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The size and composition of government expenditure

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Abstract

This paper tests several leading hypotheses on determinants of government expenditure. The purpose is to avoid omitted variables bias by testing the prominent theories in a comprehensive specification, to identify persistent puzzles for the current set of theories, and to explore those puzzles in greater depth by looking at the composition of government expenditure and the level of government at which it takes place as well as its magnitude. Using Government Financial Statistics data from the IMF covering over 100 countries from 1970–2000, I look at cross-sectional and inter-temporal variation in government expenditure and both individual categories of expenditure (such as defense, education, health care) and different levels of government (central, and local). Among other results, I find a new explanation for Wagner's Law, widespread evidence that preference heterogeneity leads to decentralization rather than outright decreases in expenditures, that a great deal of the expenditure associated with increased trade openness is not in categories that explicitly insure for risk, and evidence that both political access and income inequality affect the extent of social insurance.

Keywords: Government size; Openness; Country size; Fragmentation; Wagner's Law; Redistribution

1. Introduction

Because of a paucity of data and correlation among the explanatory variables, theories of government size are often difficult to test. This paper makes headway in two directions. First, gathering the leading hypotheses and testing them together in a unified specification avoids omitted variables bias and the temptation to data-mine by playing with the specification. Second, using spending data disaggregated both by category of expenditure (education, healthcare, social security, etc.) and by level of government (central and local) enables more nuanced tests of many

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of these theories. Two explanatory variables which tend to correlate with similar behavior of total expenditure may correlate with very different patterns in the disaggregated data.

This approach yields a variety of interesting new results.

1. Much of the increase in total expenditure associated with greater trade openness is attributable to categories that do not insure for risk. This is especially true in less-developed countries.
2. In less-developed countries, greater trade openness is associated with a centralization of expenditure: the increase in central government expenditures is partially offset by a decrease in local government expenditures.
3. In more populous countries and countries with greater ethnic fractionalization, spending on many categories of public goods (education, healthcare, public order and safety) is decentralized: lower spending by the central government is significantly offset by higher spending by local governments.
4. A greater fraction of the population over 65 is associated with large and significant increases in local government expenditure in almost every category.
5. Wagner's Law is shown to be driven by demographics: richer countries are older and spend more on social security which boosts total expenditure. Total spending net of social security actually declines with per capita income.
6. In industrialized democracies, better political rights and greater inequality are each associated with more redistribution, though the interaction term is negative.
7. Majoritarian governments do not display a clear bias towards or against any type of spending: they simply correlate with reduced expenditure across the board.

Theories of government size tend to focus either on determinants of demand for government services or, more recently, on the structure of the supply of these services. Most theories identify a variable thought to shift demand for government spending and hypothesize that *ceteris paribus*, a shift in this variable leads to a corresponding change in equilibrium expenditure on a certain class of public goods or transfers. For example, a larger population of elderly in a country implies a greater demand for social security (as well as a larger fraction of the population receiving it) and thus higher public expenditure on social security in equilibrium. Demand-driven theories have nominated a variety of demographic factors as explanatory variables: demographics, ethnic fragmentation, and trade openness are popular examples.

While demand-side theories usually treat the formation of policy as a black-box, supply-side theories construct political economy models of representative government to give structure to the supply of public goods. They seek to explain variation in the pattern of expenditure as a function of political organization: electoral rules, the type of government, and the degree of political participation.

Many of the explanatory variables nominated by these theories are correlated: trade shares tend to be smaller in more populous countries, richer countries tend to have better political rights (or vice-versa), and richer countries tend to have an older populace to name a few. Table 1 lists sample correlations between explanatory variables. In the basic sample, 7 of the 15 sample correlations have an absolute value in excess of 0.5. As a result, tests which focus solely on one or even just a few of these variables almost surely suffer from omitted variables bias. The first purpose of this paper is to gather the prominent theories and test them collectively to avoid such bias.

The second purpose is to use data breaking out public expenditure into categories (defense, education, health care) and different levels of government (central and local) to formulate more