Research Statement

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Introduction

Inspired by the adage, *"the road to hell is paved with good intentions,"* my primary research field lies at the intersection of Public Finance, Labor Economics, Macroeconomics, and Computational Economics. My studies use a dynamic general equilibrium framework to examine the effects of welfare and tax policies on aggregate and distributional outcomes. I am especially interested in the unintended effects of policies, which may either counter or reinforce the intended outcomes.

As a researcher, I firmly believe in the complementarity of quantitative and empirical approaches; theoretical and quantitative frameworks require empirical validation, and the insights they produce, in turn, guide empirical research. This belief shaped my initial project, which focused on establishing an empirical foundation that not only serves as a base but also motivates and guides my quantitative work.

Current Research

The focus of my current work is on child-related transfers, a critical component of welfare programs in OECD countries and increasingly relevant in developing nations. My dissertation, titled *"Topics in Optimal Design of Taxes and Child Benefits"*, explores child benefit design with a case study on Australia. The Australian welfare system offers unique insights due to its progressive tax system and its generous, means-tested benefits. The combined system significantly raises effective marginal tax rate (EMTR) schedules for low-income parents, often impacting female labor supply. Studying this setting reveals important implications for efficiency and welfare that can inform broader policy design.

My empirical paper examines income dynamics and the role of family earnings and public transfers in buffering shocks to individual earnings. This study reveals that spousal earnings show minimal response to primary earners' income shocks, whereas public transfers respond strongly. Combined with the M-shaped life cycle labor supply of mothers, these findings emphasize the need to understand how policies, particularly child-related transfers, influence behavior and welfare, providing a key motivation for my subsequent quantitative projects.

The quantitative framework of my second paper incorporates rich household heterogeneity, accounting for family structure (marital status and children), human capital, wealth, and idiosyncratic shocks. Analysis is performed within a dynamic general equilibrium setting to assess fiscal sustainability and long-term welfare impacts. Results indicate that universalizing child benefits increases labor participation among married mothers and improves welfare and output. However, the associated tax burden produces an adverse unintended effect that harms single mothers, the intended beneficiaries.

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In my third project, I examine the interaction between progressive taxes and means-tested child benefits. I find that optimizing the tax system leads to reduced progressivity to encourage labor supply among high-education households, but this also places heavier tax burdens on low-income parents. Ultimately, a standalone tax reform undermines child benefit objectives. A proposed joint reform, combining reduced tax progressivity with a moderate universal lump-sum benefit, enhances both overall and parental welfare, though the findings also highlight the need for careful balance to mitigate impacts on non-beneficiaries

Collectively, these studies reveal how, despite well-intentioned aims, broad-based child benefits can inadvertently disadvantage the very groups they are meant to support. Furthermore, they underscore the importance of coordinating between tax and transfer policies to deliver effective and equitable outcomes.

Future Research Directions

To extend the empirical foundation, my collaborative project with Dr. Chung Tran and Dr. Nabeeh Zakariyya will utilize administrative datasets to deepen our understanding of income dynamics and the evolving roles of government and family insurance over time. This empirical work can help identify important policy areas for further quantitative examination.

Building on my existing quantitative work, I plan to enhance the model by incorporating a more realistic wage process to improve accuracy in policy recommendations (De Nardi et al., 2024). Additionally, I plan to integrate endogenous factors such as child quality, which may yield insights into the long-term implications of welfare policies on economic growth and intergenerational equity (Heckman, 2006). I am also interested in expanding my research to consider developing countries, which presents unique challenges due to their large informal sectors and different behavioral patterns. In this context, optimal policies may require different approaches, such as in-kind transfers, tagging based on observable demographic traits (Akerlof, 1978), and ordeals on transfer recipients (Nichols et al., 1971).

Impact and Relevance

By examining behavioral responses and policy interactions, my work contributes to the understanding of the unintended effects of welfare policies, supporting the development of tax and transfer systems that deliver sustainable benefits to vulnerable groups while promoting broader economic stability. The models I develop also address a gap in the micro-founded macro modeling of taxes and child benefits in Australia, providing a framework that integrates factors such as family structure, earnings shocks, labor participation, and human capital. Lastly, my research offers a versatile foundation, making it adaptable for addressing emerging questions in tax and transfer policy as well as broader economic phenomena.

Conclusion

My Ph.D. has been a profound learning journey, teaching me to be independent and embrace opportunities to rediscover and refine established ideas, make mistakes, and value criticism. I have come to deeply appreciate the incremental process of knowledge creation. This humbling and enriching experience has shaped me into the researcher I am today. I am committed to upholding these values and fostering them in the next generation of students and researchers.

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