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## UNIVERSITY OF PENNSYLVANIA

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### **Personal Information:**

Date of Birth: May 14, 1988  
Citizenship: United States of America, Italy (Dual Citizenship)

### **Undergraduate Studies:**

B.A., Economics and B.M., Clarinet Performance, University of Southern California, 2011

### **Work Experience:**

Professional Clarinetist, various orchestras in Norway, 2011-2015

### **Masters Studies:**

MSc Economics, London School of Economics, 2017

### **Ph.D:**

University of Pennsylvania, 2017 to present  
Thesis Title: "*An Analysis of Educational and Labor Market Policies*"  
Expected Completion Date: May 2023

### **Thesis Committee and References:**

Professor Petra Todd  
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**Research Fields:**

Labor Economics, Economics of Education, Applied Econometrics

**Teaching Fields:**

Labor Economics, Econometrics

**Teaching Experience:**

Fall, 2022	Graduate Micro Econometrics, Teaching Assistant for Petra Todd
Spring, 2022	Econometrics (Undergraduate), Teaching Assistant for Daniel Lewis
Fall, 2021	Labor Economics (Undergraduate), Teaching Assistant for Andrew Shephard
Fall, 2020	Labor Economics (Undergraduate), Teaching Assistant for Andrew Shephard
Spring, 2020	Labor Economics (Undergraduate), Teaching Assistant for Andrew Shephard
Fall, 2019	Econometrics (Undergraduate), Teaching Assistant for Francis Diebold
Spring, 2019	Econometrics (Undergraduate), Teaching Assistant for Francis Diebold
Fall, 2018	Intermediate Microeconomics (Undergraduate), Teaching Assistant for Rakesh Vohra

**Professional Activities:**

2022	Society of Labor Economists Annual Conference (Presenter)
2021	Latin American Meeting of the Econometric Society (Presenter)
2021	Young Economists Symposium (Presenter)
2020	Young Economists Symposium (Session Organizer)
2018-present	International Economic Review (Referee)

**Fellowships:**

2022	University of Pennsylvania, Covid Extension Fellowship
2021	Matching Grant, Penn Institute for Economic Research (PIER)

**Work Prior to Economics:**

**Orchestral Positions:** Substitute clarinetist between 2012-2015 with Oslo Philharmonic Orchestra, Norwegian National Opera, Norwegian Chamber Orchestra, Norwegian Radio Orchestra, Stavanger Symphony Orchestra, and Kristiansand Symphony Orchestra.

**Musical Competitions and Awards:**

2014	Second Prize, Second Annual Anton Eberst Competition, Serbia
2013	Semifinalist, International Carl Nielsen Music Competition & Festival
2012	Winner, Yamaha Music Foundation of Europe Stipend Competition
2011	First Place, International Clarinet Association Orchestral Competition

## **Job Market Paper:**

*“The Heterogeneous Effects of Changing SAT Requirements in Admissions: An Equilibrium Evaluation”*

Many universities are reducing emphasis on standardized exam scores in admissions out of concern that the exams limit college access for students from disadvantaged backgrounds. This paper analyzes how such a policy change would affect enrollment patterns and graduation rates at four-year colleges in the United States. To do so, I build an equilibrium model in which colleges rebalance their admissions criteria towards other measurements of students' human capital in the absence of standardized exam scores. The model allows high school students' application decisions and human capital investments to respond endogenously to the admissions policy, while colleges adjust admissions thresholds to maximize their objectives. I estimate the model using data from the Education Longitudinal Study of 2002. I find that banning the SAT causes a small increase in college attendance for low-income students but has a negligible effect on the enrollment of under-represented minority (URM) students, despite estimating that many universities have substantial preferences for diversity. The reason for this result is that endogenous human capital investment and equilibrium responses by capacity-constrained colleges completely offset the diversifying effects of relying more on grades and allowing non SAT-takers to apply to college. Elite colleges are worse off after banning the SAT, as they enroll students with lower skills and see graduation rates drop by 3 pp, while completion rates rise at less selective schools. A separate policy that requires all students to take the exam raises college completion for URMs by 1.6 pp overall by helping schools to identify stronger students.

## **Working Papers:**

*“The Marginal Returns to Distance Education: Evidence from Mexico's Telesecundarias,”* with Gabrielle Vasey, Revise and Resubmit at **AEJ Applied**

This paper analyzes a large-scale and long-running distance education program in Mexico. We estimate marginal treatment effects (MTEs) for learning in math and Spanish in telesecundarias relative to traditional Mexican secondary schools using an empirical framework that allows for unobserved sorting on gains. The estimated MTEs reveal that school choice is not random and that the average student experiences significant improvements in both math and Spanish after just one year of attendance in telesecundarias. We find that the existing policy reduces educational inequality, and our policy-relevant treatment effects show that expanding telesecundarias would yield significant improvements in academic performance.

*“Learning Through Repetition? A Dynamic Evaluation of Grade Retention in Portugal,”* with Hugo Reis and Petra E. Todd, Submitted for Review

High rates of grade retention are a matter of much controversy and debate worldwide. Although some students may learn more with extended classroom time, other students get discouraged and drop out of school. This paper develops and implements a dynamic value-added modeling approach for estimating grade retention effects in Portuguese high schools where over 40% of students were retained. The statistical model is derived from an education production function that describes how knowledge cumulates with sequential years of school attendance, including repeated grades. Model parameters are obtained using simulated method of moments applied to nationwide administrative test score data. The estimated model is used to simulate achievement in math and Portuguese under the existing grade retention and compulsory schooling policies and under alternative policies. Results show that the average impact of the current policy on 12th grade test scores of retained students is positive, 0.2 standard deviations in math and 0.5 s.d. in Portuguese. However, test score impacts are heterogeneous and roughly one third of students experience negative effects. Retention also significantly increases school dropout, especially for male youth and older students. A cost-benefit analysis that incorporates effects of grade retention policies on educational attainment, knowledge, age of labor market entry and earnings shows how the optimal retention policy varies with labor market returns to knowledge.

*“Welfare, Workfare, and Labor Supply: A Unified Evaluation,”* with Francesco Agostinelli and Giuseppe Sorrenti, Submitted for Review

We analyze the extent to which labor supply responds to incentives created by social programs in the United States. We find evidence that the incentive and disincentive effects of the EITC and welfare programs on hours worked among single mothers are more extensive than previously found in the literature. We also show that the difference-in-differences design, frequently adopted in the existing literature, fails to identify a meaningful treatment parameter in the context of the welfare-to-workfare transition in the 1990s. Finally, we use our quasi-experimental estimates to identify a structural model of labor supply with multiple tax and transfer programs. Model counterfactuals show that the EITC’s effect on labor supply depends on the regime of taxes and welfare system in place.

*“A Reappraisal of the Effect of Class Size on Children's Learning,”* with Francesco Agostinelli and Karun Adusumilli

The Student-Teacher Achievement Ratio (STAR) Project is one of the most important educational experiments in the United States, and its results have been used to promote schooling reforms. In this paper, we argue that the simple experimental evaluation of STAR has limited policy relevance due to its experimental design. While children were randomized into classes of different sizes, the intensity of class size reduction was subject to schools' heterogeneous compliance responses, which can confound treatment with selection on gains. In light of this experimental feature, we reevaluate the class size effects in STAR via a new econometric framework that allows for heterogeneous treatment effects and possible grouped selection on targeted treatment and control class sizes. We find that a small group of schools displays large benefits from class size reduction, while the majority did not. Our results suggest that policy proposals to reduce pupil/teacher ratios should be implemented in a targeted, rather than universal, modality.