

Does Taxation Lead to Representation?

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Does their need for greater tax revenue force governments to democratize? Most research on contemporary democratization says little about the effects of taxation. Yet there are good reasons to believe that taxation led to representation in the past: representative government first came about in early modern Europe when monarchs were compelled to relinquish some of their authority to parliamentary institutions, in exchange for the ability to raise new taxes; similarly, the war for independence in the United States began as a rebellion against British taxes. Some scholars argue that a comparable process is occurring today: the need to raise taxes forces authoritarian governments to democratize. These claims have never been carefully tested. In this article, the ‘taxation leads to representation’ argument is explored and tested using pooled time-series cross-national data from 113 countries between 1971 and 1997. One version of the argument appears to be valid, while another does not. These findings are important both for scholars who wish to understand the causes of democracy, and for policy makers who wish to promote it.

Are governments forced to democratize by their need for greater tax revenue? There are good reasons to believe this was true in the past: representative government first came about in early modern Europe when monarchs in England, France, Spain and Austro-Hungary were compelled to relinquish some of their authority to parliamentary institutions, in exchange for the ability to raise new taxes. The rebellion of the American colonies against King George III was sparked by his government’s efforts to impose new taxes in the 1760s. Most research on contemporary democratization says little or nothing about the effects of taxation. But some scholars suggest that the need to raise taxes, even today, may force authoritarian governments in the developing and transitional countries to democratize. This claim has never been carefully tested. In this article, I explore the history and nuances of the ‘taxation leads to representation’ argument, and test it using pooled time-series cross-national data from 113 countries between 1971 and 1997. I find that one version of the argument appears to be valid, while another does not.

The relationship between taxation and representation has both theoretical and practical importance. Over the last two decades, there has been a wealth of research on the causes of democracy. Yet according to most studies, democracy appears to be caused by factors that are very difficult to change, including per capita income, changes in class relations, the religious make-up of the population, and the unique features of the ‘Western’ states.¹

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¹ Dietrich Rueschemeyer, Evelyne Huber Stephens and John D. Stephens, *Capitalist Development and Democracy* (Chicago: University of Chicago Press, 1992); Ross E. Burkhardt and Michael S. Lewis-Beck, ‘Comparative Democracy: The Economic Development Thesis’, *American Political Science Review*, 88 (1994), 903–10; John B. Londregan and Keith T. Poole, ‘Does High Income Promote Democracy?’ *World Politics*, 49 (1996), 1–30; Robert J. Barro, ‘Determinants of Democracy’, *Journal of Political Economy*, 107 (1999), 158–83;

Hence, the study of democratization has produced few practical recommendations for democracy advocates. A state's fiscal policies, however, are highly malleable and can be influenced by domestic and international actors alike. Examining the links between taxation and representation can both cast light on the correlates of democratic transitions and generate practical suggestions for advocates of democracy.

I begin by discussing the lineages of the claim that taxation leads to representative government, noting both historical and contemporary applications, and highlighting some theoretical ambiguities in the argument. Next I describe tax trends in both the advanced industrial and developing countries between 1970 and 1997. An explanation of testing for the impact of taxation on regime types follows, and then I present the results. In the final section I discuss some implications and conclude.

TAXATION AND REPRESENTATION: HISTORICAL, CONTEMPORARY AND THEORETICAL LINKS

The view that taxation tends to produce more representative government is based on a common interpretation of political development in early modern Europe and colonial America. This interpretation has deeply influenced a generation of political scientists, sociologists and economic historians – including Robert Bates, James Buchanan, Margaret Levi, Michael Mann, Barrington Moore Jr, Douglass North, Kenneth Organski, Mancur Olson, Theda Skocpol and Charles Tilly – whose theories of state-building, taxation and representative government have, in turn, shaped the way many other scholars view the non-Western states.

Historical Applications

Most of these researchers were themselves influenced by an earlier generation of German and Austrian academics, including Otto Hinze, R. Goldscheid and Joseph Schumpeter, who pioneered the study of 'fiscal sociology' in the early twentieth century and developed the argument that taxation was central to state-building. Schumpeter suggested that from the fourteenth to the sixteenth centuries, the rising cost of war in the Austrian principalities had forced princes into debt, which sent them 'begging to the estates'; in exchange for new taxes, the estates eventually received greater accountability from the princes, and influence over how their money was spent. For Schumpeter, this was the dawn of the modern state in Central Europe; it was also a critical step towards the incorporation of representative institutions into government.²

Many scholars of English history have also observed that the Crown's need for revenues – particularly in the thirteenth, fourteenth and seventeenth centuries – led to the foundation and evolution of early forms of representative government. According to Stubbs, 'The admission of the right of parliament to legislate, to enquire into abuses, and to share in the guidance of national policy, was practically purchased by the money granted to Edward

(Footnote continued)

Adam Przeworski, Michael Alvarez, Jose Antonio Cheibub and Fernando Limongi, *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990* (New York: Cambridge University Press, 2000).

² Schumpeter was not remiss in describing the virtues of fiscal sociology: 'The spirit of a people, its cultural level, its social structure, the deeds its policy may prepare – all this and more is written in its fiscal history, stripped of all phrases. He who knows how to listen to its message here discerns the thunder of world history more clearly than anywhere else.' See Joseph A. Schumpeter, 'The Crisis of the Tax State', first published in 1918, but reproduced in *International Economic Papers*, 4 (1954), 5–38, p. 7.

I and Edward III.³ More recently, North and Weingast argued that the events surrounding the Glorious Revolution of 1688 – in which Parliament gained firmer control over the Crown’s ability to raise and spend tax revenues, and in exchange allowed the Crown to tax and borrow larger sums – was central to England’s subsequent military and economic success.⁴ Mann has shown that the Crown’s revenues, after stagnating from the late thirteenth century to the reign of Charles I, rose significantly after the Glorious Revolution, as a result of this taxation-for-representation swap.⁵

In France, the influence of the provincial estates fluctuated between fourteenth and eighteenth centuries depending, in part, on the monarch’s need for taxes.⁶ Indeed, it was the Crown’s utter bankruptcy in 1788 that led to Louis XV’s fateful decision to convene the Estates General in 1789; once again, an autocrat’s need for taxes led – albeit fitfully – to the evolution of representative government.

Hoffman and Norberg, in their study of early modern England, France, Spain and the Netherlands, emphasize the failure of monarchs, and the success of representative governments, in raising revenues:

In the end, representative institutions, not absolute monarchy, proved superior in revenue extraction. Where representative bodies held the ultimate authority, as in the Netherlands or eighteenth-century England, they facilitated taxing. Representation in the English Parliament created a willingness to pay ... Where forceful representative institutions were absent, though, fiscal paralysis was almost inevitably the result. In France, competing interests and the lack of a national representative body made it virtually impossible for the royal government to create desperately needed taxes. In Spain, the demise of the Cortes helped freeze taxation and usher in the end to Spain’s status as a great power.⁷

For US scholars, the Revolutionary War offers a more familiar example. In the 1760s, the British government successively adopted three measures that would impose new taxes on the American colonies, to help pay for the debts incurred by the Seven Years War: the Sugar Act, the Stamp Act and the New Townshend levies. These measures provoked an unprecedented level of organized resistance in the colonies, producing petitions, boycotts, riots, assemblies of outraged citizens, the formation of anti-tax militias and appeals from the colonial legislatures. The colonists themselves – later joined by most historians – believed these acts helped produce the rebellion of 1776, which eventually led to both independence and a government with strong representative institutions.⁸

The colonists also developed a theory of rights to accompany the tax rebellions. Often they called upon the British example, arguing that it was part of the British constitution – and according to some, natural law – that peoples could only be taxed with their consent.⁹

³ William Stubbs, *The Constitutional History of England*, Vol. II (Oxford: Clarendon Press, 1896), p. 599.

⁴ Douglass North and Barry R. Weingast, ‘Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England’, *Journal of Economic History*, 49 (1989), 803–32.

⁵ Michael Mann, ‘State and Society, 1130–1815: An Analysis of English State Finances’, in Maurice Zeitlin, ed., *Political Power and Social Theory* (Greenwich, Conn.: JAI Press, 1980), pp. 165–208.

⁶ Philip T. Hoffman, ‘Early Modern France, 1450–1700’, in Philip T. Hoffman and Kathryn Norberg, eds, *Fiscal Crises, Liberty, and Representative Government, 1450–1789* (Stanford: Stanford University Press, 1994), pp. 226–52.

⁷ Philip T. Hoffman and Kathryn Norberg, ‘Conclusion’, in Hoffman and Norberg, eds, *Fiscal Crises*, pp. 299–312, at p. 306.

⁸ Bernard Bailyn, David Brion Davis, David Herbert Donald, John L. Thomas, Robert H. Wiebe and Gordon S. Wood, *The Great Republic: A History of the American People* (Boston: Little, Brown, 1977). Ironically, in 1820 the US Supreme Court ruled in *Loughborough v. Blake* that the federal government had the right to impose taxes on US territories that had no representation in Congress.

⁹ Edmund S. Morgan and Helen M. Morgan, *The Stamp Act Crisis: Prologue to Revolution* (New York: Collier Books, 1953); Bernard Bailyn, *The Ideological Origins of the American Revolution* (Boston, Mass.: Harvard University Press, 1967).

The final declaration of the Stamp Act Congress of 1765 – an *ad hoc* assembly to which nine of the thirteen colonial governments sent their representatives – asserted:

That it is inseparably essential to the Freedom of a People, and the undoubted Right of Englishmen, that no taxes be posed upon them, but with their own consent, given personally, or by their Representatives.¹⁰

Even though the taxes that gave rise to these protests were eventually repealed, the fact that King George had ‘impos(ed) taxes on us without our consent’ was cited in the Declaration of Independence as one of the rebellion’s precipitating grievances. In 1775, on the eve of the war for American independence, Edmund Burke explained to the House of Commons that:

The Colonies draw from you, as with their life-blood, these ideas and principles [of liberty]. Their love of liberty, as with you, fixed and attached on this specific point of taxing. Liberty might be safe, or might be endangered, in twenty other particulars, without their being much pleased or alarmed. Here they felt its pulse, and as they found that beat, they thought themselves sick or sound.¹¹

Contemporary Applications

The view that taxation had a catalytic effect on political development in Europe and the United States has deeply influenced the way many contemporary scholars view the non-Western world. Samuel Huntington, for example, suggests in his discussion of democratic transitions that ‘the lower the level of taxation, the less reason for the public to demand representation.’¹²

While historians have focused on the influence of taxes on the formation and salience of representative institutions *per se*, scholars of the developing world often suggest that taxation tends to promote the development of democracy more broadly. The ‘taxation produces representation’ claim is most commonly invoked today by Middle East specialists who reason that the ability of the region’s autocrats to finance themselves with non-tax revenues – primarily through oil revenues – has enabled them to avoid pressures to democratize.¹³ Crystal, for example, suggests that the discovery of oil allowed the governments of Kuwait and Qatar to stop taxing their merchant classes; relieved of taxes, the merchants relinquished their historically-established right to participate in policy making.¹⁴ Similarly, Brand found that a drop in foreign aid and remittances in the 1980s forced the Jordanian government to depend more heavily on taxes: from 1987 to 1992, the ratio of taxes to gross domestic product (GDP) rose from 0.13 to 0.24.¹⁵ Rising taxes and

¹⁰ Quoted in Morgan and Morgan, *The Stamp Act Crisis*, pp. 142–3.

¹¹ Cited in Charles Adams, *Those Dirty Rotten Taxes: The Tax Revolts that Built America* (New York: The Free Press, 1998), p. 100.

¹² Samuel P. Huntington, *The Third Wave: Democratization in the Late 20th Century* (Norman: University of Oklahoma Press, 1991), p. 65.

¹³ Lisa Anderson, ‘The State in the Middle East and North Africa’, *Comparative Politics*, 20 (1987), 1–18; Hazem Beblawi and Giacomo Luciani, eds, *The Rentier State: Nation, State, and Integration in the Arab World*, Vol. 2 (London: Croom Helm, 1987); Kiren Aziz Chaudhry, *The Price of Wealth: Economies and Institutions in the Middle East* (Ithaca, NY: Cornell University Press, 1997).

¹⁴ Jill Crystal, *Oil and Politics in the Gulf: Rulers and Merchants in Kuwait and Qatar* (New York: Cambridge University Press, 1990).

¹⁵ World Bank, ‘World Development Indicators’, CD-ROM (1999).

falling subsidies led to riots in April 1989, a revision in the election laws, and following a November 1989 vote, a more open, representative and influential parliament.¹⁶

Using a somewhat different logic, Shambayati argues that the absence of taxation in pre-revolutionary Iran led to a paucity of interest-group politics, which in turn made religious fundamentalists unusually influential and undermined the prospects for democracy.¹⁷ The ‘taxation leads to representation’ argument has also been used to explain the problems of resource-rich authoritarian governments outside the Middle East, including the Republic of Congo, Democratic Republic of Congo, Gabon and Indonesia.¹⁸

The belief that higher taxes will produce more accountable government has even influenced some international development organizations, who worry that aid will reduce the pressure on governments to democratize.¹⁹

Theoretical Applications

Most theories of democracy say nothing about taxes. But a handful of general theories of political and economic development have incorporated the idea that taxes are traded for representative or democratic government. The ‘neo-classical’ theory of the state developed by Douglass North begins with a ruler who provides his subjects with a reduction in disorder, and the enforcement of property rights, in exchange for some level of tax revenue. North then posits the development of:

a representative body reflecting the interests of constituent groups and their role in bargaining with the ruler. This concept, consistent with the origin of parliaments, estates general, and cortes in early modern Europe, reflects the needs of the ruler to get more revenue in exchange for which he or she agrees to provide certain services to constituent groups.²⁰

The logic of the taxation-for-representation swap has also been explored with formal models. Brennan and Buchanan devise a model in which constitutional government arises from the efforts of citizens to constrain a sovereign’s tax-raising powers.²¹ Although their model is principally concerned with the development of constitutional government, it strongly implies the presence of a representative assembly.

¹⁶ Laurie A. Brand, ‘Economic and Political Liberalization in a Rentier Economy: The Case of the Hashemite Kingdom of Jordan’, in Iliya Harik and Denis J. Sullivan, eds, *Privatization and Liberalization in the Middle East* (Bloomington: Indiana University Press, 1992), pp. 167–88.

¹⁷ Hootan Shambayati, ‘The Rentier State, Interest Groups, and the Paradox of Autonomy: State and Business in Turkey and Iran’, *Comparative Politics*, 26 (1994), 307–31.

¹⁸ John Clark, ‘Petro-Politics in Congo’, *Journal of Democracy*, 8 (1997), 62–76; Douglas A. Yates, *The Rentier State in Africa: Oil Rent Dependency and Neocolonialism in the Republic of Gabon* (Trenton, NJ: Africa World Press, 1996); Olle Törnquist, ‘Rent Capitalism, State, and Democracy: A Theoretical Proposition’, in Arief Budiman, ed., *State and Civil Society in Indonesia* (Melbourne: Monash Papers on Southeast Asia No. 22, 1990), 29–49; John Clark, ‘The Nature and Evolution of the State in Zaire’, *Studies in Comparative International Development*, 32 (1998), 3–23.

¹⁹ Department for International Development, *Making Government Work for Poor People* (London: Department for International Development, 2000); Jan Willem Gunning, ‘Rethinking Aid’, paper presented at the Annual Bank Conference on Development Economics, 18–20 April 2000, Washington, DC; Stephen Knack, ‘Does Foreign Aid Promote Democracy?’ (Center for Institutional Reform and the Informal Sector, University of Maryland, Working Paper, 2000).

²⁰ Douglass North, *Institutions, Institutional Change, and Economic Performance* (New York: Cambridge University Press, 1990), p. 49.

²¹ Geoffrey Brennan and James M. Buchanan, *The Power to Tax: Analytical Foundations of a Fiscal Constitution* (New York: Cambridge University Press, 1980).

In an alternative model offered by Bates and Lien, a democratic government forms when a monarch who wishes to raise taxes agrees to defer to the policy preferences of his subjects.²² They suggest several reasons why revenue-seeking monarchs should favour the formation of representative institutions: it facilitates the negotiation of policy concessions, since it is less costly for monarchs to bargain with citizens collectively than individually; and it is more efficient for a ruler to apply a uniform tax code to all sectors of the economy and all realms of the territory, lest citizens shift their assets from taxable to untaxable areas. Taxpayers should also prefer to bargain over taxes and policy concessions collectively, according to Bates and Lien, to avoid free-riding by their fellow citizens on public goods that the government agrees to provide. Their model shows that citizens whose assets are more mobile – and who can more easily evade taxation – may consequently have greater bargaining leverage *vis-à-vis* the sovereign.

Despite the prominence of the taxation-produces-representation hypothesis, it has never been statistically tested. Moreover, the empirical basis of the claim may be weaker than its common usage suggests. Many people dislike paying taxes, and some will cause trouble when governments raise them. But democracy is only one possible outcome of these conflicts. Historically, people have borne crushingly high tax rates with few rebellions; when they do revolt, they have often been met with intensified repression, not democratic concessions.²³ The English, French, Spanish, Austro-Hungarian and American examples have been highlighted by prominent scholars, but they only constitute five examples. Even if these five cases represent the prevailing pattern in early modern Europe and colonial America, they might not hold for the developing world today.

The claim that ‘taxation leads to representation’ also contains a critical ambiguity: it is not clear whether democracy is linked to a higher absolute tax burden, or a higher tax burden relative to the services the government provides.²⁴ The issue may seem trivial, but each view implies a different causal model and must be tested in a different way.

If democracy is linked to the absolute size of the tax bite, it implies what might be called a ‘pure anti-tax’ model, whose underlying hypothesis is that ‘if taxes are increased in a non-democratic state, it will tend to increase the demand for democracy, which will tend to produce a more democratic government.’ According to this view, the only relevant preference of citizens is to minimize their taxes; democracy is simply a way for society to curb the predatory appetites of the state.

But if democracy is associated with the size of the tax burden relative to government services it implies a ‘cost–benefit’ model, in which citizens weigh the costs of funding the government against the benefits they receive. According to this model, high taxes would not produce greater demands for representative government, if the taxes were offset by greater government benefits. Nor would a small tax bill necessarily lead to political quiescence. Both the size of the tax burden, and the quality and quantity of government spending matter; citizens ultimately care about the ‘price’ they pay for the government services they receive. Democracy in this case is not necessarily a way for citizens to reduce

²² Robert Bates and Da-Hsiang Donald Lien, ‘A Note on Taxation, Development, and Representative Government’, *Politics and Society*, 14 (1985), 53–70.

²³ Carolyn Webber and Aaron Wildavsky, *A History of Taxation and Expenditure in the Western World* (New York: Simon & Schuster, 1986); Charles Adams, *For Good and Evil: The Impact of Taxes on the Course of Civilization* (New York: Madison Books, 1993); Anthony Reid, *Southeast Asia in the Age of Commerce, 1450–1680: Volume Two, Expansion and Crisis* (New Haven, Conn.: Yale University Press, 1993).

²⁴ By ‘services’ I mean to cover all functions undertaken by the government, including the provision of law and order, the distribution of welfare goods, national defence, etc.

their taxes, or to increase spending, but to get more for their money. The underlying hypothesis in this case is that ‘If the ratio of taxes to government benefits rises in a non-democratic state, it will tend to increase the demand for democracy, which will tend to produce a more democratic government.’

The central difference between the two models is that in one case, citizens hold only a single preference (about taxes), while in the other they hold two preferences (about taxes and expenditure). Strictly speaking, the models are not mutually exclusive: the pure anti-tax model might be seen as a special case of the cost–benefit model, in which citizens prefer a minimal level of government services.

Intentionally or not, scholars who have theorized about the link between taxation and representation often tilt towards one model or the other. Those with a more pronounced anti-state bias – like Brennan and Buchanan – seem to prefer the pure anti-tax model.²⁵ So does Samuel Huntington, when he asserts that since oil revenues:

reduce or eliminate the need for taxation, they also reduce the need for the government to solicit the acquiescence of its subjects to taxation. The lower the level of taxation, the less reason for the public to demand representation. ‘No taxation without representation’ was a political demand; ‘no representation without taxation’ is a political reality.²⁶

In other words, a rise in the tax burden alone is sufficient to produce a demand for representation.

Scholars with a more sanguine view of the state often favour the cost–benefit approach. The Bates and Lien model, for example, assumes that citizens hold preferences about both tax levels and government policies, and seek to maximize these preferences simultaneously.²⁷ The implication is that citizens will weigh the burden of paying taxes against the benefits of receiving government services, and that neither taxes nor government spending should necessarily be minimized.

The cost–benefit model appears to fit a larger number of cases, reflecting its broader scope. The pure anti-tax model can only be applied to cases in which democracy was produced by anti-tax protests; the cost–benefit model can be applied to cases in which democracy was caused by protests against either a rise in taxes, or a drop in the quality or quantity of government services (including, for example, the loss of subsidies). The cost–benefit model is also consistent with public opinion research in both wealthy and poor states, which has found that political protesters are significantly motivated by dissatisfaction with their government’s provision of public goods.²⁸

The cost–benefit model can also account for cases in which a government’s adherence to the conditions in an International Monetary Fund (IMF) or World Bank loan has led to protests. Typically these programmes make citizens pay a higher price for government services, at least in the short run, since they force governments to close budget deficits by raising taxes or reducing subsidies, or both. Bratton and van de Walle found a significant and positive link in sub-Saharan African states between the signing of a stabilization or

²⁵ Brennan and Buchanan, *The Power to Tax*.

²⁶ Huntington, *The Third Wave*, p. 65.

²⁷ Bates and Lien, ‘A Note on Taxation, Development, and Representative Government’.

²⁸ Steven E. Finkel, Edward N. Muller and Karl-Dieter Opp, ‘Personal Influence, Collective Rationality, and Mass Political Action’, *American Political Science Review*, 83 (1989), 885–903; Edward N. Muller, Henry Dietz and Steven E. Finkel, ‘Discontent and the Expected Utility of Rebellion: The Case of Peru’, *American Political Science Review*, 85 (1991), 1261–82; Steven E. Finkel and Edward N. Muller, ‘Rational Choice and the Dilemmas of Political Action’, *American Political Science Review*, 92 (1998), 37–49.

adjustment loan between 1980 and 1989, and subsequent political protests; these protests, in turn, were linked to democratization.²⁹

The cost–benefit model might also help explain democratic movements that are spurred, in part, by anti-corruption protests. Some protests against corruption may reflect popular objections to the high cost of government services: citizens may observe that they are receiving few government benefits relative to their tax burden, and infer (rightly or wrongly) that their taxes are being lost to corruption. Indonesia’s recent transition towards democracy provides a good illustration. From 1966 to 1998, Indonesia was governed by Suharto, a former military general who brought high growth rates to what had been one of Asia’s poorest countries. Thanks to both foreign aid and oil exports, he was able to keep taxes at modest levels: between 1995 and 1997, Indonesia’s tax-to-GDP ratio was 0.157, well below the mean rate for this period for all non-OECD (Organization for Economic Cooperation and Development) states (0.189). The tax-to-GDP ratio was also on a downward trend, falling by 28 per cent from 1981 to 1997.

But Indonesia’s tax-to-government spending ratio told a different story. Between 1995 and 1997 it was 1.00 – 50 per cent above the mean value for non-OECD states during the same period (0.665); moreover, it was on an upward trend, rising over 10 per cent from 1981 to 1997. While taxes were modest and falling, the price of government services was high and rising.

These trends were reflected in the protests that broke out in 1997–98: their overwhelming theme was the intolerably high, and rising, level of government corruption. It was a message that forced the Suharto government to resign in May 1998, and pushed his successors towards genuine democratic reforms.

TAX TRENDS, 1970–97

Before turning to the analysis, it is useful to examine how tax levels have changed over time, and how they vary between different categories of states. Cross-national data on taxation is available for a large number of states beginning in 1970, thanks to the data-collection efforts of the IMF.

There are marked differences in absolute tax burdens – defined here as the ratio of tax revenues to GDP – between the OECD and non-OECD states (Table 1). Since the early 1970s, the tax burden in the OECD states has remained about two-thirds higher than in the non-OECD states. At the same time, the tax burden increased substantially in both categories of states, rising in the OECD states from 24.3 per cent to 31.5 per cent of GDP, and in the non-OECD states from 14.4 per cent to 18.9 of GDP.³⁰ Taxes rose at more or less the same rate in East Asia, Latin America and sub-Saharan Africa. Only in the Middle East and North Africa – where oil booms in the 1970s created enormous revenue windfalls, producing a high initial taxes-to-GDP ratio – did the tax burden fall.

It is important to note that taxes are only one source of government revenue: over these three decades, the ratio of taxes to total government revenues dropped slightly in both developing and developed states, reflecting the growing reliance of governments on fines,

²⁹ Michael Bratton and Nicolas van de Walle, *Democratic Experiments in Africa: Regime Transitions in Comparative Perspective* (New York: Cambridge University Press, 1997).

³⁰ The rise in the tax/GDP ratio continues longstanding trends in both the developing and Western states. Explanations for this rise in the size of government are reviewed in Dennis Mueller, *Public Choice II* (New York: Cambridge University Press, 1989).

TABLE 1 *Taxes as a Percentage of GDP, 1971–97*

	Taxes/GDP 1971–73	Taxes/GDP 1995–97
OECD	24.3	31.5
Non-OECD	14.4	18.9
Latin America	13.7	17.4
Mideast/N. Africa	21.6	17.1
Sub-Saharan Africa	14.2	18.9
East Asia	12.2	15.2
All states	17.7	21.8

TABLE 2 *Taxes as a Percentage of Total Revenue, 1971–97*

	Taxes/Revenue 1971–73	Taxes/Revenue 1995–97
OECD	92.1	91.1
Non-OECD	80.3	78.5
Latin America	88.6	87.2
Mideast/N. Africa	61.2	59.1
Sub-Saharan Africa	86.2	82.9
East Asia	79.3	77.9
All states	83.5	81.4

administrative fees and revenues from state-owned properties and enterprises (Table 2). As a result, even though the absolute tax burden rose, total government revenues rose even faster. The non-OECD states – especially in the Middle East and North Africa – were far more reliant on these ‘non-tax revenues’ than the OECD states.

There was also a shift in the composition of taxes over this period, away from direct taxes and trade taxes, and towards indirect taxes, social security taxes and non-tax revenues (Table 3). In the advanced industrialized states these shifts were small. But the changes in developing states were sharper, particularly for trade taxes. Taxes on international trade are relatively easy for impoverished governments to collect; hence countries with low per capita incomes tend to rely more heavily on trade taxes as a source of government revenue.³¹ Yet since the early 1970s, rising incomes and the free-trade initiatives embodied in the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO) have led to a steep decline in trade taxes among the poorer states; from 1971–73 to 1995–97 they dropped from 25.6 per cent to 12.7 per cent of all government revenues in the developing world.

³¹ William Easterly and Sergio Rebelo, ‘Fiscal Policy and Economic Growth’, *Journal of Monetary Economics*, 32 (1993), 417–58; Howell H. Zee, ‘Empirics of Cross-country Tax Revenue Comparisons’, *World Development*, 24 (1996), 1659–71.

TABLE 3 *Composition of Taxes in OECD and Non-OECD States, 1971–97, as Percentage of Total Revenues*

	1971–73	1995–97
Non-OECD		
Direct taxes	23.7	21.2
Indirect taxes	22.1	30.5
Trade taxes	25.6	12.7
Social security taxes	3.4	10.2
Other taxes	5.1	3.6
OECD		
Direct taxes	33.1	32.0
Indirect taxes	28.4	29.3
Trade taxes	4.8	0.62
Social security taxes	20.8	25.4
Other taxes	4.5	3.7

MODEL SPECIFICATION AND RESEARCH DESIGN

To examine the links between taxes and democracy, I devise a model that predicts regime types; it includes three independent variables – one for the pure anti-tax model and two for the cost–benefit model – plus seven control variables. I then use regression analysis to test the model with a pooled time-series cross-national dataset, using a panel-corrected standard error process.

The Timing of Changes in Taxes and Regimes

To test the taxation-produces-representation hypotheses, I should have precise expectations about the temporal relationship between ‘taxes’ and ‘representative government’. Unfortunately, most taxation-produces-representation arguments are consistent with at least two scenarios: in one, an authoritarian government gradually raises taxes, or cuts services, producing a rebellion and a subsequent transition to democracy; in another, an authoritarian government suddenly tries to raise taxes or cut services, is met with popular resistance, and makes democratizing concessions or is overthrown. In the first case, a rise in taxes or drop in services would precede a change in regime; but in the second case, either the rise in taxes or the change in regime could come first, depending on whether the government is able to change its fiscal policies before making concessions. If a government’s tax-raising or service-cutting efforts are utterly foiled by protests, then democracy might come first; if a government is able to raise taxes, or slash services, before triggering a change in regime, then a change in revenues or spending would come first. To complicate matters, in either of these scenarios a government may act strategically: it may need new tax revenues but anticipate popular opposition, and hence might offer democratizing measures at the same time, or before, putting in place a fiscal austerity plan. Moreover, in any given dataset, the ordering of events will be influenced by the coding decisions of researchers, and the length of time it takes for new fiscal policies to be reflected in annual data.

Despite these ambiguities, it seems most sensible to me that a change in the independent variables (taxes and government services) should precede a change in the dependent variable (regime type). This design should capture cases in which a steady rise in the tax

rate, or fall in government services, creates social pressures that force the government to democratize. If higher taxes or cuts in government services are not associated with subsequent moves towards democracy, then the taxation-causes-representation models can be either rejected or modified. Since the theories discussed above provide little guidance about the elapsed time between changes in taxes and changes in regime type, I test the model with three-year, five-year and ten-year time lags. I avoid using a one-year lag since it tends to produce biased results in models of this type.³²

Dependent Variable: Regime Type

Different taxation-produces-representation theories have somewhat different dependent variables: those that focus on early modern Europe and colonial America suggest that taxation led to the rise of representative institutions, while those that concentrate on the contemporary developing world suggest taxation leads to democracy.³³ Since I am interested in the contemporary application of these hypotheses, and since my data cover the years since 1970, I take ‘democracy’ – or more properly, regime type – as my dependent variable.

Still, to remain as close as possible to the original claim that taxation leads to a greater level of representation in government, I construct my dependent variable, *Regime*, from the Polity98 dataset of Gurr and Jagers.³⁴ The Polity dataset focuses narrowly on the attributes of regimes themselves – in particular, whether the state’s chief executive (who may be a monarch, a military figure, a president, etc.) is selected by, accountable to or otherwise constrained by other actors. An alternative measure of regime type, offered by Freedom House, focuses instead on the political and civil rights of citizens, and hence is a less direct measure of how representative a regime is.

The Polity dataset provides two sets of 0–10 scales for each country and each year, one that measures the government’s degree of autocracy, and one that measures the government’s degree of democracy. I combine these two measures by subtracting each country’s autocracy score from its democracy score, and recalibrating the resulting – 10 to + 10 scale as a 0 to 10 scale (with twenty-one intervals), in which 0 represents an ‘undemocratic’ government and 10 is a ‘democratic’ government. For the six states with populations greater than 1 million that Gurr and Jagers offer no indicators for (Austria, Cameroon, Democratic Republic of Congo, Libya, Sierra Leone and Switzerland), I use data from Freedom House instead – summing their measures for ‘political rights’ and ‘civil liberties’ and converting the results to the 0–10 scale.³⁵

³² Using a one-year lag with pooled time-series cross-sectional data tends to produce misleading results when a lagged version of the dependent variable is used as a control variable, as is the case here. With a one-year lag, according to Achen, the absolute value of the coefficient on the lagged dependent variable becomes artificially large and the values on the other coefficients artificially small (Christopher H. Achen, ‘Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables’ (paper presented at the annual meeting of the American Political Science Association, 2000, Washington, DC)).

³³ Brennan and Buchanan are principally interested in the rise of constitutional government, in which representative institutions play a major role.

³⁴ Ted R. Gurr and Keith Jagers, ‘Polity 98: Regime Characteristics, 1800–1998’, database (1999).

³⁵ Scholars disagree over whether democracy should be measured as a dichotomous variable or a graded variable. Collier and Adcock pragmatically suggest that scholars choose the measure of democracy that casts the most light on their research question; see David Collier and Robert Adcock, ‘Democracy and Dichotomies: A Pragmatic Approach to Choices about Concepts’, *Annual Review of Political Science*, 2 (1999), 537–65. I am not only interested in the narrow question of whether taxation increases the likelihood that states will cross some threshold between non-democracies and democracies; I want to know if taxation is associated with *any* variations in regime type — whether higher taxes make stubbornly authoritarian states somewhat less authoritarian, and partially democratic states more democratic. I hence prefer a graded measure of democracy to a binary measure.

Independent Variables: Measuring Taxation

To construct measures of taxation, I draw on data collected by the IMF on government tax receipts. These figures measure the actual taxes accrued by the central government, not the nominal tax levels. I find this a good way to measure the independent variables, for two reasons: people should be more likely to rebel against taxes they must actually pay, rather than nominal taxes that might be easily avoided; and since the level of tax evasion presumably varies from state to state, nominal tax rates are an unreliable indicator of the actual tax burden.

I test the pure anti-tax hypothesis – that higher taxes as a fraction of income ultimately lead to more democratic governance – by using a variable called *Tax/GDP*, which measures all tax revenues as a fraction of GDP. The variable is designed to reflect how much in taxes each citizen pays as a fraction of their income: it could also be expressed as ‘the ratio of taxes per capita to income per capita’.³⁶ Within the limits of the available data, I find this the best measure of the absolute tax burden, since it tells us how much of the average citizen’s income is collected by the government.

To test the cost–benefit hypothesis – that higher taxes as a fraction of government-provided goods and services lead to more democratic governance – I develop a variable called *Tax/Spend*, which measures tax revenues as a percentage of government expenditure. Like *Tax/GDP*, it could also be understood in per capita terms, as the ratio of what the mean citizen pays for government (taxes per capita) to what she receives (government spending per capita). Government spending includes all current and capital expenditure, including interest payments on past debts.

The *Tax/Spend* variable can capture the quantity of government spending but not its quality. It is unclear from discussions of the taxation–produces–representation claim whether or not the quality of government spending should matter. Still, it plausibly could: perhaps if the quality of a government’s services is high, then a high *Tax/Spend* ratio might not induce calls for democracy; if the quality is poor, a low *Tax/Spend* ratio might provoke a democratic rebellion.

It is also possible that the omission of any measure of government quality could lead to a specification error. Chaudhry’s study of Saudi Arabia and Yemen and Karl’s study of Venezuela and other oil exporters suggest that, when states rely more heavily on taxes, they grow more likely to have the characteristics of a ‘strong’ state: a more effective bureaucracy, less corruption and greater fidelity to the rule of law.³⁷ Perhaps one or all of these factors, and not tax revenues, is the underlying correlate of democracy; if so, the regressions might produce a spurious correlation between the tax variables and *Regime*.

To address these concerns I develop an additional variable, *Government Quality*, which I use in my tests of the cost–benefit hypothesis. This variable draws on a database compiled by a private risk-assessment firm, The PRS Group, which covers ninety-seven states between 1982 and 1997. *Government Quality* is the sum of three subjective 0–6 indicators: ‘Corruption in Government’, ‘Bureaucratic Quality’ and ‘Rule of Law’. Even though this indicator is highly imperfect, it offers at least a crude way to measure the quality of government in a large number of countries over many years. Since it is theoretically ambiguous whether the quality of government spending should matter – and it is also

³⁶ When both the numerator and denominator are multiplied by the country’s population, the result is *Tax/GDP*.

³⁷ Kiren Aziz Chaudhry, ‘The Price of Wealth: Business and State in Labor Remittance and Oil Economies’, *International Organization*, 43 (1989), 101–45; Terry Lynn Karl, *The Paradox of Plenty: Oil Booms and Petro-States* (Berkeley: University of California Press, 1997).

unclear whether the *Government Quality* variable measures the true quality of government spending – I test the cost–benefit hypothesis both with and without the *Government Quality* variable.

Control Variables

The model includes seven control variables, which are designed to capture the factors most robustly associated with regime type, for which indicators are available for most of the countries and years.³⁸ The first is *Regime*, the lagged dependent variable. I use it here as a control variable to help capture any historical or cultural features that may influence each country’s regime type, but are missed by the other right-hand side variables. It also helps address the problem of serial correlation, which is likely to occur here if the error term for a given country and year is correlated with the error terms for the same country in other years. As Achen and Beck and Katz suggest, including the lagged dependent variable as a control variable helps mitigate this problem.³⁹

The second control variable is *Income*, which I measure as the natural log of per capita GDP corrected for purchasing power parity (PPP), in current international dollars. A large number of democracy scholars – including Lipset, Burkhart and Lewis-Beck, Londregan and Poole, Barro, and Przeworski *et al.* – have all found per capita income to be a significant correlate of democracy.⁴⁰

The third is *OECD*, a dummy that is coded 1 for states that are members of the Organization for Economic Cooperation and Development (excluding newer members Mexico and South Korea) and 0 for all others. Previous researchers have found evidence that the advanced industrialized states of the OECD are significantly more likely to be democratic in the era following the Second World War than the states of the developing world, even after income and other factors have been accounted for.⁴¹ The *OECD* dummy helps account for any Western-specific effects, regardless of the mechanisms behind it.

The OECD dummy also helps guard against a spurious correlation between the tax variables and *Regime*. It was noted above, in the section dealing with tax trends, that the ratio of taxes to GDP, and taxes to government revenues, are atypically high in the OECD states; for reasons that may or may not be related, the level of democracy in the OECD is also exceptionally high. Including the *OECD* variable ensures that the regression does

³⁸ I also tested other hypothesized correlates of democracy – including measures for education, and status as a former British colony – but did not find them to be significant, and excluded them from the model.

³⁹ Achen, ‘Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables’; Nathaniel Beck and Jonathan N. Katz, ‘What To Do (and Not To Do) with Time-Series Cross-Section Data’, *American Political Science Review*, 89 (1995), 634–47.

⁴⁰ Seymour Martin Lipset, ‘Some Social Requisites of Democracy: Economic Development and Political Legitimacy’, *American Political Science Review*, 53 (1959), 69–105; Burkhart and Lewis-Beck, ‘Comparative Democracy’; Londregan and Poole, ‘Does High Income Promote Democracy?’; Barro, ‘Determinants of Democracy’; Przeworski *et al.*, *Democracy and Development*.

⁴¹ There is no consensus on why this is so. It has variously been attributed to the West’s unique historical trajectory, for example, by Barrington Moore, *Social Origins of Dictatorship and Democracy* (Boston, Mass.: Beacon Press, 1966); the cultural influence of Protestantism by Lipset, ‘Some Social Requisites of Democracy’, and Huntington, *The Third Wave*; the residual effects of Western colonialism on non-Western states by Robert A. Dahl, *Polyarchy: Participation and Opposition* (New Haven, Conn.: Yale University Press, 1971); and a ‘world system’ that constrains the prospects of states in the non-Western ‘periphery’ by Kenneth A. Bollen, ‘World System Position, Dependency, and Democracy: The Cross-National Evidence’, *American Sociological Review*, 48 (1983), 468–79, and by Burkhart and Lewis-Beck, ‘Comparative Democracy’.

not discover a correlation between the tax variables and *Regime* that is ultimately caused by historical differences between OECD and non-OECD states, and is therefore spurious.

The fourth and fifth control variables are *Islam* and *Catholic*, which denote the Muslim and Catholic percentage of the state's population in 1970.⁴² Previous studies have suggested that states with large Muslim populations tend to be less democratic than non-Muslim states.⁴³ Of all the religious categories tested by Barro, Islam had by far the largest and most statistically significant influence on a state's regime type.⁴⁴ Some studies also suggest that Catholic populations have historically been negatively correlated with democracy.⁴⁵

The sixth and seventh control variables are *Oil* and *Minerals*, which measure the export value of mineral-based fuels (petroleum, natural gas and coal), and the export value of non-fuel minerals, as a fraction of GDP. Many studies have noted that exceptional oil wealth appears to make states less democratic. Ross finds that there is a negative correlation between oil exports and democracy, and between non-oil mineral exports and democracy.⁴⁶ Since oil and minerals exports – which are relatively easy to tax – could simultaneously influence a state's taxation policies and its regime type, it is important to include them in the regression.

Methodology

The basic regression model, without the taxation variables, is:

$$\text{Regime}_{i,t} = a_1 + b_1(\text{Regime}_{i,t-1}) + b_2(\text{Income}_{i,t-1}) + b_3(\text{OECD}_i) + b_4(\text{Islam}_i) + b_5(\text{Catholic}_i) + b_6(\text{Oil}_{i,t-1}) + b_7(\text{Minerals}_{i,t-1})$$

where *i* is the country, *t* is the year, and *l* is a time lag. Data for each of the variables are summarized in Table 4; additional details are available in the Appendix.

I test this model with a pooled time-series cross-sectional (PTSCS) dataset. In recent years, the use of PTSCS data has grown more common in comparative political economy.⁴⁷

⁴² In virtually all cases, the figures for 1980 (the only other year for which data were available) are identical to the 1970 figure.

⁴³ Ghassan Salamé, ed., *Democracy Without Democrats? The Renewal of Politics in the Muslim World* (London: I.B. Tauris Publishers, 1994); Seymour Martin Lipset, 'The Social Requisites of Democracy Revisited', *American Sociological Review*, 59 (1994), 1–22; Manus Midlarsky, 'Democracy and Islam: Implications for Civilizational Conflict and the Democratic Peace', *International Studies Quarterly*, 42 (1998), 485–511. Explanations for the negative correlation between democracy and Islamic populations have been offered by Hisham Sharabi, *Neopatriarchy: A Theory of Distorted Change in Arab Society* (New York: Oxford University Press, 1988); Michael Hudson, 'The Political Culture Approach to Arab Democratization: The Case for Bringing It Back In, Carefully', in Rex Brynen, Bahgat Korany and Paul Noble, eds, *Political Liberalization and Democratization in the Arab World: Volume One, Theoretical Perspectives* (Boulder, Colo.: Lynne Rienner, 1995), pp. 61–76; and Steven M. Fish, 'Islam and Authoritarianism', *World Politics*, 55 (2002), 4–37.

⁴⁴ Barro, 'Determinants of Democracy'.

⁴⁵ See, for example, Huntington, *The Third Wave*; Lipset, 'The Social Requisites of Democracy Revisited'; and Jose Antonio Cheibub, 'Political Regimes and the Extractive Capacities of Governments: Taxation in Democracies and Dictatorships', *World Politics*, 50 (1998), 349–76. Note that since many states with large Catholic populations (in Southern Europe and Latin America) moved towards democracy between 1971 and 1997, *Catholic* should be positively correlated with *Regime* in a model, such as this one, that includes a lagged dependent variable on the right-hand side.

⁴⁶ Michael L. Ross, 'Does Oil Hinder Democracy?' *World Politics*, 53 (2001), 325–61.

⁴⁷ For an introduction to some of the issues raised in regression analysis with PTSCS data, see James A. Stimson, 'Regression in Space and Time: A Statistical Essay', *American Journal of Political Science*, 29 (1985), 914–47; for a more recent analysis, see Nathaniel Beck, 'Time Series-Cross Section Data: What Have We Learned in the Past Few Years?' *Annual Review of Political Science*, 4 (2001), 271–93.

Pooled datasets contain observations of x units over t time periods, producing a total of xt observations; the datasets enable scholars to test their hypotheses with a large number of observations, and to simultaneously look for both time-series and cross-sectional correlations.

TABLE 4 *Summary of Variables*

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
<i>Regime</i>	3,752	4.48	3.79	0	10.00
<i>Income</i>	3,316	7.45	1.20	4.53	10.43
<i>OECD</i>	4,528	0.16	0.37	0	1.00
<i>Islam</i>	4,336	25.01	36.62	0	99.70
<i>Catholic</i>	4,337	32.02	36.22	0	98.10
<i>Oil</i>	2,322	5.50	14.06	0	116.00
<i>Minerals</i>	2,865	2.25	5.80	0	55.08
<i>Tax/GDP</i>	1,948	0.19	0.10	0	0.51
<i>Tax/Spend</i>	1,908	0.70	0.22	0	1.66
<i>Government Size</i>	3,042	18.81	7.99	1.10	64.80
<i>Government Quality</i>	1,187	9.53	4.41	0	18.00

The database I use covers 113 countries – that is, all sovereign states with populations over 100,000 for which data are available – and spans the twenty-seven years from 1971 to 1997.⁴⁸ Many of the world's poorer and less orderly states reveal data intermittently, but not annually, for some of the variables I use; hence a certain amount of data is missing. Regression 1, for example, covers 113 states over twenty-seven years, but has just 2,181 (out of a possible 3,051) observations. Such problems are, unfortunately, ubiquitous with datasets that cover a large number of developing states over a significant period of time.

The tests are run with Stata 7.0, using the panel-corrected standard errors process suggested by Beck and Katz.⁴⁹ This is a superior estimation method to ordinary least squares when using PTSCS data, when the errors show three common problems: panel heteroscedasticity, contemporaneous correlation and unit-specific serial correlation.⁵⁰

RESULTS

Tables 5 and 6 show the results of the estimations. They suggest there is no support for the pure anti-tax hypothesis, but strong support for the cost–benefit hypothesis.

Regression 1 includes the control variables only, using a five-year lag, and shows all of them except *OECD* to be highly significant with the expected signs. In this base case, I am able to use 2,183 observations for 115 countries. Since data on taxes and spending

⁴⁸ No cross-national data on taxation is available before 1970.

⁴⁹ Beck and Katz, 'What To Do (and Not To Do) with Time-Series Cross-Sectional Data'.

⁵⁰ I also carried out tests with an alternative process – the feasible generalized least-squares method first described by R. Parks, 'Efficient Estimation of a System of Regression Equations when Disturbances are Both Serially and Contemporaneously Correlated', *Journal of American Statistical Association*, 62 (1967), 500–9. The results were almost identical to those reported below.

TABLE 5 *Influence of Tax/GDP and Tax/Spend on the Dependent Variable, Regime*

Regressions	1	2	3	4	5	6	7
<i>Lagged Regime</i>	0.675*** (0.0420)	0.784*** (0.0349)	0.652*** (0.0454)	0.431*** (0.0531)	0.784*** (0.0351)	0.646*** (0.046)	0.415*** (0.0520)
<i>Income</i>	0.597*** (0.0732)	0.349*** (0.0684)	0.586*** (0.0793)	1.010*** (0.093)	0.346*** (0.0776)	0.604*** (0.091)	1.090*** (0.0988)
<i>OECD</i>	0.305 (0.220)	1.550 (0.1840)	0.022 (0.2180)	-0.143 (0.2430)	0.058 (0.1660)	-0.064 (0.1860)	-0.301 (0.2050)
<i>Islam</i>	-0.005* (0.0022)	-0.003 (0.0016)	-0.005* (0.0021)	-0.008*** (0.0022)	-0.002 (0.0017)	-0.004 (0.0023)	-0.006* (0.0023)
<i>Catholic</i>	0.005** (0.0018)	0.006*** (0.0008)	0.009*** (0.0011)	0.014*** (0.0011)	0.005*** (0.0008)	0.008*** (0.0011)	0.013*** (0.0011)
<i>Oil</i>	-0.034*** (0.0044)	-0.024*** (0.0042)	-0.037*** (0.0054)	-0.057*** (0.0043)	-0.021*** (0.0043)	-0.033*** (0.0053)	-0.050*** (0.004)
<i>Minerals</i>	-0.020*** (0.0036)	-0.015*** (0.0045)	-0.035*** (0.0054)	-0.057*** (0.0083)	-0.014*** (0.0043)	-0.032*** (0.0053)	-0.051*** (0.0097)
<i>Tax/GDP</i>	-	-0.004 (0.0047)	0.002 (0.0052)	0.010 (0.0056)	-	-	-
<i>Tax/Spend</i>	-	-	-	-	0.451 (0.2330)	1.020** (0.3510)	2.220*** (0.3020)
<i>Lag (years)</i>	5	3	5	10	3	5	10
<i>Observations</i>	2,183	1,633	1,503	1,182	1,605	1,476	1,158
<i>States</i>	115	110	108	103	109	107	102
<i>R²</i>	0.78	0.85	0.79	0.70	0.85	0.79	0.71

Notes: Standard errors are in parentheses below the coefficients. Tests are run with Stata 7.0.

* Significant at the 0.05 level.

** Significant at the 0.01 level.

*** Significant at the 0.001 level.

is somewhat scarce, adding them to the estimations reduces the number of country-year observations available for analysis.

In Regressions 2, 3, and 4 I test the pure anti-tax hypothesis by adding *Tax/GDP* to the model, using lags of three, five and ten years. These tests provide no support for the pure anti-tax hypothesis: none indicate that a larger tax burden is tied to greater democracy. In fact, the *Tax/GDP* variable never approaches statistical significance.

In Regressions 5 through 10 I test the cost–benefit hypothesis by first adding *Tax/Spend*, then *Tax/Spend* and *Government Quality* simultaneously, to the model. The variables are once again inserted with three-year, five-year and ten-year lags. *Tax/Spend* is positively and significantly correlated with *Regime* when the lag is five or ten years. When the lag is three years, it remains on the edge of statistical significance ($p = 0.053$).

Table 6 shows the effect of adding *Government Quality* to the estimations in Table 5. In Regressions 8, 9 and 10, *Tax/Spend* remains positively correlated with *Regime*, and achieves statistical significance with all three time lags. The *Government Quality* variable itself, however, is not significant and the sign on the coefficient changes with the duration of the lag.

Regressions 5 through 10 are consistent with the cost–benefit hypothesis, although only for the variable *Tax/Spend*, not *Government Quality*. In other words, they suggest that a rise in the price of government (i.e., the ratio of taxes to government spending) is associated with a subsequent rise in the level of democracy. The quality of government – at least, in so far as it can be measured by *Government Quality* – does not seem to matter.

TABLE 6 *Controlling for Government Quality and Government Size when the Dependent Variable is Regime*

Regressions	8	9	10	11
<i>Lagged Regime</i>	0.735*** (0.0511)	0.576*** (0.0651)	0.315*** (0.0260)	0.650*** (0.0463)
<i>Income</i>	0.364** (0.1240)	0.391* (0.1610)	0.650** (0.2250)	0.614*** (0.0952)
<i>OECD</i>	-0.147 (0.2320)	-0.416** (0.1580)	-0.328* (0.1540)	-0.113 (0.1960)
<i>Islam</i>	-0.004* (0.0018)	-0.004 (0.0032)	-0.011*** (0.0031)	-0.004 (0.0022)
<i>Catholic</i>	0.006*** (0.0014)	0.010*** (0.0015)	0.011*** (0.0010)	0.008*** (0.0010)
<i>Oil</i>	-0.033*** (0.0062)	-0.048*** (0.0071)	-0.059*** (0.0118)	-0.032*** (0.0058)
<i>Minerals</i>	-0.016 (0.0134)	-0.020 (0.0201)	-0.013 (0.0255)	-0.035*** (0.0067)
<i>Tax/Spend</i>	0.722* (0.3320)	1.750*** (0.4420)	2.140*** (0.5960)	1.220*** (0.3780)
<i>Govt Quality</i>	-0.021 (0.0248)	0.024 (0.0272)	0.008 (0.0301)	-
<i>Govt Size</i>	-	-	-	0.003 (0.0078)
<i>Lag (years)</i>	3	5	10	5
<i>Observations</i>	783	662	361	1,404
<i>States</i>	85	82	76	100
<i>R²</i>	0.83	0.75	0.60	0.78

Notes: Standard errors are in parentheses below the coefficients. Tests are run with Stata 7.0.

* Significant at the 0.05 level.

** Significant at the 0.01 level.

*** Significant at the 0.001 level.

Some Potential Problems: Endogeneity, Misspecification

Are these results clouded by an endogeneity problem? Might democracy cause higher taxes, instead of (or in addition to) the reverse?⁵¹ There are at least two hypothesized effects that might lead to this kind of problem. First, Meltzer and Richard suggest that the expansion of suffrage tends to increase the size of government; similarly, Mueller and Murrell suggest that a rise in the number of interest groups may lead to a rise in the size of government.⁵² Both imply that democratization should cause an increase in the *Tax/GDP* variable. A second endogeneity problem might arise if taxes are easier to collect in democracies, because of greater voluntary compliance; again, this implies that democracy would lead to a rise in *Tax/GDP*.

⁵¹ Note that lagging the right-hand side variables can reduce, but not eliminate, the danger of endogeneity.

⁵² A. H. Meltzer and S. F. Richard, 'A Rational Theory of the Size of Government', *Journal of Political Economy*, 89 (1981), 914-27; Dennis Mueller and P. Murrell, 'Interest Groups and the Size of Government', *Public Choice*, 48 (1986), 125-45.

All of these effects suggest a positive and significant association between *Tax/GDP* and *Regime*. Yet Regressions 2, 3 and 4 find no significant correlation between these variables. As a result, I find little reason to suspect that the causal arrow is pointing in the wrong direction.

I also carry out further tests to explore two potential sources of specification error. The first is the possibility that *Tax/Spend* is a proxy for the size of the government, which is the underlying correlate of democracy. Perhaps larger governments (such as in the socialist states) are both less democratic and rely more heavily on non-tax revenues to fund themselves. If this were the case, the correlations between *Tax/Spend* and *Regime* would be spurious. To explore this possibility I construct the variable *Government Size*, which measures government spending as a percentage of GDP; I then add it to the model in Regression 11. *Government Size* is not remotely significant, and its inclusion has little effect on the *Tax/Spend* variable. I conclude that the omission of *Government Size* did not lead to specification error.

The second possible source of specification error stems from my observation earlier that between 1970 and 1997 there was a global trend towards higher taxes. Over the same period, there was also a trend towards democratization. Perhaps each trend is independently caused by unobserved factors, and the observed correlation between *Tax/Spend* and *Regime* is spurious.

One way to test for this possibility is to include in the regressions a set of twenty-six dummy variables, one for each year covered by the data (1971–97), less one. The year dummies can control for any as-yet-unmeasured time-specific effects that may be influencing the dependent variable – for example, the impact of the Cold War and its termination, or the ‘third wave’ of democratic transitions that produced temporally-clustered regime changes in Southern Europe, Latin America, Eastern Europe and sub-Saharan Africa.

I hence re-ran Regressions 1 through 11, adding in the year dummies. The results were virtually identical.⁵³ From this I infer that the correlations were not biased by the exclusion of time-specific effects.⁵⁴

CONCLUSION

In 1765, the British parliament attempted to place a stamp tax on the American colonies. It was not an unreasonable move. The colonies were expensive for the Crown to defend, and its residents enjoyed a relatively light tax burden. Of the many possible ways for the Crown to tax its American subjects, a stamp tax was relatively judicious; indeed, a similar tax had been in effect in England since 1694.

Yet the colonists responded to the Stamp Act with a level of antipathy that parliament had scarcely anticipated. In the course of their campaign to get the tax repealed, the colonists also emerged as champions for a new ‘right’ whose roots they found in the British experience: the right of peoples to be taxed only by their own representatives.

The claim articulated by a handful of leading colonists – that there should be no taxation without representation – not only had a strong effect on their fellow colonists; it has had a persistent influence on social scientists, who have periodically incorporated into their

⁵³ Results are available from the author.

⁵⁴ As a further check, I also re-ran the regressions and included a series of dummy variables for the major regions of the world. The results were almost the same and are available from the author.

work the claim that taxation leads to representation. Until now, the claim has never been carefully tested.

One virtue of subjecting any common axiom to empirical tests is that it can help reveal hidden ambiguities in its logic. On close inspection, the taxation-produces-representation axiom turns out to have two major variants whose practical implications, and ideological assumptions, are often at odds.

The tests I carry out above find no evidence to support the hypothesis that higher taxes *relative to income* lead to democratization – that is, the pure anti-tax model. The tests are, however, consistent with the hypothesis that higher taxes *relative to government services* tend to make states more democratic – the cost–benefit model. These findings are robust to changes in the lag structure of the model, and do not appear to be an artefact of an underlying relationship between government size and regime type, government quality and regime type, or any time-specific or region-specific factors and regime type.

In plainer terms, this article finds that a rise in taxes *per se* does not appear to lead to democratization. Perhaps this is because higher taxes are often used to fund a higher level of desirable government services, leaving citizens equally well or better off. However, a rise in the price of government services *is* associated with subsequent democratization. A rise in the price of government services can either take the form of a rise in taxes for a constant set of government services, or a constant level of taxes with a cut in government services.

This suggests that people do not generally rebel against taxation without representation; rather, they appear to rebel against taxation without commensurate government services. When the price of government services goes up, authoritarian regimes tend to become – or, perhaps, are forced to become – more accountable to their citizens.

The impact of taxation on democracy is neither huge nor trivial: a single standard deviation increase in the ratio of taxes to government spending corresponds to as much as a 0.48 rise on the 0–10 democracy scale. While this is somewhat smaller than the effects of *Oil* and *Islam*, it is about one-third larger than the influence of *Catholic*.

At the broadest level these tests contribute to our understanding of why states do or do not become democratic. They offer statistical evidence that supports the theoretical claim of Bates and Lien that struggles between citizens and governments over both taxes and government services tend to produce greater democracy. At the same time, they fail to support the claims of Huntington and others, who argue that attempts to raise taxes alone tend to lead to democratization.

These results also have practical implications: they imply that measures that help authoritarian governments lower the price of government services will, *ceteris paribus*, tend to have anti-democratic effects; policies that force them to raise the price of government services will tend to have pro-democratic effects. For example, programmes that extend subsidized loans to authoritarian governments should tend to retard democracy, by dropping the cost of government and reducing the democratic pressures the regime would otherwise face.

Conversely, programmes that force authoritarian governments to bring revenues and expenditures into line should help create pro-democratic pressures. For example, stabilization and structural adjustment programmes offered by the IMF and the World Bank commonly force authoritarian states to reduce their budget deficits. Development advocates sometimes complain that these measures are ‘anti-democratic’, since they take policy-making away from domestic officials and give it to international organizations. Yet

this study implies that inducing repressive governments to balance their budgets will tend to have pro-democratic effects, by forcing them to charge their citizens a higher price for their services. In short, measures that subsidize the cost of government in authoritarian states will also relieve pressures for democracy. Policies that trim these subsidies should help boost democratic pressures.⁵⁵

People may dislike taxes, and indeed they loathe paying more while receiving less from their governments. Ironically, this loathing may be a good thing: when citizens are faced with an undemocratic government that is charging unreasonably high prices for its services, they tend to demand democratic reforms. Their desire for a cost-effective government may help free them from arbitrary rule.

APPENDIX: DEFINITION OF VARIABLES⁵⁶

Regime is a 0–10 variable indicating a country's regime type, with 0 as a perfect autocracy and 10 a full democracy. It is taken from the Polity 98 dataset compiled by Gurr and Jagers, who assign a 0–10 indicator for both level of autocracy and level of democracy.⁵⁷ I transform these two measures into a single indicator by subtracting the autocracy measure from the democracy measure, and rescaling the resulting –10 to +10 scale as a 0 to 10 scale. For the six states with populations greater than 1 million that Gurr and Jagers offer no indicators for (Austria, Cameroon, Democratic Republic of Congo, Libya, Sierra Leone and Switzerland), I use data from Freedom House (1972–98) instead – summing their measures for 'political rights' and 'civil liberties' and converting the results to the 0–10 scale.

Income is the natural log of real per capita GDP, in current international dollars. Most of the data comes from the Penn World Tables; missing values have been imputed using data from the World Bank.⁵⁸

OECD is a dummy variable coded 1 for the following states and 0 for all others: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States.

Islam is the percentage of the population whose professed religious affiliation in 1970 was Muslim.⁵⁹

Catholic is the percentage of the population whose professed religious affiliation in 1970 was Roman Catholic.⁶⁰

Oil is the export value of mineral-based fuels as a percentage of GDP. Mineral-based fuels include petroleum, natural gas and coal, as classified under SITC revision 1, section 3. I corrected the export figures for Singapore, which is a transshipment point for raw materials extracted in nearby states. The value was set at 0.01.

Minerals is the export value of non-fuel minerals as a percentage of GDP; it includes all ores and metals classified under SITC revision 1, sections 27, 28 and 68. Again, I corrected the export figures for Singapore, which is a transshipment point for raw materials extracted in nearby states. The value was set at 0.01.

Tax/GDP is the tax revenue collected by the central government as a fraction of GDP. All of the tax variables are compiled from data collected by the IMF and published by the World Bank. Argentina and Romania

⁵⁵ A note of caution about these implications is in order. The IMF and World Bank influence governments through a variety of mechanisms, some of which may counterbalance the tax-related impacts described here.

⁵⁶ Unless otherwise specified, all data are taken from World Bank, *World Development Indicators*.

⁵⁷ Gurr and Jagers, *Polity98*.

⁵⁸ Robert Summers and Alan Heston (1999), 'Penn World Tables, Version 5.6', <http://can-sim.epas.utoronto.ca;5680/pwt/pwt.htm>.

⁵⁹ David B. Barrett, ed., *World Christian Encyclopedia* (New York: Oxford University Press, 1982).

⁶⁰ Barrett, *World Christian Encyclopedia*.

reported zero tax revenues for all tax categories for some years; these data points were treated as errors and recoded as 'missing'.

Tax/Spend is the tax revenue collected by the central government – including direct, indirect, trade, social security and 'other' taxes – as a fraction of total government spending.

Government Size is the share of GDP accounted for by government activity, in 1985 international prices. The data are from the Penn World Tables and the World Bank. Missing data have been imputed by Stata.

Government Quality is a 0–18 interval-level variable that is the sum of the 0–6 measures 'Corruption in Government', 'Rule of Law' and 'Quality of the Bureaucracy' put together by a private firm, The Political Risk Services Group, and published in their monthly International Country Risk Guide. The monthly data has been changed into annual data by taking the mean of the twelve monthly values.

