



# Efficacy of Microfinance in Alleviating Poverty – An Agent Based Model

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Dilshani N Ranawaka

# Contents

Meet the presenter

Background

Research questions

Hypothesis

Methodology

Results and analysis

Key takeaways

Future research



### **Dilshani N Ranawaka**

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Dilshani is a Junior Research Professional at the Centre for Poverty Analysis, Sri Lanka.

Her research interests include Behavioural Economics, Complexity Economics, Labour Economics and Economic Modelling. She's currently doing her Master in Economics at the University of Colombo, Sri Lanka.

## Background

GINI Coefficient – 39.3

Economic Growth – 3.3%

Literacy rate – 92.3%

MPI – 16%





## Research question

What is the impact of external factors in influencing the success of microfinance in Sri Lanka?

- Skills
- Networks
- Population



# Hypothesis

Poverty Alleviation is equivalent to  
wealth accumulation within the  
model

The numbers taken in to  
consideration are in unit values  
where the data is not readily  
available in Sri Lanka

# Methodology

Step 1 – Creating the model

Step 2 – Testing the model

- Syntax testing
- Print statements
- Agent monitors

Step 3 – Statistical analysis of the model

- Hypothesis testing
- Regression analysis



# The model



## Results and analysis – Hypothesis testing

Mean wealth of Green turtles vs mean wealth of  
Sky turtles

t-stat  
5.7

Mean wealth of 50 Green turtles vs mean  
wealth of 10 Green turtles

t-stat  
12

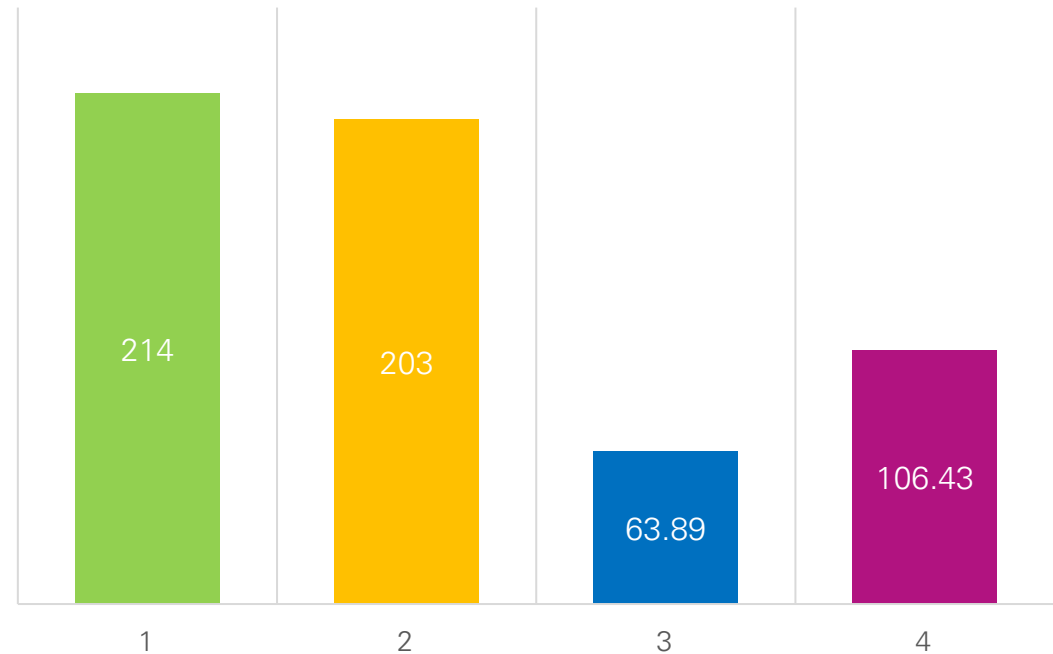
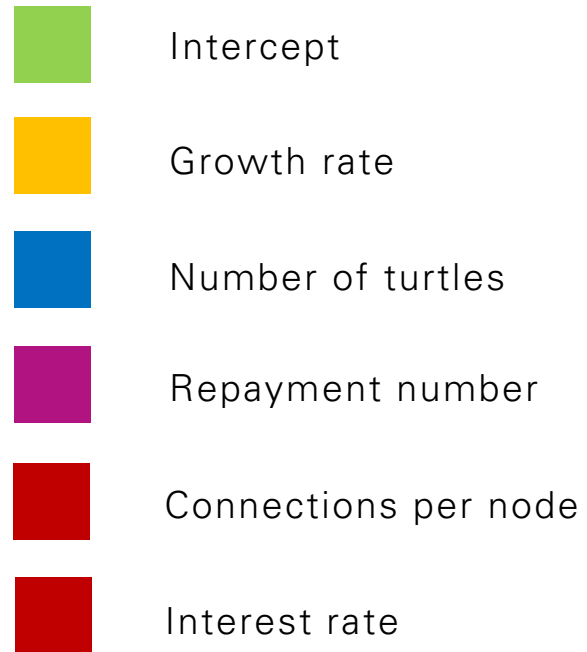
Mean wealth of 50 Red turtles vs mean wealth  
of 10 Red turtles

t-stat  
-0.1

Mean wealth of 50 Green turtles vs mean  
wealth of 50 Red turtles

t-stat  
3.3

## Results and analysis – Regression results





## Key takeaways

The impact of external environment such as education, the ability convert ideas into action, the economic growth of the region, population and the repayment number has positive implications of enabling a person who takes a loan into a more productive outcome which is not reflected in the existing literature.



## Future research

It is important to take into account external factors as well, when evaluating the efficacy and the impact of microfinance loans.

Therefore, regional disparities, educational level, population and the person's ability to convert a loan into a productive income generating income are important to be taken into consideration.





## Thank you

Dilshani N Ranawaka

+94 77 892 1227

dilshanin.ranawaka@gmail.com

dilshani@cepa.lk

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