

## **Rents, Taxes, and Distribution: Towards a New Public Economics of Climate Change**

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Economists commonly perceive climate change as a negative environmental externality, and in the political arena, environmental ministries are in charge of finding solutions to the problem of climate change. This thesis departs from the common practice of framing climate change as a problem of environmental pollution. Instead, it takes the perspective of a finance minister, based on the premise that interactions of climate policy with the broader fiscal system cannot be omitted from the economics of climate change. To analyze the manifold interaction effects of climate policy with the broader fiscal system, novel general equilibrium models of intermediate complexity are developed and solved numerically.

This thesis shows that even in the absence of any environmental motive, governments benefit from implementing carbon taxes unilaterally. The reason is that international capital mobility puts downward pressure on corporate taxes, and public capital stocks are thus underfinanced. Unilaterally taxing carbon can solve this problem by enabling governments to appropriate rents associated with the ownership of fossil resources. If the rents are then invested in productive public capital, national welfare increases. As an additional unintended effect, resource owners postpone extraction, and the level of cumulative emissions is reduced – no green paradox occurs. Instead, fiscally motivated carbon taxation constitutes a viable green policy, and could be, moreover, an alternative entry point for the international climate negotiations under the UNFCCC. However, if carbon taxes are implemented unilaterally, jobs in energy-intensive sectors may relocate abroad. This thesis shows that governments can mitigate adverse distributional effects on these sectors by implementing sectoral labor tax cuts instead of carbon tax exemptions. Addressing distributional questions more broadly, this thesis further shows that governments have substantial freedom to reduce wealth inequality without sacrificing output by implementing combinations of taxes on land rents and bequests.

Finally, the thesis provides a systematical discussion of hitherto identified interactions between climate change mitigation and public finance, and thus puts the other main results into perspective. Thereby, this thesis takes first steps towards a new public economics of climate change.