

# Danusha Rajapaksa

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## Graduate Studies

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University of Saskatchewan

2017–present

Ph.D. Candidate in Applied Economics  
Expected Completion Date: January 2025

### References

Dr. Enchuan Shao	Dr. Andreas Pollak	Dr. Maxym Chaban
University of Saskatchewan	University of Saskatchewan	University of Saskatchewan
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## Prior Education

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University of Saskatchewan, Canada

2012–2017

B.A. Hon. in Economics

## Fields

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Primary: Financial Technology (Fintech), Cryptocurrency, Economics of Blockchain, and Decentralized Finance

Secondary: Market Microstructure, Time Series Analysis

## Job Market Paper

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**On the Relationship between Tether and Other Cryptocurrencies**, with Enchuan Shao.

*Tether is a stablecoin that is widely used to trade crypto assets. Using Tether's price volatility, characterized by two distinct regimes, we identify the structural relationship between Tether and Bitcoin price and the circulating supply of Tether. This study delves into the intricate dynamics of Tether (USDT) and its interactions with Bitcoin (BTC), providing valuable insights into the mechanisms that underpin stability. We propose a new hypothesis based on triangular arbitrage to explain the underlying market structure and the relationship between our variables of interest. We then compare the statistically identified model with the theoretically driven restricted models. Our findings highlight the critical role of the arbitrage mechanism, particularly triangular arbitrage, in maintaining the stability of the Tether price. Consequently, Tether demand shocks can inflate the Bitcoin price in the short run. Contrary to conventional wisdom, our results show that the circulating supply of Tether responds to price differentials in Bitcoin markets rather than its own market conditions.*

## Publications

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**"Miner Competition and Transaction Fees."** With Enchuan Shao.  
*Journal of Economic Behavior & Organization*, 2024.

## Working Papers

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**The Entry of Bitcoin Mining and its Welfare Implications**, with Enchuan Shao.

*Mining is one of the key features to maintain the value and security of the Bitcoin system. Like mining of other commodities, Bitcoin mining requires a nontrivial fixed cost to enter the business. We extend a framework that captures some key features of Bitcoin to incorporate entry costs. We use the model to investigate the welfare effect of barriers to entry in Bitcoin mining. We find that barriers to entry can help to improve welfare. Our quantitative results show that this welfare gain is moderate when compared to an economy without entry barriers. The source of welfare gains is the saving in mining costs due to the reduction in competition, rather than the benefit from the drop in a delayed settlement.*

## Work in Progress

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**Unveiling the Transaction Network Dynamics of Stablecoins**, with Enchuan Shao.

**The Double-Edged Sword of Regulation in Crypto Markets**, with Moty Moravvej.

## Teaching Experience

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**Sessional Lecturer in Economics**, University of Saskatchewan

*Sept. 2022 - Present*

Courses taught:

ECON 311 Money, Banking and Capital Markets

ECON 211 Intermediate Microeconomics

ECON 114 Introductory Macroeconomics

**Teaching Assistant**, University of Saskatchewan Department of Economics

*Sept. 2017 - 2022*

Graduate courses:

ECON 801 Macroeconomic Theory

ECON 805 Mathematical Analysis in Economics

ECON 850 Game Theory: Strategic and Cooperative Choices

Undergraduate courses:

ECON 498 Financial Economics

ECON 450 Strategic Choice

ECON 411 Monetary Theory

ECON 214 Intermediate Macroeconomics

ECON 211 Intermediate Microeconomics

ECON 114 Introductory Macroeconomics

## Professional Activities

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### **CBER Forum Summer School Participant**

*Columbia University*

*New York, Summer 2024*

### **Ministerial Assistant to the Minister of Justice**

*Government of Saskatchewan*

*Regina, SK, 2016*

### **Vice-Dean Research, Scholarly & Artistic Work Search Committee Member**

*University of Saskatchewan*

*Saskatoon, SK, 2015*

### **Student Crew Coordinator**

*University of Saskatchewan Students' Union*

*Saskatoon, SK, 2015-2017*

### **Budget and Financing Committee Member**

*University of Saskatchewan Students' Union*

*Saskatoon, SK, 2014-2015*

### **Vice President Internal Affairs**

*Arts and Science Students' Union*

*Saskatoon, SK, 2014-2015*

## Conference Presentations

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### **Economics of Financial Technology Conference,**

Presentation: *"Miner Competition and Transaction Fees"*

*Edinburgh, 2022*

### **Prairie Finance Conference,**

Presentation: *"On the Relationship between Tether and Other Cryptocurrencies"*

*Saskatoon, 2024*

## Awards, Scholarships, and Grants

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### **Google Academic Research Grant**

*2024*

Awarded for research into crypto transaction networks, exploring how their structure drives the market price dynamics between stablecoins and other cryptocurrencies.

### **University of Saskatchewan Graduate Scholarship**

*2017 - 2022*

### **Bank of Canada Governor's Challenge Grand Finalist**

*2015*

### **Saskatchewan Advantage Scholarship**

*2012*

## Languages and Skills

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Languages: English (fluent), Sinhalese (native), French (beginner)

Skills: Python, MATLAB, Stata, SQL, LaTeX

## Other Information

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Citizenship: Canada and Sri Lanka