

Thesis Outline

Welfare Implications of Subsidy Design with Intertemporal Price Discrimination

I study the impact of different subsidy designs for consumers in settings where firms have market power and practice intertemporal price discrimination, such as airlines and hotels. Subsidy designs can steer demand toward high-priced products, increasing government spending as an unintended consequence. Using the subsidies for residents of remote territories in the Spanish airline industry as a case study, I develop a dynamic discrete choice model and estimate the demand parameters of forward-looking consumers, who can decide when to purchase. Combining the estimated demand parameters with a supply model in which multiproduct firms choose prices in each period, I perform a counterfactual analysis to evaluate the impact of changing the subsidy design from the current *ad valorem* format to a unit design. I show that accounting for price discrimination is important when analyzing the choice between unit and *ad valorem* designs. I also show that changing to a unit design would generate savings of almost 15% for the government due to a shift in consumption toward cheaper options.

The Determinants of Pass-Through with Capacity Constraints and Dynamic Demand

I analyze the pass-through of subsidies to consumer prices and how it varies with three main factors: the degree of competition, the stringency of capacity constraints, and the timing of purchases. Using a difference-in-differences design with continuous treatment and an observed increase in the subsidy rate, I find that pass-through is less than complete: on average, 75% of the increase is passed through to consumer prices. I then develop a theoretical model to rationalize the observed effects, showing that time-to-departure and capacity constraints are relevant features that affect the usual determinants of pass-through in oligopolistic settings. I also show how strategic substitutability across periods alters the standard analysis of the effect of competition on pass-through, which can explain a negative effect of competition on pass-through rates.

The Role of Capacity Constraints in Public versus Private University Choice

We study the determinants of the growth in the private-university share of new enrollments in the past decade in many European countries. We leverage Spanish microdata on student choices of first-choice major and second choices when students are not admitted to their first choice. We set up a decision model with heterogeneous individuals (in ability and parental income) who must choose their field of study and the type of university—public or private. We allow for nested-logit preferences to capture substitution patterns in which students who are not admitted to their first option are more likely to substitute into the same field in the other university type rather than switch fields. We then set up an allocation mechanism with capacity constraints in public universities. Using data from Spain to calibrate the model parameters, we find that 28% of private-university enrollments can be attributed to public-sector capacity constraints. Furthermore, we identify other factors that may have contributed to the recent rise of private Spanish universities, with convergence in the perceived quality of private universities toward that of public universities and increases in household wealth being the most influential.