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Adverse selection in credit markets and regressive profit taxation

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Abstract

In many countries, taxes on businesses are less progressive than labor income taxes. This paper provides a justification for this pattern based on adverse selection that entrepreneurs face in credit markets. Individuals choose between becoming entrepreneurs or workers and differ in their skill in both of these occupations. I find that endogenous cross-subsidization in the credit market equilibrium results in excessive (insufficient) entry of low-skilled (high-skilled) agents into entrepreneurship. This gives rise to a corrective role for differential taxation of entrepreneurial profits and labor income. In particular, a profit tax that is regressive relative to taxes on labor income restores the efficient occupational choice.

JEL classification: D5; D8; G1; H2; J6

Keywords: Multidimensional screening; Credit markets; Entrepreneurial taxation; Occupational choice

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1. Introduction

In most countries, taxes on entrepreneurs and businesses, such as the corporate income tax, are less progressive than labor income taxes in the sense that they are typically characterized by flat rather than increasing marginal tax rates. This paper proposes a framework in which such a pattern arises as an optimal policy response to frictions that entrepreneurs face in credit markets. The argument is developed in a model in which individuals can choose between entrepreneurship and paid employment as workers and have private information about their ability in both of the two occupations. In order to set up a firm, entrepreneurs have to borrow funds in competitive credit markets that are affected by adverse selection.[2] Whenever there is cross-subsidization between high and low quality borrowers, this provides excessive incentives for low-skilled individuals to enter entrepreneurship, but insufficient incentives for high ability agents. I show that this occupational misallocation can be removed by a profit tax that is regressive relative to labor income taxes, thus counteracting the cross-subsidization in the credit market equilibrium. Notably, this pattern of tax policy can be justified on efficiency grounds even without a redistributive or revenue motive for taxation.

The fact that adverse selection can induce the wrong *mix* of individuals in entrepreneurship and paid employment, rather than just an inefficient overall share of entrepreneurs in the economy, is driven by multidimensional heterogeneity. The existing literature, going back to the seminal papers by Stiglitz and Weiss [30] and De Meza and Webb [4], has instead focused on settings where a one-dimensional, privately known ability type drives occupational choice. In this case, credit market imperfections induce either a too low or a too high number of agents to become entrepreneurs, depending on whether ability affects the mean or the riskiness of entrepreneurial returns. This calls for either a lump-sum subsidy or tax on entrepreneurship (or bank profits) to restore efficiency, but is unable to explain why profit taxes should be less progressive than labor income taxes.

By contrast, I consider a more general setting in which individuals differ in both their ability as entrepreneurs and workers, and the two dimensions of private information are not necessarily perfectly correlated. In this case, adverse selection in credit markets can distort occupational choice even if the equilibrium level of overall entrepreneurial activity is at the efficient level. This is because the *composition* of agents in entrepreneurship is inefficient, with too many and too few entrepreneurs at the same time. Whereas lump-sum taxes or subsidies on entrepreneurship are unable to correct this misallocation, I demonstrate that regressive profit taxes are a more flexible corrective instrument that not only affects the overall level but also the ability mix of agents in the two occupations.

Formally, private heterogeneity is captured in the model by a type vector (θ, ϕ), where θ denotes an individual's entrepreneurial skill and ϕ the skill as a worker. Entrepreneurial profits π are risky and distributed according to some cdf $H(\pi|\theta)$, where higher θ leads to better profit distributions. On the other hand, if an individual chooses to become a worker, her payoff is deterministic and proportional to her skill ϕ. This structure generates some frontier $\tilde{\phi}(\theta)$ that determines occupational choice, i.e. the set of types who are just indifferent between becoming entrepreneurs or workers. All types with $\phi \leqslant \tilde{\phi}(\theta)$ become entrepreneurs and all the others workers.

I start with characterizing credit market equilibria in this economy. Competitive banks offer the funds needed by entrepreneurs to set up a firm in exchange for repayment schedules $R_\theta(\pi)$.

[2] See e.g. Evans and Leighton [6], Hurst and Lusardi [10] and De Nardi, Doctor, and Krane [5] for evidence on the importance of borrowing frictions for entrepreneurship.