

# Ramsey Asset Taxation under Asymmetric Information

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In this paper we study optimal asset taxation in a moral hazard environment where governments have serious informational problems, while the market has serious commitment problems in the form of exclusivity. We provide a generalization of Ramsey taxation for generic assets. We find that taxes 'always go in the direction of incentives'. Hence wealth should be positively taxed.

We consider environments with competitive markets for insurance in the presence of asymmetric information of the moral hazard (hidden effort) type. Insurance firms are able to observe the realization of the idiosyncratic shocks affecting agents but cannot observe the effort level undertaken by agents, which affects the likelihood of the individual shocks, nor the trades made by agents in the market; the contracts traded in the insurance markets are thus non exclusive. In such environments we can still have state contingent claims been traded (Arrow securities), provided only there is a different price for buying and selling such claims (i.e. a bid ask spread is allowed), and prices are otherwise linear in trades. Markets can hence potentially provide insurance and we consider the case where a complete set of Arrow securities contingent on each individual shocks are available for trade. In this set up market outcome is typically inefficient, even when the incentive constraints are taken into account.

We study the optimal taxation of assets in this environment.

The limited information over agents' trades – in particular the anonymity of trades in the market - implies the government can only resort to linear taxes on asset trades (purchases). The government can also impose lump sum taxes or transfers. The specific form of these taxes depends on the information available over agents' income shock realizations. In this regard we consider both the case where the government has the same information as insurance firms have over agents' income shocks and the case where government can only impose deterministic lump sum taxes. In all cases, taxes on trades are linear and – unlike Kocherlakota (Econometrica 2005) for example - cannot be contingent on ex-post realizations of individual income shocks. This is in accordance to the anonymity of the insurance and credit markets.

The main finding is that tax on capital is typically positive and the second best allocation can be achieved if and only if agent's joint deviations are irrelevant; i.e., if and only if the so called 'first order approach' is valid (see Abraham, Pavoni, and Koehne, 2009).

This paper aims at creating a bridge between the classical Ramsey capital taxation literature and the more recent Mirrleesian approach to optimal wealth or asset taxation in general equilibrium.