Redistribution, Sovereign Debt, and Optimal Taxation

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Overview

• This research proposes a theory of external debt sustainability based on the government’s motive for redistribution.
  - I study a small open economy model in which taxes are distorting and the government has a redistributive concern and faces endogenous borrowing constraints due to its lack of commitment.
  - When the government can borrow externally, it redistributes the external funds to domestic households via domestic financial markets. The government uses low distortionary labor taxes for redistribution.
  - Default resulting in financial autarky is endogenously costly because, without access to external financing, redistribution comes with a high efficiency cost in terms of high distortionary labor taxes.
  - Higher inequality implies a higher cost of default, which results in default resulting in financial autarky.
  - I study a small open economy model in which taxes are affine taxes to redistribute resources: marginal taxes on labor income \( \tau_l \) and domestic asset return \( \tau_f \) and lump-sum tax \( T \). Government has access to both state-contingent domestic and foreign bonds. Government is benevolent and maximizes weighted utility of all households. Government lacks commitment in all tax and debt policies.

Introduction

The recent European debt crises have prompted intense policy debates on fiscal consolidations reduce the government’s budget. These policies help repay debt but have an unequal effect on the domestic economy. Governments often face a trade-off between its commitment to debt repayment and its commitment to maintain a level of redistribution. To show how this trade-off is present in the data, I document the cross-country and time series properties of pre-tax income inequality and external debt. First, highly indebted countries have also experienced high levels of pre-tax income inequality.

Second, the increase in the country’s net financial outflows has coincided with an increase in aggregate pre-tax income inequality:

![Figure 1: Inequality & External Debt Across Countries, 1985-2015 Average](image)

Research Questions

• How does the government’s motive for redistribution affect its external debt repayment?
• What austerity policies should the government follow in the presence of inequality?

Model

The model is a small open economy that faces aggregate productivity shock. The economy consists of three types of agents: domestic households, a government, and foreign lenders.

Domestic Households. Households are heterogeneous in labor productivity types \( \Psi_i \). They are impatient and have preferences over consumption \( c_t \) and labor in efficiency units \( P \).

\[ E_t \sum \mathbb{E} \left[ \sum_{t=0}^{\infty} \left( \frac{1}{\beta} \right)^t c_t \right] \]

Households only have access to state-contingent domestic bonds.

Government. Government uses affine taxes to redistribute resources: marginal taxes on labor income \( \tau_l \) and domestic asset return \( \tau_f \) and lump-sum tax \( T \). Government has access to both state-contingent domestic and foreign bonds. Government is benevolent and maximizes weighted utility of all households. Government lacks commitment in all tax and debt policies.

Lack-of-commitment constraints (Endogenous borrowing constraints)

\[ \sum_{i \in I} \sum_{t=0}^{\infty} \mathbb{E} \left[ \omega_i \left( 1 - \beta \right)^t \cdot u_i \left( c_t, l_t \right) \right] \geq \mathbb{E} \left[ \sum_{t=0}^{\infty} \mathbb{E} \left[ \left( 1 - \beta \right)^t \cdot L_t \right] \right] \]

Foreign Lenders. There is a continuum of risk neutral foreign lenders that lend to the government with fixed interest rate \( r^* \).

Mechanism

Why does greater income inequality imply more external debt?

Consider the following deterministic economies:

• Economy 1: No heterogeneity \( \rightarrow \) No external debt
  - Government defaults on any borrowing.
  - Lenders anticipate defaults and do not lend ex-ante.

• Economy 2: Heterogeneity \( \rightarrow \) Positive external debt
  - Government wants to sustain external debt because external resources can be redistributed among households via domestic financial markets.
  - Government can achieve redistribution with lower distortionary labor taxes than in financial autarky.

Quantitative Analysis

Key assumptions

• Two types: \( \{ \Psi_1, \Psi_2 \} \) with equal means
• Utilitarian welfare: \( \lambda_B = \lambda_L \)
• Impatience: \( \beta (1 + r^*) < 1 \)
• Aggregate productivity shock \( z \) follows log AR(1)

Calibration

• Data: Italy, annual frequency from 1985 to 2015
• Key parameters and moments
  - Discount factor \( r \) to match avg. domestic real interest rate
  - Wage ratio \( \hat{w} / w \) to match mean wage top 50% / bottom 50% in cross-sectional household data

Result 1: Inequality and External Debt Across Countries

I perform a cross-country estimation of the correlation between pre-tax income inequality and external debt both in the model and in the data. The model is obtained by simulating the model for 30 different levels of wage inequality. Table 1 reports the results.

![Figure 2: Inequality & External Debt Over Time, EU-Country Average](image)

![Figure 3: Impulse response functions to a negative productivity shock](image)

Conclusion

• I develop a new theory in which the government is willing to sustain positive external debt that is related to its desire for redistribution.
• I introduce a new endogenous cost of default as a result of redistribution requiring high distortions in default when governments do not have access to external financing.
• The theory quantitatively accounts for observed inequality and external debt levels as well as their correlation across countries and over time.