

1. [Accueil](#)
2. Entity Print

Working paper

[Economy](#)

Sovereign Default and Imperfect Tax Enforcement

6 Juin 2019

Auteurs : [Francesco Pappadà](#), Yanos Zylberberg

Working paper n°722. We show that tax compliance is volatile and markedly responds to fiscal policy. To explore the consequence of this novel stylized fact, we build a model of sovereign debt with limited commitment and imperfect tax enforcement. Fiscal policy persistently affects the size of the informal economy, which impact future fiscal revenues and thus default risk. This mechanism captures a key empirical regularity of economies with imperfect tax enforcement: the low sensitivity of debt price to fiscal consolidations. The interaction of imperfect tax enforcement and limited commitment strongly constrains the dynamics of optimal fiscal policy. During default crises, high tax distortions force the government towards extreme fiscal policies, notably including costly austerity spells.

The European sovereign debt crisis of 2009--2014 has seen large fiscal consolidations being implemented in peripheral European economies plagued by tax evasion. Despite their unprecedented magnitude, these fiscal consolidations did not reduce debt service and exacerbated the economic downturn. Economies may experience long periods of high taxes, depressed demand and high default risk---a phenomenon commonly referred to as *austerity trap* in the media.

In this paper, we study the dynamics of fiscal policy and default risk when tax enforcement is imperfect. First, we document novel stylized facts about the dynamics of tax evasion, most notably its volatility and sensitivity to tax rates. Second, we provide a model of sovereign debt with limited commitment in order to explore how fluctuations in tax compliance affect the dynamics of fiscal policy and default risk.

We construct a new measure of tax compliance based on Value-Added-Taxes (VAT), and we uncover the following key stylized facts. Tax compliance is volatile, and there is a large heterogeneity in such volatility across countries. The volatility of tax compliance is driven by its pro-cyclicality and its sensitivity to tax rates. In some economies with imperfect tax enforcement, a larger share of taxpayers hides their activity in downturns and in periods of austerity. In contrast with the standard behavioral response, the magnitude of fluctuations in tax compliance implies sharply decreasing returns to taxes, and some economies display an extreme form of fiscal fatigue (cf. Ghosh et al. (2013)).

We explore the implications of fluctuations in tax compliance on the dynamics of optimal fiscal policy in a model where a benevolent government uses fiscal policy as a consumption-smoothing instrument. The novelty of the model is to introduce dynamic distortions through tax evasion. In standard models of sovereign debt with limited commitment (Eaton and Gersovitz (1981), Arellano (2008)), default risk depends on the debt level and an exogenous state variable, e.g., current productivity. In such benchmark, a fiscal consolidation reduces future debt levels and unambiguously lowers default risk. By contrast, our model adds another endogenous state variable which affects default risk: the expected distortions as captured by current

technological choices. A fiscal consolidation affects the contemporary choice of entrepreneurs, which increases the future expected cost of raising tax revenues and tilts the future trade-off between repayment and default. This indirect effect mitigates the gains in debt service through the standard "fiscal surplus" effect: fiscal consolidations may not unambiguously lower default risk.

We calibrate and simulate our model with aggregate productivity shocks and public expenditure shocks. We use three moments uncovered in the empirical section to calibrate important unobserved fundamentals characterizing the choice of entrepreneurs. We assess the model performance through its ability to reproduce - across different economic environments - the sensitivity of debt prices to fiscal policy. Without being a targeted moment, the correlation between fiscal surplus and default risk is small in the highly-distorted economy, as in the data: the negative impact of future distortions (through current technological choices) alleviates the gains from the reduction in debt levels.

The model rationalizes the rise of two (opposite and) extreme fiscal policies during default crises. Most often, the government enters costly periods of austerity. These austerity spells are unable to remove the threat of default: a significant share of such spells ends by a default. In periods of low productivity, the returns to austerity may be so low that the government instead opts for a very lenient fiscal policy, incurring fiscal deficits during a default crisis. An even larger share of such spells ends by a default. The preferred remedy of economies with high tax enforcement, i.e., mild fiscal consolidations, is never used by economies with low tax enforcement. These findings illustrate how imperfect tax enforcement may constrain the set of feasible fiscal policies during default crises. They may justify the polarized debate on recovery, some policy makers advocating for extreme austerity with others promoting expansionary fiscal policies.

Download the paper

[Working Paper Series no. 722. Sovereign Default and Imperfect Tax Enfo... \(PDF - 3 Mo\)](#)