Taxes and Market Power: A Network Approach

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Abstract :
Suppliers of differentiated goods make simultaneous pricing decisions, which are strategically linked. Because of market power, the equilibrium is inefficient. We study how a policymaker should target a budget-balanced tax-and-subsidy policy to increase welfare. A key tool is a certain basis for the goods space, determined by the network of interactions among suppliers. It consists of eigenbundles---orthogonal in the sense that a tax on any eigenbundle passes through only to its own price---with pass-through coefficients determined by associated eigenvalues. Our basis permits a simple characterization of optimal interventions. A planner maximizing consumer surplus should tax eigenbundles with low pass-through and subsidize ones with high pass-through. The Pigouvian leverage of the system---the gain in consumer surplus achievable by an optimal tax scheme---depends only on the dispersion of the eigenvalues of the matrix of strategic interactions. We interpret these results in terms of the network structure of the market.