The impacts of energy efficiency policies: meta-analysis

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Abstract-

This paper attempts to quantitatively summarize the existing empirical evidence on the effects of energy efficiency policies on energy demand and on the price of associated durable goods, as well as to identify the main factors that systematically affect the estimated impacts. To this end, a meta-regression analysis of the effects of energy efficiency policies is carried out on the basis of an extensive review of the existing literature, selecting those studies that analyze the impact of energy efficiency policies with respect to a business-as-usual setting. Taking into account the econometric problems associated with this type of analysis (intra-class correlation, cross-sectional dependence, publication bias) in pursuit of robust outcomes, the results show that the studies analyzing the effects of energy efficiency policies estimate a significant impact of these policies on energy demand [-10.5%; -8.8%] and the price of related durable goods [7%; 9.6%]. The main factors that influence results are the policy instrument, the targeted sector, the type of country, the analyzed period, the consideration of free-riders, and the type of analysis, data and publication (energy demand); and the sector and analyzed period (price of durables).

Index Terms- Energy efficiency; meta-Analysis; Energy demand; Price of durables