One vs. Two Instruments for Redistribution: The Case of Public Utility Pricing

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Abstract

Since the seminal Atkinson-Stiglitz (1976) theorem, a number of theoretical papers have addressed the issue whether one instrument vs. two instruments are adequate for income redistribution. We employ a large panel data set on around 180,000 households in the Swiss Canton of Bern and the years 2008-2013 including detailed energy consumption and household income and tax payment characteristics to shed light on this issue. We structurally estimate a model combining both public good pricing and income taxation. We analyse whether the government should draw on one instrument (the income tax) or two instruments (the income tax and public utility pricing) for efficiency and redistribution purposes. Our results show that assuming heterogeneous tastes and a simplified taxation scheme there is a role for redistribution through public good pricing markups. In the case of Switzerland’s energy market, setting a negative markup is optimal if poor households receive a higher welfare weight. As opposed to this, a welfare weight as a function of energy consumption instead of income is associated with a positive markup and hence with two instruments being adequate for redistribution. In our data we observe a markup of 43% which may imply the government stresses the importance of energy efficiency goals.

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