
Accounting for needs in cost sharing

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Abstract

We develop a framework to formally account for needs when devising rates for utility services.

We first show that interdependence between agents should be explicitly accounted for: if rates depends only upon agents own consumption and needs, budget balance and equal treatment of equal are not compatible.

We then characterize two polar opposite rate-setting families of solutions. Conditional Equality solutions emphasizes responsibility for usage beyond needs while Egalitarian Equivalent solutions stress compensation for differences in needs.

Within these two families, we provide characterizations of several underlying cost-sharing rules to govern the management of the production externality when coupled by the relevant responsibility/compensation transfers. We then present corresponding rate schedules that make use of aggregate—and realistic—information to summarize distributional aspects.

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