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Curriculum Vitae Fall 2021

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Citizenship: US

Major Fields of Concentration

Industrial Organization, Econometrics, Applied Microeconomics

Education

DegreeFieldInstitutionYearPhDEconomicsUniversity of Minnesota (expected)2022BSEconomicsThe George Washington University2011

Dissertation

Title: "The Welfare Impact of Incentive Based Regulation: An Analysis of the Midstream Oil Market"

Dissertation Advisor: Professor Amil Petrin Expected Completion: Summer 2022

References

Dr. Fabrizio Perri

Professor Amil Petrin	(612) 625-0145 petrin@umn.edu	Department of Economics University of Minnesota 4-101 Hanson Hall
Professor Thomas J. Holmes	(612) 625-4512 holmes@umn.edu	1925 Fourth Street South Minneapolis, MN 55455
Dr. Alessandra Fogli	(612) 204-5485 afogli001@gmail.com	Research Department Federal Reserve Bank of Minneapolis 90 Hennepin Avenue

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Honors and Awards

2017 Distinguished Teaching Assistant, Department of Economics, University of Minnesota, Minneapolis,

Minnesota

2016 Bruce and Mildred Mudgett Fellowship, Department of Economics, University of Minnesota,

Minneapolis, Minnesota

Teaching Experience

2017 - 2018 Teaching Assistant, Department of Economics, University of Minnesota, Minnesota, Minnesota, Led

recitaton sections for Principles of Microeconomics, Intermediate Microeconomics, and Introduction to

Econometrics.

Research Experience

Fall 2018 - present Research Assistant, Research Department, Federal Reserve Bank of Minneapolis, Minneapolis,

Minnesota. Research Assistant to Dr. Alessandra Fogli.

2012 - 2016 Senior Analyst, NERA Economic Consulting

Papers

Ponder Mark, "The Welfare Impact of Price Regulation on U.S. Pipeline Investment During the Shale Revolution," job market paper

Ponder, Mark, "Production Functions without Control Functions: Estimating Input Elasticities when Monotonicity does not Hold"

Azzimonti, Marina, Alessandra Fogli, Fabrizio Perri, and Mark Ponder, "Pandemic Control in ECON-EPI-Networks," presented at the SED, Minneapolis, Minnesota, July 2021.

Fogli, Alessandra, Veronica Guerrieri, and Mark Ponder, "How to Save the American Dream: Neighborhood-Based Policies," presented at the Centre for Banking Studies Workshop on Household Finance and Housing, virtual, June 2021 (coauthor); SED, Minneapolis Minnesota, July 2021 (coauthor).

Petrin, Amil, Boyoung Seo, and Mark Ponder, "Identification and Estimation of Discrete Choice Demand Models when Observed and Unobserved Characteristics are Correlated"

Postal, Veronica and Mark Ponder, "Accessibility or Amenities? Estimating the Value of Light Rail Transit"

Computer Skills

Julia, Matlab, Python, SAS, Stata, SQL, R

Languages

English (native)

Abstracts

"The Welfare Impact of Price Regulation on U.S. Pipeline Investment During the Shale Revolution," job market paper

I examine the impact of price regulation on pipeline investment in response to the U.S. shale boom. Since 2010, crude oil production surged over 100% leading to a dramatic increase in demand for pipeline transportation. However, the profitability of investing in oil pipelines is constrained as transportation rates are set subject to a price-ceiling. To explore the impact of this regulation on investment, I develop a theoretical model of the pipeline industry, where firms make production and investment decisions while being subject to a dynamically changing price-ceiling. I estimate the model using detailed operational data derived from regulatory filings and compare the performance of the oil pipeline industry under three separate regulatory environments: price-cap regulation, cost-plus regulation, and deregulation. I find that price-cap regulation was superior to the alternative mechanisms considered, as it increased market entry by 15% and incentivized firms to operate 17% more efficiently. However, I find evidence suggesting that prices were allowed to increase too quickly. While this led to an increased rate of entry into new markets it came at the expense of higher prices in existing markets. This ultimately resulted in a transfer in consumer surplus from existing customers to new customers and a slight decrease in total welfare relative to what could have been achieved under a fixed price-ceiling.

"Production Functions without Control Functions: Estimating Input Elasticities when Monotonicity does not Hold"

It is becoming increasingly common to use cost-minimization first-order conditions to recover firm-level markups. In principal, researchers do not need to specify a competitive environment in order to estimate price-cost margin which adds considerable appeal of this approach. However, researchers need to be careful that their method of estimating input elasticities, a crucial ingredient to this approach, is internally consistent with the estimates they are attempting to recover. The validity of control function methods, a common technique used to estimate input elasticities, rely on several assumptions that can be incompatible with a wide range of competitive environments. This paper proposes a new method of estimating production functions that relaxes some of the main assumptions of the control function approach, namely scalar unobservables and monotonicity. It does so by extending the results of Hausman et al. (1991) to a dynamic panel setting. Because these assumptions place the most restrictions on the economic environment, this has the potential of broadening the applicability of using cost-minimization moments to recover firm markups.

"How to Save the American Dream: Neighborhood-Based Policies," with Alessandra Fogli and Veronica Guerrier

Since the '80s the US has experienced both an increase in income inequality and an increase in residential segregation by income. After documenting this fact, we develop a general equilibrium model where parents choose the neighborhood where to raise their children. Segregation and inequality amplify each other because of local spillovers that affect the education returns. We calibrate the model using 1980 US data and the estimates for neighborhood exposure effects in Chetty and Hendrent (2018). We then show that segregation contributes to 28% of the increase in inequality between 1980 and 2010 after an unexpected permanent skill premium shock.

"Identification and Estimation of Discrete Choice Demand Models when Observed and Unobserved Characteristics are Correlated," with Amil Petrin and Boyoung Seo

The standard Berry, Levinsohn, and Pakes (1995) (BLP) approach to estimation of demand and supply parameters assumes that the product characteristic unobserved to the researcher but observed by consumers and producers is conditionally mean independent of all characteristics observed by the researcher. We extend BLP to allow all product characteristics to be endogenous, so the unobserved characteristic can be correlated with the other observed characteristics. We derive moment conditions based on the assumption that firms - when choosing product characteristics - are maximizing expected profits given their beliefs at that time about preferences, costs, and competitors' actions with respect to the product characteristics they choose. Following Hansen and Singleton (1982) we assume that the "mistake" in the choice of the amount of the characteristic that is revealed once all products are on the market is conditionally mean independent of anything the firm knows when it chooses its product characteristics. We develop an approximation to the optimal instruments and we also show how to use the standard BLP instruments. Using the original BLP automobile data we find all parameters to be of the correct sign and to be much more precisely estimated. Our estimates imply observed and unobserved product characteristics are highly positively correlated, biasing demand elasticities upward significantly, as our average estimated price elasticities double in absolute value and average markups fall by 50%.

"Accessibility or Amenities? Estimating the Value of Light Rail Transit," with Veronica Postal

This paper examines consumer marginal willingness-to-pay for the introduction of light rail transit in Minneapolis. We estimate the resulting change in local property prices to assess what share is attributable to the direct effect of improved access to public transit and what share is attributable to the increase in local amenities. After assembling a rich spatial dataset encompassing every residential property in Minneapolis and hundreds of thousands of businesses and neighborhood amenities, we use machine learning techniques to estimate a hedonic pricing surface. We extend the method of Boosted Smooth Trees introduced by Fonseca et al. (2018) to a high-dimensional dataset and to incorporate instrumental variables, allowing us to control for endogeneity in amenity changes. Our results indicate that the price of properties located within a half mile of a light rail station increased by around 11.3%. The direct impact of access to the light rail itself is estimated to increase local housing prices by 5.5%, while the estimated spillover due to changes in amenities is quantifiable at 5.8%.