Explaining fiscal decentralisation: geography, colonial history, economic development, and political institutions

Daniel Treisman

Department of Political Science
University of California, Los Angeles
4289 Bunche Hall
Los Angeles, CA 90095-1472
Treisman@polisci.ucla.edu

Abstract

Why are some countries more fiscally decentralised than others? Scholars have attributed such differences to geographical, cultural, institutional, and economic factors. Using a dataset of 66 countries, I test various hypotheses. The results suggest territorially larger—but not necessarily more populous—countries are more fiscally decentralised. Former colonies of Spain or Portugal are more centralised, while former Soviet states are particularly decentralised.Economic development leads to greater expenditure decentralisation, but affects revenue decentralisation less, rendering local governments in richer countries more dependent on central transfers. Federal states are more decentralised, in part because federalism is more common among more developed countries. Ethnolinguistic divisions did not correlate with decentralisation. Neither the level nor duration of democracy had any clear effect. Longitudinal analysis suggested democratisation is associated with a significant but tiny increase in decentralisation.

Introduction

Why are some countries more fiscally decentralised than others? Many scholars have sought to understand the consequences of decentralisation. Far less effort has gone into discerning its causes.[1] Yet the huge variation in the degree to which countries have devolved fiscal resources and expenditure responsibilities to local and regional governments presents a *prima facie* puzzle. As of the mid-1990s, the share of subnational governments in total government expenditures ranged from zero per cent in Singapore, which has no subnational governments, to 57 per cent in Canada (see Figure 1).[2] The subnational share in total government revenues ranged from zero to 54 per cent (again for Singapore and Canada).

Many factors might contribute to these differences. Some are geographical or cultural. The challenges of governing very large or ethnically diverse countries might, over time, lead to a decentralisation of government activity. Others relate to accidents of history. Patterns of fiscal organisation are likely to be influenced by countries' institutional past, and in much of the world that past involved colonisation by external powers. Which imperial power occupied a given country's territory might well affect how decentralised its fiscal structures are today. At the same time, fiscal decentralisation might increase or decrease with economic development. And the character of the existing regime—whether democratic or authoritarian, federal or unitary—might also influence the distribution of fiscal resources.

[FIGURE 1 ABOUT HERE]

In this paper, I explore available crossnational fiscal data for meaningful patterns. Measuring fiscal decentralisation is both difficult and controversial. Various studies have used the share of subnational governments in total state expenditures or revenues, usually based on data published in the IMF's *Government Finance Statistics Yearbooks*. I adopt this approach here and study fiscal decentralisation defined as the subnational share of either revenues or expenditures.

As some have pointed out, the pattern of revenue and expenditure decentralisation will not always coincide with the division of political decisionmaking among levels of the state.[3] Expenditures financed from subnational budgets are sometimes mandated by central governments. Subnational revenues often include shares of central taxes. Even taxes whose revenues are wholly assigned to subnational governments may have their rates and bases set by the center. For this reason, it is important to define and distinguish fiscal and decisionmaking decentralisation clearly and to study each separately, making sure the concept chosen is appropriate to the particular theoretical arguments at stake.[4] In this paper, I focus on the former, and results should not be loosely extrapolated to the latter.

The analysis suggests a number of tentative conclusions. Country size and colonial history together explain more than half the variation in both expenditure and revenue decentralisation. Former British colonies, French colonies, Russian colonies, and countries that were never colonised in modern times were significantly more decentralised than former Spanish or Portuguese colonies. This was true of the British and non-colonies in part because they tended to be more economically developed. Greater economic development was strongly linked to greater decentralisation (and this was true in instrumental variables as well as OLS regressions). The Russian colony effect probably reflects a powerful legacy of Soviet rule. Ethnic division—at least in the formulation I used—was not related to fiscal decentralisation. (It appeared at first *negatively* associated, but this was likely caused by a negative effect of ethnic division on income.) Federalism correlated strongly with fiscal decentralisation, although this was caused in part by the greater frequency of federal structures at higher levels of economic development.

Democracy—either the current extent of political freedoms or the duration of democratic rule—was not significantly related to fiscal decentralisation in the cross-sectional regressions controlling for colonial history and economic development. This was surprising given the common association of decentralisation with transitions from authoritarianism. I therefore tried running panel regressions to see whether changes in the level of democracy (as measured by

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Freedom House scores) were followed by changes in fiscal decentralisation. The panel included data from a range of countries in the period 1972-2000. I found evidence of a very small but significant positive relationship between increases in democracy and subsequent increases in expenditure decentralisation. There was no relationship between democratisation and revenue decentralisation. I illustrate the lack of a clear pattern with several examples. Although Spain decentralised dramatically during its first decades of democracy, Estonia *centralised* fiscal resources during its transition from Soviet rule. Zimbabwe, in the late 1980s, centralised fiscally while becoming more authoritarian. But Belarus' slide into autocracy in the late 1990s was accompanied by a *decentralisation* of expenditures.

The next section discusses a number of hypothetical determinants of fiscal decentralisation. I then review the data and methods of the analysis, and present results, before exploring the dynamic relationship between decentralisation and democracy.

Possible Determinants

Existing scholarship suggests a number of possible reasons why some countries are more fiscally decentralised than others. I examine below the strengths and weaknesses of these arguments, before attempting to test them empirically in the following section.

Ethnic division

Two types of argument are often made relating fiscal decentralisation to ethnic heterogeneity. The first focuses on practical politics. Where ethnic divisions are politicised (and ethnic groups are territorially compact), decentralising authority over such contentious policy issues as education and culture may help to restrain communal violence or even prevent civil war.[5] Such policy decentralisation is a key feature of 'consociational democracy', a design of democratic institutions thought to help preserve peace in divided societies (Lijphart, 1977, 1993). To be credible, policy decentralisation must have some fiscal component. Thus, to preserve stability,

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central elites in more ethnically divided societies may choose a higher level of fiscal decentralisation.

Of course, they also may not. Central leaders may care more about other goals—retaining fiscal resources at the center, for instance—than about avoiding communal violence. And, even if they do decentralise, this may fail to prevent ethnic violence and to preempt demands for secession. Consociational arrangments have failed on many occasions—most notably, in Lebanon in 1975. Aleman and Treisman studied the post-war histories of four ethnically-divided federal states—India, Pakistan, Nigeria, and Yugoslavia—and found no relationship between the degree of fiscal decentralisation and the incidence of secessionist violence (Aleman and Treisman, 2005). If fiscal decentralisation is an unreliable means of restraining ethnic conflict, central leaders may not use it.

A second, related argument is about economic efficiency. Tastes for public goods and services are likely to vary across ethnic groups. If so, and if certain other conditions are met,[6] more total utility will result if different baskets of public goods and services are provided in different, ethnically homogeneous subregions. If education policy, say, is made at regional rather than central level, then different ethnic minorities can set syllabi and levels of education financing in their home regions to suit their tastes. Oates (1972) considered this a strong argument for fiscal decentralisation.[7] However, the assumption that central governments can only provide goods uniformly has come in for criticism.[8] On the face of it, any decentralised expenditure scheme could also be implemented by a centralised government, so the efficiency argument requires some additional assumption. A common one is that local governments are either more efficient at collecting information about tastes or better able to get local constituents to reveal such information (Tanzi, 2000). Note that this argument—at most—establishes the possibility that decentralised provision would be more efficient. One must assume in addition that local governments are not captured by predatory elites to a greater extent than central ones (Bardhan and Mookherjee, 2000). Finally, this is an argument about efficiency. Few economists—and still

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fewer political scientists—believe that actual arrangements are always the most efficient ones. So even if fiscal decentralisation is more efficient in ethnically divided societies, that does not imply ethnically divided societies would tend to be more fiscally decentralised.

Country size

Several common arguments predict that fiscal decentralisation will be greater in more populous or territorially larger states. Although these arguments appear common-sensical, the logic is not as compelling as it might seem. A first reason to expect greater fiscal decentralisation in larger states is that there are likely to be diseconomies of scale in government. The relevant diseconomies are not those associated with provision of particular public goods or services—such goods or services could still be provided at the optimal scale by decentralised agents of a fiscally unitary government, just as optimally sized plants can operate under a single firm's financial management. The key is the notion that certain central supervisory functions cannot be provided as effectively in very large units. As John Stuart Mill put it: 'There is a limit to the extent of country which can advantageously be governed, or even *whose government can be conveniently superintended*, from a single centre' (Mill, 1991). For Mill, this constituted a reason for federalism and decentralisation in large states.[9]

A second reason why larger countries might have greater fiscal decentralisation is derived by combining the efficiency argument about heterogeneity with the assumption that heterogeneity of tastes is likely to be greater in larger states. Thus, larger countries are assumed to be more diverse, and therefore to have greater efficiency gains to realize from decentralisation.

Both these arguments are about the efficiency of decentralisation in large countries. As already noted, however, there is little reason to be confident that the most efficient arrangement will generally be chosen. It is less clear why the process of political organisation and bargaining

would lead to greater fiscal decentralisation in large than in small states. This is a theoretical gap that, given the results I present below, needs to be filled.

Colonial history

Most countries of the world were colonised within the last two centuries by one or other of the major powers.[10] The colonists introduced systems of government and administration that reshaped political life. The styles and strategies of political control differed markedly. Various writers have contrasted the British willingness to introduce indirect government in their imperial possessions, and—at least in the Americas—to devolve considerable decisionmaking power to elected legislatures of colonial settlers. Tocqueville (2000 [1833]), in the early 19th Century, was struck by the contrast between British and French styles of colonial administration in North America:

> For several centuries, the central government in France has worked constantly to control every decision itself; today, we can say that it does not just govern but administers all the separate parts of the realm… Nearby, on the ocean coast, the English come to settle…. From the start, they have their political assemblies and tribunals, they appoint most of their magistrates, organise their militia, provide for their needs, and make their own municipal regulations and laws. The metropole gets involved in almost none of their internal affairs; it acts only to protect their commerce and to secure them against attack by foreigners.

When it withdrew from most of its overseas possessions more than a century later, Britain was more prone than other empires to leave behind federal structures.[11]

The tradition in Spain's overseas dominions is usually seen as one of overcentralisation, leavened by weakness of central enforcement and local corruption. The motives of Spanish colonists have often been described as particularly mercenary. Diderot unfavourably compared the '*soif d'or*' of the conquistadores with the religious fervor of the British Puritans. The first Spanish settlements—the self-governing *cabildos*—were probably quite autonomous, with considerable powers of taxation and expenditure. But these were reined in by the centralising

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Habsburg monarchs, desperate to raise revenues for their European campaigns. Frontier democracy was replaced by the sale of Crown offices. As a result, 'Spain's legacy to Latin America was a tradition of extreme centralisation in governmental decisionmaking' (Nickson, 1995: 15). In the post-independence years, local government was neglected and 'often suppressed altogether' (Ibid.). 'Local governments had almost no power to tax or to administer local social programs' (Wiarda and Kline, 1996: 45).

Within each colonial empire, the colonies differed in type. Some—for instance, the North American colonies and Australia—were settlement colonies, to which large numbers of Europeans emigrated and either drove out or exterminated the aboriginal population. Others—British colonies in what would become the US South, Brazil, the Caribbean—were plantation colonies, in which natives or imported slaves were employed in agriculture by relatively small European settler elites. Still others—Hong Kong, the Dutch colonies in Indonesia, Aden—were essentially strategic or trade outposts, with surrounding populations mostly left to their own devices. The type of institutions introduced is likely to have varied with the type of colony (Acemoglu, Johnson, and Robinson, 2001). In particular, one might expect greater decentralisation of colonial institutions—and, perhaps, of the states that followed decolonisation—in colonies that had a larger proportion of European settlers.

Economic development

Fiscal decentralisation might tend to be higher in more economically developed countries for two reasons. First, decentralisation may itself be 'a superior good, the demand for which is likely to grow with per capita income' (Tanzi, 2000). As people become richer, more educated, and more urbanised, they may have more time and a greater motivation to participate in making local political decisions. They may also become more skilled at organising to pressure the central government to devolve authority and fiscal resources.

Second, increases in development may induce a shift in tastes towards public goods and services that are most efficiently provided locally. Musgrave (1969: 79) suggested that as societies grow more affluent, an increasing share of private consumption 'flows into 'adult toys' for leisure time use… pleasure cars, motorboats and other durables' the operation of which requires public investment and services—the building of 'high-speed roads, marinas, parks, and so forth' or the organisation of 'traffic patrols, park services, or weather reporting'. While weather reporting probably involves significant economies of scale, the construction and maintenance of marinas, parks, and local roads, as well as the organisation of traffic patrols can efficiently occur at local or regional scale. As population density rises with urbanisation, the risks of crime or accident may also rise at a disproportionate rate, requiring greater proportional public spending on policemen, firemen, and health inspectors to achieve the same level of public safety. There are no great economies of scale in any of these activities. As with some of the previous arguments, this one suggests that decentralisation might become more efficient as income rises; some more explicitly *political* argument would still be needed to explain why such efficiency gains would be realized.

Democracy

Some have suggested there is a natural affinity between democracy and decentralisation. Central democrats might wish to institute strong subnational governments for various reasons. Participation in local government, as Tocqueville and Mill argued, might educate citizens in democratic practices and values. Jefferson admired the fervor for liberty inspired by participation in the New England townships. 'Where every man is a sharer in the direction of his ward-republic, or of some of the higher ones, and feels that he is a participator in the government of affairs, not merely at an election one day in the year, but every day; when there shall not be a man in the State who will not be a member of some one of its councils, great or small, he will let the heart be torn out of his body sooner than his power be wrested from him by a Caesar or a

Bonaparte' (Appleby and Ball, 1999: 205). At the same time, strong local governments might serve as a check on abusive central authorities. Tocqueville (1969 [1835]: 263), concerned that the central government could be captured by a tyrannical majority, saw municipal and county governments as 'so many hidden reefs retarding or dividing the flood of the popular will.'

More recently, the fall of authoritarian governments has led to either spontaneous dissipation of central power or the deliberate assertion of local rights. Across Eastern Europe, the collapse of regimes in which power was centralised in the communist party prompted a strong demand for autonomous local self-government (World Bank, 2001). Burki, Perry, and Dillinger (1999: 1) argue that decentralisation in Latin America since the early 1980s has been 'part of a broader trend toward democracy in the region.'

Federalism and decentralised political institutions

Federal constitutions may directly mandate a high level of fiscal decentralisation. The 1988 Brazilian constitution, for instance, requires that the states and municipalities receive 47 per cent of income tax receipts and 10 per cent of receipts from the tax on industrial products (Article 159). Federal constitutions may also assign particular taxes entirely to state or local governments. Even if constitutions do not dictate fiscal relations, they may provide political and institutional leverage for state governments to press for a larger share of revenues. For instance, systems in which the upper house of parliament represents regional governments and has a veto over financial laws, as for instance in Germany, are likely to exhibit greater fiscal decentralisation.

The degree of fiscal decentralisation might also be affected by another political institution—the party system. Riker (1964) argued that the degree of decisionmaking centralisation in a federation will vary with the centralisation of the main parties. Garman, Haggard, and Willis (2001: 206) develop this insight and apply it to fiscal decentralisation: 'if parties are more centralised, any bargaining over intergovernmental fiscal relations will favour the center and the fiscal structure of the state will be more centralised. Conversely, if party

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control is less centralised, the state's fiscal structure will also tend be more decentralised, other things being equal.'

Data and methods

Data

How well do the various factors discussed in the previous section explain current crossnational differences in fiscal decentralisation? I tried to assess this using multiple regressions. The main dependent variables were measures of the subnational shares of state expenditures and of state revenues, averaged for 1993-5. As will be seen, the results were generally similar whichever of these was used, but there were some interesting differences.

Finding data on ethnic division posed a challenge. I used data compiled by Gunnemark (1991) on the share of the population that spoke a language other than the official language at home. I updated this to include the postcommunist states, almost all of which were excluded from the Gunnemark data set, using data from a variety of sources.[12] As a robustness check, I also used the index of ethnolinguistic fractionalisation constructed from data compiled by a team of Soviet anthropologists in the early 1960s, published in the *Atlas Narodov Mira*. This has been criticised recently for (1) being out of date[13], and (2) focusing on just one of many potentially salient cultural divisions, while ignoring others such as religion, caste, and tribe. The Gunnemark data are also subject to the second criticism, though not the first. Since no comprehensive, crossnational accounting of which cultural cleavages were politically salient in different periods exists, this was the best alternative available. For country size, I used both the log of countries' surface area and the log of their 1994 population.

Dummies for colonial heritage were constructed from a variety of sources. I focus on the period since the American Revolution, so countries that became independent before this are coded as non-colonies. Ethiopia was coded a non-colony despite the relatively short Italian

occupation from 1935-41. If states were constructed from territories colonised by two powers, I code them as .5 for each—e.g., Cameroon is .5 'former British colony' and .5 'former French colony'. If, on the other hand, a country underwent an extended period of colonisation by more than one country (since 1775)—for instance, Mauritius, which was under French, then British rule—it is coded as a former colony of each. Among British colonies, I distinguish three types, following Fieldhouse: settlement colonies, the Indian states, and others.

To measure economic development, I use per capita GNP in purchasing power parity terms, as of 1995, as calculated by the World Bank.[14] In assessing the effect of democracy on fiscal decentralisation, several specifications might be relevant. First, I used the Freedom House ratings of countries' political rights as of 1993-4. These scores, which range from 1 to 7, are based on the estimates of experts, who rank countries on a checklist of specific aspects of political freedom.[15] I adjusted the data so that 7 corresponds to completely democratic and 1 to completely authoritarian. Second, since the effect of democracy on fiscal decentralisation may be gradual, I tried using a measure of the number of consecutive years that the country had been democratic as of 1995, in the definition of Przeworski et al.[16]

Establishing which countries are federal is not an easy task.[17] One might go by which countries label themselves 'federal' or 'federations' in their constitutions. Alternatively, one might follow the classification of scholars of federalism. A third option would be to apply an authoritative definition of federalism. Using each approach, I arrived at a different—although overlapping—list of states. Of 130 countries whose constitutions I studied, 21 had constitutions that referred to the state as 'federal' (notably, *not* including the USA). The second option turned out to be problematic because scholarly consensus on which states are federal does not seem to exist. While Riker classified 18 states as federations, Wheare considered only four of these to be federal (the US, Canada, Australia, and Switzerland) (Riker, 1964; Wheare, 1963). Elazar (1987) singled out 19 states. Elazar (1995) listed 20. Some scholars insist that to be federal, a state must be democratic (Stepan, 2001: 318). Others include authoritarian states such as Pakistan, or semi-

democracies such as Russia.[18] Probably the most authoritative definition is that of Riker. Federal

states are those (1) that have (at least) two levels of government, and (2) in which each level has

'at least one area of action in which it is autonomous.' The latter requirement must be formally

guaranteed, for instance in a constitution (Riker, 1967). Strictly applying this definition, produced

a list of 27 countries in which the constitution assigned at least on policy area exclusively to

subnational governments, or gave subnational governments residual authority over policy areas

not assigned (Treisman, 2002). In the analysis below, I tried using three alternative variables for

federalism: (1) a dummy for the 21 whose constitutions called them 'federal', (2) a dummy for

the 20 classified as 'federal' by Elazar (1995), and (3) a dummy for the 27 that met the Riker

definition.

Using data from Tsebelis and Money, I constructed a dummy variable picking out the

eight countries that had upper houses of parliament that were chosen on a regional basis and

which could veto lower house financial legislation (Tsebelis and Money, 1997).[19] I was not able

to find crossnational data for many countries on the centralisation of party systems, so I was not

able to test this hypothesis.

Method

Assessing the influence of these variables on the degree of fiscal decentralisation involved several

complications. Of the explanatory variables, only colonial history can be considered completely

exogenous. Some may influence each other—for instance, ethnic divisions are often thought to

affect the rate of growth and the prospects for democracy; country size may well influence

whether a given state is federal. Economic development may even be affected by fiscal

decentralisation itself; some have argued that decentralisation is a cause of more rapid growth

(Qian and Weingast, 1997).

My strategy was to run a series of regressions, starting with just the most notionally

exogenous geographical, ethnic, and historical variables, and gradually adding those relating to

political institutions and economic development that might be caused by these. By comparing how coefficients change across models, it is possible to make some tentative inferences about paths of causation. To adjust for the possible endogeneity of economic development, I ran a two stage least squares model using countries' latitudinal distance from the Equator as an instrument. The criteria for a good instrument are that the variable is correlated with the relevant endogenous independent variable and that it does not affect the dependent variable by any other path. Distance from the Equator correlates with log 1995 per capita GNP at .52. I could not think of any way that distance from the Equator would affect fiscal decentralisation other than via its effect on economic development. Democracy (as of the 1990s) might also be affected by past levels of political and fiscal decentralisation. I therefore ran two stage least squares models when democracy was included, using a dummy for whether the country was a democracy as of 1950 as an instrument for current democracy or for the number of years democratic since 1950. (The correlations between the instrument and the two democracy variables were .50 and .69 respectively.)

A final methodological concern is that the subnational share of spending or revenues is by construction censored: it cannot exceed 100 per cent or be lower than zero (Panizza, 1999). This could render OLS inappropriate. However, since only one of the 66 cases in my data set took the limit value (Singapore, which had subnational shares of zero), this seems unlikely to be a problem in practice. To adjust for heteroskedasticity, I present White-corrected standard errors.

Results

Tables 1 and 2 present the regressions. The results for country size were strong and consistent across models. Territorially larger countries—but not necessarily more populous ones—tended to be more fiscally decentralised. The result was highly significant whether fiscal decentralisation was measured by the subnational expenditure or revenue share. The estimates imply that a tenfold increase in surface area—the difference, say, between New Zealand and Argentina—is associated

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with an increase in the subnational governments' share of revenues by some 8-12 per centage points, and in their share of expenditures by some 7-10 per centage points.

[TABLES 1 AND 2 HERE]

The results for ethnic division are interesting, and at first sight surprising. In the simplest models, there is a significant *negative* relationship between ethnic division and fiscal decentralisation, using either indicator. The greater the share of the population that did not speak the official language at home, the lower was fiscal decentralisation.[20] Controlling for political decentralisation reduces the relationship somewhat in some models. But an interesting change occurs in the two stage least squares models that control properly for economic development: now ethnic division has a positive effect, although not significant. The most plausible interpretation is that greater ethnic division tends to slow economic development, while economic development leads to greater fiscal decentralisation.[21] By slowing economic development—and the fiscal decentralisation that tends to accompany it—ethnic divisions may delay the devolution of power and resources that faster development brings.

The results suggest some clear relationships between decentralisation and colonial history. The excluded category in the regressions is 'former colony of Spain or Portugal'. Controlling only for ethnolinguistic division and country size (models 1-3), former colonies of Britain, France, and Russia, as well as countries never colonised in the modern era, were significantly more decentralised than former Spanish or Portuguese colonies, using either indicator. This was probably also true of former colonies of Italy or Habsburg Austria, although the difference was not quite significant for expenditures. Former Dutch or Ottoman Turkish colonies were not significantly different. The one former Chinese colony included—Mongolia— had significantly greater expenditure—but not revenue—decentralisation. Some of the effects were large. Controlling only for size and ethnic division, former Russian colonies had subnational

expenditure shares some 18 per centage points higher and subnational revenue shares some 16-17 points higher than former Spanish or Portuguese colonies. Countries not colonised (since 1775) had subnational expenditures some 15 per centage points—and revenue shares 12-13 points—higher. Former British colonies had expenditure shares some 10 points and revenue shares some 11 points higher. For former French colonies, the differences were about 8 and 7-8 points, respectively. (Notice that, although former British colonies were more decentralised than former French colonies, the difference was not as large as one might have expected from reading Tocqueville. There would be a larger difference if one contrasted British settlement colonies such as the USA and Canada with the average French colony, but the diversity of types of British colonies brings the average down.) Thus, the results do support the notion that the former possessions of Spain and Portugal are unusually centralised.

A surprising result was the robustly high and significant coefficient on the dummy for 'former Russian colony'. The very large differences remained—and, in fact, increased—as I added controls for federalism, development, and democracy. Was this a specifically Russian phenomenon, or was a high level of fiscal decentralisation common to all postcommunist countries? In fact the mean subnational expenditure shares for postcommunist and other states were quite close—22.7 and 20.0 per cent, respectively—and the difference between them was not significant. When I added a dummy for postcommunism to model 1, the coefficient on 'former Russian colony' was virtually unchanged and remained highly significant; postcommunism was not significant and had a negative sign.[22] The overlap between 'former Russian colony' and former members of the Soviet Union was extremely close, and it is likely that the high fiscal decentralisation is a particularly Soviet inheritance. The only divergent cases were Finland (a former Grand Duchy of the Russian Empire), Poland (which I coded as .5 for 'former Russian colony', taking into account the partition with Prussia and Austria-Hungary), and Russia itself (coded 'not a colony'). One might note, however, that the fit was better with the Russian colony variable than with a fomer Soviet Union dummy: when both were included in a regression,

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'former Russian colony' remained significant at p < .01, while the former Soviet dummy was insignificant. The data notwithstanding, it seemed to me implausible that histories of Russian rule are why Finland and Poland are relatively decentralised today. High fiscal decentralisation appears to be a distinctive legacy of Soviet rule.

Model 3 breaks down the British colonies into 'settlement colonies', 'dependent colonies', and India.[23] All three have positive signs, but here some interesting divergences emerge between the correlates of expenditure and revenue decentralisation. Former settlement colonies tended to have subnational expenditure shares some 16 per centage points higher than former Spanish or Portuguese colonies.[24] However, their revenues were on average only about 9 per centage points higher, and the difference was not statistically significant. By contrast, former British Crown colonies, protectorates, protected states, and mandates had expenditure shares statistically indistinguishable from those of the former Spanish and Portuguese colonies; but their revenue shares were some 11 per centage points higher (significant at p < .01). Thus, both settlement and dependent colonies of Britain were more fiscally decentralised in at least one regard. The most striking finding concerns India, which stands out as an extreme outlier on both indicators. India had a rate of fiscal decentralisation some 24-27 per centage points higher than one would expect in a former Spanish or Portuguese colony with the same size and ethnic characteristics.[25]

Settlement colonies were far more common in the British than in other empires. However, the rate at which Europeans settled varied across all the colonies (Acemoglu et al., 2001). Were colonies in which Europeans made up a larger share of the population more likely to have decentralised governments in the 1990s? Answering this is difficult given the sparsity of reliable data. Acemoglu et al. provide some rough estimates of the share of European settlers in the populations of various colonies as of 1900. These data were available for only 26 of the countries for which I had fiscal data, so elaborate statistical analyses were not possible. However, there was a correlation between the share of European settlers as of 1900 and the degree of fiscal

decentralisation in 1993-5 (.51 for expenditure share, and .59 for revenue share). Controlling for country size the correlations were similar (.57 and .55, respectively). There are two possible explanations for these correlations, and the weakness of the data makes it difficult to choose between them. First, greater concentrations of European settlers might have led to a more decentralised structure of administration in the colonies, which in turn led to greater decentralisation in the post-colonial states. Second, greater concentrations of European settlers might have led to better protections of property rights, which fueled faster growth, which in turn increased pressures for decentralisation at a later date. Given the very small number of countries for which data were available, these findings should be viewed with particular caution.

Why are the former colonies of some powers today more fiscally decentralised than those of others? Observing how the coefficients change as additional variables are entered suggests some hints about the causal pathway. In part, the former British colonies appear to be more decentralised than former Spanish and Portuguese colonies because they tend to be more economically developed. The British colony coefficient in the subnational expenditure regressions falls from about 7 per centage points (model 4) to 3-4 points (models 9-11), when I control properly for economic development. (The drop in the revenue decentralisation regressions is from about 8 to about 6 per centage points.) The mean 1995 per capita GNP for former British colonies was about $4,900 compared to $3,550 for former Spanish or Portuguese colonies. It is harder to interpret the French colony effect. This effect became insignificant and the estimated coefficients dropped when I controlled for federal structure or economic development. Since former French colonies tended to be somewhat less developed and less likely to be federal than Spanish or Portuguese colonies, this was surprising. The Turkish colony effect falls a bit as I control for income, suggesting that in part the former Turkish colonies are more decentralised than Spanish and Portuguese ones because they tend to be more developed (average 1995 per capita GNP of $8,500 for the former, compared to $3,550 for the latter). Similarly, non-colonies'

greater fiscal decentralisation appears mostly due to their higher income—the coefficient falls quite sharply controlling for economic development.

Federalism, by any of the three measures, was associated with greater fiscal decentralisation, by either indicator. (In models 8-11, I use the Elazar classification, since this is the most significant and does not require the dropping of cases.) However, the federal effect dropped quite sharply (and became insignificant) once I controlled for economic development. Federalism is more common among richer countries, which also tend to be more fiscally decentralised.[26] It is less clear to what extent the choice of political institutions *independently* affects the division of fiscal tasks and resources. There was no evidence that merely having a regionally-chosen upper house of parliament that could veto financial legislation increased fiscal decentralisation (model 7). This does not seem to be why federations tend to be more decentralised.[27]

The results for economic development are quite dramatic. In a simple OLS model, there appears to be just about no relationship. However, in the two stage least squares models (instrumenting with the country's latidudinal distance from the equator), a very large effect appears in the expenditure decentralisation regressions: for every ten-fold increase in per capita GNP, a country tends to increase expenditure decentralisation by some 25 per centage points or more. The estimated relationship between revenue decentralisation and income was weaker, and not significant at conventional levels. Thus, while economic development is strongly associated with greater decentralisation of government expenditures, the increased expenditures tend to be paid for in part by higher central transfers as well as higher subnational revenues.[28]

Finally, neither indicator of democracy was significant in the two stage least squares regressions controlling for income, for either measure of decentralisation. For countries at a given level of income and political decentralisation, greater democracy is not significantly associated with greater fiscal decentralisation. (This was also true if I left the federal variable out of the analysis.) Nor did controlling for democracy cause major changes in the coefficients on colonial

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history. Former colonies apparently did not differ in their levels of fiscal decentralisation because their respective colonial heritages were more or less conducive to democracy.

To sum up, territorially larger—but not necessarily more populous—countries tend to be more fiscally decentralised. Economic development appears to cause countries to increase their expenditure decentralisation—but not always their revenue decentralisation. (The two stage least squares results make it reasonable to talk of causation here, although the result could certainly have other interpretations.) The smaller the share of their population speaking the official language, the *less* fiscally decentralised countries tended to be. This was probably explained by the lower average level of economic development in more linguistically divided countries. Former colonies of Britain, France, and Russia, as well as countries that were not colonised in the modern era, all tended to be more fiscally decentralised than former Spanish or Portuguese colonies. In the cases of the British settlement colonies and the non-colonies, this was probably due in part to their higher average level of development. The situation with French, Dutch, and Turkish former colonies was harder to read from the data. India, Mongolia, and the former Soviet republics stood out as extremely decentralised given their other characteristics. Federal states were significantly more decentralised, but a considerable part of the difference is attributable to the fact that federal states tend to be more economically developed. Finally, the degree or duration of democracy did not seem to make a difference.

The result regarding economic development corresponds to various previous studies (Oates, 1972; Panizza, 1999; Bird, 1995; Diaz-Cayeros, 2000), but is particularly strong since the two stage least squares estimation corrects for endogeneity. The finding of an apparently greater effect of economic development on expenditure than on revenue decentralisation corresponds to that of Bird (1995). Various studies have also found a relationship with country size, although sometimes with population rather than area. My results differ from previous studies in several ways. I did not find a significant positive relationship between ethnic heterogeneity and fiscal decentralisation, as some others have reported. This may be because I control for colonial history.

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Looking for a relationship between ethnicity and decentralisation is complicated by the fact that both are related to income. Given the paucity of reliable data, it is good to be cautious on this question. I do find, like Oates, that federal states were more decentralised, but attribute a significant part of this not to a direct relationship but to the fact that federal structure is more common at higher income levels.

Decentralisation and democracy

The lack of any clear relationship between the level or duration of democracy and the degree of fiscal decentralisation in a cross-section of countries was surprising. Observers have often linked the major decentralisation reforms of the 1980s and 1990s to the ongoing 'Third Wave' of democratisation. Is there any justification for the view that fiscal decentralisation is more common in countries moving toward greater democracy?

To answer this question requires a more dynamic analysis than cross-sections can provide. The *Government Finance Statistics Yearbooks* publish data on a number of countries over the course of several decades. Up to about 1,400 country-years were available for both the subnational revenue share and the subnational expenditure share. I tried running panel regressions to see whether changes in the degree of democracy (as measured by Freedom House scores) led to changes in the degree of fiscal decentralisation. I tried two formulations, one assuming that one year changes in democracy were translated the following year into changes in decentralisation, one looking at changes over five years. Specifically, I ran regressions of the form:

(1) $D_t = a + bD_{t-2} + c(FH_{t-1} - FH_{t-2}) + dFH_{t-2}$ and

(2) $D_t = a + bD_{t-6} + c(FH_{t-1} - FH_{t-6}) + dFH_{t-6}$

where D is fiscal decentralisation (either the subnational revenue or expenditure share) and FH is the Freedom House score. I included a lag of the dependent variable to correct for autocorrelation, so the results measure the effect of a prior change in democracy on the change in

the degree of decentralisation. Including the lagged dependent variable also controls for any characteristics of the country that were essentially fixed as of the start of the period (e.g., geography, ethnic division, colonial origin, federalism, rough level of economic development). Including the lagged Freedom House score as well as the recent change makes it possible to distinguish the effects of the level of democracy from those of recent democratisation. One should note that these regressions do not control in any way for endogeneity; if decentralisation causes democratisation as well as the reverse, the results will be biased. I report panel corrected standard errors, which are more accurate than those calculated by GLS (Beck and Katz 1995).

[TABLE 3 HERE]

Modeling with either a one-year or a five-year lag, I did find a marginally significant relationship between democratisation and subsequent increases in the subnational expenditure share. If we ignore concerns about endogeneity, this supports the view that democratisation leads to expenditure decentralisation. However, the effect is tiny. A one-point increase in a country's democratisation rating (on Freedom House's seven-point scale) leads to an increase in the subnational expenditure share of just .27 per centage points within one year. A one-point increase in democracy over the course of five years (from t-6 to t-1) leads to an increase in the expenditure share of .35 per centage points (between t-6 and t). Thus, even a maximal 6-point democratisation—from 'pure authoritarianism' to 'pure democracy'—would increase a country's subnational expenditure share the next year by less than two per centage points (e.g. from 20 to 22 per cent of total government expenditures) and by slightly more than two per centage points over a five-year period.

There was no significant relationship between democratisation and change in the subnational governments' share of revenues (in fact, although not significant, the coefficient suggested a negative relationship.) These regressions did find a relationship between a higher

level of democracy and greater revenue decentralisation (suggesting that such a relationship may have been stronger in other years between 1972 and 2000 than 1993-5, the years of the cross-sectional regressions in Tables 1 and 2.) Still, here too, the effect appears very small. A 'pure democracy' (with an adjusted FH score of 7) is predicted to have a subnational revenue share just .60 to .84 per centage points greater than a 'pure autocracy' (with an adjusted score of 1).

In short, a higher level of democracy may be associated with a higher level of revenue decentralisation and recent democratisation may also lead to an increase in expenditure decentralisation. But in both cases, the estimated impact is tiny. These very weak relationships are plotted in Figure 2. Looking at individual countries, some fit the expectation—as Spain cast aside the Fanco era, it also shifted some 20 per cent of expenditures down to regions and localities. But there are also cases of democratisers that *centralised*—e.g., Thailand. Among countries where the level of democracy changed little in the last 20 years, some centralised by as much as 13 per centage points (Sweden), while others decentralised (Mexico shifted about 7 per centage points downward).[29] Democratisation is neither a sufficient nor a necessary condition for decentralisation.

In fact, it is easy to find examples of all four polar relationships between decentralisation and democratisation (see Figure 3). Some countries, like Spain (Figure 3A), decentralised expenditures as they democratised. Others, like Estonia (Figure 3B), reduced the subnational expenditure share as they became more democratic. Yet others, like Belarus (Figure 3C), decentralised expenditures as they became steadily more authoritarian. Finally, some, like Zimbabwe in the late 1980s (Figure 3D), centralised expenditures as their governments became more autocratic.

[FIGURES 2 AND 3 ABOUT HERE]

Conclusions and Discussion

Much of the literature on fiscal decentralisation has focused on normative questions—in particular, how much decentralisation is consistent with efficiency. This paper sought to answer a positive one: why do some countries have so much more decentralised fiscal systems than others? Like several previous studies, I found that fiscal decentralisation tends to be greater in territorially larger countries, in those with federal constitutions, and in those at higher levels of economic development. As some writers have suggested, former British colonies—especially those where more Britons settled—do tend to be relatively decentralised, while former Spanish and Portuguese colonies tend to be relatively centralised.

Unlike certain previous studies, I did not find a positive relationship between ethnic division and fiscal decentralisation. This might reflect the particular data I used, or the fact that I control for colonial history. It may also reflect a more complicated interaction of decentralisation with both ethnicity and economic development. If ethnic divisions slow economic growth, as argued for instance by Easterly and Levine, this should reduce the decentralising pressures that come with economic development, offsetting any direct effect that ethnicity has on politicians' incentives to decentralise (Easterly and Levine, 1997). However, since there is little clear evidence to support the common view that greater fiscal decentralisation reduces social tensions in ethnically divided societies, it is not clear why we should expect political leaders in such countries to decentralise at all.

I also found no relationship between the current degree of democracy in a country or the number of years for which it had been democratic and fiscal decentralisation as of the early 1990s.[30] Looking longitudinally instead of cross-sectionally, there was a very small positive relationship between change in the degree of democracy and in the extent of fiscal decentralisation between 1972 and 2000. Closer examination suggested possible reasons for some of the patterns in the data. Federal states, former British colonies, and countries not colonised in

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the modern era all tend to be relatively fiscally decentralised, in part, because they are on average more economically developed.

Certain results merit further examination. The relationship between country size and fiscal decentralisation emerges strongly from the data. But we do not have a compelling theory to explain why this should be the case. Most theoretical analysis of this question has been normative, showing that in larger countries greater fiscal decentralisation is likely to be more *efficient*. But since decisions to decentralise result from bargaining between self-interested central and local politicians, it is not clear why efficiency would tend to win the day. In larger countries, the benefits to central officials of concentrating all public resources in their hands would seem to be even greater than in smaller countries. To make sense of this result, we need a theory that shows why local demands for more fiscal resources are more politically powerful when the country's territory is larger.

Economic development increases fiscal decentralisation. But it appears to increase decentralisation of expenditures more than revenues. As a result, the relative size of center-region transfers (or subnational borrowing) must tend to grow with income. This is the case in this data set: the average excess of subnational expenditures over pre-tansfer revenues in countrie s with 1995 per capita GNP above $10,000 was 5.8 per cent of GDP in 1994; for countries with per capita GNP below $10,000, the average was 2.8 per cent. By and large, it is rich countries that have local governments that are the most heavily dependent on central transfers—for example, Denmark with a pre-tranfers subnational deficit of some 14 per cent of GDP, the Netherlands with 11 per cent of GDP, or Canada with 10 per cent.[31] High vertical fiscal imbalance—the difference between local revenues and expenditure responsibilities—is frequently faulted by public finance specialists for reducing the accountability of those making expenditures. Empirically—at least according to the *Government Finance Statistics Yearbooks* data—aggregate imbalances appear to be a problem almost entirely of rich countries. There is a paradoxical

positive correlation between aggregate vertical fiscal imbalance and subjective indexes of the quality of government.[32]

As interesting as the general findings were those about particular countries and regions that bucked the trend. India is much more fiscally decentralised than one would expect, even taking into account its vast size. Mongolia had far greater expenditure—but not revenue—decentralisation than one might have predicted.[33] And countries of the former Soviet Union had on average nearly 20 per centage points more of spending and revenues at subnational levels than former Spanish and Portuguese colonies of similar size and economic development. They were also far more fiscally decentralised than other countries in general.[34] This appears to reflect the the legacy of fiscal practices in the pre-transition Soviet Union. Ironically, since budgeting was a formality that merely implemented central plans, Moscow allowed a large share of budget resources to be notionally assigned to republic and local levels. As of 1990, the USSR union budget accounted for just 47 per cent of total expenditures and 45 per cent of total revenues (Goskomstat SSSR, 1991: 17). Although data are hard to find, it is likely that resources were officially quite decentralised within each union republic as well. The collapse of central power turned the accounting fiction into a fiscal reality, creating 15 newly independent states with fiscal structures far more decentralised than in most other countries at their levels of development.

These empirical findings raise intriguing questions. What are the political processes that lead territoria lly larger states to decentralise fiscal resources? What, in such states, strengthens local actors at the expense of central politicians? Are fiscal resources decentralised by the sheer administrative difficulty of monitoring over large distances? Or, is the bargaining power of local politicians greater in larger states? Does this have to do with the size of the subnational units (perhaps units large enough to credibly threaten secession are better able to demand more fiscal resources)? Does it relate to the path by which states were formed (if a weak center had to bargain with regional barons, that might have created decentralisation from the start)? At this point, one can only conjecture.

The association of economic development with decentralisation appears strong, once reverse causation is taken into account. But the theoretical link is rather weak. Is there evidence that the demand for subnational expenditure grows faster than the demand for central expenditure as income rises? If so, why are central officials motivated to meet such demands even when it means giving up resources? Independent of democracy or other aspects of the political regime, does economic development strengthen subnational political elites relative to central ones? And why does the reverse causal path appear so powerful? Have countries that were fiscally decentralised in the past grown much faster or slower than others?

Finally, if accountability is best preserved by locating revenue-raising and spending decisions at the same level, it is odd to see this principle systematically violated in many industrialised countries (in which local governments depend heavily on central transfers). Why do such problems have so little notable effect on the quality of government? The Scandinavian countries, Canada, Australia, and the Netherlands all have high aggregate vertical imbalances in this sense. Yet they have among the most honest and effective governments in the world. These questions await further research.

FOOTNOTES

[1] Two important exceptions are Panizza (1999) and Garman, Haggard, and Willis (2001). An ealier discussion occurs in Oates (1972).

[2] Figures are averages for 1993-5. The dataset for the analysis in this chapter was constructed from the IMF's *Government Finance Statistics Yearbooks* as presented in a dataset comp iled by the World Bank. It included 66 countries for subnational expenditures and 65 for subnational revenues. This is a relatively small number, and this renders conclusions somewhat tenative.

[3] Ebel and Yilmaz (2002); see also Bird (2000).

[4] Some arguments about the consequences of decentralisation apply to decisionmaking, others to the location of fiscal resources. For example, in discussing corruption it is often the latter that matters. Corrupt actions often occur in the implementation of spending or taxation decisions rather than in the decisionmaking stage, so the relevant type of decentralisation will be that related to actual spending or taxation.

[5] See, for instance, Hechter (2000).

[6] Ethnic groups need to be compactly located; externalities between subnational units and diseconomies of scale must not be too great.

[7] It is also the logic that, in Alesina and Spolaore's (1997) model of public good provision and spatially differentiated tastes, leads large states to disintegrate as lower international trade barriers reduce the advantages to regions of staying politically united. The advantages of narrowly differentiated baskets of local public goods come to loom larger. However, as Montesquieu (1989 [1748]) first noted, there is no need for states to disintegrate if they can just decentralise certain functions.

[8] See the discussion of the 'uniformity assumption' in (Breton, 2000).

[9] The relevant type of 'largeness' could be either population or territory.

[10] Of the 167 countries in my data set, 142 were colonies at some point in the period since the American Revolution, which I take as an arbitrary dividing point. (I do classify the US as a fomer British colony.)

[11] See Riker (1964), Elazar (1987). Others have emphasised the diversity of forms of rule within the British Empire, ranging from the relatively autonomous settlement colonies to certain highly centralised and dependent Crown colonies. Major changes also occurred over time (see, e.g., Fieldhouse (1982)).

[12] Primarily, the CIA's World Factbook 1996, and the Ethnologue database at http://www.sil.org/ethnologue/.

[13] Linguistic divisions are not completely exogenous to political processes, as is usually assumed. 'Take the case of Somalia. At independence, Isaaqs (from former British Somaliland) and Hawiyes (from former Italian Somalia) insisted they spoke the same language, and any survey of linguistic diversity undertaken at the time would have reflected this. In recent years, however, Isaaqs have begun consciously differentiating their speech forms from those of the Hawiyes as part of an attempt to justify recognition for their secessionist republic—much as Croat and Serb intellecturals and linguists have done over the past fifteen years in the Balkans' (Posner and Laitin, 2001: 14).

[14] I use 1995 data because choosing an earlier year would require dropping many cases due to lack of data. Economic development is clearly endogenous; as discussed below, I run a two stage least squares model.

[15] For more details, see http://freedomhouse.org/research/freeworld/2000/methodology2.htm.

[16] In this definition, a country is democratic if: (1) the chief executive is elected, (2) the legislature (at least its lower house) is elected, (3) more than one party contests elections, and (4) during the last three elections of a chief executive there has been at least one turnover of power between parties (see Przeworski, Alvarez, Cheibub, and Limongi, 2000). Note that the definition focuses exclusively on the contested election of governments. Under this definition, a country remains 'democratic' even if the leader imposes a state of emergency and suspends civil and political rights (as did Indira Gandhi between 1975 and 1977) so long as that leader was elected and does not violate or change the rules on holding new elections and leaving office. The 1975 Indian state of emergency was approved by both houses of the legislature. Mrs. Gandhi did call elections in 1977, and left power constitutionally when she lost. By contrast, when a leader, e.g. President Park in Korea, unconstitutionally changes the rules for selection of political officials, then that regime is classified as not democratic.

[17] For a discussion, see Treisman (2002).

[18] Riker (1967: 140) asserts that 'a number of federalisms simultaneously have been dictatorships'.

[19] Note that this included upper houses that were elected on a regional basis as well as those in which regional governments themselves chose representatives to the upper house.

[20] I tried also running this regression using the *Atlas Narodov Mira* ethnolinguistic fractionalisation index instead. This required dropping all the post-Soviet countries and reduced the number of cases from 64 to 47. The coefficient on fractionalisation was still negative though not significant (-.06, with standard error .11 in the subnational expenditure regression).

[21] The latter finding is borne out by the data; see below. In this data set, the ethnolinguistic division variable was negatively correlated with log 1995 per capita GNP at -.51.

[22] This was true using either the subnational expenditure or revenue share.

[23] Fiscal data were not available for any of the other countries formed fro m what was British India— Pakistan, Bangladesh, and Sri Lanka.

[24] The 'settlement colonies' were Australia, Canada, Ireland, New Zealand, South Africa (coded .5 to take into account the large Dutch influence), and the USA.

[25] In part, this is probably explained by India's federal status—the coefficient falls to about 19 controlling for this. However, controlling for income (using 2SLS) increases the coefficient again. Given its low income, India's fiscal decentralisation is all the more surprising.

[26] Among countries with 1995 per capita GNP above $10,000, every fourth country was a federation; among those with incomes below this threshold, only about one in ten was a federal state.

[27] In any case, this feature is not distinctive to federations. The eight countries I identified whose constitutions give a regionally chosen upper house this right were the Dominican Republic, Germany, Haiti, Italy, Liberia, the Netherlands, Switzerland, and the USA. Of these, only Germany, the USA, and Switzerland are usually considered federations.

[28] Bird also found in an empirical study that on average local governments in the industrialised countries financed a smaller share of their expenditures with own resources than local governments in the developing countries (see Bird (1995) and the discussion in Bird and Vaillancourt (1998)).

[29] These figures are for the period 1975-95. One might contend that there were small movements in the direction of greater political freedom in Mexico during these years, perhaps too small to merit a one-point jump in the Freedom House score.

[30] Panel regressions suggest there might be a very weak relationship between democratisation and the level of revenue decentralisation in some other years.

[31] This refers to the average. There are certainly some subnational governments in many developing countries that are heavily dependent on central transfers. Note also that there is greater variance among high income countries. Some rich countries—New Zealand, Iceland, for instance—had pre-transfer subnational aggregate deficits of less than 3 per cent of GDP.

[32] For instance, scholars at the World Bank calculated an index of 'graft' for about 150 countries in the late 1990s, based on aggregating various subjective ratings (see Kaufmann, Kraay, and Zoido-Lobaton, 1999). This correlates at $r = -.49$ with the aggregate subnational deficit (i.e., countries with larger subnational deficits are less corrupt). More surprisingly, the correlation was still -.43 and highly significant controlling for income. The aggregate subnational deficit may not reflect the fiscal imbalance in the average region, however. Even if the aggregate subnational deficit is low, there may be a high level of interregional redistribution (some regions run large deficits, others export large surpluses).

[33] China was also an outlier, with a far greater decentralisation level than predicted.

[34] Running two state least squares models similar to model 10, but leaving out all colonial variables except for 'former Russian colony', I estimate a former Russian colony effect of about 20 percentage points for the subnational expenditure share and about 17 points for the subnational revenue share.

Table 1. Determinants of the subnational expenditure share, 1993-5

	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) OLS	(6) OLS	(7) OLS
Country size							
Log surface area	9.27***	8.57***	8.02***	7.18***	7.52***	9.20***	9.94***
	(2.16)	(2.42)	(2.22)	(2.04)	(2.11)	(1.83)	(2.17)
Log population	1.88	2.60	.86	-.33	1.66	-1.32	.93
	(2.79)	(2.95)	(2.44)	(2.73)	(2.93)	(2.61)	(3.11)
Ethnolinguistic division							
Per cent not using	-.12***	-.12***	-.08*	-.07	-.07*	-.10**	-.11**
official language at home	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)
Colonial history							
British	10.18***	10.15***		7.23**	9.44***	9.07***	9.96***
	(3.40)	(3.44)		(3.10)	(3.30)	(3.16)	(3.50)
Settlement colony			16.26**				
			(6.21)				
Dependent colony[a]			3.03				
			(3.83)				
India			26.66***				
			(4.79)				
French	8.44**	7.73*	8.63**	-.06	1.53	3.23	9.26**
	(3.99)	(4.15)	(4.19)	(7.40)	(6.57)	(6.62)	(3.76)
Dutch	2.50	2.32	1.01	7.63	4.28	3.23	2.86
	(7.73)	(7.88)	(6.07)	(8.54)	(8.33)	(4.53)	(7.88)
Russian	18.31***	18.27***	17.69***	19.83***	19.98***	17.03***	18.74***
	(2.66)	(2.68)	(2.61)	(2.10)	(2.26)	(3.63)	(2.69)
Turkish	5.79	5.37	7.02*	8.18**	7.47*	7.01*	6.66*
	(3.84)	(3.90)	(3.76)	(3.30)	(3.72)	(3.80)	(3.93)
Other	8.19**		8.21**	10.61***	10.52***	9.00**	8.81**
	(3.51)		(3.76)	(3.46)	(3.53)	(3.95)	(3.49)
of Italy or Habsburg Austria		6.16					
		(3.74)					
of China[e]		15.87***					
		(4.29)					
Non-colony	15.00***	14.69***	15.74***	14.68***	15.15***	13.16***	14.47***
	(3.75)	(3.76)	(3.84)	(3.32)	(3.35)	(3.91)	(3.81)
Political decentralisation							
'Federal' (Elazar 1995)				14.39***			
				(4.77)			
'Federal' (own constitution)					11.31**		
					(4.53)		
Subnational autonomy (federal						9.86**	
by Riker's (1964) definition)						(3.79)	
Regionally-chosen upper							5.84
house with financial veto							(6.21)
Economic development							
Log 1995 GNP per cap, PPP							
Democracy							
Political Rights, 1993-4							
(higher means more free)							
Consecutive years 'democratic'							
as of 1995							
Constant	-9.28**	-8.21*	-6.13	-5.93	-8.02*	-7.51	-10.63**
	(4.14)	(4.43)	(4.21)	(4.39)	(4.22)	(5.02)	(4.11)
R²	.5790	.5840	.6289	.6806	.6424	.6475	.5905
N	64	64	64	64	64	58	64

White heteroskedasticity-corrected standard errors; * $p < .10$, ** $p < .05$, *** $p < .01$.

[a] Crown colony, protectorate, protected state, mandate.

Instrument for log 1995 gnp p.c. is distance from Equator; instrument for democray is dummy for democratic in 1950.

[b] R^2 for first round regression was .614; [c] R^2 for first round regression (of democracy) was .749;

[d] R^2 for first round regression (of democracy) was .739; [e] only case with data was Mongolia.

Table 1. continued

	(8) OLS	(9) 2SLS[b]	(10) 2SLS[c]	(11) 2SLS[d]
Country size				
Log surface area	7.19***	8.40***	9.05***	8.59***
	(1.94)	(1.91)	(2.43)	(1.95)
Log population	.19	3.59	2.66	3.45
	(2.71)	(2.90)	(2.80)	(2.86)
Ethnolinguistic division				
Per cent not using	-.04	.07	.08	.07
official language at home	(.05)	(.06)	(.06)	(.06)
Colonial history				
British	6.44	3.81	3.24	3.60
	(3.93)	(3.18)	(3.28)	(3.27)
Settlement colony				
Dependent colony[a]				
India				
French	-1.45	-5.65	-8.03	-6.11
	(7.88)	(9.71)	(10.40)	(9.90)
Dutch	5.70	-8.49	-14.39	-9.91
	(8.29)	(7.08)	(14.81)	(8.39)
Russian	20.07***	21.21***	21.29***	21.01***
	(2.13)	(2.33)	(2.33)	(2.37)
Turkish	5.51*	3.46	3.74	3.93
	(2.86)	(4.02)	(4.27)	(4.14)
Other	14.19***	11.56***	13.41***	10.96**
	(3.62)	(4.09)	(4.27)	(5.01)
of Italy or Habsburg Austria				
of China[e]				
Non-colony	13.43***	4.90	4.14	5.30
	(4.68)	(5.11)	(5.39)	(5.02)
Political decentralisation				
'Federal' (Elazar 1995)	13.85***	7.17	6.73	7.50
	(4.86)	(4.59)	(5.27)	(4.61)
'Federal' (own constitution)				
Subnational autonomy (federal by Riker's (1964) definition)				
Regionally-chosen upper house with financial veto				
Economic development				
Log 1995 GNP per cap, PPP	3.14	24.31***	31.12*	27.25**
	(5.20)	(8.10)	(17.17)	(11.14)
Democracy				
Political Rights, 1993-4		1.71		
(higher means more free)		(3.26)		
Consecutive years 'democratic'			-.10	
as of 1995			(.20)	
Constant	-18.57	-103.79***	-134.66*	-113.34***
	(19.22)	(31.00)	(74.71)	(40.76)
R²	.6902	.72294	.7346	.7346
N	61	64	64	64

White heteroskedasticity-corrected standard errors; * $p < .10$, ** $p < .05$, *** $p < .01$.

[a] Crown colony, protectorate, protected state, mandate.

Instrument for log 1995 gnp p.c. is distance from Equator; instrument for democray is dummy for democratic in 1950.

[b] R^2 for first round regression was .614; [c] R^2 for first round regression (of democracy) was .749;

[d] R^2 for first round regression (of democracy) was .739; [e] only case with data was Mongolia.

Table 2. Determinants of the subnational revenue share, 1993-5

	(1) OLS	(2) OLS	(3) OLS	(4) OLS	(5) OLS	(6) OLS	(7) OLS
Country size							
Log surface area	10.81***	11.04***	11.51***	8.72***	8.83***	9.81***	11.39***
	(1.78)	(2.08)	(2.01)	(1.82)	(1.82)	(1.83)	(1.80)
Log population	-1.45	-1.68	-2.92	-2.99	-1.29	-2.41	-2.26
	(2.32)	(2.59)	(2.46)	(2.72)	(2.56)	(2.59)	(2.67)
Ethnolinguistic division							
Per cent not using	-.10**	-.10**	-.11***	-.05	-.05	-.07*	-.09**
official language at home	(.04)	(.04)	(.03)	(.04)	(.04)	(.04)	(.04)
Colonial history							
British	10.91***	10.94***		8.10***	10.04***	9.14***	10.78***
	(3.09)	(3.13)		(2.90)	(3.10)	(3.22)	(3.12)
Settlement colony			9.27				
			(5.88)				
Dependent colony[a]			11.04***				
			(2.57)				
India			24.19***				
			(4.36)				
French	7.17**	7.39**	7.87**	-.28	.25	3.22	7.86**
	(3.33)	(3.48)	(3.75)	(6.86)	(6.19)	(5.76)	(3.16)
Dutch	-6.62	-6.55	-3.86	-2.34	-5.03	-6.99	-6.30
	(4.00)	(4.07)	(3.89)	(4.86)	(4.56)	(4.45)	(4.21)
Russian	16.72***	16.73***	16.41***	18.30***	18.70***	16.70***	17.10***
	(2.34)	(2.36)	(2.41)	(2.05)	(2.11)	(3.25)	(2.40)
Turkish	1.33	1.46	1.33	3.62*	3.24	3.10	2.08
	(2.27)	(2.31)	(2.33)	(2.03)	(2.08)	(2.57)	(2.41)
Other	5.15**		4.69*	7.39***	7.67***	6.84**	5.72**
	(2.52)		(2.69)	(2.02)	(2.13)	(2.87)	(2.67)
of Italy or Habsburg Austria		5.66**					
		(2.62)					
of China[e]		2.84					
		(4.05)					
Non-colony	12.64***	12.73***	12.69***	12.49***	12.97***	11.74***	12.22***
	(3.56)	(3.53)	(3.69)	(3.21)	(3.05)	(3.77)	(3.52)
Political decentralisation							
'Federal' (Elazar 1995)				12.69**			
				(5.40)			
'Federal' (own constitution)					11.43**		
					(4.68)		
Subnational autonomy (federal						7.98*	
by Riker's (1964) definition)						(4.03)	
Regionally-chosen upper							4.87
house with financial veto							(6.76)
Economic development							
Log 1995 GNP per cap, PPP							
Democracy							
Political Rights, 1993-4							
(higher means more free)							
Consecutive years 'democratic'							
as of 1995							
Constant	-13.04***	-13.37***	-12.76***	-10.16**	-11.93***	-12.07**	-14.20***
	(3.61)	(3.87)	(4.05)	(4.14)	(3.65)	(4.51)	(3.62)
R²	.6113	.6118	.6247	.7030	.6861	.6421	.6208
N	63	63	63	63	63	59	63

White heteroskedasticity-corrected standard errors; * p < .10, ** p < .05, *** p < .01.
Instrument for log 1995 gnp p.c. is distance from Equator; instrument for democray is dummy for democratic in 1950.
[a] Crown colony, protectorate, protected state, mandate; [b] R² for first round regression was .614;
[c] R² for first round regression (of democracy) was .749; [d] R² for first round regression (of democracy) was .739
[e] only case with data was Mongolia

Table 2. continued

	(8) OLS	(9) 2SLS[b]	(10) 2SLS[c]	(11) 2SLS[d]
Country size				
Log surface area	8.63***	9.24***	9.70***	9.49***
	(1.91)	(1.80)	(2.14)	(1.98)
Log population	-3.26	-.75	-1.54	-.72
	(2.41)	(2.55)	(1.94)	(2.62)
Ethnolinguistic division				
Per cent not using	-.06	.03	.02	0.2
official language at home	(.05)	(.05)	(.06)	(.06)
Colonial history				
British	8.61**	5.99*	5.64	5.92
	(3.52)	(3.15)	(3.62)	(3.79)
Settlement colony				
Dependent colony[a]				
India				
French	.32	-3.38	-5.31	-3.84
	(7.70)	(8.38)	(8.98)	(9.49)
Dutch	-1.23	-11.05**	-15.53	-13.09*
	(4.27)	(5.25)	(10.41)	(7.31)
Russian	18.09***	18.98***	18.85***	18.55***
	(2.12)	(2.18)	(2.15)	(2.14)
Turkish	4.52**	1.05	1.41	.75
	(2.20)	(3.02)	(2.94)	(3.49)
Other	7.12***	7.70***	8.74**	6.14**
	(2.58)	(2.12)	(3.39)	(2.49)
of Italy or Habsburg Austria				
of China[e]				
Non-colony	13.17***	7.16	6.65	7.41
	(4.38)	(5.38)	(5.97)	(5.94)
Political decentralisation				
'Federal' (Elazar 1995)	13.03**	8.93	8.72	8.95
	(5.26)	(5.57)	(6.12)	(5.89)
'Federal' (own constitution)				
Subnational autonomy (federal by Riker's (1964) definition)				
Regionally-chosen upper house with financial veto				
Economic development				
Log 1995 GNP per cap, PPP	-1.73	12.96	18.08	16.85
	(4.53)	(8.37)	(13.19)	(11.83)
Democracy				
Political Rights, 1993-4		1.40		
(higher means more free)		(2.15)		
Consecutive years 'democratic'		-.12		
as of 1995		(.19)		
Constant	-3.05	-62.10*	-85.29	-74.87*
	(16.80)	(32.32)	(55.99)	(44.13)
R²	.6954	.7187	.7204	.7204
N	60	63	62	62

White heteroskedasticity-corrected standard errors; * $p < .10$, ** $p < .05$, *** $p < .01$.

Instrument for log 1995 gnp p.c. is distance from Equator; instrument for democray is dummy for democratic in 1950.

[a] Crown colony, protectorate, protected state, mandate; [b] R^2 for first round regression was .614;

[c] R^2 for first round regression (of democracy) was .749; [d] R^2 for first round regression (of democracy) was .739

[e] only case with data was Mongolia

Table 3. Democratisation and decentralisation, panel regressions

	(1) Expenditure share	(2) Expenditure share	(3) Revenue share	(4) Revenue share
Dependent variable t−2	.99*** (.01)		.99*** (.01)	
Dependent variable t−6		.97*** (.01)		.99*** (.01)
Freedom House score t−2	.06 (.04)		.10** (.04)	
Change in Freedom House score t−2 to t−1	.27* (.15)		-.07 (.14)	
Freedom House score t−6		.18** (.08)		.14*** (.04)
Change in Freedom House score t−6 to t−1		.35* (.20)		-.20 (.19)
Constant	.37* (.21)	1.06*** (.33)	.49*** (.16)	.77*** (.23)
R^2	.98	.94	.97	.95
Number of observations	1170	836	1177	834
Number of countries	88	71	91	72

Panel corrected standard errors in brackets; sigma computed by pairwise selection. *** $p < .01$, ** $p < .05$, * $p < .10$.
Freedom House scores adjusted so that higher scores indicate *more* democratic government.
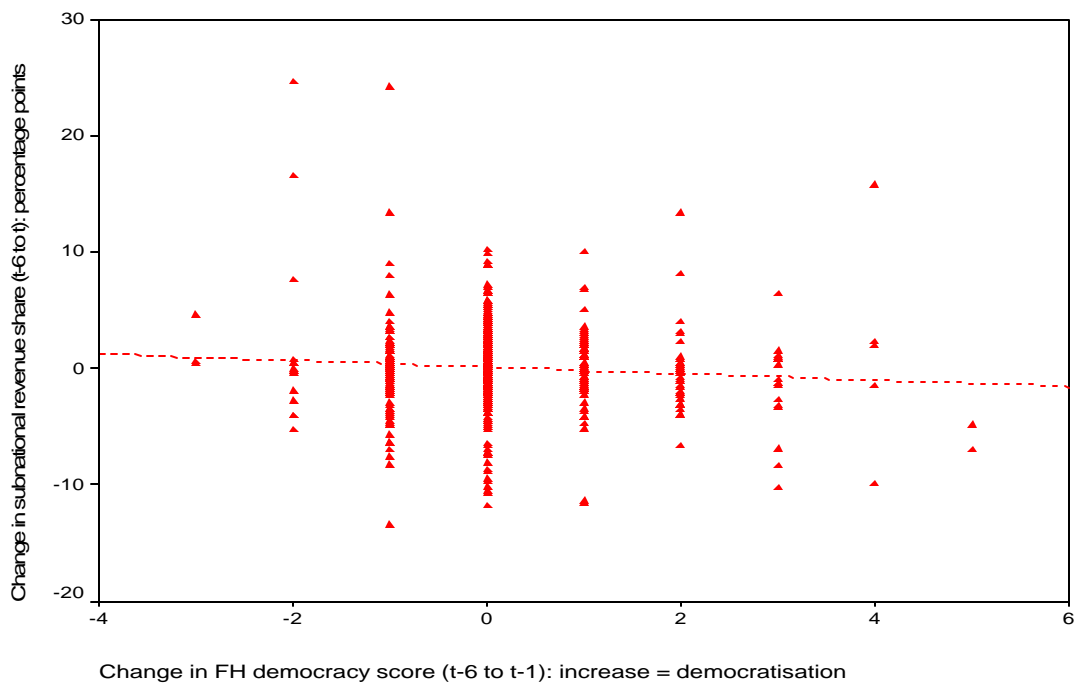
Figure 1. Fiscal decentralisation in the early 1990s
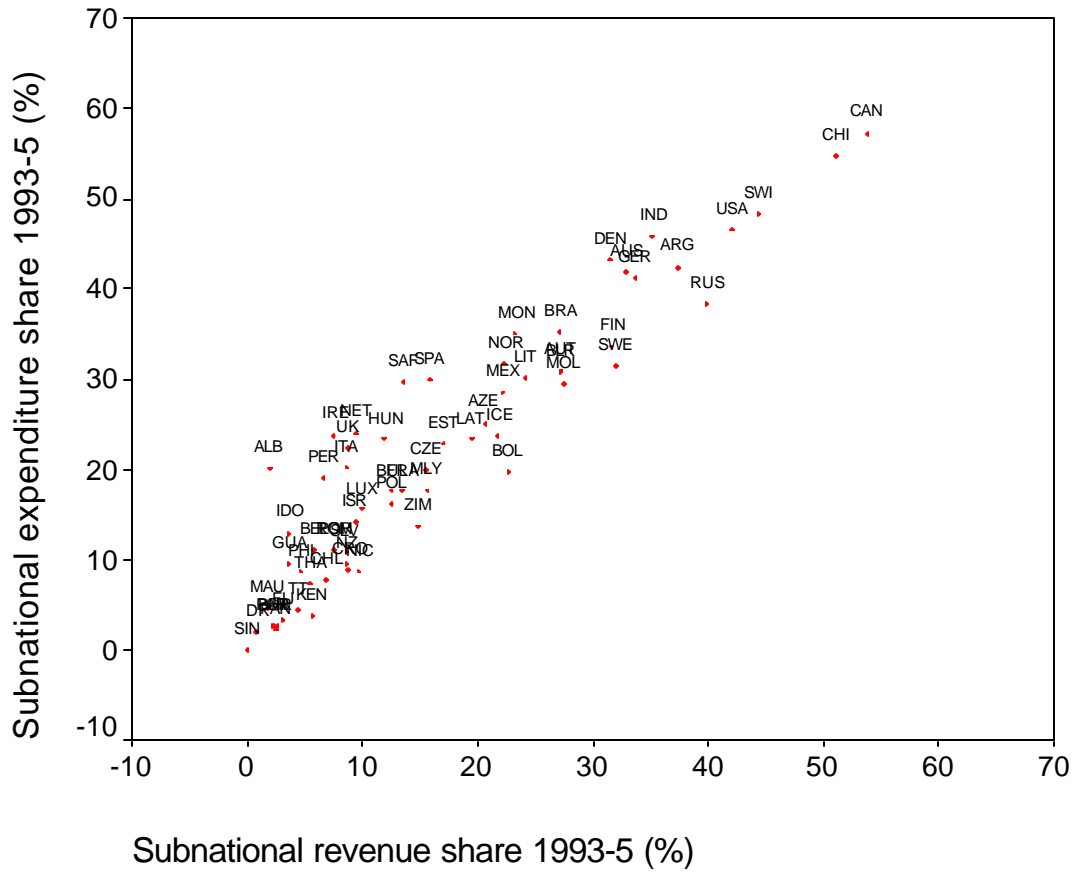
Source: IMF, *Government Finance Statistics Yearbooks*, various years, as collected in World Bank fiscal indicators database. Subnational share is (local + state)*100/(local + state + central).

Figure 2. Democratisation and decentralisation

2A. Expenditure decentralisation
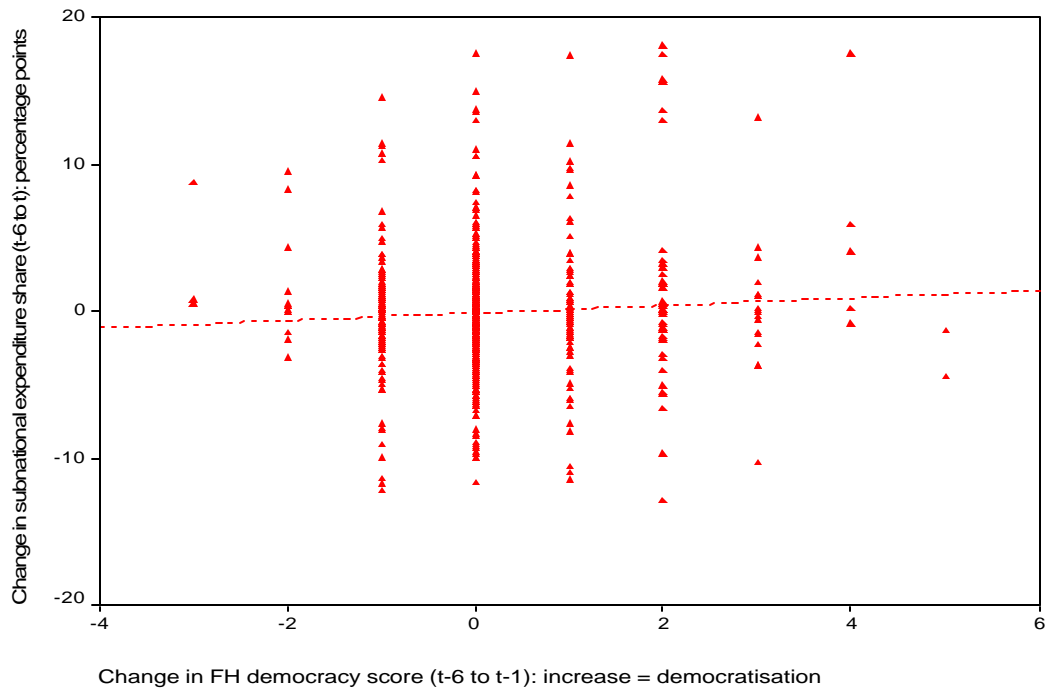
2B. Revenue decentralisation

Sources: Political rights rating is from Freedom House, adjusted so that increases represent increases in political freedoms. Subnational expenditure share is calculated from *Government Finance Statistics Yearbooks*, various years, as collected in World Bank fiscal indicators database.

Figure 3A. Democratisation and Decentralisation: Spain
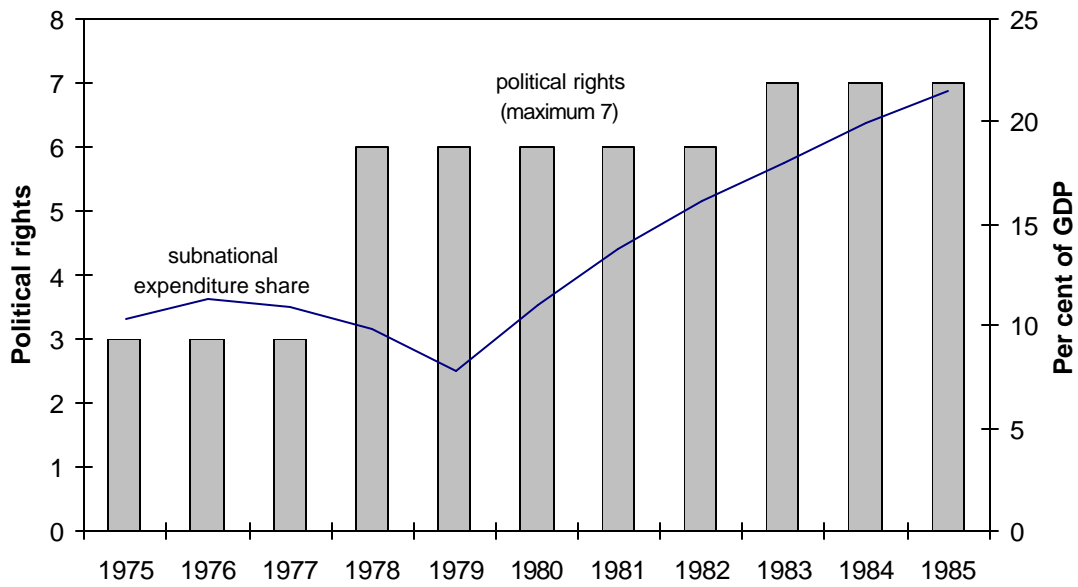
Figure 3B: Democratisation and Centralisation: Estonia
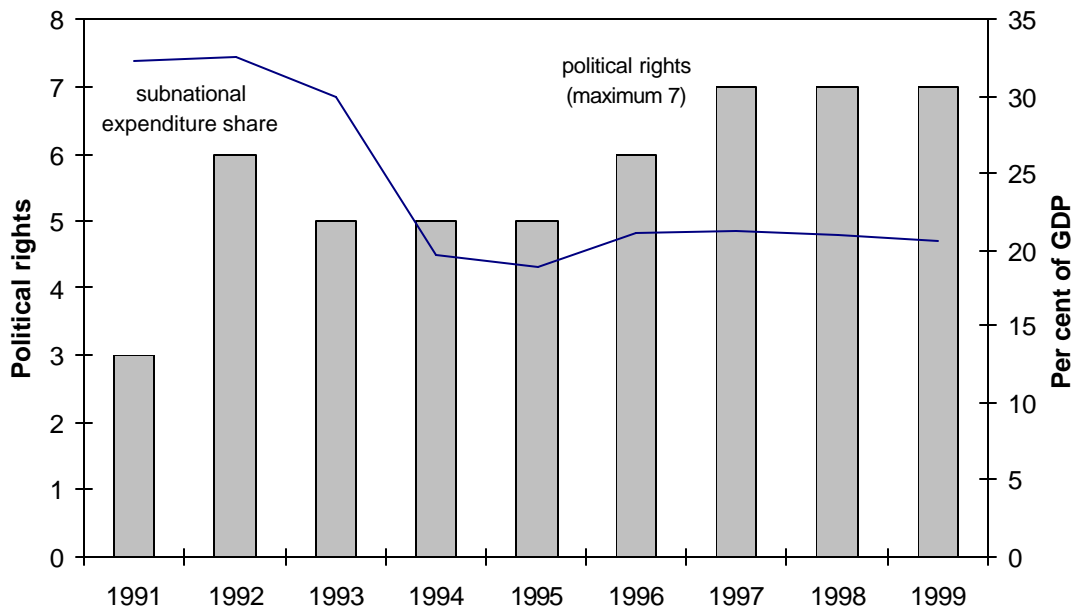
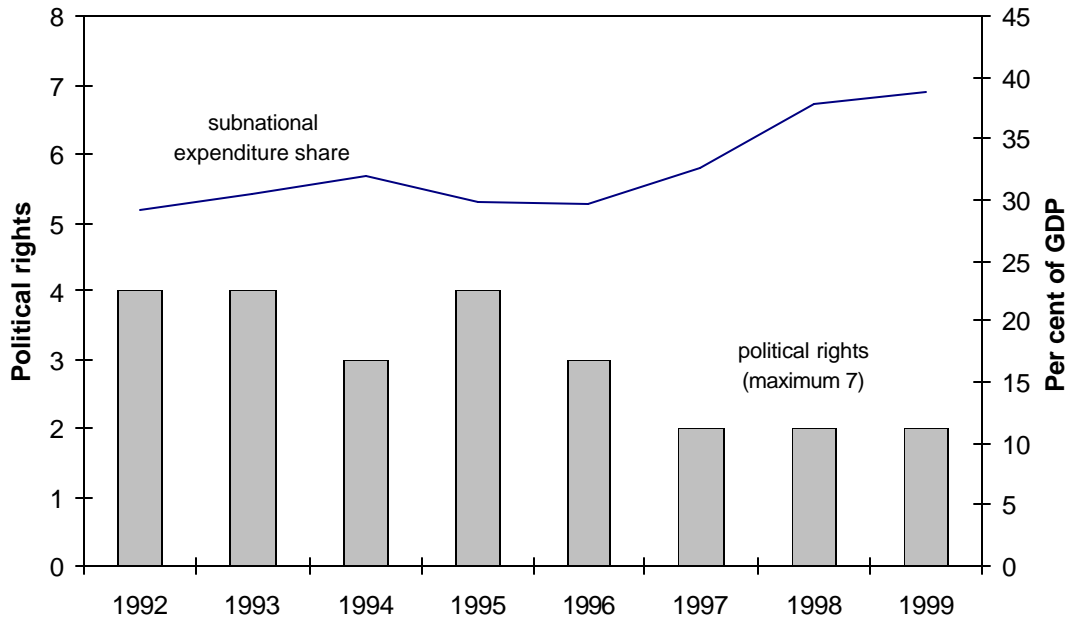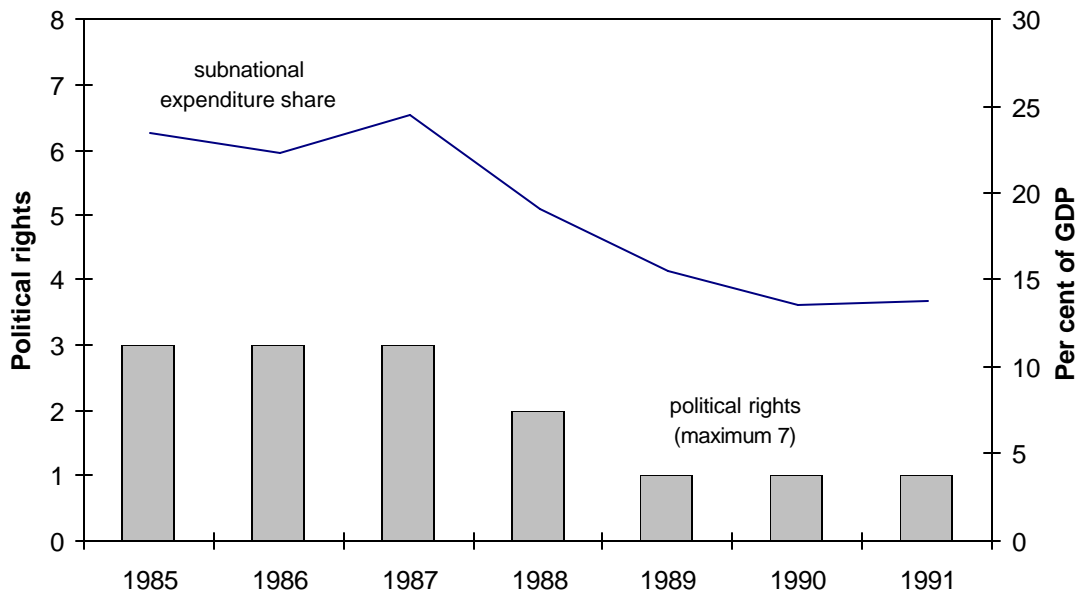## Figure 3C: Increasing Authoritarianism and Decentralisation: Belarus

Figure 3D: Increasing Authoritarianism and Centralisation: Zimbabwe

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