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Democratic Accountability, Deficit Bias, and Independent Fiscal Agencies

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Abstract

Despite growing interest among policymakers, there is no theory of independent fiscal institutions. The emerging literature on "fiscal councils" typically makes informal parallels with the theory of central bank independence, but a very simple formal example shows that such a shortcut is flawed. The paper then illustrates key features of a model of independent fiscal agencies, and in particular the need (1) to incorporate the intrinsically political nature of fiscal policy—which precludes credible delegation of instruments to unelected decisionmakers—and (2) to focus on characterizing "commitment technologies" likely to credibly increase fiscal discipline.

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I. INTRODUCTION

The fiscal legacy of the economic and financial crisis of 2008-09 brought to the fore serious concerns about the capacity of governments to maintain sustainable public finances. Several vulnerable countries came under severe market pressure, while government bond yields in countries considered so far as safe havens also started rising. Of particular concern is the fact that the large fiscal deficits and ballooning government debts caused by the crisis came on top of already substantial inherited liabilities and ahead of intensifying demographic pressures on entitlement spending. These trends are on a collision course with the intertemporal budget constraint, making ambitious and sustained consolidations unavoidable. The challenge is formidable and markets are on the watch, pushing governments to look for ways to firm up the credibility of their commitments to sound public finances.

While formal fiscal policy rules have long been used to contain tendencies toward fiscal profligacy (e.g. Fabrizio and Mody, 2006; and Debrun and others, 2008), it has been argued that many of the limitations and failures associated with numerical rules—most notably their inflexibility in the face of unusual circumstances—could be overcome by establishing non-partisan agencies. Through independent analysis, assessments, and forecasts, such bodies could enhance policymakers' incentives to deliver sustainable policies.

Despite a fairly active public debate, no full-fledged theory has either established the desirability of such institutions or derived first-order principles likely to secure their effectiveness. In a sense, this is hardly surprising, as one can only theorize about a well-defined object. In reality, the literature on independent fiscal agencies covers a wide array of specific (and sometimes outlandish) academic proposals as well as a number of existing institutions, including the Central Planning Bureau in the Netherlands, the High Council of Finance in Belgium, and the more recent Swedish Fiscal Policy Council and United Kingdom's Office of Budget Responsibility. At best, existing papers propose a taxonomy (Debrun and others, 2009; Calmfors, 2010), but there currently is no consensus on the tasks these agencies should be assigned, what institutional form they should take, and on whether they should complement or instead substitute for a rules-based framework.

Expositions of the rationale for non-partisan agencies nevertheless share a common thread, the canonical illustration of which is Wyplosz (2005). First, there is a review of the many reasons why fiscal policy tends to systematically deviate from a socially optimal solution, with often an emphasis on common pool problems, short-termism, and time-inconsistency. Second, the author(s) lament(s) the ineffectiveness of fiscal policy rules. It is argued that the main problem with the latter is that the simplicity required for their smooth operation limits their appropriateness outside normal circumstances, undermining their credibility as soon as uncommon conditions prevail. For example, deficit ceilings fail to trigger discipline in good times—when compliance is more likely to result from automatic stabilizers rather than conscious actions—but bind in bad times, forcing undesirable procyclical contractions. Third, the author(s) call(s) on our sense of déjà vu to draw a parallel with the case for central

bank independence, which is also based on the idea of an expansive bias affecting unconstrained discretionary policies, and on the manifest failure of rigid rules (e.g. caps on the growth of certain monetary aggregates) to address that bias.

The aim of this paper is to assess the theoretical framework anchoring the policy debate on politically independent fiscal agencies. After setting-up a basic model of fiscal policy (Section II), I show that the parallel with independent central banks is theoretically flawed because most models of fiscal bias cannot demonstrate why elected officials would want to establish such institutions in the first place (Section III). In addition, the idea of fiscal delegation is misleading because the very fear of delegating may motivate principled, yet baseless opposition from politicians. I then suggest—still using simple formal illustrations—that any full-fledged theory of fiscal agencies should (1) incorporate the intrinsically political nature of fiscal policy and the infeasibility of delegating policy instruments to unelected officials and (2) focus on characterizing mechanisms that encourage ex-post compliance with ex-ante commitments ("commitment technologies") to fiscal discipline (Section IV). Some practical conclusions are drawn in Section V.

II. AN ILLUSTRATIVE MODEL OF FISCAL POLICY

Since the late 1980s, a large literature has explored the reasons why elected officials may choose policies that systematically deviate from a well-defined social optimum.[2] In particular, the notion of a deficit bias emerged from the seemingly inexorable rise in the ratio between gross government liabilities and the economy's income since the mid-1970s. Today's public debt levels are often unprecedented in peace time (Figure 1).

Many different theories have been developed to explain the possibility of deficit bias, but none of them has so far emerged as a dominant explanation in empirical analyses.[3] As they have been surveyed elsewhere (see e.g. Calmfors, 2010, Debrun and others, 2009, and Hagemann, 2010), this section simply presents a basic setup used in support of some of the points developed in the remainder of the paper. The main virtue of the model is its sheer simplicity. There is no pretense that its underlying assumptions should be taken at face value or that they have strong empirical backing.

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[2] For the sake of simplicity, I deliberately abstract from the fact that there is no firm consensus in the economic profession on what characterizes an optimal policy path (see Wren-Lewis, 2010, for a discussion).

[3] There is, however, suggestive evidence that fragmented government coalitions (e.g. Fabrizio and Mody, 2006) and political instability (Debrun and Kumar, 2007) are associated with larger fiscal deficits. This may reflect common pool problems—that is the failure to coordinate competing claims on limited budget resources—as well as the fear of not being re-elected (that feeds short-termism).
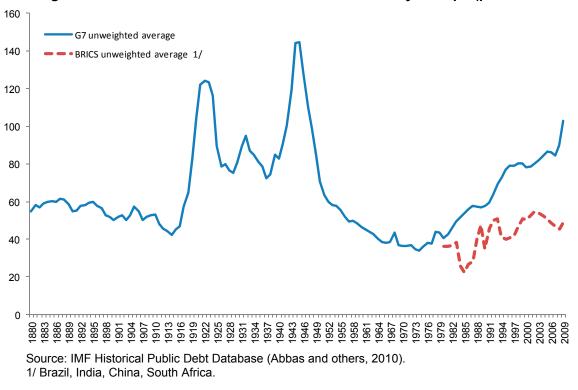
Figure 1. Gross Government Debt in Selected Country Groups (percent of GDP)

Source: IMF Historical Public Debt Database (Abbas and others, 2010).
1/ Brazil, India, China, South Africa.

A. Objectives and Constraints

The model draws on Alesina and Tabellini (1990), considering 2 periods, and constant and deterministic income levels. Identical private agents maximize utility *U*, which is separable over time and types of goods (private and public).

$$U(c,q) = E_0 \left[\sum_{t=1}^{2} \beta^{t-1} \big(u(c_t) + v(q_t) \big) \right] , \tag{1}$$

where *c* denotes the per-capita consumption of private goods and *q* the per-capita consumption of public goods. E_0 symbolizes the expectations operator conditional on information available at the beginning of period 1 (time 0), and β is a subjective discount factor. With a constant proportional income tax rate τ, private budget constraints write as follows:

$$c_1 = (1-\tau)y + l$$
$$c_2 = (1-\tau)y - Rl$$

with *R*, the interest factor and *l*, the stock of net private liabilities at the end of period 1.

Elected officials decide on public good provision. They belong to one of two political parties (C or L) indexed by Q. Preferences are identical across political parties and to those of the population,[4] but officials only value public goods when in office. These assumptions avoid the needless complexity of a partisan cycle in the conduct of fiscal policy, leading to a simple and well-defined deficit bias.

$$U_Q(c,q) = E_0\left[\sum_{t=1}^{2}\beta^{t-1}\left(u(c_t) + \rho^{t-1}v_Q(q_t)\right)\right]; \quad Q = C,L \; ; \; 0 \le \rho \le 1 \qquad (2)$$

with $v_C(q_t) = 0$ if party L is in office, and $v_L(q_t) = 0$ if party C is in office. Elections with uncertain outcome take place at the end of period 1, and the parameter ρ^{t-1} captures the probability of the incumbent party to be in office at period t.

The intertemporal budget constraint determines the quantity of public goods (per capita) delivered in each period:

$$q_1 = \tau y + b - \delta_1 , \qquad (3a)$$
$$q_2 = \tau y - Rb - \delta_2, \qquad (3b)$$

with b denoting the overall deficit at the end of period 1 (or equivalently, the principal of the debt to be repaid in period 2). Equations (3a/b) show how the budget deficit determines the time profile of public consumption by shifting available budget resources in favor of current public consumption at the cost of future consumption.

To rationalize electoral uncertainty, I introduce a potential motive for voters not to re-elect the incumbent. This comes in the form of a random event affecting the efficiency of public good delivery. For any given level of taxation, voters obviously dislike the waste of public money because the private consumption foregone by paying taxes is not offset by the delivery of public goods and services. Symmetrically, voters appreciate efficiency gains in the public sector. The specific nature of the shock affecting government efficiency does not matter, and I simply assume non-serially correlated shocks with zero mean and finite variance: $\delta_t \sim N(0,\sigma_\delta^2)$. One could think of a positive realization of δ as public resources being diverted by corrupt bureaucrats, the effect of poor administrative capacities, or unforeseeable policy mistakes. Of course, good surprises can also occur (more public goods being delivered with the same budgetary envelope), which is why δ follows a normal distribution with mean zero. Finally, recall that fiscal policy decisions have no impact on income, and thereby, on private consumption since R is given and independent of b.

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[4] As a result, the model does not exhibit any "partisan" budget cycle related to changes in administrations.

B. Benchmark Equilibria

The key benchmark is the socially-optimal solution. It results from direct maximization of the representative citizen's utility (1) by a benevolent "social planner." To economize on notation, I assume, without loss of generality, that $\beta = R = 1$ (discount and real interest rates are equal to zero) and that utility is quadratic: $u(x) = v(x) = -(x - \tilde{x})^2$, meaning that decision-makers dislike deviations from pre-determined objectives denoted by a tilde. Under these assumptions, the Euler equation establishes that the social planner delivers a balanced budget:

$$q_1^* = q_2^* \Rightarrow b^* = 0. \tag{4}$$

Before deriving the political equilibrium—i.e. elected policymakers' choice—one needs to clarify the sequence of moves. First, "Nature" draws the governing party (C by assumption here). Then, the government elaborates a budget that sets the deficit level for period 1, and by extension, the expected time path of public consumption over the two periods. Third, the public sector efficiency shock materializes, and finally, elections take place. In period 2, all debts are paid off, a new shock occurs and the world ends. Backward-induction rules out time-inconsistency.

The model very simply illustrates the impact of elected official's motivations on the equilibrium deficit. Because they care about future public good provision only to the extent that they expect to win the elections and remain in office, politicians effectively discount the future utility derived from public consumption at a higher rate than citizens. The resulting wedge between the representative citizen's and the politician's discount rate leads to a socially suboptimal downward tilt in the chosen time path for public consumption, which requires a deficit in period 1. Denoting by a ** superscript the solution associated with the political equilibrium, it is immediate to show that:

$$b^{**} = \left[\frac{1-\rho}{1+\rho}\right]\tilde{b} \text{ , with } \tilde{b} = \tilde{q} - \tau y. \tag{5}$$

Certainty about election outcomes brings about two boundary cases. Obviously, certain re-election ($\rho = 1$) eliminates policymakers' impatience and readily secures a balanced budget: $b^{**}\big|_{\rho=1} = 0 = b^*$. In contrast, losing office with certainty implies that the incumbent will select a budget balance such that the expected public consumption in period 1 is equal to its preferred level $\tilde{q}$, hence $b^{**}\big|_{\rho=0} = \tilde{b}$. The model exhibits a "short-termist" deficit bias only if $\tilde{b} > 0$, which requires that the appetite for public goods (parametrized by $\tilde{q}$) exceed available tax money. This condition embodies the common pool problem inherent to budgetary decisions. In subsequent illustrations, I assume that this is the case so that $b^{**} > b^*$. It is important to note that because voters' behavior remains purely exogenous, this deficit bias emerges in a political setting without formal democratic accountability.

III. INSTITUTIONAL SOLUTIONS TO THE DEFICIT BIAS: THE CENTRAL BANK ANALOGY

This section formally illustrates two points. First, by analogy with the theory of central bank independence (CBI), very simple institutional arrangements with immediate real-world appeal can be characterized. Second, in contrast to the CBI theory, policymakers have no ex-ante incentive to set-up such institutions (and by extension, no incentive to comply with the associated limitations on policy discretion if they happen to be in place).

A. From Central Bank Independence...

In the 1980s, the persistence of high inflation prompted an intense debate on the merits of granting central banks complete operational independence from elected officials in pursuing price stability. The basic premise was the perception of politicians' perverse incentive to rely on monetary stimulus to push unemployment below structural levels. Barro and Gordon (1983) popularized the argument in the form of a time-inconsistency problem à la Kydland-Prescott (1977), whereby the ex-post optimum (high inflation) differed from the ex-ante optimum (low-inflation) due to the nominal nature of binding wage contracts and the possibility for policymakers to exploit these nominal rigidities for short-term employment gains.

In that model, even though elected officials fully appreciate ex-ante the merits of low inflation, their aversion to unemployment and their reluctance to enact structural reforms encourage them to take advantage of any profitable opportunity to move along the short-term Phillips curve. As rational wage setters understand these motivations, inflation expectations and the corresponding wage demands are aligned on the highest inflation rate the government could tolerate (given the structural level of unemployment), locking the economy in a high-inflation, high-unemployment equilibrium.

As formal numerical rules aimed at limiting money growth failed to contain price pressures, Thomson (1981) first suggested appointing central bankers with "politically independent" preferences. Once appointed, these could exert complete discretion in choosing policies that meet their peculiar preference for low inflation. Rogoff (1985) fleshed out the argument in the Barro-Gordon (1983) setup, showing the positive impact of delegating monetary policy to an unelected official that was more inflation-averse than the typical citizen. A vast literature on optimal monetary institutions subsequently mushroomed around the idea of locking central bankers in a contract providing specific incentives to deliver low inflation (see Walsh, 1995, Svensson, 1997, and Berger, De Haan and Eijfinger, 2001 for a useful survey). By the end of the 1990s, many central banks had gained full control over monetary policy in the context of an explicit mandate to deliver low and stable inflation.

B. ...to Independent Fiscal Institutions

One preliminary point to clarify is that the delegation/independence argument simply embodies the *assumption* that the inflation contract cannot be modified once expectations have been set in line with its terms. In principle, any high-level legal norms (e.g. the constitution) effectively tying policymakers to ex-ante optimal policies could achieve the same theoretical result as an "independent" institution with an adequately defined mandate.[5] So there is no intrinsic virtue to independence, just the implicit assumption that this is an effective mechanism preventing discretionary adjustments in objectives to be made as easily as for policy decisions themselves. This is why many theoretical models of fiscal rules are formally indistinguishable from those of monetary policy delegation (e.g. Castellani and Debrun, 2005, or Beetsma and Debrun, 2007).

It is thus technically straightforward to characterize the fiscal analog of central bankers' "inflation contract." In my illustrative model, one could think of a linear scheme subjecting elected officials to an institutional arrangement that somehow discourages deficits and encourage surpluses (equation (6)). This could be a balanced-budget rule complemented with provisions that raise the reputational costs of deficits. But the same formula could describe an independent fiscal authority exerting full discretion over the deficit level, leaving composition issues to elected officials. The "constrained" utility of the elected official—or that of the independent fiscal authority—would then be rewritten as follows:

$$V_C = U_C - f\big(b - b^*\big) . \tag{6}$$

Policymakers subject to the "deficit contract" thus select a budget balance maximizing V_C instead of U_C. Clearly, there exists an optimal fiscal contract characterized by $f^* = (1 - \rho)\widetilde{b}$ (the marginal cost of deviations) implementing $b^{**} = b^*$.

Now, even if one sticks to the theory of central bank independence and assumes that this contract cannot be changed, the basic question remains whether politicians have any incentive to set-up such institutions in the first place. This is where a sharp contrast emerges in the design of monetary vs. fiscal institutions. In the case of central bank independence, policymakers are aware that any mechanism implementing the ex-ante optimal solution (low inflation) is in the best interest of everyone because the underlying game between the policymaker and the public is a Prisoner's Dilemma. This implies that the socially-optimal inflation contract fulfills the participation constraint of the politician. The model of deficit bias presented above is different because there is no genuine time-inconsistency problem: the

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[5] This argument reformulates McCallum's (1995) second fallacy of central bank independence, stating that if governments have the discretion to set up an independent central bank with the right incentives, they also have the discretion to revert to a dependent central bank with inadequate incentives. Jensen (1997) formally demonstrates in the Barro-Gordon-Rogoff framework that delegation does not matter if the no-renegotiation assumption is lifted.

ex-ante optimal solution in the political equilibrium is simply not the socially-optimal solution. Formally, it is easy to demonstrate that $E_0 V_C(q^*) < E_0 U_C(q^{**})$.

In that light, fiscal institutions themselves are dynamically inconsistent, which explains in part why these arrangements periodically come under intense pressures, are scrapped, substantially modified, circumvented, or temporarily ignored.[6] In contrast, and despite some recent heated rhetoric, inflation contracts seem more robust. That said, the relative instability of fiscal rules and institutions also reflect the inherent difficulty to implement an effective rule (which has to be simple and therefore vulnerable to unforeseen events), and the greater variance of opinions about what constitutes an appropriate fiscal policy (as opposed to monetary policy) in given circumstances.

The fact that independent fiscal councils nevertheless emerge in practice could mean that none of those actually exert any constraint on discretionary fiscal choices, or that politicians face motivations excluded by assumption from the illustrative model. For instance, the two political parties competing for votes could be ideologically different. Hence, in circumstances where the electorate favors a fiscally-conservative platform, the party in question could set up such institutions, hoping to constrain future administrations with a more profligate bent. Technically, this would require a partisan model of fiscal policy, involving a more loaded notation, but no obvious benefit in terms of additional insight, as electoral shifts would coincide with institutional changes.[7]

C. Conclusion and Moving Forward

The discussion above suggested that the parallel between independent fiscal agencies and central banks is theoretically flawed. A fairly standard model of deficit bias cannot establish why such institutions would emerge in the first place: one is left with the uncomfortable assumption of some institutional heritage from apolitical and visionary founding fathers.

The next section explores ways to set up fiscal institutions that would at least appeal to policymakers (i.e. satisfy their participation constraint). To circumvent the theoretical impasse, I explicitly model the interaction between rational voters and elected officials. It is indeed already evident that effective institutions can only work if they are fully owned by the only real principal in a democracy: the voters.

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[6] The problems have been documented and extensively discussed for numerical fiscal rules, but they also apply to independent fiscal agencies. The experience with the High Council of Finance in Belgium is a case in point, as noted by Coene and Langenus (2011). The recent abolition of the Hungarian Fiscal Council—created only two years earlier—is another vivid illustration of the inherent fragility of discipline-enhancing fiscal institutions.

[7] Regardless of the Council, each party would still deliver a policy in line with its own preferences.

IV. DEMOCRATIC ACCOUNTABILITY AND INDEPENDENT AGENCIES

In an ideal representative democracy, fully informed voters would provide adequate incentives to enable politicians to deliver socially optimal policies. So far the model above cannot capture this basic requirement that elected policymakers are also accountable to their principal. An immediate task is therefore to show that the deficit bias exists even if voters can credibly sanction inadequate policies. This is because policy making is subject to informational asymmetries: voters' preferences may be hard to read for policymakers, whereas the abilities and true agenda of those running for office are unobservable to voters. These asymmetries imply that policy mistakes (successes) can be hard to detect, interpret, and adequately sanction (reward).

To show that these imperfections can lead to deficit bias of the kind discussed above, I make two basic assumptions. First, voters cannot observe the intrinsic competence of policymakers. Second, opaque public accounts prevent voters from assessing whether observable outcomes are the result of either pure luck or competent policy making. Formally, this means that the public sector efficiency shocks δ_t and the true level of debt (deficit) are unobservable ex-post. Only tax revenues and actual output in terms of public goods are perfectly observed. (Voters only know for sure what they pay and what they get.) The combination of unobservable competence and observable outcomes implies that voters will naturally use the size of q_1 as a signal of competence.[8] One implication is that a favorable efficiency shock ($\delta_t < 0$) could be interpreted as a superior capacity to deliver public goods given fixed budgetary resources. Rational voters thus only observe a "notional" budget deficit reflecting a combination of shock (δ_1) and noise (ξ):

$$q_1^C - \tau y = \xi - \delta_1 \tag{7}$$

To identify the realization of the efficiency/competence variable at the end of period 1, voters solve a basic signal-extraction problem:

$$E_1[\delta_1] = -\frac{\sigma_\delta^2}{\sigma_\delta^2 + \sigma_\xi^2}\left(q_1^C - \tau y\right) \tag{8}$$

As voters' best guess of δ_1 embodies their assessment of the incumbent's competence, it amounts to treating δ as persistent: $E_1[\delta_2|Q=C] = \lambda E_1[\delta_1]$ with $0 < \lambda \leq 1$, while $E_1[\delta_2|Q=L]=0$. Clearly, the incumbent will be re-elected if she is expected to deliver more public goods given the remaining budgetary resources (which are the same for both parties).

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[8] Cukierman and Meltzer (1986), and Rogoff and Sibert (1988) first introduced that type of conjecture in formal models of fiscal policy.

Formally, re-election occurs if $E_1[q_2|Q = C] - E_1[q_2|Q = L] > 0$. At time 0 (budget preparation stage for period 1), the perceived probability of re-election is therefore:

$$\rho = \Pr\left(\lambda \frac{\sigma_\delta^2}{\sigma_\delta^2 + \sigma_\xi^2}\left(q_1^C - \tau y\right) > 0\right).$$

With the probability of re-election depending positively on the (ex-post) realization of a notional deficit, policymakers face an opportunistic (ex-ante) motive to run a deficit. A larger ex-ante deficit indeed reduces the likelihood that voters will detect adverse efficiency shocks at the end of period 1, boosting re-election chances and correspondingly reducing the short-termist bias. The expanded model with democratic accountability thus exhibits two offsetting motives for excessive deficits.

What could be the role of an independent fiscal agency in this highly stylized setting? While it is beyond the scope of this paper to formally model the precise mechanism, it is intuitively appealing to conceive an agency performing non-policymaking tasks that ameliorate the interaction between voters and policymakers. Given the nature of the informational problems at the origin of the fiscal bias, that agency could for instance improve fiscal transparency to weaken the ex-ante motive for deficits.

The model also suggests that an agency with a broad mandate is more likely to credibly improve fiscal performance than one with a narrow remit. A fiscal agency strictly confined to enhancing transparency (e.g. by revealing the true efficiency shocks) would only eliminate the opportunistic deficit bias. However, the short-termist bias would be maximized because voters' assessment of competence would reflect the actual distribution of these shocks (leading to $\rho = 0.5$). A broader remit could better address informational asymmetries in a mutually beneficial way for voters and elected officials. Specifically, compliance with a fiscal rule and normative assessments by an accountable and well-staffed fiscal agency could replace efficiency shocks as the trusted signal of policymakers' competence. Hence, detailed analysis and normative assessments of fiscal performance could prevent the confusion between bad luck and bad policies, reduce opportunistic motives, and directly reward compliant governments with greater re-election chances. Of course, this presumes that fiscal institutions would be genuinely "owned" by voters, which requires the strictest guarantees of independence from politics.

V. Concluding Remarks

The paper discussed from a theoretical perspective the role of independent fiscal agencies in enhancing fiscal discipline. The key point is that the effectiveness of such institutions depends on their capacity to deal with the root cause of deficit bias, including informational asymmetries between voters—the only legitimate principal in the policy game—and politicians. A number of practical implications emerge:

1.   The delegation of fiscal policy prerogatives to unelected officials is unworkable from a positive perspective, reinforcing the normative argument against fiscal delegation emanating from Alesina and Tabellini (2007). The model indeed illustrates that the very decision to delegate macro-relevant dimensions of fiscal policy—such as the level of the deficit, as suggested by Wyplosz (2005)—simply violates participation constraints of elected decisionmakers.

2.   An independent fiscal agency is more likely to credibly enhance fiscal discipline if a broad mandate allows it to address the various manifestations of the deficit bias (from creative accounting to masking policy slippages or biasing revenue forecasts). This includes having the discretion to make normative assessments of the fiscal stance—albeit within the boundaries of elected politician's own ex-ante commitments—in the light of cyclical conditions, public debt dynamics, and risks to public sector's long-term solvency.

3.   The agency's effectiveness is likely to be greater if it receives specific instruments to trigger a public debate where elected officials would have to publicly explain slippages (with respect to ex-ante targets) deemed inappropriate by the agency. By becoming a reliable source on the overall quality of fiscal policy, the agency can help voters identify ex-post deviations related to "bad policies" (as opposed to "bad luck") and hold policymakers accountable. This is a task that rules-based fiscal frameworks—bound to remain simple to be operational—cannot by themselves deliver. Indeed, mere deviations from preset benchmarks do not always signal policy mistakes.

4.   As politicians may be reluctant to bear the short-term costs of deviations from ex-ante commitments, an effective fiscal agency ideally requires a degree of political independence enshrined in primary legislation (Constitutional or framework law) and guaranteed by ring-fenced, multi-year budget appropriations or rules-based extra-budgetary financing (e.g. through a fixed transfer from the central bank) commensurate with the agency's tasks.

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