DISSERTATION ABSTRACT

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"Essays on Public Finance and Auction Theory"

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This dissertation contains three chapters and focuses on the optimal design of fiscal policy and multi-item auction mechanisms where there is an informational friction in the economy.

In the first chapter, I examine the optimal taxation of families in an environment in which (i) the earning abilities and child tastes of parents are private information, and (ii) child-rearing requires both parental time and goods. The optimal tax system combines an income tax schedule for childless families with tax credits for families with children. These components insure parents against low income and high taste for children draws respectively. The parental time and cost of goods involved in child-rearing have distinct impacts on the shape of optimal child tax credits. In the quantitative part, I estimate these costs and show that they translate into a pattern of optimal credits that is U-shaped in income. As a result, the credit to one (two) child families is decreasing over the first 40% (50%) of the income distribution. In addition, the credit for the second child is not equal to the credit for the first, owing to economies of scale in child-rearing. For median-income families, the credit for the second child equals 44% of the credit for the first child. Finally, I offer a simple linear-income dependent credit policy that achieves most of the welfare gain from the optimum.

In the second chapter (joint with Laurence Ales and Christopher Sleet), we considers the normative implications of technical change for tax policy design. A task-to-talent assignment model of the labor market is embedded into an optimal tax problem. Technical change modifies equilibrium wage growth across talents and the substitutability of talents across tasks. The overall optimal policy response is to reduce marginal income taxes on low to middle incomes, while raising those on middle to high incomes. The reform favors those in the middle of the income distribution, reducing their average taxes while lowering transfers to those at the bottom.

In the third chapter (joint with Isa Hafalir), we consider multi-unit discriminatory auctions where ex-ante symmetric bidders have single unit demands and resale is allowed after the bidding stage. When bidders use the optimal auction to sell the items in the resale stage, the equilibrium without resale is not equilibrium. We find a symmetric and monotone equilibrium when there are two units for sale, and, interestingly, show that there may not be a symmetric and monotone equilibrium if there are more than two units.