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The form of government and fiscal dynamics

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ABSTRACT

Using a combination of time series variation in oil prices and cross-section variation in the oil intensity of countries, this paper investigates whether exogenous shifts in the government revenues affect the government expenditures differently depending on the political institutions of the form of government. Comparing the fiscal policy dynamics in parliamentary and presidential systems, a main finding is that the government expenditures appear more responsive to shifts in the revenues when the form of government is presidential.

> "If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself."
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> — James Madison, the Federalist No. 51 (*Independent Journal*, Feb. 6, 1788)

1. Introduction

The insight that the form of government matters for policy outcomes is not new, and the literature indeed documents a strong correlation between the form of government and the size and composition of government budgets.[1] In particular, the levels of government taxes and expenditures are significantly higher when the form of government is parliamentary, as opposed to presidential. The mechanisms are, however, not well understood. Moreover, understanding the effects of the form of government for policy dynamics appear key. There is now mounting evidence that fiscal policy is more volatile in presidential systems.[2] No

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[1] For a broad overview of this research program, see Persson and Tabellini (2004a,b). Persson and Tabellini (2003) provide an empirical investigation of the effects of the constitutional features of the form of government and the electoral rules, while Persson and Tabellini (2000a) summarize the theoretical literature. Acemoglu (2005) offers a critical review of the constitutions literature in general, and of Persson and Tabellini (2003) in particular.

[2] See, e.g., Fatás and Mihov (2005).

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existing theories can, however, explain these empirical regularities,[3] and the few empirical contributions that exist on the dynamic effects of the form of government suffer from different problems of identification.[4]

This paper employs an unbalanced panel of 63 democratic countries, in the period 1970 to 2001, to identify whether the fiscal effects of exogenous budget shocks vary systematically with the form of government. Empirical analysis of fiscal policy is in general demanding, mainly because of the strong degree of endogeneity in policy determination; clearly, regressing the government expenditures on the government revenues would not be informative. The first contribution of the paper is to propose a novel strategy to identify how changes in the government revenues affect the path of contemporaneous and future government expenditures. In particular, oil prices are interacted with predetermined and/or exogenous measures of oil production intensity in the countries to generate a proxy for the windfall revenues from oil production. It is demonstrated that the proxy is a strong predictor for current and future changes in the government revenues, and the estimates suggest that the effective marginal tax rates on the gross value of the oil windfalls are in the range of 30–40%. Importantly, this revenue effect does not vary significantly with the form of government. The second contribution is to employ the proposed strategy to investigate whether the fiscal responses to the exogenous government revenue shocks are systematically correlated with the form of government.[5] A main result is that the exogenous government revenue shocks appear to have strong effects for the government expenditures if the form of government is presidential, while there are, at most, weak and unsystematic effects on the government expenditures when the form of government is parliamentary. These results are consistent with the empirical patterns previously documented in the literature (see, e.g., Fatás and Mihov, 2005) of a higher degree of fiscal volatility among presidential systems as compared with parliamentary.

There are several advantages associated with the proposed empirical strategy. First, as the oil intensity measures are predetermined (or, when utilizing proven oil reserves, possibly exogenous) and highly persistent, while the real oil prices are highly volatile, the main variation in the windfall proxy variable is driven by the oil price innovations. In turn, the oil price shocks are exogenous to the economic- and political environment in most economies, which sharply reduces the potential of estimation biases due to simultaneity and reverse causation.[6] Second, the time series properties of annual oil prices validate the interpretation of oil price innovations as permanent, rather than transitory, shifts. Third, because the oil price shocks are highly observable, their effects on the governments' budgets may be identified, given that any additional effects of the oil price shocks are properly accounted for. In the estimations, other unidentified fiscal effects of the oil price shocks are accounted for by including either a full set of time dummies, or, alternatively, the oil price innovations in themselves (i.e., the percentage change in the oil price). Finally, there is a significant amount of variation in the political institutions among the oil producers, which facilitates a meaningful statistical comparison of the fiscal effects of oil price shocks across regime types.

Although the literature offers no fully coherent explanation, or theory, for the main result in the present paper, (at least) two potential interpretations are available. First, the so-called veto player theory (e.g., Tsebelis, 1995, 1999, 2002) associates different political systems with different capacities to produce policy change. Tsebelis' theory distinguishes between institutional and partisan veto players, where the former is more prevalent in presidential systems (e.g., the president and the chambers), while the latter typically plays a larger role in parliamentary systems (e.g., the role of parties in the government). The potential for policy change is decreasing in the number of veto players.[7] To investigate whether the main result of the paper is driven by veto player mechanisms, or some other mechanism that is systematically correlated with the form of government, two measures of the political constraints on the executive and the prevalence of coalition governments, respectively, are successively included in the regressions. In addition, a measure of the democratic quality is included, as constitutional rules are likely to be of greater importance in more advanced democracies.

The inclusion of alternative institutional measures in the regressions provides some support for the mechanisms of institutional and partisan veto players, as suggested by the theory of Tsebelis; more political constraints are, if anything, associated with weaker effects of the windfalls on the government expenditures. The electoral system, however, does not seem to matter.[8] Importantly, including these variables does not shut down or even weaken the separate effect of presidentialism, which is still

[3] Persson et al. (1997, 2000) analyze the fiscal effects of the form of government, but their theory is static and does not contribute to the understanding of fiscal dynamics. The theory in the literature that most explicitly addresses the dynamic effects of constitutional rules, is perhaps the Holmström (1999) style career-concern model by Persson and Tabellini (2000a, Ch. 9). In addition, Persson and Tabellini (2003) offer a discussion on how some of the static models in the literature may be given dynamic interpretations.

[4] Persson (2002) and Persson and Tabellini (2003) estimate how 'unobserved common events' (i.e., the time dummies) affect fiscal policy, and the effects appear stronger if the form of government is parliamentary. The empirical strategy does however not account for country-specific fiscal policy trends. Moreover, the unobserved nature of the identifying 'events' does not facilitate further theorizing. A similar empirical approach is employed by Milesi-Ferretti et al. (2002). Their shock variable (unemployment) is however endogenous, and, thus, their estimates might be biased.

[5] The empirical strategy in the present paper is similar to the strategy in Acemoglu et al. (2009), who utilize oil price shocks to investigate the income effects on health expenditures in Economic Sub Regions (ESRs) in the U.S. Also Persson and Tabellini (2000b) and Persson (2002) make an effort to exploit oil prices to identify comparative effects of shocks, but their strategy is incapable of distinguishing between the effects of the oil price innovations and other, correlated shocks.

[6] Exceptions are the member countries of the OPEC cartel, and the U.S., of which all certainly are in a position to affect the price of oil. See Wirl (2009) for a review of the potential political determinants of the price of oil, and for an analysis of the role of OPEC in particular. Most OPEC members a considered nondemocratic and are hence excluded from the current sample throughout. However, all the main results go through also when excluding the remaining OPEC-members which occasionally are classified as democratic, as well as excluding the U.S.

[7] Note that an additional mechanism in Tsebelis' theory is that the ideological distance between the veto players matters; the larger the distance, the more likely is new legislation to be biased towards the status quo.

[8] The pattern that coalition governments are more common under proportional electoral rules (Persson et al., 2004), implies that coalition government should be less frequent in presidential systems because of the positive correlation between presidentialism and majoritarian electoral rules (see, e.g., Müller, 2008).