Michael Irwin

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Citizenship and Visa Status

U.S. Citizen

Education

Ph.D. Economics, The Ohio State University, 2021 (expected)
Dissertation: "The Macroeconomic Implications of Unsecured Consumer Credit and Default"
Committee: Aubhik Khan (co-chair), Kyle Dempsey (co-chair), Julia Thomas
M.A. Economics, The Ohio State University, 2016
B.A. Economics, The University of Cincinnati, Summa Cum Laude, 2015

Teaching and Research Fields

Primary fields: Macroeconomics
Secondary fields: International Economics

Research Papers

"The Interaction of Unemployment Insurance with Credit and Bankruptcy Over the Business Cycle"
(Job Market Paper)

I study the cyclical implications of unemployment insurance (UI) policies while quantifying the interaction of these benefits with unsecured consumer credit and default. Competitive credit can amplify the welfare gains from increases in UI benefits via improved credit access resulting from decreases in default behavior. However, the relationship is theoretically ambiguous because improved UI benefits can also substitute for credit use by households. To better understand this connection, I build an equilibrium model of labor markets and competitive credit markets calibrated to reflect the employment risk, credit use and bankruptcy behavior of US households. I first show that the majority of the volatility in credit and bankruptcy can be explained by aggregate fluctuations in extensive margin employment risk. I then find that the increased duration of UI benefits during the Great Recessions prevented a much more severe drop in unsecured credit use. The improved benefits also prevented over a 1.1pp further drop in aggregate consumption. I show that competitive credit had a significant amplifying effect on UI during the Great Recession because the improved credit access accounted for over 27% of the total welfare gains from the extended benefits.

"Competitive Financial Intermediaries in the Market for Student Loans"

What are the implications of replacing the federal student loan system with competitive intermediaries that price loans based on the probability of default? I study this question using a quantitative, overlapping generations equilibrium model wherein households make a costly education decision with access to student loans. To measure the effectiveness of federal student loans, I remove the federal program and allow a competitive intermediary to replace it. The intermediary offers long-term loans where the price depends on the probability of default throughout the entire duration of the loan. I show there are significant losses to welfare and over a 24% decrease in the college educated population with competitive intermediaries. However, the intermediaries facilitate an increase in aggregate production. This increase is largely driven by a more efficient sorting of highly productive individuals to college education.

"A Method of Overlapping Endogenous Grids to Solve Problems with Non-Concavities"

I develop a new method of solving problems where discrete choices create non-concavities in a continuous decision. The first-order condition does not guarantee a unique solution when there are non-concavities. To alleviate this problem, I break the first-order condition into numerous concave regions. Each concave region will have a unique proxy solution. The algorithm yields a global solution by choosing the proxy solution with the highest utility. This method improves upon a previous modification of the endogenous grid method developed in Fella (2014). The current method generates significant gains in speed by avoiding a discrete grid-search method to check each point within the non-concave region. I generate significant gains in accuracy by avoiding interpolation across a discrete jump in the decision rules. Finally, I apply this method to a model with consumer default in equilibrium. I show that gains in accuracy will yield less default in equilibrium. This occurs because as a solution method become more accurate it generates more utility from repaying debts, but it does not have a significant effect on the value of default.

Research in Progress

"The Implications of Secular Trends in Student Loans and Credit Card Debt" with Heejeong Kim

We study the implications of increasing student loan debt and credit card debt for consumption smoothing and default behavior. An essential preliminary step is to better understand the relationship between student loan debt and credit card borrowing behavior. Using the Survey of Consumer Finances (SCF), we show that among similar college graduates those with student loans are more likely to have positive credit card balances. Households with student loans also carry significantly higher credit balances. We then build a quantitative model that can replicate the levels of education, student borrowing, credit card debt and bankruptcy. However, the model is not able to match the positive relationship between student loan debt and credit card debt. Future work will focus on reconciling this difference between the model and data.

Conference and Seminar Presentations

Winter 2020	Concordia University
Winter 2020	Focusing on the first-year teaching conference

Research Experience and Other Employment

2019-2020	Graduate Studies Committee, Student Representative

Honors, Scholarships, and Fellowships

2019, 2020	Graduate Associate Teaching Award
2018	Departmental Citation in Teaching Excellence
2015-2016	University Fellowship, Graduate School, Ohio State University

Teaching Experience

Autumn 2017	Econ 2001, Ohio State, Independent Instructor
Spring 2019, 2020	Econ 8723, teaching assistant for Professor Kyle Dempsey
Autumn 2018, 2020	Econ 2002, teaching assistant
Autumn 2016, 2019	Econ 2001, teaching assistant

References

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