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Urban Public Transportation

In this lecture, we provide an overview of the economics of urban public transportation. The lecture starts with the conceptual building blocks of users and operators resources, and how they are used as inputs to deliver the final output: travel. From a cost minimization perspective a formal cost function is derived and, from the analysis of its structure, salient features of transits systems are identified, particularly increasing returns to scale, something also known as the Mohring effect. From the interaction with a demand function, optimal and second best pricing are analyzed, and the need for subsidies is discussed.

The second part of the lecture interacts transit and private transportation, building on the previous lecture on equilibria and optima. Market equilibrium and how the whole transportation system may be improved are discussed. Pricing policies such as transit subsidies, which decreases transit fares, or congestion pricing, which charges the substitute mode, are analyzed, as well as policies that affect not prices but level of service, such as dedicated bus lanes. Discussion on road capacity addition as a possible policy, and the potential for the Downs-Thomson paradox to emerge are analyzed. The efficiency and possible substitutability of all instruments (prices and capacity) are studied.