



复旦大学数学科学学院 数学综合报告会

报告题目: General equilibrium theory for climate change

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地点: 光华东主楼1403室

报告摘要:

We propose two general equilibrium models, quota equilibrium and emission tax equilibrium. The government specifies quotas or taxes on emissions, and then refrains from further action. All results in this paper remain valid regardless of how government chooses its desired emissions target.

Quota equilibrium exists; the allocation of emission property rights strongly impacts the distribution of welfare. If the only externality arises from total net emissions, quota equilibrium is constrained Pareto Optimal. For certain tax rates, emission tax equilibrium may not exist.

Every quota equilibrium can be realized as an emission tax equilibrium and vice versa. However, different quota prices may arise in equilibrium from a single quota, and different emission levels may arise in equilibrium from a single tax rate. This leads to an inequivalence between quota and emission tax equilibria.

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