

11<sup>th</sup> IMF Statistical Forum  
**MEASURING MONEY IN THE  
DIGITAL AGE**

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#StatsForum



STATISTICS

# Crowdfunding Platforms and Financial Inclusion: Fulfilled Promise or Disillusion?

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# Summary



## What and Why?

- **Crowdfunding platforms** emerged with the **promise to democratize access to capital** and promote financial inclusion.
- To date, **little empirical evidence**, especially in developing countries.
- **Our objective** is to **fill this gap**.
- **Research Question:** Does crowdfunding fulfill the promise of promoting financial inclusion?

## How?

- **Panel data** from **122** countries on **2800+** microfinance institutions
- **Fixed Effects** Model using **IV Estimations**
- Data from Mix Market, IMF, World Bank and KIVA.



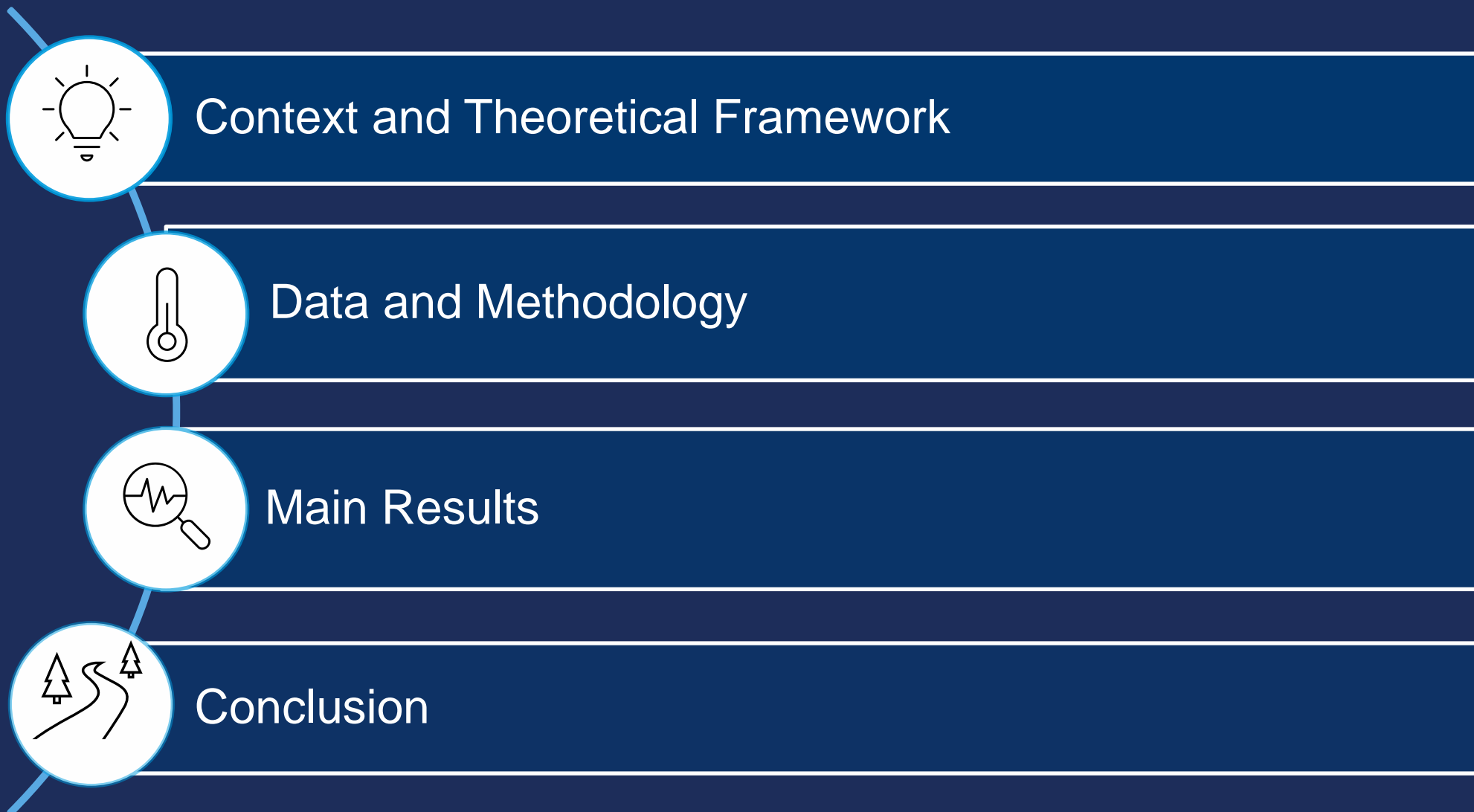
## Main Results

Empirical evidence that **crowdfunding can improve access to capital, to some extent**.

- Improvement in number of customers reached
- No significant impact on interest rates or loan amount.
- Other measures should be considered.



# Outline of the Presentation



# Context

**kiva** Lend ▾ Borrow About ▾ Sign in

56% funded  
43 days left \$3,300 to go  
Total loan: \$7,525  
Powered by 130 lenders

**Cynthia**  
Manica, Mozambique / Farming

\$25 ▾ Lend now

A loan of \$7,525 helps to buy quality inputs, including certified seed and fertilizer, in order to produce quality crops, stock her market and increase her family income.

**Cynthia's story**  
Cynthia is 60 years old and married. She lives with her husband in Manica Province.  
Cynthia and her husband have 25 hectares of land that they have been farming for more than 20 years. Their main crops are fruits and vegetables. Cynthia also has a big shop where she sells her crops at a price lower than the market. Cynthia therefore has regular clients year-round. Because her farm is big, Cynthia needs workers to help her in sowing and harvesting time. Thus she helps young people in her community get employment and gain experience in agribusiness.  
Cynthia wants to expand her production this season. She needs to buy a large amount of inputs like certified seed and fertilizer in order to ensure good quality crops. She is therefore requesting a Kiva loan to buy the necessary inputs to produce quality produce, stock her market and increase her family income.

**Loan details**  
Loan length: **12 months**  
Repayment schedule: Monthly  
Disbursed date: April 17, 2020  
Funding model: Fixed  
Partner covers currency loss? Partially  
Facilitated by Field Partner: iDE Mozambique  
Is borrower paying interest? Yes  
Field Partner risk rating: ★ ↓

**Field Partner: iDE Mozambique**

- Socially-oriented P2P lending platform



# Theoretical Framework

- ▶ To enable the democratization of access to capital, we would need to observe.
  - ◆ More people getting access to loans. Especially those with less access (e.g., more vulnerable individuals).
- ▶ How crowdfunding platforms can do this?

## Cost reduction

- Reliance on offline alternatives.
- Online option (crowdfunding) allows access to an international pool of lenders – lower search costs.
- Potential result: Expansion of financial services.

## Matches with pro-socially oriented lenders

- If lenders were profit-seekers: (more) risk aversion.
- Potentially shift services towards less risky borrowers (less vulnerable).
- However, lenders display pro-social behaviour.

## About the Data

- Performance of 2,806 microfinance institutions from 122 countries
- Data about the online activity (on Kiva) of 200+ MFIs
- Yearly frequency (2006 to 2018)
- Unbalanced panel – 15,797 MFI-year observations.
- **Data Sources:**
  - Microfinance Information Exchange (MIX Market)
  - KIVA - the world's largest socially oriented peer-to-peer lending platform
  - Additional controls for the structure of the economy come from the IMF and World Bank's World Development Indicators

# Methodology

- **Dependent variables: Proxies for financial inclusion**
  1. Number of borrowers (log). (Outreach breadth)
  2. Average loan size divided by the GNI per capita. (Outreach depth)
  3. Real yield on gross loan portfolio – the interests and fees generated from loans. (Outreach depth)
- **Independent variable: Proxy for online activity**
  - Activity on Kiva – Number of posted loans/year (almost all posted loans are fully funded).
- **Control variables: Internal and external factors**
  - Internal (e.g., size, maturity of MFI) // External (e.g., income levels, institutional quality etc.)
- **Methodology: Panel regressions with Fixed Effects (FE) IV estimator.**
  - Instrumental variable (IV) estimation to mitigate endogeneity issues.

## Main Results

- A statistically significant impact of crowdfunding on total number of borrowers.
- The impact is economically modest: 10% increase in number of loan requests results in about 0.35% increase in overall borrowers.
- Consistent across specifications.

**Table 1:** Impact of Crowdfunding on number of borrowers.

	Nb. active borrowers (Log)
Kiva loans t-1 (Log)	0.035*** (0.009)
Equity to total assets	-0.563*** (0.132)
Control of corruption	0.190* (0.098)
Domestic credit to private sector (% of GDP)	0.007*** (0.002)
GDP growth (annual %)	0.000 (0.004)
GDP per capita	0.000*** (0.000)
Age MFI	Yes
Size MFI	Yes
Year dummies	Yes
Constant	7.310*** (0.162)
Observations	11,904
R-squared	0.231
Number of MFIs	2,161



## Main Results

- We do not find evidence of an impact of crowdfunding on the ability of more vulnerable borrowers to get loans.
- Consistent across specifications.

**Table 2:** Impact of crowdfunding on outreach depth

	Yield on gross portfolio (real)	Average loan size per borrower/ GNI
Kiva loans t-1 (Log)	0.001 (0.001)	0.094 (0.090)
Equity to total assets	0.010 (0.012)	-0.778 (0.875)
Control of corruption	0.041*** (0.012)	2.148 (2.196)
Domestic credit to private sector (% of GDP)	-0.001*** (0.000)	-0.079 (0.099)
GDP growth (annual %)	-0.001 (0.000)	-0.584 (0.600)
GDP per capita	-0.000 (0.000)	-0.001 (0.001)
Age MFI	Yes	Yes
Size MFI	Yes	Yes
Year dummies	Yes	Yes
Constant	0.307*** (0.019)	14.515 (12.945)
Observations	10,497	11,615
R-squared	0.039	0.006
Number of MFIs	1,907	2,148

## Conclusion

- Evidence of crowdfunding leading to more outreach breadth and contributing to financial inclusion.
- No evidence of improvement in reaching out to the most vulnerable people.
- While digital technologies can contribute to reducing barriers to financial access, the enhancement of institutional quality, legal and regulatory frameworks, and investments in entrepreneurial environment remain equally crucial.

**Thank you!**

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