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Bureaucratic corruption and the dynamic interaction between monetary and fiscal policy

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ABSTRACT

This paper analyses the dynamic interaction between monetary and fiscal policies in the presence of bureaucratic corruption. Corruption constrains the fiscal capacity to tax and increases the reliance on inflation (seigniorage). Given the restrictions that corruption imposes, a monetary reform strengthening central bank independence induces strategic debt accumulation; the government has the incentive to use debt and indirectly 'force' the central bank to pursue expansionary monetary policy. This result is augmented by the size of bureaucratic corruption, posing difficulties on the achievement of both a balanced debt process and price stability. The adverse implication of corruption on debt accumulation, given central bank independence, is supported in a large cross-sectional event study for developed and developing countries. Complementing the analysis with a measure for the level of independence each central bank reform enacted, the impact of corruption is greater, the higher the degree of independence granted. The results are also confirmed when accounting for countries that did not forego meaningful reforms and our findings are robust to different sub-samples, control variables and unobserved heterogeneity.

1. Introduction

Central bank independence (CBI) is widely accepted as the institutional remedy that contributes to price stability. Since 1990s the majority of statutes around the world have been rewritten, strengthening the central bank's political and economic autonomy. International organisations have promoted central bank reforms in emerging and developing countries and by 2007 about thirty countries have been operating under a highly autonomous inflation-targeting framework. However, despite the wide consensus and adoption of such an institutional reform, the monetary and fiscal performance of these countries has been diverse, especially across developed and developing countries. Several contributions suggest that the impact of reforms on inflation, inflation volatility and growth is sensitive to country and time samples, control variables and model specifications.[1] These mixed empirical results ultimately place the effectiveness of central bank reforms under uncertainty.

This wave of central bank reforms is closely related to the macroeconomic literature of monetary policy inconsistency and remedial institutional designs (Barro and Gordon, 1983; Rogoff, 1985). In this context, a number of contributions (initiated by Sargent and Wallace, 1981 and Alesina and Tabellini, 1987) have established the importance of fiscal policy in determining the inflation bias and thus the optimal monetary design. However, the relevance of the stance and quality of fiscal institutions to the optimal design has received less attention. Bureaucratic corruption, among other things, limits the fiscal capacity to tax and affects the government's fiscal decisions. Indeed, there is both theoretical and empirical evidence on the negative impact of corruption on tax revenues and the

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[1] See Berger et al. (2001) for a survey on earlier cross-sectional studies. More recent contributions employ panel data analyses.

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government's budget, strongly indicating the importance of incorporating such features in the analysis of monetary and fiscal policy interactions.

The aim of this paper is to reassess theoretically and empirically the optimality of central bank independence when active fiscal policy, debt dynamics and bureaucratic corruption are explicitly considered. At a theoretical level, we readdress the time-inconsistency problem of monetary policy focusing on the driving forces of monetary and fiscal policymaking when the economy is faced with suboptimal fiscal institutions, notably in the presence of a corrupt bureaucracy in the tax collection system. As such, we augment the framework of Alesina and Tabellini (1987) to include tax leakages due to corruption and focus on a two period model to allow for dynamic effects to take place. This way we highlight (i) the bearing of bureaucratic corruption in shaping and constraining fiscal policy and (ii) the role of debt policy and its impact on monetary outcomes and the optimal institutional design.

Our main theoretical finding suggests that in the presence of corruption price stability is undermined through the strategic use of debt. Even with central bank independence, the government may have the incentive to indirectly 'force' an expansionary monetary policy by accumulating debt. Intuitively, an independent central bank is overcorrecting for the inflation bias, delivering too little inflation (seigniorage) from the government's perspective. At the same time, high bureaucratic corruption is limiting fiscal tax revenues. As a result, the government is induced to borrow more today in an attempt to increase future inflation. Hence, the level of bureaucratic corruption can restrict the effectiveness of a monetary institutional reform by 'altering' fiscal responses and constraining the extent of actual independence.

The theoretical implications provide potential interpretations for a set of empirical findings. First, they provide a reason for the observed diversity of performance of different countries that adopted similar central bank reforms. Second, they offer an explanation as to why many countries have experienced debt increases following important reforms.[2] They also give a rationale for the focus on debt ceilings. The explicit theoretical channel identified here gives emphasis to strategic borrowing due to the interplay between fiscal and monetary policy actions under central bank independency and suboptimal fiscal institutions. Consequently, our empirical analysis concentrates on the relationship between debt accumulation and bureaucratic corruption after central bank independence has been legislated.

In a cross-sectional event study setting, CBI is approximated by the timing of a significant central bank reform. The impact of corruption on debt evolution after that point (relative to before) is then examined. In addition, the analysis is complemented by a newly complied measure for the level of legal independence each reform provided. The sample covers 77 developed and developing countries and reforms span throughout 1990s and beginning of 2000s. Our main results are consistent with the theoretical implications and indicate that corruption plays a significant and negative role in debt accumulation. More importantly, the effect of corruption on debt accumulation is stronger, the higher the magnitude of the respective reform. We also investigate and confirm the impact of corruption on debt accumulation in a difference-in-differences setting, accounting for countries that did not forego meaningful reforms. The results prove to be robust to a set of sensitivity tests that allow for different subsamples, specifications, control variables and unobserved heterogeneity.

This work is linked to three literatures. The first one focuses on the role of debt within the monetary inconsistency game, as done for example by Beetsma and Bovenberg (1997a,b). The possibility of a (positive or negative) strategic use of debt also emerges in their work when governments are myopic or opportunistic. Here, we provide for an alternative reasoning; namely, due to corruption, fiscal institutions are suboptimal and that generates incentives for strategic public borrowing, when the monetary authority is 'too conservative'. The second strand concentrates on bureaucratic corruption. The macroeconomic literature on corruption mainly focuses on its consequences for economic growth, but it lacks systematic analysis of its impact on macroeconomic policymaking.[3] Huang and Wei (2006) are the first to incorporate bureaucratic corruption in the static Alesina and Tabellini (1987) framework, however the response and importance of debt policy is disregarded. The third refers to event studies in the empirical CBI literature, which have been recently growing.[4] These contributions predominantly concentrate on the impact of inflation targeting reforms on inflation and output. Here, the focus is on a broader concept of central bank reforms, while debt accumulation is the principal variable of interest. Hence, we explore the fiscal discipline effect of central bank independence, in relation to the level of corruption. A contribution closer to ours is Acemoglu et al. (2008) who, using a generic politics redistributive approach, give theoretical and empirical support to the idea that reforms will be more successful at intermediate levels of constraints to politicians. They also provide preliminary support of a 'seesaw effect' on fiscal outcomes. Our work is similar in identifying the importance of institutional distortions in assessing the effectiveness of reforms, albeit the theoretical mechanisms and empirical strategies are distinct. We focus on a structural institutional distortion, namely, fiscal capacity to tax and within a standard macro-policy game we investigate the interactions between monetary and fiscal policy decisions. On the empirical side, we use a larger sample, but focus on the short-run debt response in relation to corruption, while they focus more on the long-run effect of the reform on inflation (and partially on government expenditure).

The remaining of the paper proceeds as follows. Section 2 presents the theoretical model. Section 3 determines the policy decisions and outcomes under the distinct institutional settings: commitment (second best), discretion, decentralisation of policies, focusing on central bank independence. The empirical analysis is conducted in Section 4. Section 5 concludes.

[2] See, for instance, Cabral and Ozkan (2008) and Daniel et al. (2003) for a discussion on public debt increases for emerging markets.

[3] Exceptions are, for example, Blackburn et al. (2008) who investigate the impact of corruption on seigniorage and through it on growth.

[4] For instance, Ball and Sheridan (2005), Daunfeldt and de Luna (2008) and Brito and Bystedt (2010).