

Genes as Tags: The Tax Implications of Widely Available Genetic Information
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Final Summation

The future of taxation depends importantly on innovations in the gathering and processing of information. In parallel with these innovations, there have been stunning technological developments in the identification of new information about individual human characteristics that may also have profound implications for taxation. We are speaking about the human genome and the vast amount of information that is now or soon will be available merely from a sample of a person's genetic material. The question we wish to pursue is how such advances in genetic research might bear on tax policy.

To explore that question, we consider how progress in genetics – specifically, the proliferation of knowledge about the human genome – may influence the feasibility and desirability of a tax that is based in part on individual human endowments or, to use the economist's preferred term, a tax based on ability. The terms "endowment" or "ability" in this context refer to a measure of an individual taxpayer's innate lifetime earning capacity – an approximation of the income that an individual could generate during her lifetime if she chose to pursue her highest valued use, as that use is defined by the market.

The rapid technological progress in the understanding of the human genome may eventually provide a way to estimate the value of something that approximates an individual's endowment or at least correlates with that value. Using the person's genetic information, these advances in genetic research raise the prospect of loosening the tradeoff between progressivity and efficiency by allowing tax liability (or transfer eligibility) to be based in part on immutable characteristics of individuals ("tags") that are correlated with their expected lot in life. Use of genetic tags would reduce reliance on tax bases (such as income) that are subject to individual choices and therefore subject to inefficient distortion to those choices. Taking advantage of this information will allow policy outcomes that dominate the outcome menu available without using genetic information as a tag – everyone can be made better off. The same distributional outcome can be attained with less cost to the economy.

Thus, our first contribution to the endowment tax literature is the observation that the spread of genetic information bears on optimal tax design, to the extent that genetic information is observable and provides nearly immutable tags for overall well-being. Our second contribution is to point out that, as genetic information spreads to private employers and insurers (and assuming that, in contrast to the current situation, the law did not effectively prevent them from using such information), the case for adopting some kind of a genetic endowment tax becomes more compelling, as genetic inequalities would be exacerbated by market forces. If society desires to reduce or eliminate such inequalities, to maximize overall utility by shifting resources from the genetic rich to the genetic poor, at least two potential policy instruments are available: directly allowing tax

to depend in part on genetic endowment, or a regulatory regime that forbids genetic discrimination and forces genetic cross-subsidization.