Center for Equitable Growth Funded Research Application

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Project Title: *Status Experiments to Inform Optimal Income Tax Policy:*
        Labor Elasticity in the Presence of Relative Income Concerns

Economists understand the scope of redistributive taxation to be limited by the efficiency-equity tradeoff. This understanding is founded in a behavioral model of individuals optimizing over leisure and one's own absolute level of consumption. Since at least Duesenberry (1949) there has been awareness that people's preferences may additionally include tastes over relative position, or rank, in some fashion. This consideration has led to several optimal income taxation models that take into account agents' concern over their own relative income or status (e.g. Boskin and Sheshinski (1978), Oswald (1983), Ireland (2001), Allgood(2006)). In the positive economics literature, while there have been several papers in the very recent past that demonstrate the effects of information about relative income rank on worker effort and productivity in both real world and laboratory settings, to date there has been little connection between the observed behavioral effects of relative income considerations and optimal income tax policy. In the experiment outlined below, I hope to bridge this gap and possibly provide indications for simple policy tools that can lower the efficiency costs of income taxation. As such, there may be important and novel implications for equitable growth. In short, redistributive taxation may disincentivize growth less than previously thought if exposure to relative income information can be used to motivate sustained effort via a contest for status (all people working to be the richest guy in the room) even in the face of tax increases that reduce the absolute - though, critically, not relative - earnings of the taxpayer and her comparison group. The upshot: growth and redistribution for a more equitable society may be less in competition than typically assumed.

The research design is guided by the goal of testing if/how the optimal income tax schedule changes when individuals' relative rank in the earnings distribution is made salient. To do so, I will use Saez's (2001) optimal income tax formula, which relies on labor-supply elasticity as a sufficient statistic for determining the welfare-maximizing income tax schedule. I will attempt to measure this elasticity in a simple laboratory experiment, and, then again, in a similar experiment in the field using online work. In the experimental control, one group (Control-Hi) will be given a piece rate task (clerical and memory tasks) for which they are paid a high piece rate. Similarly, other groups will get the same instructions and task but be paid a low piece rate (Control-Low) or a medium piece rate (Control-Med). Using this variation in piece rates a labor supply elasticity can be calculated. The treatment will consist of the same task and instructions (and the same HI, MED, and LOW piece rate) as the control. The difference is that, in advance of their performance, participants will additionally be told that they will learn their rank in the distribution of earnings following their performance. This will allow me to test for a statistically significant difference in labor supply elasticity when subjects have the opportunity to incorporate relative income concerns into their optimizing behavior. The

between-subjects comparison testing the ex ante effects of income rank information will be complemented by a within-subjects comparison of how the elasticity changes over time given the history of relative income rank within the treatment group (an ex post effect of the relative income revelation). If income rank considerations matter to people and the experimental context can engage these preferences, the prediction is that there should be a smaller, first round labor elasticity for the treatment group than for the control. If people want to work especially hard to maintain a top rank or to get out of a last place rank, then the prediction is that the labor elasticity will be lower for those with a history of first or last place in the prior
round of work.

Negative findings would suggest the budding literature on relative income concerns may be of limited usefulness for income taxation policy, though such a finding could preclude certain functional forms used to model relative income preferences (e.g. certain reference dependent formulations of relative income concerns that allow relative income to not only affect the level of utility but also the marginal utility in such a way as to appear as an argument in the labor supply function). Positive findings, on the other hand, would suggest that policies to make income rank more salient (such as the full disclosure of citizens' taxable incomes, as practiced to varying degrees in Scandinavia and Japan) may minimize the efficiency cost of taxation attending redistribution, public goods spending, and other uses of tax revenue. Furthermore, if indeed people trade off the cost of lost leisure time attending work for the benefits of *both* traditional (non-status) consumption uses of labor income *and* the higher status derived from achieving a possibly higher income rank from that remunerative work, then those whose marginal work decisions weigh status concerns more heavily might be thought of as proxied by the treatment group in the above experiment, who, unlike the control group are not deprived of the ability to consider local income rank, thus, giving it a greater role – if there is a role for it to play at all - in decisions. If, as seems reasonable, high earners (compared to low earners) are not earning to consume their marginal income so much as to improve their status (via increases in their relative income rank among a reference group of other high earners in their tax bracket), then the postulated results would additionally provide suggestive evidence, ceteris paribus, for higher income taxes on top earners.

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