture shift in advanced industrial society*. Princeton: Princeton University Press.
- Inman, Robert. 2008. Federalism's Values and the Value of Federalism, *CESifo Economic Studies* (advance access publication).
- Inter-Parliamentary Union. 2007. PARLINE Database on national parliaments. Available at <http://www.ipu.org> (consulted December 2007).
- Irwin, Elena G. and Nancy E. Bockstael. 2001. The problem of identifying land use spillovers: measuring the effects of open space on residential property values. *American Journal of Agricultural Economy* 83 (3): 698–704.
- Janson, Harald and Ulf Olsson. 2001. A measure of agreement for interval or nominal multivariate observations. *Educational and Psychological Measurement* 61 (2): 277–289.
- Jeffery, Charlie. 2000. Sub-national mobilization and European integration: does it make any difference? *Journal of Common Market Studies* 38 (1): 1–23.
- Jolly, Seth. 2006. *A Europe of regions? Regional integration, subnational mobilization and the optimal size of states*. PhD dissertation. Durham: Duke University.
- Jolly, Seth. 2007. How the EU fuels subnational regionalism. Working Paper. Available online at <http://www.duke.edu/~skj3/howEUFuels.pdf> (last accessed May 1, 2008).
- Joumard, Isabelle and Per M. Kongsrud. 2003. Fiscal relations across government levels. Paris: OECD Economics Department Working Papers, N. 375.
- Kandeva, Emilia. ed. 2001. *Stabilization of Local Governments. Local Governments in Central and Eastern Europe. Volume 2*. Budapest: Local Government and Public Sector Reform Initiative.
- Karmis, Dimotros and Wayne Norman. eds. 2005. *Theories of federalism: a reader*. New York: Palgrave Macmillan.
- Kasapovic, Mirjana (1996) 1995 Parliamentary elections in Croatia. *Electoral Studies* 15 (2): 269–282.
- Keating, Michael. 1995. 'Size, efficiency, and democracy: consolidation, fragmentation and public choice'. In *Theories of urban politics*, eds. David Judge, Gerry Stoker and Harold Wolman. London: Sage Publications, 117–34.
- Keating, Michael. 1998. *The new regionalism in western Europe. Territorial restructuring and political change*. Aldershot: Edward Elgar.
- Keating, Michael. 2001. *Plurinational democracy. Stateless nations in a post-sovereignty era*. Oxford: Oxford University Press.
- Keating, Michael and James Hughes. eds. 2003. *The regional challenge in central and eastern Europe. Territorial restructuring and European integration*. Brussels: P.I.E.–Peter Lang.
- Keele, Luke and Nathan J. Kelly. 2006. Dynamic models for dynamic theories: the ins and outs of lagged dependent variables. *Political Analysis* 14: 186–205.
- Kerber, Wolfgang and Martina Eckhardt. 2007. Policy learning in Europe: the open method of co-ordination and laboratory federalism. *Journal of European Public Policy* 14 (2): 227–247.
- King, Preston. 1982. *Federalism and federation*. Baltimore: The John Hopkins University Press.

- King, David. 2006. 'Local government organization and finance: United Kingdom'. In *Local governance in industrial countries*, ed. Anwar Shah, Washington, DC: The World Bank, 265–312.
- Kittel, Bernard. 1999. Sense and sensitivity in pooled analysis of political data. *European Journal of Political Research* 35: 225–53.
- Kowalczyk, Andrzej. 2000. 'Local Government in Poland'. In: *Decentralization: Experiments and Reforms. Volume 1*, ed. Tamás M. Horváth. Budapest: Local Government and Public Sector Reform Initiative, 217–254.
- Lane, Jan-Erik and Svantte Ersson. 1999. *Politics and society in Western Europe*. London: Sage Publications.
- Lane, Jan-Erik and Svantte Ersson. 2000. *The new institutional politics. Performance and outcomes*. London: Routledge, 77–101.
- Laplant, James T., Michael Baun, Jiri Lach and Dan Marek (2004) Decentralization in the Czech Republic: the European Union, political parties, and the creation of regional assemblies. *Publius: The Journal of Federalism* 34(1): 35–51.
- Le Goffe, Philippe. 2000. Hedonic pricing of agriculture and forestry externalities. *Environmental and Resource Economics* 15 (4): 397–401.
- Lijphart, Arend. 1999. *Patterns of democracy. Government forms and performance in thirty-six countries*. New Haven: Yale University Press.
- Lipset, Seymour M. and Stein Rokkan. 1967. 'Cleavage structures, party systems and voter alignments: an introduction'. In *Party systems and voter alignments: cross national perspectives*, eds. Seymour M. Lipset and Stein Rokkan. New York: Free Press, 1–64.
- Lipsky, Michael. 1983. *Street level bureaucracy. Dilemmas of the individual in public services*. New York: Russell Sage Foundation.
- Long, J. Scott. 1997. *Regression models for categorical and limited dependent variables*. London: Sage Publications
- Loughlin, John. ed. 2001. *Subnational democracy in the European Union. Challenges and opportunities*. Oxford: Oxford University Press.
- Loughlin, John and Daftary, Farimah. 1999. *Insular regions and European integration: Corsica and the Åland Islands compared*, ECMI report 5, Flensburg, Germany: European Centre for Minority Issues.
- Majone, Giandomenico. 1994. The rise of the regulatory state in Europe. *West European Politics*. 17 (3): 77–101.
- Marlow, Michael L. 1988. Fiscal decentralization and government size. *Public Choice* 56 (3): 259–269.
- Marks, Gary. 1997. 'An actor-centred approach to multi-level governance'. In *The regional dimension of the European Union. Towards a third level in Europe?*, ed. Charley Jeffery. London: Frank Cass, 20–40.
- Marks, Gary. 2007. Introduction: triangulation and square-root law. *Electoral Studies*. 26 (1): 1–10.
- Marks, Gary, François Nielsen, Leonard Ray and Jane E. Salk. 1996. Competencies, cracks and conflicts. *Comparative Political Studies* 29 (2): 164–192.
- Marks, Gary and Liesbet Hooghe. 2000. Optimality and authority: a critique of neoclassical theory. *Journal of Common Market Studies* 38 (5): 795–816.
- Marks, Gary, Liesbet Hooghe, Marco R. Steenbergen, and Ryan Bakker. 2007. Crossvalidating data on party positioning on European integration. *Electoral Studies* 26 (1): 23–38.

- Marks, Gary, Liesbet Hooghe and Arjan H. Schakel. 2008. Patterns of regional authority. *Regional and Federal Studies* 18 (2/3): 167–181.
- Marshall, Monty G. and Keith Jagers. 2004. Polity IV Data Set. [Computer file; version p4v2004]. College Park: Center for International Development and Conflict Management, University of Maryland. Available online at: <http://www.cidcm.umd.edu/polity> (last accessed September 19, 2007).
- Martinez–Vazquez, Jorge and Robert McNab. 1997. Fiscal decentralization, economic growth, and democratic governance. Working Paper 97–7, George State University: Andrew Young School of Policy Studies.
- Martinez–Vazquez, Jorge and Robert M. McNab. 2003. Fiscal decentralization and economic growth. *World Development* 31 (9): 1597–1616.
- Meloche, Jean–Philippe, François Vaillancourt, and Serdar Yilmaz. 2004. Decentralization or fiscal autonomy? What does really matter? Effects of growth and public sector size in European transition countries. Policy Research Working Paper, 3254, Washington: World Bank.
- Mény, Yves and Vincent Wright. eds. 1985. *Centre–periphery relations in Western Europe*. London: George Allen & Unwin.
- Meyers, Marcia K., and Susan Vorsanger. 2003. ‘Street–level bureaucrats and the implementation of public policy’. In *Handbook of Public Administration*, eds. B. Guy Peters and Jon Pierre. London: Sage Publications, 245–254.
- Montero, Alfred P. and David J. Samuels. 2004. ‘The political determinants of decentralization in Latin America. Causes and consequences’. In *Decentralization and democracy in Latin America*, eds. A. P. Montero and D. J. Samuels. Notre Dame: University of Notre Dame Press, 3–32.
- Munteanu, Igor, and Victor Popa. eds. 2001. *Developing New Rules in the Old Environment. Volume 3. Local Governments in the Eastern Europe, in the Caucasus and Central Asia*. Budapest: Local Government and Public Service Reform Initiative.
- Newman, Saul. 1996. *Ethnoregional conflict in democracies*. Mostly ballots, rarely bullets. CT: Greenwood Press.
- Nordsieck, Wolfram. 2007. Parties and elections in Europe. Data available at: <http://www.parties-and-elections.de/countries.html> (consulted September 2007).
- Oates, Wallace E. 1972. *Fiscal Federalism*. New York: Harcourt Brace Jovanovich.
- Oates, Wallace E. 1999. An essay on fiscal federalism. *Journal of Economic Literature* 37: 1120–1149.
- Oates, Wallace E. 2005. Toward a second–generation theory of fiscal federalism. *International Tax and Public Finance* 12 (4): 349–373.
- Obinger, Herbert, Stephan Leibfried and Francis G. Castles, ed. 2005. *Federalism and the welfare state. New world and European experiences*. Cambridge: Cambridge University Press.
- OECD. 1999. *Taxing powers of state and local government*. Paris: OECD Tax Policy Studies No. 1.
- Okraszewska, Aldona and Jacek Kwiatkowski. 2002. ‘The state of democracy in Poland’s gminas’. In *The State of Local Democracy in Central Europe*, eds. Gábor Soós, Gábor Tóka, and Glen Wright. Budapest: Local Government and Public Service Reform Initiative, 185–284.

- Osterkamp, Riger and Markus Eller. 2003. Functional decentralisation of government activity. *Journal for Institutional Comparisons* 1 (3): 36–42.
- Page, Edward C. and Michael J. Goldsmith. 1987. *Central and local government relations. A comparative analysis of West European unitary states*. London: Sage.
- Page, Edward C. 1991. *Localism and regionalism in Europe*. Oxford: Oxford University Press.
- Panizza, Ugo. 1999. On the determinants of fiscal centralization: theory and evidence. *Journal of Public Economics* 74 (1): 97–139.
- Peterson, Paul E. 1995. *The price of federalism*. Washington D.C.: Brookings Institution Press.
- Plümper, Thomas, Vera E. Troeger, and Philip Manow. 2005. Panel data analysis in comparative politics: linking method to theory. *European Journal of Political Research* 44: 327–54.
- Popescu, Marina and Martin Hannavy. 2001. Political transformation and the electoral process in post-communist Europe. Data available at: <http://www2.essex.ac.uk/elect/database/election.asp> (consulted September 2007).
- Prud'homme, Rémy. 1995. The dangers of decentralization. *World Bank Research Observer* 10: 201–20.
- Pufendorf, Samuel [1672]. *De jure Naturae et Gentium Libri Octo*, edited by James Brown Scott and translated by C.H. and W.A. Oldfather (Oxford: Clarendon Press, 1934), volume II, book VII, chapter V, sections 2–3 and 13–22, pp. 1024–1025 and 1038–1054.
- Putnam, R.D. 1993. *Making democracy work. Civic traditions in modern Italy*. Princeton: Princeton University Press.
- Ray, Leonard. 2007. Validity of measured party positions on European integration: assumptions, approaches, and a comparison of alternative measures. *Electoral Studies* 26 (1): 11–22.
- Riker, William H. 1964. *Federalism: origin, operation, significance*. Boston: Little Brown
- Riker, William H. 1996. 'European federalism: the lessons from past experience'. In *Federalizing Europe? The costs, benefits and preconditions of federal political systems*, eds. Joachim Jens Hesse and Vincent Wright. Oxford: Oxford University Press, 9–24.
- Rodden, Jonathan. 2004. Comparative federalism and decentralization. On meaning and measurement. *Comparative Politics* 36 (4): 481–499.
- Roeder, Philip G. and Donald Rothchild. eds. 2005. *Sustainable peace. Power and democracy after civil wars*. New York: Cornell University Press.
- Rokkan, Stein. 1999. 'Cleavage structures and party systems'. In *State formation, nation-building, and mass politics in Europe. The theory of Stein Rokkan*, eds. Peter Flora, Stein Kuhnle, and Derek Urwin. New York: Oxford University Press.
- Rokkan, Stein and Derek Urwin. 1983. *Economy, territory, identity. Politics of West European peripheries*. London: Sage Publications.
- Rose, Jürgen and Johannes Ch. Traut. eds. 2002. *Federalism and decentralization. Perspectives for the transformation process in Eastern and Central Europe*. Münster: Lit Verlag.

- Sapat, Alka. 2004. Devolution and innovation: the adoption of state environmental policy innovations by administrative agencies. *Public Administrative Review* 64 (2): 141–151.
- Sarle Warren S. 1997. Measurement theory: frequently asked questions. Version 3, September 14, 1997 accessed on February 15, 2008, at <ftp://ftp.sas.com/pub/neural/measurement.html>. Originally published in: *Disseminations of the International Statistical Applications Institute* 1 (4): 61–66.
- Sartori, Giovanni. 1970. Concept misformation in comparative politics. *American Political Science Review* 64 (4): 1033–1053.
- Schmidt, Manfred. 2002. ‘The impact of political parties, constitutional structures and veto players on public policy’. In *Comparative democratic politics*, ed. Hans Keman. London: Sage Publications, 166–184.
- Schneider, Aaron. 2003. Decentralization: conceptualization and measurement. *Studies in Comparative International Development* 38 (3): 32–56.
- Scott, Patrick G. 1997. Assessing determinants of bureaucratic discretion: an experiment in street-level decision making. *Journal of Public Administration Research and Theory* 7 (1): 35–57.
- Seabright, Paul. 1996. Accountability and decentralization in government: an incomplete contracts model. *European Economic Review* 40 (1): 61–89.
- Sekelj, Laslo. 2000. Parties and elections: the Federal Republic of Yugoslavia—change without transformation. *Europe–Asia Studies* 52 (1): 57–75.
- Shah, Anwar. 1997. *The Reform of Intergovernmental Fiscal Relation in Developing and Emerging Market Economies*. Washington DC: The World Bank.
- Shah, Anwar. 2006. ‘A comparative institutional framework for responsive, responsible, and accountable governance’. In *Local governance in industrial countries*, ed. Anwar Shah. Washington D.C.: The World Bank, 1–40.
- Shah, Anwar. 2007. ‘A practioner’s guide to intergovernmental fiscal transfers’. In *Intergovernmental fiscal transfers. Principles and practice*, eds. Robin Boadway and Anwar Shah. World Bank, Washington DC, 1–53.
- Sharma, Chanchal Kumar. 2006. Decentralization dilemma: measuring the degree and evaluating the outcomes. *Indian Journal of Political Science* 67 (1): 49–64.
- Sharpe, L. Jim. 1993a. ‘The European meso: an appraisal’. In *The rise of meso government in Europe*, ed. L. Jim Sharpe. London: Sage Publications, 1–39.
- Sharpe, L. Jim. ed. 1993b. *The rise of meso government in Europe*. London: Sage Publications.
- Shevlin, Mark, Jeremy N.V. Miles, and Brendan P. Bunting. 1997. Summated rating scales: a Monte Carlo investigation of the effects of reliability and collinearity in regression models. *Personality and Individual Differences* 23 (4): 665–676.
- Shor, Boris, Josph Bafumi, Luke Keele and David Park. 2007. A Bayesian multilevel modeling approach to time-series cross-section data. *Political Analysis* 15 (2): 165–181.
- Sim, Julius and Chris C. Wright. 2005. The kappa statistic in reliability studies: use, interpretation, and sample size requirements. *Physical Therapy* 85 (3): 257–268.
- Smith, Graham. ed. 1995. *Federalism. The multiethnic challenge*. London: Longman.
- Snyder, Richard. 2001. Scaling down: the subnational comparative approach. *Studies in Comparative International Development* 36 (1): 93–110.

- Sowa, Jessica E., and Sally Coleman Selden. 2003. Administrative discretion and active representation: an expansion of the theory of representative bureaucracy. *Public Administration Review* 63 (6): 700–710.
- Stegarescu, Dan. 2005a. Public sector decentralisation: measurement, concepts and recent international trends. *Fiscal Studies* 26 (3): 301–333.
- Stegarescu, Dan. 2005b. Costs, preferences, and institutions: an empirical analysis of the determinants of government decentralization. Discussion Paper No. 05–39, Mannheim: Centre for European Economic Research.
- Stevens, S.S. 1946. On the theory of scales of measurement. *Science* 103 (2684): 677–680.
- Strumpf, Koleman S. 2002. Does government decentralization increase policy innovation? *Journal of Public Economic Theory* 4 (2): 207–241.
- Swenden, Wilfried. 2006. *Federalism and regionalism in Western Europe. A comparative and thematic analysis*. Houndmills: Palgrave Macmillan.
- Swenden, Wilfried and Bart Maddens. eds. 2009. *Territorial party politics in Western Europe*. Houndmills: Palgrave Macmillan.
- Tarrow, Sidney, Peter Katzenstein and Luigi Graziano. eds. 1978. *Territorial politics in industrial nations*. New York: Praeger.
- Ter–Minassian, Teresa. ed. 1997a. *Fiscal Federalism in Theory and Practice*. Washington: International Monetary Fund.
- Ter–Minassian, Teresa. 1997b. ‘Intergovernmental fiscal relations in a macroeconomic perspective: an overview’. In *Fiscal federalism in theory and practice*, ed. Teresa Ter–Minassian. Washington: International Monetary Fund, 3–24.
- Thiessen, Ulrich. 2003. Fiscal decentralization and economic growth in high-income OECD countries. *Fiscal Studies* 24 (3): 237–274.
- Thorlakson, Lori. 2003. Comparing federal institutions: Power and representation in six federations. *West European Politics* 26(2): 1–22.
- Todorovski, Ilija. 2001. ‘Local government in Macedonia’. In *Stabilization of Local Governments. Local Governments in Central and Eastern Europe. Volume 2*, ed. Emilia Kandeveva. Budapest: Local Government and Public Sector Reform Initiative, 241–288.
- Toonen, Theo, and Trui Steen. 2008. Towards a framework for the comparative institutional analysis of central–local relations. The Netherlands as a case example. Paper presented at the 4th Transatlantic Dialogue, June 12–14, 2008, Milan Italy.
- Treisman, Daniel. 2002. Defining and measuring decentralization: a global perspective. Unpublished paper, Los Angeles, University of California. Available online at: <http://wwsscnet.ucla.edu/polisci/faculty/treisman/defin.pdf> (last accessed September 19, 2007).
- Treisman, Daniel. 2006. Explaining fiscal decentralization: geography, colonial history, economic development and political institutions. *Commonwealth and Comparative Politics* 44 (3): 289–325.
- Treisman, Daniel. 2007. *The architecture of government. Rethinking political decentralization*. Cambridge: Cambridge University Press.
- Tsebelis, George. 2002. *Veto players: How political institutions work*. Princeton: Princeton University Press.
- Tullock, Gordon. 1969. Federalism: Problems of Scale. *Public Choice* 6 (1): 19–29.

- Urwin, Derek W. 1985. 'The price of a kingdom: territory, identity and the centre-periphery dimension in western Europe'. In *Centre-periphery relations in Western Europe*, eds. Yves Mény and Vincent Wright. London: George Allen & Unwin, 151–170.
- U.S. Census Bureau. 2007. International Database (IDB). Available at: <http://www.census.gov/ipc/www/idb/tables.html> (consulted: September 2007).
- Vanhanen, Tatu. 2000. A new dataset for measuring democracy, 1810–1998. *Journal of Peace Research* 37 (2): 251–265. Polyarchy dataset. Version 2.0. [updates until 2000] available online at: http://www.prio.no/page/Project_detail//9244/42472.html (last accessed September 19, 2007).
- Van Houten, Pieter. 2001. Regional assertiveness in Western Europe. A statistical exploration. Paper prepared for the ECPR Joint Sessions, Grenoble. Available online at: <http://www.chu.cam.ac.uk/~PJV24/research.htm> (last accessed November 1, 2008).
- Van Kersbergen, Kees and Bert Jan Verbeek. 1994. The politics of subsidiarity in the European Union. *Journal of Common Market Studies* 32 (2): 215–235.
- Vatter, Adrian. 2005. The transformation of access and veto points in Swiss federalism. *Regional and Federal Studies* 15 (1): 1–17.
- Watts, Ronald L. 1999. *Comparing federal systems. 2nd edition*. Kingston: McGill–Queen's University Press.
- Watts, Ronald L. 2008. *Comparing federal systems. 3rd edition*. Montreal: McGill–Queen's University Press.
- Weber, Max. 1949. *The methodology of the social sciences*. New York: Free Press.
- Weigher, J.C. and R.H. Zerbst. 1973. The externalities of neighborhood parks: an empirical investigation. *Land Economics* 49 (1): 99–105.
- Where, Kenneth C. 1963. *Federal Government. 4th edition*. Oxford: Oxford University Press.
- Wilhelmsen, Lars. 2006. *A democratic peace revisited – measuring democracy in international relations*. PhD diss., University of Oslo. Database available at: <http://www.prio.no/page/cscw/datasets/9649/47893.html> (consulted: October 2007).
- Wilson, T.P. 1971. Critique of ordinal variables. *Social Forces* 49 (3): 432–444.
- Woldendorp, Jaap, Hans Keman and Ian Budge. 2000. *Party government in 28 democracies (1945–1998): composition – duration – personnel*. Dordrecht: Kluwer Academic Publishers.
- World Bank. 2006. Fiscal decentralization database. Database available at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECT/ORANDGOVERNANCE/EXTDSRE/0,,contentMDK:20248616~menuPK:2086395~pagePK:210058~piPK:210062~theSitePK:390243,00.html> (consulted May 2006).
- Wright, Vincent. 1998. 'Intergovernmental relations and regional government in Europe: a skeptical view'. In *Regions in Europe*, eds. Patrick Le Galés and Christian Lequesne. London: Routledge, 39–49.
- Xie, Danyang, Heng-fu Zou and Hamid Davoodi. 1999. Fiscal decentralization and economic growth in the United States. *Journal of Urban Economics* 45 (2): 228–239.
- Zhang, Tao and Heng-fu Zou. 1998. Fiscal decentralization, public spending, and economic growth in China. *Journal of Public Economics* 67 (2): 221–240.