Assessing Equity Effects of Climate Change Policy through the American Consumer Expenditure Survey: New Results on Housing and Transportation

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Climate change policies raise crucial equity issues at the world level, between industrialized (and belonging to Annex B) and developing countries, which represents a serious hurdle in defining a cooperative framework for a concerted mitigation policy. But not less serious –and much less addressed- is the domestic equity issue. There are obvious reasons to expect that the cost –before any compensation mechanism or an associated redistributive policy- will vary significantly according to categories of households, in particular to income classes. Indeed, it is well known that the share of energy consumption –either for residential use or in private transportation- is decreasing with income, so that low income groups would bear a relatively higher burden.

A preliminary analysis has be conducted on the basis of the American consumer expenditure survey (CEX) for which a span of 20 years –from 1984 to 2003- is now available, and a database pairing this survey with the Consumer Price Index, and was presented at the NCCR CLIMATE 2005 Seminar held in Interlaken. Welfare costs can then be compared according to income classes, the size of the family, the generation (age of the representative agent) and the region of residence.

New and more detailed results are presented here, namely concerning Private Transportation, by taking into account all categories of outlays, and Housing with alternative specifications of the demand function (with or without additive separability). Differences with previous estimations are analyzed and commented.

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climate change, welfare cost, equity, demand function, Engel curve, Slutsky matrix, separability, additive separability

New concept: Technical Progress in consumption

JEL classification: C8, C31, D1, D58, D6