Lindahl Equilibrium as a Collective Choice Rule

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A collective choice problem specifies a finite set of alternatives from which a group of expected utility maximizers must choose. We associate a public goods economy with every collective choice problem and establish the existence and efficiency of Lindahl equilibrium allocations for that economy. We also associate a cooperative bargaining problem with every collective choice problem and define a set-valued solution concept, the weighted Nash bargaining set. We provide axioms that characterize the weighted Nash bargaining set. Our main result shows that weighted Nash bargaining set payoffs with welfare weights are also the Lindahl equilibrium payoffs of the corresponding economy with the same utility functions and incomes !. Finally, we consider a general class of matching problems and show that the set of Lindahl equilibrium payoffs and the set of Walrasian equilibrium payoffs is the same. More generally, we show that in any discrete-goods economy, the set of Walrasian equilibrium allocations is a subset set of the set of Lindahl equilibrium allocations.