

# Rowena Jane Cornelius

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## Citizenship

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Citizen of Ghana / Permanent Resident of Canada

## Education

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Ph.D., Economics, University of Western Ontario, Canada	expected 2024
M.A., Economics, University of Western Ontario, Canada	2017
M.Phil., Mathematical Science, African Institute for Mathematical Sciences, <i>degree awarded by University of Ghana</i>	2016
B.A., Economics and Mathematics ( <i>Summa cum laude</i> ), University of Ghana, Ghana	2013

## Research Interests

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Development Economics, Applied Microeconomics, Applied Econometrics

## Job Market Paper

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### **Digital Credit and Digital Transfers: The Unintended Consequences of Mobile Money Digital Credit in Ghana**

Capitalizing on the success of mobile money, a cellphone-based payment system, various lenders, and Mobile Network Operators (MNOs) have joined forces to introduce digital credit through mobile money platforms. Despite the prevalent belief that expanding mobile money services could enhance digital payments, empirical evidence supporting this assumption is lacking. In my study, I explore the impact of mobile money digital credit—a rapidly growing service—on the augmentation of mobile money payments. Through a unique administrative dataset and a difference-in-differences event study strategy, I find no evidence suggesting that the adoption of mobile money digital credit results in increased mobile money payments. Contrarily, adopters of mobile money digital credit exhibit a reduction in transfers to and from a diminished number of mobile money accounts, primarily driven by delinquent borrowers. These findings align with the behavior of delinquent borrowers avoiding mobile money usage until their debt is repaid, possibly influenced by the repayment enforcement mechanism that enables lenders to garnish the mobile money wallet of delinquent borrowers.

## Work in Progress

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### **Towards a Cashless Economy: Mobile Money and Retail Payment (joint with Amanda Awadey, Mount Holyoke College)**

Increased penetration of mobile phones, a large unbanked population, and the recent COVID-19 pandemic have advanced the rapid spread of mobile money usage in sub-Saharan Africa. Predominantly used for peer-to-peer transfers (P2P), mobile money is yet to gain significant traction as a mode of payment, particularly in retail.

Empirically, evidence of the constraints and the factors that promote using mobile money as a payment tool is scant and was obtained before the COVID-19 pandemic. We are collecting data on these constraints and factors from micro and small firms in Ghana after the surge of digital transactions triggered by the COVID-19 pandemic. With this, we hope to design informed interventions to address the constraints of using mobile money for retail payments.

**Climate Change, Food Security and Social Networks (joint with Tim Conley, Isaac Luginaah, Cecilia Diaz-Campo, Daniel Amoak, and Kamaldeen Mohammed)**

This study aims to examine the role of social networks in the exchange of seeds, information, and loans in addressing food insecurity in Malawi. Our primary focus is to better understand how networks for men and women differ and the geographic extent of those social networks. In particular, we seek to explore the role of marriage-based migration in determining the nature of social networks and its impact on outcomes of interest.

**M-PESA, Household Savings and Intra-household Resource Allocation**

In this study, I offer evidence, employing an instrumental variable approach, that the initial adoption of mobile money by Kenyan households led to increased participation in rotating savings and credit associations (ROSCAs). Additionally, I observed an increase in spending on alcohol and a decrease in spending on children by mobile money user households. By connecting gender gaps in mobile money adoption and ROSCA participation, the study suggests that the impact of mobile money on household resource allocation and financial decisions is shaped by the gender gap in mobile money adoption.

**How to do inference with African Data? Adjusting for space-time correlation (joint with Aldo Sandoval-Hernández, Global Affairs Canada)**

This is a simulation study that evaluates the performance of different approaches for controlling for spatial dependence in commonly used African datasets (e.g. Demographic and Health Surveys). We calibrate spatial statistical models to match the datasets and then conduct Monte-Carlo simulations using our calibrated models to evaluate the inference methods.

## Research and Teaching Experience

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**Instructor**

Econ 1022B, Principles of Macroeconomics	University of Western Ontario	Summer 2019, 2020, 2021, 2022
Econ 1022B, Principles of Macroeconomics	University of Western Ontario	Winter 2022, 2023
Econ 2125B, Economic Development II	University of Western Ontario	Winter 2023, 2024

**Research Assistant**

Research Assistant for Timothy Conley	University of Western Ontario	2018-present
Research Assistant for Lisa Tarquinio	University of Western Ontario	2022
Research Assistant for Lance Lochner	University of Western Ontario	2018

## Teaching Assistant

(Graduate TA)

Econ 9503B, Macroeconomic Theory for Finance	University of Western Ontario	Winter 2021
Econ 9600, Mathematics Review Summer Course	University of Western Ontario	August 2018
Econ 9505A, Financial Econometrics,	University of Western Ontario	Fall 2017, 2018, 2019

(Undergraduate TA)

Econ 2169G, Economics of Health Care	University of Western Ontario	Winter 2020
Econ 2125B, Economic Development II	University of Western Ontario	Winter 2019
Econ 2150B, Intermediate Microeconomics Theory I	University of Western Ontario	Winter 2017, 2018
Econ 1022A, Principles of Microeconomics,	University of Western Ontario	Fall 2016, 2020
Econ 1022B, Principles of Macroeconomics,	University of Western Ontario	Winter 2016

## Scholarships, Awards and Grants

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Student Research Grant Program, Center for Development Economics and Policy	2022
Graduate Fellowship, Economics Department, University of Western Ontario	2021
Western Graduate Research Scholarship, University of Western Ontario, Canada	2016-2021
F. K. A. Allotey Meritorious Award, African Institute for Mathematical Sciences, Ghana	2015
Economics Essay Award, University of Ghana	2013

## Selected Volunteer Experience

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Ghana Association of London Ontario, Maths Camp, Teaching Grade 7, Summer (2019-2021)

## Skills and Certificates

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Computer Skills: Julia, Python, Matlab, R, Stata

Language: English (native), Fante (native), French (basic)

Certificate: SHARCNET Summer School on High-Performance Computing (2018)

## References

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### Timothy Conley (Co-supervisor)

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### Terry Sicular

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### Lisa Tarquinio (Co-supervisor)

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### Leigh MacDonald (Teaching Reference)

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## Placement Officer

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