The uniform commodity taxation theorem by Atkinson and Stiglitz (1976), one of the most influential results in Public Economics, implies that dfferentiated consumption tax rates are not needed if an optimal non linear income tax is in place. Yet, in practice, most countries heavily rely on differentiated commodity taxation even if they have sophisticated progressive income tax systems.
In order to bridge this gap between tax theory and tax practice, in this paper I quantitatively characterize the optimal consumption and income tax rates using an estimated structural life-cycle model of households' consumption, saving and labor supply choices. The model relaxes the key assumptions of the Atkinson-Stiglitz theorem that could be driving the uniform commodity taxation result. First, I allow for multiple consumption goods with different degrees of necessity and durability. In particular, I include durable goods that are partially irreversible and enter the borrowing constraint. Second, I consider rich preference heterogeneity. Third, I take into account horizontal equity objectives of the social planner.
I derive the optimal tax system under the assumption of a utilitarian social welfare function. I find that durables should be subsidized and non-durables should be taxed at a uniform rate. The durable subsidy is driven by the life-cycle features of the model together with durables irreversibility and borrowing constraints. Uniform taxation on non-durables holds under exogenous and endogenous fully or weakly separable labor supply and it relies on homogeneity of intertemporal preferences. Lastly, allowing for government's horizontal equity concerns, I show that the model can rationalize the tax practice under a high degree of government's inequality aversion.