

WORKING PAPER

Executive Summary

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CAPITAL INCOME TAXES WITH HETEROGENEOUS DISCOUNT RATES

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The Atkinson-Stiglitz theorem shows that when the available tax tools include nonlinear earnings taxes, optimal taxation is inconsistent with taxing savings when two key assumptions are satisfied: (1) that all consumers have preferences that are separable between consumption and labor and (2) that all consumers have the same sub-utility function of consumption. Empirical evidence suggests that on average those with higher skills save at higher rates. We therefore relax the second condition and analyze the taxation of savings with heterogeneity in both skill and savings propensity. We consider both uniform and earnings-varying taxation of savings.

This paper uses a simple model in which the number of types of jobs in the economy is restricted. The paper provides an argument for making the taxation of savings progressive in earnings. In a four worker-types model, we find that the savings of the high earners should be taxed, whereas the savings of the low earners should be subsidized. This can be implemented by earnings varying rules on contributions to tax-favored retirement accounts. This result is independent of the correlation between ability and discount factors, provided that the optimum has all the high skilled workers on the more productive job. A uniform savings tax, however, only increases welfare if that correlation is succinctly high.

Primary attention is focused on a model with four worker types - with two discount factors and two skill levels. The model assumes the existence of two jobs, rather than the standard model where each worker can select the number of hours to be worked. This results in a setting where workers with the same skill but different discount factors choose the same job and so have the same earnings. With the introduction of earnings-related savings tax rates, they are subject to the same tax rates. We assume that at the optimum both high-skill types work at the high-skill job and that redistribution from high earners to low earners is the important redistribution. Given these assumptions social welfare increases with the introduction of a tax on the savings of high earners and with the introduction of a subsidy on the savings of low earners. The relative frequencies of the four types in the population plays no role in the derivation of this result, conditional on the assumed structure of the optimum.

The underlying assumption is that those valuing the future more are more willing to work than those valuing the future less, conditional on the disutility of work. This means that an incentive compatibility (IC) constraint just binding on a high skill worker with low value for the future is not binding on a high skill worker with high value for the future and holding the same job. Earnings-dependent taxes and subsidies on savings allow an increase in redistribution by targeting types in a given job with saving preferences

different than those of types who are tempted to switch jobs. In particular, introducing taxation of savings of high earners (and transferring the revenue back equally to all high earners) eases the binding IC constraint since it transfers resources from the high saver to the low saver for whom the IC constraint is binding. Introducing a subsidy on savings for low earners (financed by equal taxation on all low earners) also eases the binding IC constraint by making switching to the lower job less attractive to the high earner with low savings. In extensions, the case for taxing the savings of high earners appears to be more robust than the case for subsidizing the savings of low earners. While the focus of the paper is the introduction of small taxes, we also consider optimal taxes under stronger assumptions.

The assumption that those with less discounting of the future are more willing to work is in line with standard modeling, represented by the preferences. An alternative specification would imply the exact opposite. We examine some empirical support for our assumption, using data from the Survey of Consumer Finances (SCF). We find that conditional on education and age, people with higher discount factors tend to earn more. To proxy for the discount factor, we use reported savings and the time horizon people report having in mind when making spending and savings decision. We also use these proxies to revisit the positive correlation between skills and savings propensities.

While the focus of this paper is on capital taxation, the intuition generalizes to the taxation of other commodities for which the preferences are heterogeneous, since this heterogeneity may impact the labor choice as well.

The paper is organized as follows. Section 2 sets up the model with four types and two jobs. Section 3 characterizes respectively the first best and the restricted first best, referring to ‘equal job, equal pay’ and no savings taxation restrictions. Section 4 introduces incentive compatibility constraints and characterizes the second best including the introduction of earnings-varying savings tax rates. Section 5 considers the introduction of a uniform savings tax, rather than one varying with earnings level. For comparison, Section 6 reviews a two-types model. Section 7 discusses empirical support for the assumptions and Section 8 has concluding remarks.

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