



De Gustibus non est Taxandum: Heterogeneity in preferences and optimal redistribution [☆]

Benjamin B. Lockwood ^a, Matthew Weinzierl ^{a,b,*}

^a Harvard University, United States

^b NBER, United States



ARTICLE INFO

Article history:

Received 18 December 2013

Received in revised form 28 January 2015

Accepted 29 January 2015

Available online 20 February 2015

Keywords:

Optimal taxation

Preference heterogeneity

Redistribution

Sufficient statistics

ABSTRACT

The prominent but unproven intuition that preference heterogeneity reduces redistribution in a standard optimal tax model is shown to hold under the plausible condition that the distribution of preferences for consumption relative to leisure rises, in terms of first-order stochastic dominance, with income. Given familiar functional form assumptions on utility and the distributions of ability and preferences, a simple statistic for the effect of preference heterogeneity on marginal tax rates is derived. Numerical simulations and suggestive empirical evidence demonstrate the link between this potentially measurable statistic and the quantitative implications of preference heterogeneity for policy.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

In the early years of modern optimal tax research, theorists assumed that all individuals have the same preferences over consumption and leisure. James A. Mirrlees's (1971) second simplifying assumption was that "Differences in tastes...are ignored. These raise rather different kinds of problems, and it is natural to assume them away." This simplification freed Mirrlees to assume that the only way in which people differ is in their ability to earn income.¹ His powerful approach—along with his assumption of preference homogeneity—now dominates theoretical work on tax design.

Preference heterogeneity of this form, however, appears to be an evident feature of reality. Kahneman (2011) reports that such preference differences are widespread among young adults and correlate with

outcomes later in life. Data shown in this paper from the World Values Survey reveal that respondents report a wide range of views toward the value of material possessions. More anecdotally, people choose a wide range of consumption–leisure bundles, even conditional on apparent budget constraints.

Heterogeneous preferences for consumption relative to leisure can be included in a standard Mirrleesian model without any impact on the results if society's normative attitude toward those preferences is the same as that toward income-earning abilities. In fact, in that case the distinction between preferences and ability is merely semantic, as they are also observationally equivalent. That is, an individual may earn a low income, and respond to taxes the way he does, either because he has low ability or because he has a weak relative preference for consumption.

In contrast, if society does not view these preferences as normatively equivalent to abilities, preference heterogeneity has implications for optimal taxation, and these implications are the focus of our paper. We analyze the impact of society adopting the normative view that individuals are to be, in the influential terminology of Fleurbaey and Maniquet (2004), compensated for having low abilities but held responsible for their preferences.² In that case, society's preferred unconstrained policy could range from, for example, full equalization of outcomes (if income differences are entirely due to ability) to no redistribution (if income differences are entirely due to preferences).

Results characterizing the effects of this form of preference heterogeneity on optimal tax policy in a general setting have proven elusive,

[☆] We are grateful to Robert Barro, Rafael di Tella, Alex Gelber, Caroline Hoxby, Louis Kaplow, Narayana Kocherlakota, Erzo F.P. Luttmer (the editor), Greg Mankiw, David Moss, Eric Nelson, Julio Rotemberg, Dan Shoag, Aleh Tsyvinski, Glen Weyl, Danny Yagan, anonymous referees and seminar participants at Harvard and Michigan for helpful comments and suggestions on earlier versions of this paper. We especially appreciate insightful suggestions on the formal analysis of Section 2 by one of the referees for this Journal.

* Corresponding author.

E-mail addresses: lockwood@fas.harvard.edu (B.B. Lockwood), mweinzierl@hbs.edu (M. Weinzierl).

¹ Mirrlees was not the first to adopt this simplification. Arthur Pigou (1928) wrote, in a classic text: "Of course, in so far as tastes and temperaments differ, allowance ought, in strictness, to be made for this fact...But, since it is impossible in practice to take account of variations between different people's capacity for enjoyment, this consideration must be ignored, and the assumption made, for want of a better, that temperamentally all taxpayers are alike."

² Other ways in which individuals vary may merit partial compensation. We limit our focus to the form of preference heterogeneity most clearly distinct from income-earning ability. See Kaplow (2008) for a discussion of other specific cases.

despite an early demonstration of its potential importance by Agnar Sandmo (1993).³ This lack of results has left us without a clear understanding of the conditions under which the prominent but unproven intuition that heterogeneity in preferences lowers optimal redistribution holds and, when it does hold, how large the effects are. For example, despite the arguments made by prominent critics of redistribution,⁴ in principle adding preference heterogeneity to the model may increase optimal redistribution. Intuitively, if preferences for consumption relative to leisure are lower among those with high incomes, attributing income variation to ability alone will understate the income-earning abilities of high earners and imply an optimal extent of redistribution that is too small.

In this paper, we derive two novel results that clarify how the presence of preference heterogeneity affects the optimal extent of income redistribution. In both cases, we show that there is a transparent formal mechanism through which we can model the effects of preference heterogeneity: namely that it changes the pattern of welfare weights the social planner assigns along the income distribution. One interpretation of our results, therefore, is that they make explicit the way in which preference heterogeneity has often implicitly entered debates over optimal redistribution. Throughout, we refer to the conventional case in which all income heterogeneity is treated as due to ability differences or, equivalently, to differences in characteristics with the same normative implications as ability, as the “homogeneous preferences” case.

Our first contribution is to derive a straightforward condition under which heterogeneity in preferences lowers optimal redistribution: if the distribution of the relative preference for consumption over leisure rises with income (in terms of first-order stochastic dominance), then optimal marginal tax rates are lower at all incomes and the net transfer to the lowest earner is smaller than in the homogeneous preferences case. Using the standard optimal tax model, we show this result analytically for the case of quasilinear utility studied in Diamond (1998) and isoelastic welfare weights that decrease with ability. We also show, through numerical simulations, that the result holds for more general functional forms of utility and social welfare. In other words, we describe a formal mechanism through which preference heterogeneity may reduce the optimal extent of redistribution in a standard optimal tax framework.

Second, we derive a simple statistic for quantifying the effect of heterogeneity in preferences on optimal marginal tax rates and redistribution. In rough terms, that statistic corresponds to the share of income variation that is due to differences in preferences. If we assume certain familiar functional forms for the distributions of ability and preferences, that statistic summarizes the implications of preference heterogeneity for marginal tax rates, but it also can be used more broadly as an intuitive guide to the role of preferences. We demonstrate the link between

this statistic and the quantitative implications of preference heterogeneity for optimal policy using numerical simulations calibrated to the U.S. economy. We also use survey data on self-perceptions related to these preferences to estimate empirically the variation in this statistic across OECD countries and show suggestive evidence that existing policy variation appears to be consistent with our theoretical findings. Our findings suggest that this simple statistic may be a fruitful target for future empirical work.

We obtain our novel analytical results by combining two recent innovations in the literature with a third innovation of our own. First, in a setting with a continuum of agents and standard utility functions, Choné and Laroque (2010) show how heterogeneity in the opportunity cost of work can justify negative marginal tax rates at low incomes.⁵ They achieve this important finding in part by collapsing multiple dimensions of heterogeneity into a single composite characteristic that determines behavior.⁶ We focus on a form of preferences—i.e., for consumption relative to leisure—that has the same effects on behavior as ability and therefore allows us, like Choné and Laroque, to obtain an analytically tractable model in which individuals differ in multiple ways.⁷ Related, our formal approach has much in common with theirs. Second, we adopt the moral reasoning behind the “second fairness requirement” in the prominent work of Fleurbaey and Maniquet (2006), which states that “the *laissez-faire* (this is, the absence of redistribution) should be the social optimum in the hypothetical case when all agents have equal earning abilities” even if they have different preferences.⁸ In other words, we adopt the normative perspective that preferences over consumption and leisure do not justify redistribution by themselves. Though specific, this interpretation follows if preferences are thought of as tastes as opposed to, for example, needs (see Kaplow, 2008 for a discussion). Third, and crucially, we introduce the technique of studying how optimal policy changes when a given distribution of income is attributed to more than one source of heterogeneity, rather than how optimal policy changes when ability is augmented with additional sources of heterogeneity that change the distribution of income. This shift makes possible our progress over prior results. It has the additional virtue of formulating the problem in a way resembling that faced by policymakers, who must decide the appropriate extent of redistribution in the face of an observable income distribution.

The paper proceeds as follows. Section 2 presents a standard optimal tax model that explicitly incorporates preference heterogeneity and derives our result on its implications for redistribution. Section 3 describes a simple summary statistic for quantifying the effect of preference heterogeneity on optimal policy and applies it in both calibrated numerical simulations and suggestive empirical evidence. Section 4 concludes, while proofs and numerical simulations demonstrating the robustness of our findings to the functional forms of utility and social welfare are collected in the online Appendix.

2. Optimal income taxation with heterogeneous preferences

Our first novel analytic result is to derive a condition under which the presence of preference heterogeneity reduces the optimal extent

³ Mirrlees (1976, 1986) addressed the general case but obtained inconclusive results. Some prior work adopts specialized settings, such as Sandmo's (1993) insightful analysis with only preference (not ability) heterogeneity; Boadway et al.'s (2002) results with two preference types, two ability levels, and quasilinear utility; Blomquist and Christiansen's (2008) findings when high-skill individuals vary in tastes for leisure; and Fleurbaey and Maniquet's (2006) analysis with a specific normative approach. Other work has focused on numerical simulations, such as Tarkiainen and Tuomala (2007) or Judd and Su (2006), who explain the computational complexities associated with multiple dimensions of heterogeneity. Two other recent papers focus on related but somewhat different questions. Kocherlakota and Phelan (2009) focus on the policy implications of uncertainty over the relationship between individuals' preferences and another, welfare-relevant, dimension of heterogeneity such as wealth. They argue that such uncertainty causes a planner using a maximin objective to avoid redistributive policy that is optimal when no such uncertainty is present. Beaudry et al. (2009) indirectly address preference differences by including in their optimal tax analysis differences in productivity of market and non-market labor effort. They show that the optimal redistributive policy makes transfers to the poor conditional on work.

⁴ See Robert Nozick (1974), “Why should we treat the man whose happiness requires certain material goods or services differently from the man whose preferences and desires make such goods unnecessary for his happiness?” Or, Milton Friedman (1962), “Given individuals whom we are prepared to regard as alike in ability and initial resources, if some have a greater taste for leisure and others for marketable goods, inequality of return through the market is necessary to achieve equality of total return or equality of treatment.”

⁵ Katherine Cuff (2000) provides an earlier, related analysis of the case for negative marginal tax rates.

⁶ This technique is similar to that used by Brett and Weymark (2003). Rothschild and Scheuer (2013) use a different method to avoid the technical problems with multi-dimensional income-earning ability.

⁷ This technique cannot help with all dimensions of heterogeneity, such as time discounting as in Golosov et al. (2013) or Diamond and Spinnewijn (2011).

⁸ Fleurbaey and Maniquet (2006) impose informational constraints on the social planner which rule out conventional utilitarian social welfare functions and which, in combination with particular fairness requirements on allocations, imply the use of a maximin social welfare function. They conclude that the optimal income tax should maximize the subsidies to the working poor: that is, it should be quite redistributive to those with low ability but who exert labor effort. Our analysis can be seen as a complement to theirs, studying the same type of preference heterogeneity in a setting closer to the more conventional Mirrleesian approach.

Download English Version:

<https://daneshyari.com/en/article/968788>

Download Persian Version:

<https://daneshyari.com/article/968788>

[Daneshyari.com](https://daneshyari.com)