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Citizenship: New Zealand, J-1 Visa

Fields of Concentration:

Primary Field: Development Economics

Secondary Field: Econometrics

Desired Teaching:

Development Economics, Econometrics, Microeconomics

Comprehensive Examinations Completed:

2018 (Oral): Econometrics, Development Economics 2017 (Written): Microeconomics, Macroeconomics

Dissertation Title: Essays on Migration and Human Capital of Children

Committee:

Professor Mark Rosenzweig (Chair) Professor Ahmed Mushfiq Mobarak Professor Orazio Attanasio

Degrees:

Ph.D., Economics, Yale University, 2024 (expected)

M.Phil., Economics, Yale University, 2019 M.A., Economics, Yale University, 2018

BCom Hon. with First Class Honors in Economics, University of Auckland, 2015 BCom/BSc Marketing, Economics, and Physiology, University of Auckland, 2014

Fellowships, Honors and Awards:

Economic Growth Center Fellowship, Yale University,	2016 - 2019
Cowles Foundation Fellowship, Yale University,	2016 - 2020
Yale Graduate Fellowship, Yale University,	2016 - 2023
The Ryoichi Sasakawa Young Leaders Fellowship Fund,	2018 - 2019
Peter C.B. Phillips Fellowship, Yale University,	2018 - 2019

Research Grants (as PI):

- 2019 Robin E. Evenson Fund, Economic Growth Center, \$5000 USD
- 2019 MacMillan International Dissertation Research Fellowship \$18,000 USD
- 2021 Ryoichi Sasakawa Young Leaders Fellowship Fund Research Award, \$20,000 USD
- 2021 Economic Growth Center PhD Dissertation Research Grant, \$25,000 USD
- 2021 Multi-Partner Trust Fund for Migration, ILO-UN Women BRIDGE project, \$25,800 USD

Teaching Experience:

2014: Teaching Assistant to Senior Lecturer Michael Anstis, ECON 191

(Undergraduate) Microeconomics, University of Auckland

2015: Teaching Assistant to Prof. Prasanna Gai, ECON 351 (Undergraduate)

Financial Economics, University of Auckland

2016: Teaching Assistant to Prof. Susan St John and Prof. Thema Vaithianathan,

ECON/POL 702, (Graduate) Public Economics, University of Auckland

Fall 2018: Teaching Assistant to Prof. Nicholas Ryan, ECON 117a (Undergraduate)

Introduction to Data Analysis and Econometrics, Yale College

Spring 2019: Teaching Assistant to Prof. Michael Boozer, ECON 559 (Graduate)

Development Econometrics, Yale University

Fall 2019: Teaching Assistant to Prof. Steven Berry, ECON 115a (Undergraduate)

Introductory Microeconomics, Yale College

Spring 2020: Teaching Assistant to Prof. Michael Boozer, ECON 559 (Graduate)

Development Econometrics, Yale University

Fall 2020: Teaching Assistant to Prof. Michael Boozer, ECON 545 (Graduate)

Microeconomics, Yale University

Spring 2021: Teaching Assistant to Prof. Bonnie Palifka, ECON 208B. Causes and

Consequences of Corruption, Yale College

Summer 2021: Teaching Assistant to Prof. Bonnie Palifka, ECON 208B. Causes and

Consequences of Corruption, Yale College

Spring 2023: Teaching Assistant to Prof. Michael Boozer, ECON 559 (Graduate)

Development Econometrics, Yale University

Research and Relevant Work Experience:

Research Assistant, Retirement Policy Research Center, University of Auckland, 2014 – 2016

Research Assistant, Prof. Ryan Greenaway-McGrevy, University of Auckland, 2014 – 2016

Research Assistant, Prof. Peter C.B. Phillips, University of Auckland, 2014 – 2015

Research Assistant, Prof. Prasanna Gai, University of Auckland, 2015 – 2016

Research Assistant, Prof. Costas Meghir, Yale University, 2023 – 2024

Research Assistant, Prof. Orazio Attanasio, Yale University, 2023 – 2024

Publications:

"Subjective Wellbeing Impacts of National and Subnational Fiscal Policies" (2016), with A. Grimes, J. Ormsby, A. Robinson, *REGION*, 3, pages 43-69.

Working Papers:

"Maternal and Paternal Migration, and Children's Human Capital", Job Market Paper

"Cyclones, Migration, and Adaptation to Climate Change", with Winston Hovekamp

Work In Progress:

"Impact of COVID-19 on Educational Outcomes of Children: Evidence from Migrant Families in the Philippines"

"Parental Migration, Family Reunification, and Human Capital Investments Back Home," with Rodrigo Guerrero, Juan Hernández-Agramonte, and Emma Näslund-Hadley

"Adapting to Climate Change with Migration: Tropical Cyclones and Human Capital Accumulation", with Qianyao Ye

Languages:

English (native), Cantonese (native), Mandarin (fluent)

References:

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Dissertation Abstract Maternal and Paternal Migration, and Children's Human Capital [Job Market Paper]

International migration opportunities improve earnings capacity, but can also create parental separation from children. For example, approximately one in every four children in the Philippines, will not have a parent physically present in their life at some point due to parental migration. Both parental presence and monetary investments determine a child's human development and educational outcomes, so migration decisions necessarily involve tradeoffs. The net effect of migration on children depends on the evolving relative importance of money and parental presence, which parent migrates, and at what age they separate from the child. Therefore, who chooses to migrate, and when, potentially has significant welfare implications for children left behind. Such considerations, in turn, can affect parental decisions to migrate in the future.

I estimate a dynamic model of migrant households with an embedded age-specific child education production function by conducting a panel survey of Filipino migrants and combining it with newly assembled administrative data from the Philippines Department of Education and the Department of Migrant Workers. Substantial variation in the timing of parental time inputs and monetary investments into children arise from the systematic and widespread international migration of Overseas Filipino Workers (OFWs). For identification of the endogenous inputs in the education production function, I exploit shocks to the demand for male and female Filipino migrant workers in East Asia and the Middle East.

My instruments are motivated by the model of the migrant household where parents make repeated migration decisions and obtain utility from consumption and the academic performance of the children. This provides a framework to understand how parents trade off parental time and expenditures for their children when making migration decisions. The migration and expenditure allocation decision rules derived from the model are estimated, which offers insights into how migrants make repeated migration decisions as parents internalize the evolving needs of their children. I finally impose further structure onto the model and estimate its parameters to run counterfactual simulations and calculate the net impact of migration.

I find monetary resources play a considerably more significant role in shaping child human capital from the ages of 11-15, whereas both maternal and paternal time inputs are more critical between the ages of 6-10. A mother's time is always substantially more productive than a father's time across all ages. Parental time and monetary inputs are always complements. Father's and mother's presence are complementary when a child is 6-10, but become substitutes at later ages. Parents internalize the effects of their absence on their children and tend to migrate if they observe successful academic progress. In addition, parents are more inclined to migrate when they know their children possess a greater endowment of abilities that enhance academic outcomes. These findings hold significance for policymakers in developing countries who seek to enhance economic welfare by promoting temporary labor migration, which inevitably causes parental absence.

Parental Migration, Family Reunification, and Human Capital Investments Back Home, with Rodrigo Guerrero, Juan Hernández-Agramonte, and Emma Näslund-Hadley

This paper studies the impact of parental migration on human capital investments of children left behind in El Salvador, Guatemala and Honduras, commonly referred to as the Northern Triangle of Central America (NTCA). The NTCA has shared challenges of corruption, violence, widespread poverty and economic instability that spur permanent migration of families. Permanent migration from NCTA often follows two stages. First, a parent (usually the father) migrates to find work in the migration destination, typically the US. After the initial migrant is established, the family attempts to reunite in the migrant's destination country. The uncertainty surrounding family reunification may discourage or delay human capital investments back home, especially if the returns to these investments differ between the migration destination and the home country.

In collaboration with the Inter-American Development Bank, the Innovations for Poverty Action, and the Ministries of Education in El Salvador, Guatemala and Honduras we are currently collecting data on children of migrants and their households. These primary data will be linked to administrative data on academic performance currently housed by the respective Ministries of Education. To date, we have successfully gathered a panel of digitized academic records for 1,077,646 students in El Salvador, from pre-school to 9th grade.

Cyclones, Migration, and Adaptation to Climate Change, with Winston Hovekamp

A disproportionate share of damages from climate change are expected to accrue to poorer and warmer countries. Accordingly, migration, especially from poorer and warmer countries to richer and cooler countries, is thought to have important potential for ameliorating local and global impacts of climate change. However, rapid-onset events associated with climate change, such as tropical cyclones, can reduce affected individuals' ability to migrate. In this paper, we study the migration behavior of Overseas Filipino Workers (OFWs), one of the largest and most well-organized international migrant populations in the world, in response to exposures to numerous cyclones between 2010 and 2022. We find that there is a 7-12% reduction in the rate of OFW overseas migration in the four years after exposure to a cyclone in the OFW's home municipality, with peak impact in the second year after exposure and a return to pre-exposure rates after five years. We show that this result is consistent with a theoretical model where potential migrants face income differences across locations but require assets above a certain threshold to embark upon a migration spell. We employ this model to structure and interpret our analysis of the heterogeneity of cyclone impacts across migrants and households with different characteristics. Our findings show that rapid-onset events pose a serious and persistent challenge to migration, and suggest a role for policy-makers in the aftermath of climate-driven disasters.

Adapting to Climate Change with Migration: Tropical Cyclones and Human Capital Accumulation, with Qianyao Ye

On average the Philippines is annually exposed to ten tropical cyclones, with five of these being expected to cause significant destruction and disruption of economic activity. As climate change increases global temperatures, warmer waters allow for tropical cyclones to strengthen more quickly and reach a higher wind speed. This paper identifies the impacts of tropical cyclones on children's human capital accumulation and studies whether parental migration can alleviate the negative impacts of cyclones in the Philippines. Migration potentially functions as a form of insurance by diversifying household income and providing a buffer against income loss caused by local economic disruption. Using a purpose-collected panel dataset on migrant households, we first implement a panel fixed effect estimator. We exploit the random timing of cyclone exposure to identify the causal effects of cyclones on educational outcomes and provide evidence of the underlying mechanisms at play. We then estimate a dynamic household model of parental migration and educational investment choice that has an embedded education production function of the children. We incorporate four mechanisms through which cyclones may impact a child's educational outcomes into the model: income loss, changes in parents' time inputs due to local loss of employment or temporary out-migration, shifts in school inputs due to school closures, and health-related consequences. This allows us to disentangle and quantify the mechanisms by which cyclone exposure can impact a child's educational outcomes, and estimate the extent to which migration can mitigate the adverse impacts of cyclones. Consequently, we provide targeted policy recommendations and guidance for ameliorating the impact of cyclones on children's educational outcomes.

The Impact of COVID-19 on Educational Outcomes of Children: Evidence from Migrant Families in the Philippines

Comprehending both the short- and long-term impacts of COVID-19 on education, as well as the mechanisms by which the pandemic affected child learning, is critical to the formulation of public policies that assist with the recovery of learning loss and rectifying disparities in learning losses. This paper distinctly identifies and quantifies the following pathways by which COVID-19 has affected children's learning in the Philippines context: (1) Direct health effects of COVID-19 infection to children and family members living with children; (2) Disruptions to income from parents and household members as a result of unemployment due to lockdowns at home and abroad; (3) Changes in the time inputs of parents and household members at home, as a result of lockdowns; (4) School closures and disruptions to learning infrastructure; (5) Introduction of remote learning modalities. This has been impossible so far, as the necessary data and identification strategies needed to disentangle all of these mechanisms by which COVID-19 impacts educational outcomes and learning loss have not been available. These insights are achieved by utilizing an innovative identification strategy and a panel dataset from 2015 – 2022 with detailed information on educational outcomes, remote learning access, household expenditures, employment status and wages of household members, and health status and expenditures of household members.