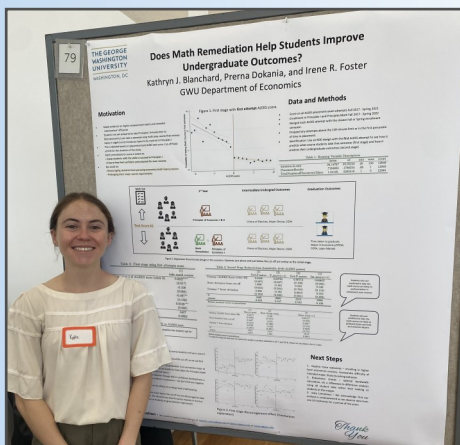


Columbian College of Arts and Sciences

2024 Research Showcase

The Columbian College of Arts and Sciences' (CCAS) Research Showcase is an opportunity for all graduate and undergraduate students in CCAS programs to present their research and scholarship in a poster session to the broader CCAS community. This year we had bright undergraduate and graduate students from the Economics department presenting their research. We are incredibly proud of the work they accomplished!

Ph.D. in Economics Students



Kathryn Blanchard & Prerna Dokania

“Math Remediation Course and its Impact on Undergraduate Outcomes”

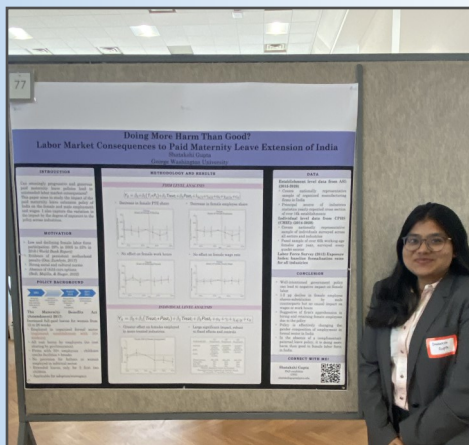
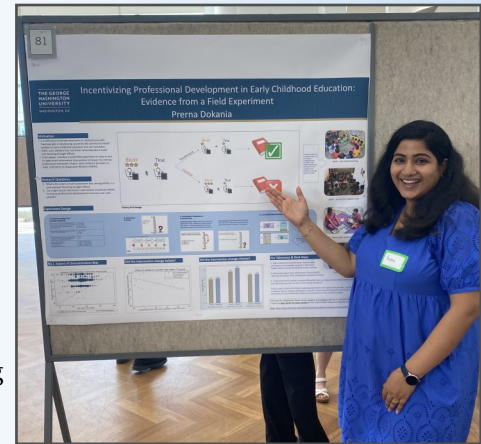
Literature on the impact of remedial courses in higher education is mixed, with predictions of development, diversion, and discouragement effects on students (Scott-Clayton and Rodriguez 2015). Many introductory courses, specifically quantitative courses, require a score on a placement exam to register. This lends itself well to studying the impacts of being placed in lower vs. higher level courses on student learning and choices of future courses and majors. In this paper, we study the impact of taking a remedial math course prior to Principles of Microeconomics I on

students' performance in their first econ course and other undergraduate outcomes. We use a regression discontinuity design around the placement exam score cutoff for entry into the Principles I course to study the causal effect of taking a math for econ course before Principles I vs taking the Principles I course directly. Preliminary data analysis shows that there is a small but insignificant positive effect of taking the math course on graduating as an econ major and a significant negative effect on time taken to complete undergraduate degree.

Prerna Dokania

“Incentivizing Professional Development among Early Childhood Educators: Evidence from a Field Experiment”

Humans have a general tendency to overestimate their capacity (ref: Dunning Kruger effect). However, in low-resource low-skill settings like community education or health in developing countries, such overestimating beliefs about one’s professional capacity could have a negative impact on policy outcomes. It can be directly detrimental to intended beneficiaries and indirectly it may inhibit the scope of professional improvement among the community workers. Correcting such overestimating perceptions through feedback can induce intrinsic motivation to learn and improve. I test this prediction by conducting a lab-in-the-field experiment with early childhood care and education providers (ECCE) in India who provide services to children (0-6 years) and new mothers. I find that most ECCE workers overestimate their knowledge level based on a proctored written test. In the experiment, I informed randomly selected workers about their test score and used this randomized information shock to study the effects of closing estimation biases. I find that participants who received the information treatment have a relatively higher take-up rate of teaching-aid materials offered as compensation compared to the control group participants.



Shatakshi Gupta

“Doing More Harm Than Good? Labor Market Consequences to Paid Maternity Leave Extension of India”

Can maternity leaves decrease female employment? Amid a recent spark in the global debate, India decided to amend its existing policy on paid maternity leaves and doubled the leaves for mothers. But in this seemingly progressive and generous leave extension, are there unintended harmful consequences on the female labor market? Previous research finds widely contrasting impacts of maternal leave policies on gendered labor outcomes, primarily on account of varying policy structure, underlying labor market dynamics, firm's ability to transfer additional costs of the paid leaves, social norms defining gender roles in a country, etc. In this study, I examine the impact of India’s 2017 paid maternity leave extension legislation on gendered labor market outcomes. The empirical methodology utilizes two-fold analysis to determine the effect of the policy, first by using a firm-level employment data to measure substitution of employment between genders when comparing treated-untreated firms. Then, I use individual-level panel data to measure the impact to female employment across varying degree of exposure to the policy. I find that the policy leads to substitution of female employees by male counterparts by 1-2 percent points in treated firms, and large declines of females employed in highly exposed industries. This indicates that the policy worsened labor outcomes for the female gender, and provides evidence of a maternity policy fueling gender differences, when implemented in the absence of an equivalent leave for fathers.

MS in Applied Economics Students

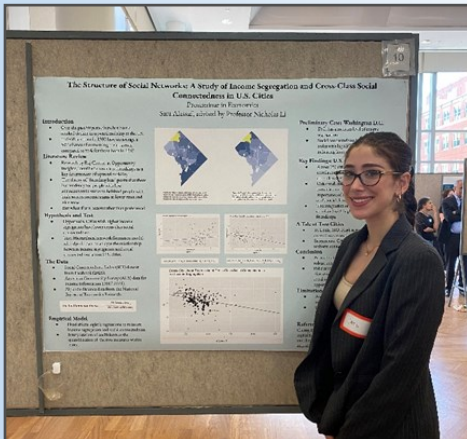
Naïssa Pierre, Varsha Narasimhan, and Emmanuel Obro

“Institutional Strength and Climate Governance: Assessing Administrative Efficiency & Environmental Taxation”

Climate change is poised to dramatically reshape the global landscape, underscoring the importance of effective environmental taxes and institutional strength. The efficacy of a government's environmental tax implementation relies on the efficiency of its tax administration. This study examines the influence of tax administration efficiency and institutional integrity on environmental tax revenues, while highlighting the role of corruption and manufacturing industry CO₂ emissions on environmental taxes. It also contributes to the understanding of effective environmental fiscal policies and their implementation, by investigating different institutional designs for global climate cooperation, variations in climate policies through panel data analysis, and non-state drivers for climate action. Using the Country-Level Institutional Assessment and Review (CLIAR), World Bank Development Indicators, and other data from the IMF, this study demonstrates the critical role of building strong institutions in achieving effective climate governance and policy outcomes. It examines the differences between the institutions and outcomes in low and middle-income countries.



Undergraduate Economics Students



Sara Alassaf

“The Structure of Social Networks: A Study of Income Segregation and Cross-Class Social Connectedness in U.S. Cities”

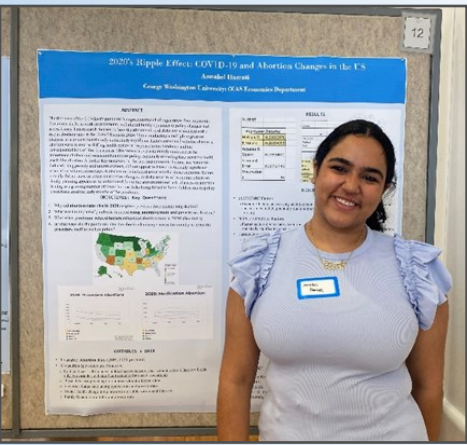
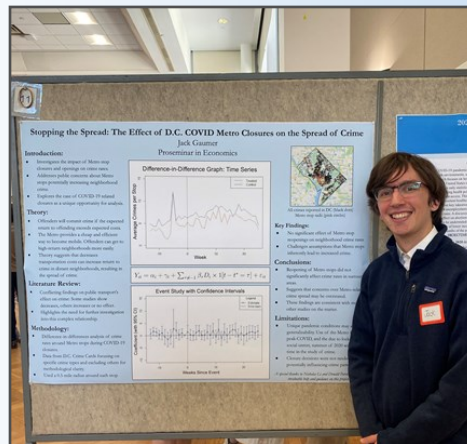
This paper explores the relationship between income segregation and cross-class social connectedness within U.S. cities, with valuable insights for upward mobility. Motivated by findings from Opportunity Insights that found cross-class friendships to be a key determinant of future economic outcomes, I examine the impact of geographic proximity of individuals across income levels on their likelihood of forming friendships. I compiled dyadic data on connections between zip-codes from Meta’s Social Connectedness

Index, differences in median household incomes, and geographic distance between zip-codes. I employ a hierarchical network formation model of fixed effects logistic regressions on zip-code pairs, to measure income segregation and cross-class social connectedness within cities. I collect these measurements (coefficients) across 190 cities for a cross-city regression to find systematic patterns. The results show that higher income segregation is associated with weaker cross-class connections. Access to individuals of varying incomes is crucial, suggesting cities with closer proximity between rich and poor residents facilitate stronger connections. I propose reducing income segregation through policies like affordable housing and better public transportation to enhance upward mobility.

Jack Gaumer

“Stopping the Spread: The Effect of D.C. COVID Metro Closures on the Spread of Crime”

This paper examines the impact of temporary closures and subsequent reopenings of seven Metro stations in Washington D.C. during the COVID-19 pandemic on local crime rates. Using a combination of theoretical models, literature reviews, and empirical methods, the study explores the relationship between public transportation and crime. It employs economic theories of crime and a difference-in-differences methodology to analyze data from the D.C. Metropolitan Police Department over periods before and after the closures. By comparing crime rates near stations that remained open with those that were closed, the study finds no significant impact on crime rates upon reopening. These findings challenge the prevailing notion that public transportation inherently increases crime, offering important insights for urban planning and crime prevention strategies. Despite limitations such as data constraints and non-random closures, this research contributes to the discussion on the effects of public transit systems on crime, underscoring the importance of evidence-based policymaking and highlighting areas for further research.



Annabel Hazrati

“2020's Ripple Effect: COVID-19 and Abortion Rate Changes in the US”

This research explores how the first year of the COVID-19 pandemic’s unprecedented challenges —ranging from economic downturns, shifts in work environments, and altered family dynamics to policy changes and access issues— influenced the rise in abortion rates in the United States in 2020. Upon conducting a multiple regression analysis, it is evident that the only statistically significant factors associated with the change in abortion were related to confusing policy endeavors and consequential lack of abortion access. This research overwhelmingly underscores the importance of clear and consistent healthcare policy, especially regarding time sensitive health needs like abortion, even amid pandemics. A further key takeaway regards the fact that economic factors, like pandemic-induced rising poverty and unemployment, did not appear to have a statistically significant association with abortion rates. A discussion is included about whether these economic factors actually did not have an effect on abortion changes, or if the severity of economic effects on family planning appear to be understated due to the aforementioned lack of access to abortion, leading to a growing number of lower income folks being forced to have children due to policy restrictions amid the early months of the pandemic.