2O

ECONOMIC ISSUES

Session Moderator: Michelle Turnovsky, Economics
MGH 389
3:30 PM to 5:15 PM

* Note: Titles in order of presentation.

Extending a Theoretical Framework for Superfund Site Remediation

Cameron Raber, Senior, Mathematics, Economics, Pacific Lutheran University
Mentor: Lynn Hunnicutt, Economics, Pacific Lutheran University
Mentor: Mark Reiman, Economics, Pacific Lutheran Universithy

The environmental and human health damage associated with industrial waste has been an undeniable concern since the late 20th century environmental disaster at Love Canal, which had devastating effects on birth defect and miscarriage rates. Since this event, the Environmental Protection Agency (EPA) has been dedicated to the remediation of toxic waste through the Superfund program. There are Superfund sites across the country, in locations as varied as urban Tacoma, Washington and rural Evansville, Wyoming. Which toxic site should enjoy the advantages of faster cleanup? A range of factors could influence the remediation rate at these sites, yet a striking difference in site characteristics presents itself; These two sites are home to very different population densities. Population density, an emblematic proxy variable, can be used as an effective tool to investigate different aspects of socioeconomic site characteristics. Scholarly models of optimal remediation, however, often focus exclusively on the financial costs and environmental damage of cleanup. This project investigates how Superfund site remediation would change if the EPA were to incorporate specific socioeconomic criteria in its decision to remediate toxic sites. Particularly, it explores various aspects of the Superfund program and focuses on and extends a particular theoretical model for temporal remediation. Population density enters the model through its effects on costs, although other consequences of population density will be investigated. The results of the extension indicate that a higher population density corresponds to a decrease in the optimal toxic waste cleanup rate.

The Impact of the Take Charge Family Planning Initative on Educational Attainment for Hispanic Women in Washington State

Nadya Ekhteraee Sanaee, Senior, Economics
UW Honors Program
Mentor: Rachel Heath, Economics

Take Charge is a statewide family planning initiative that provides men and women in Washington State with free access to family planning services. As one of the most accessible family planning programs in the nation, Take Charge has expanded into school based clinics, allowing adolescents as young as thirteen to receive contraceptives without the knowledge of their parents. Success of family planning initiatives are typically measured by how much they reduce unintended pregnancies among their low income or minority populations, but the effect of these programs on economic indicators such as income and educational attainment are generally less well explored. Thus, the purpose of this research project is to determine the impact of having access to Take Charge on college completion for Hispanic women in Washington State. To address this question, individual level data from the Minnesota Population Center Current Population Survey were used to conduct a variety of difference-in-difference and triple difference tests to measure the effect of having access to Take Charge on college completion. The results depict that having access to this program starting at age 13 significantly increased the likelihood of completing college by 14-18% for Hispanic women. These findings imply that Take Charge can be used as a model program for other states that hope to reduce their number of unintended pregnancies and increase college completion among their low income and minority populations.

Newly Implemented Policy: Two-Child Policy — A Case Study of Taiwan

Zhiyi (Elaine) Yang, Senior, Economics, Mathematics
UW Honors Program
Mentor: Melissa Knox, Economics, UW Department of Economics

The relationship between fertility and economic development can be modeled in many different ways. To microeconomists, fertility may determine the "quality" of children in one family, where quality is typically interpreted as a child's level of education. These models of child quality are based on the classical quantity-quality tradeoff model by Becker, in which parents choose to substitute child quality for child quantity under some circumstances. The focus of this paper is to detect whether the quantity-quality tradeoff exists under the two-child policy in China, implemented in 2015. Since 2015, Chinese families have been permitted to have two children, and this change in the quantity of children in a family may affect child quality as well. However, the two-child policy was implemented only three years ago, so data is lacking. Thus, I chose Taiwan as my case study. I use data from Taiwan to find some the effect of fertility and apply those results to circumstances in China. By using linear regression, I find that the results from Taiwan are consistent with the classical model. Once the quantity-quality tradeoff under two-child policy is clear, scholars can further research on the short-term and long-term influence of two-child policy in China.

Intersectional Econometrics: Do People with More Marginalized Identities Earn Less Average Annual Wages than People with More Privileged Identities?

Michael Vargas, Senior, Economics
Mentor: Frances Maloy, Finance and Business Economics, Foster School of Business

Econometrics lacks an analytical framework for estimating and discussing the impact of intersectionality on economic outcomes of groups of marginalized people (e.g., women and people of color). As a result, a rich body of literature on intersectionality is left largely unused, leading to potentially misspecified regression models. In this paper, I outline an analytical framework for estimating and discussing the impact of intersectionality on economic outcomes, such as annual wage differentials between groups of marginalized and privileged people. I construct the analytical framework using principles of intersectionality theory, such as simultaneity and multiple jeopardy. I then use the framework to construct a multiple-linear regression model to investigate the following hypothesis: Do people with more marginalized identities earn less average annual wages than people with more privileged identities in the United States, all else equal? The results indicate that there is evidence to support the hypothesis, yet more in-depth investigations are necessary to better estimate the impact of marginalized and privileged identities on average annual wages.

Why Do Banks Discriminate? Heterogeneous Effects of Traditional Determinants on Minority vs. Non-Minority Business Loan Default Rate

Anni Hong, Senior, Mathematics, Economics
UW Honors Program
Mentor: Gregory Duncan, Economics/CORE AI

Despite the high growth rate of minority-owned business in the US, economics literature suggests that minority business owners have a harder time getting loans for their businesses compared to their white counterparts. If minority-owned businesses are doing well in the U.S., it is expected that loans to minority owners have high returns (or low defaults). It is paradoxical that banks would discriminate against minority loan applicants since it's against their economic interests. My research project hypothesizes that financial institutions' loan approval process is flawed for assuming that the predictors of loan defaults have the same effect on minorities and non-minorities. For example, credit score is often an important factor in predicting default, however, many minority immigrants haven't had a chance to build up their credits to the same degree as their white counterparts. In this case, a low credit score means a high probability of default for white business owners but does not predict a high default rate for non-white owners. To test the hypothesis, the research project examines the heterogeneity in the effects of common determinants of their loan repayment between minority vs. non-minority business owners through an econometric analysis of a dataset collected by the U.S Treasury Department on CDFIs(Community Development Financial Institution Fund). More specifically, my project tests if the differences in the coefficients of predictors for each group are significant. Evidence supporting the hypothesis suggests that banks are losing out on economics gains by overlooking certain factors on their applicants and actions should be taken to prevent further loss for minority business owners.

When Lower Taxes Are Not Actually Lower Taxes: A State-Level Study of Legal Financial Obligations

Konan Mauritz Kile, Senior, Sociology, Economics
UW Honors Program
Mentor: Alexes Harris, Sociology

Court fines and fees, previously an overlooked part of the justice system, are much more impactful than once thought. Recent research has traced the rise of court mandated fines and fees, or legal financial obligations (LFOs), and detailed their various effects. LFOs have been shown to have significant, detrimental effects on poor and minority groups in relation to other parts of the population. The disparity of effects from LFOs exacerbates the already prevalent issue of wealth inequality within the United States. This study evaluates whether LFOs are higher in low tax counties than in high tax counties. This is accomplished by gathering county level tax and LFO data for four states: Florida, Pennsylvania, Washington and Wisconsin. I perform linear regression analysis of the data and performed t-tests on all variables included in the equation. Regression shows whether lower taxes are correlated with an increase of LFO severity. I anticipate that LFOs will be more severe in areas with lower taxes due to the increased financial strain on the county government. A correlation between revenues and LFOs could indicate that counties are essentially using LFOs as secondary to make up for lower tax revenues, rather than their intended purpose of disincentivizing criminal activity. With better information on potential consequences of lowering taxes, we will be able to draft smarter fiscal policies rather than arbitrarily increasing the financial burden on the poor.

Were the Conditions Attached to the IMF Loan to South Korea in 1997 Appropriate?

Yean Kim, Junior, Economics
UW Honors Program
Mentor: Levis Kochin, Economics
Mentor: Thor Dodson, Economics, UW Economics Department

In 1997, South Korea and many other Asian countries were hit with a large currency and financial crisis, with the IMF providing a $58 billion bailout program to South Korea involving large amounts of reforms and corporate restructuring involved, along with a very contractionary fiscal and monetary policy that intensified the crisis. The IMF loan had conditions of higher interest rates, higher taxes, and lower government spending, among others, on hopes that the contractionary policies will restore the foreign investors' faith in Korea. After the crisis, the conditions of the IMF loan have been subject to much criticism in both Korea and abroad. This raises a question as to whether the IMF's response and the conditions of the loan to Korea was appropriate for the situation. For this research, I am collecting information from many sources both from the US and in Korea, including books, journals, and newspapers. I am also acquiring various types of data as part of the research. Some of my findings are that the IMF's response for the crisis was inappropriate as the IMF's diagnosis of the situation was inappropriate. It is because South Korea's situation was different from the other countries of the Asian Financial Crisis as the crisis did not arise due to overvalued exchange rates and government debt. Additionally, part of the IMF's response in Korea can be said of as carrying over from past crises which involved the government accumulating large amounts of debt, as opposed to the Korean case, where the chaebol and the financial institutions lending to them accumulated large amounts of short-term debt and the government had almost no debt and was operating at a balanced budget. The uniqueness of the Korean crisis meant that the IMF should have reacted differently in imposing its conditions for the loan.