MIT MANAGEMENT SLOAN SCHOOL

Company Advisor:
Santiago Plata Diaz

Faculty Advisor:
Yanchong Karen Zheng

The Business of Being Formal

Advancing Financial Inclusion for Colombian Microbusinesses


Sabal Ranabhat
Aziz Malouche

Project Overview

5.2 million microbusinesses

99% have fewer than 10 people

55% are poor or vulnerable

87% operate entirely informally

1) Understand regional trends and the underlying causes of microbusiness informality and financial exclusion
2) Develop quantifiable indices and policy recommendations that can help boost financial inclusion for poor and vulnerable microbusinesses

Data

GEIH (Gran Encuesta Integrada de Hogares)

Demographics

Household Labor & Connectivity

General Household Population Survey

EMICRON (Microbusiness Survey)

Real Estate

Employees

Finances

Sub-module Focused on Micro-Businesses

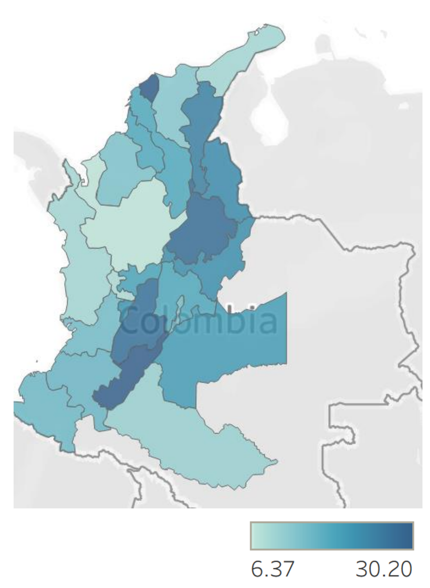
Microbusiness Landscape

Businesses Applying for Loans

18% applied for a loan in the last year

43% did not apply due to fear of debt

94% of loan applications are approved

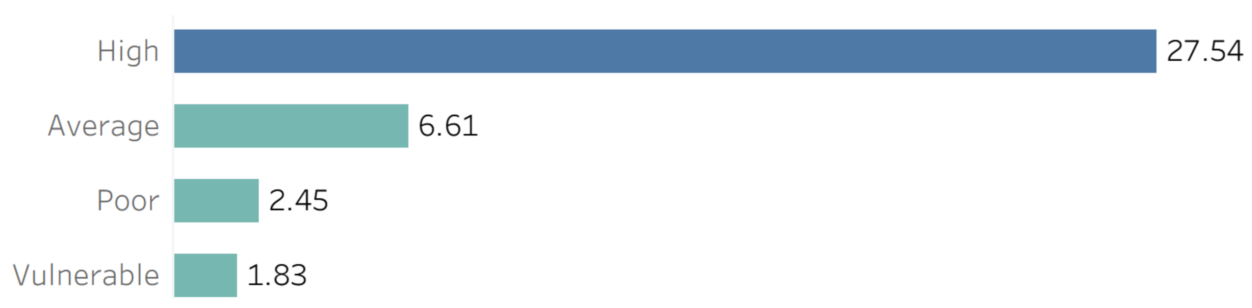


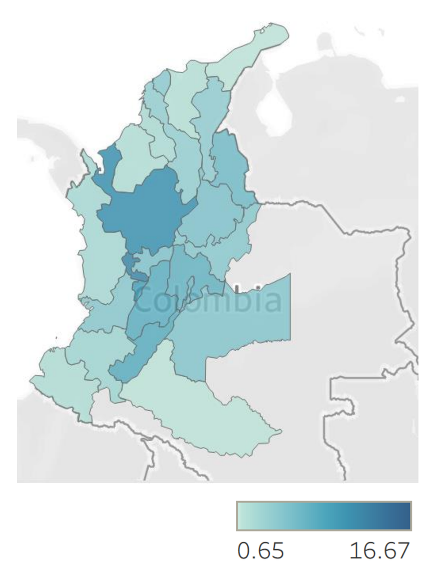
Businesses Saving Money

19% saved money in the last year

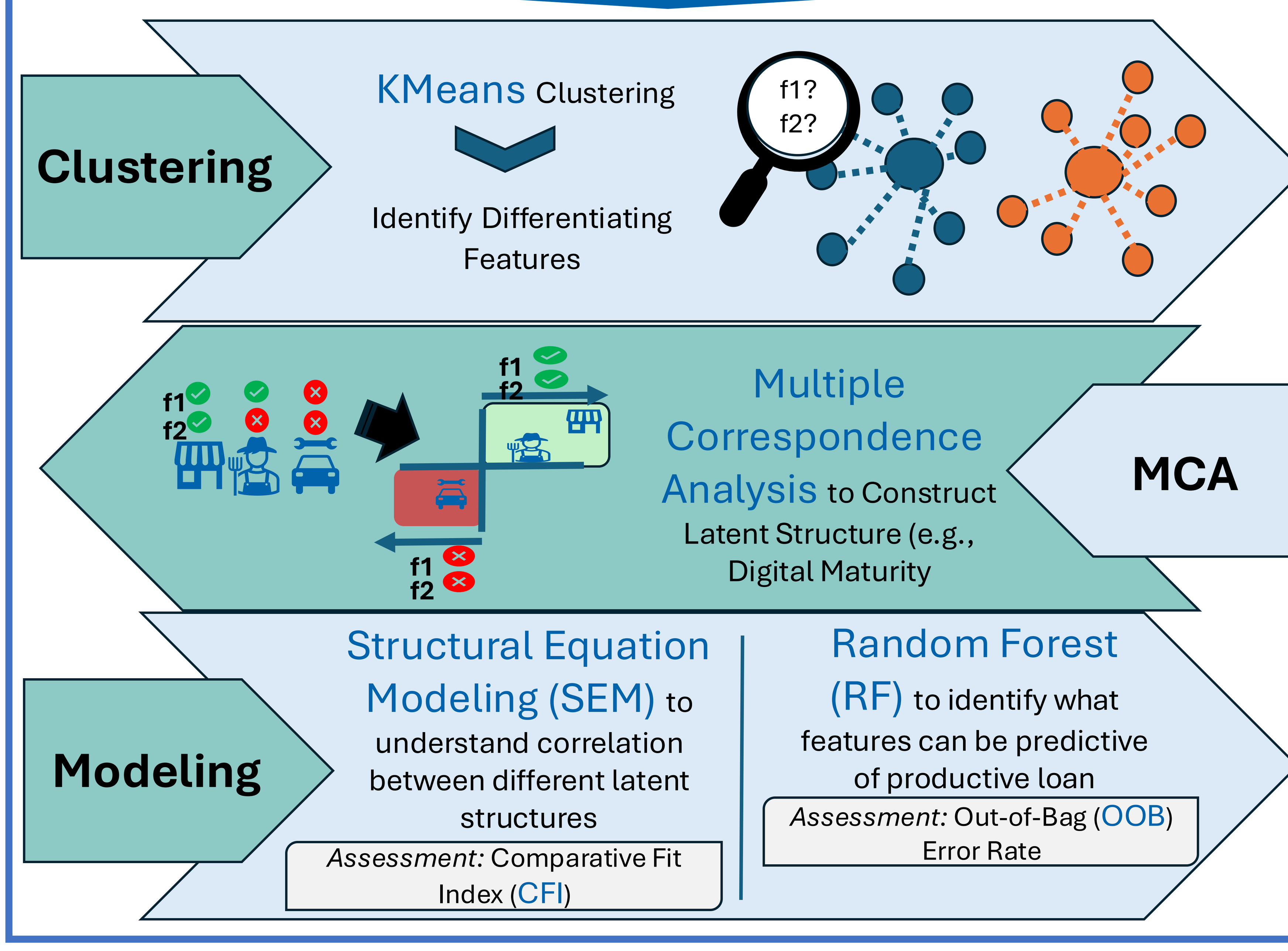
24% of savers do so in financial institutions

67% of savers do so at home





Methodology



Results

4 Indices

FORMALITY
- Registered with the Chamber of Commerce?
- Has a single tax registry?
- Paid Occupational Risk insurance?
- Paid compensation fund or SENA/ICBF (social and labor welfare)?
- Paid for health or pension in last month?

FINANCIAL FORMALITY
- Saves money in a financial institution?
- Accepts online payments?
- Accepts credit cards as payment?
- Applied for a credit or loan in the last year?

DIGITAL READINESS
- Has an email?
- Uses a cellphone?
- Uses a laptop or tablet?
- Has internet service?

BUSINESS SOPHISTICATION
- Has a trade name?
- Has workers who receive payments?
- Has a website?
- Does accounting / daily bookkeeping?

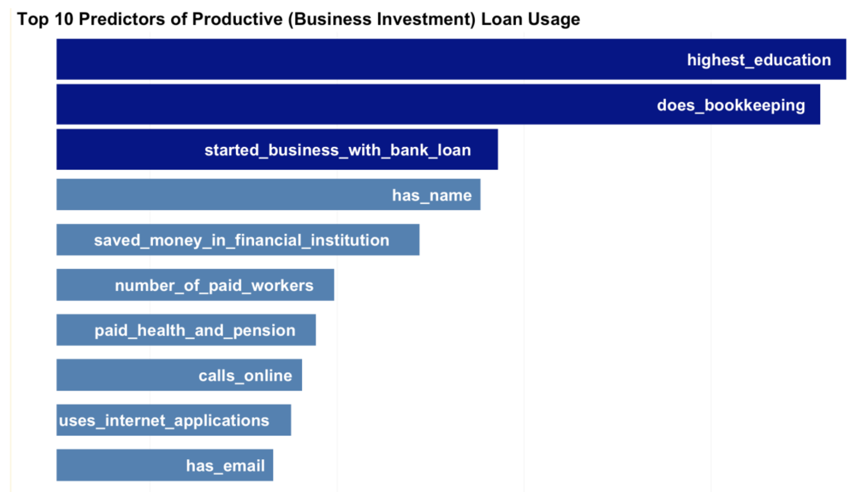
SEM for index interrelationship

Index 1	Index 2	Std Estimate
Formality	Business Sophistication	0.906
Digital Readiness	Business Sophistication	0.721
Financial Formality	Digital Readiness	0.646
Financial Formality	Business Sophistication	0.379

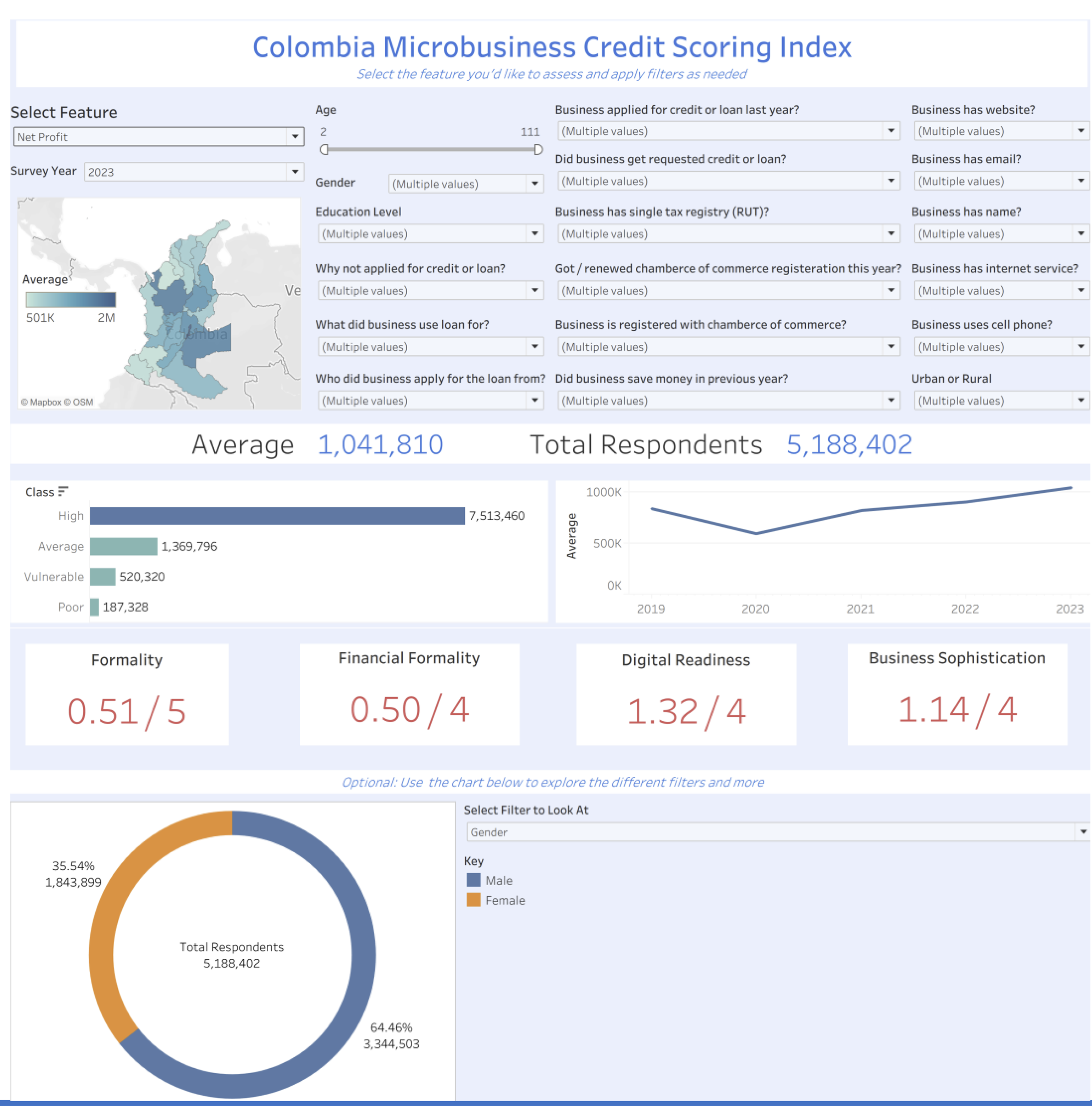
0.952 Scaled Comparative Fit Index

RF for predicting loan utilization

23.73% Out-of-Bag Error Rate



Dashboard



Policy Recommendations

Promote Formality via Business Sophistication
(to lower barriers to formality)

Encourage Digital Transformation
(to gain access to formal financial services)

Boost Loan Uptake and Number of Savings Accounts
(to help close the gap in formality)

Survey Business Progress, Not Only Status
(to move the analysis from correlation to causation)

Adoption in Other Countries
(to build similar models worldwide)

DANE: National Administrative Department of Statistics
Computadores para Educar: Computers for Education program
Bold: Fintech company enabling access to electronic payments in Colombia
Banca De La Oportunidades: Government program delivering financial education