# Financial Literacy and Financial Inclusion

## Connecting the Dots with Behavioral Science

Enrique Fatas

Universidad Europea

Lina Restrepo-Plaza (Universidad Europea), Lorena Levano (World Bank), Ana Maria Rojas (World Bank), Paulius Yamin (PIAS), Blanca Zuluaga (ICESI)

Universidad Europea

# Behavioral Economics Institute

Methodology

# Behavioral Science

Universidad Europea

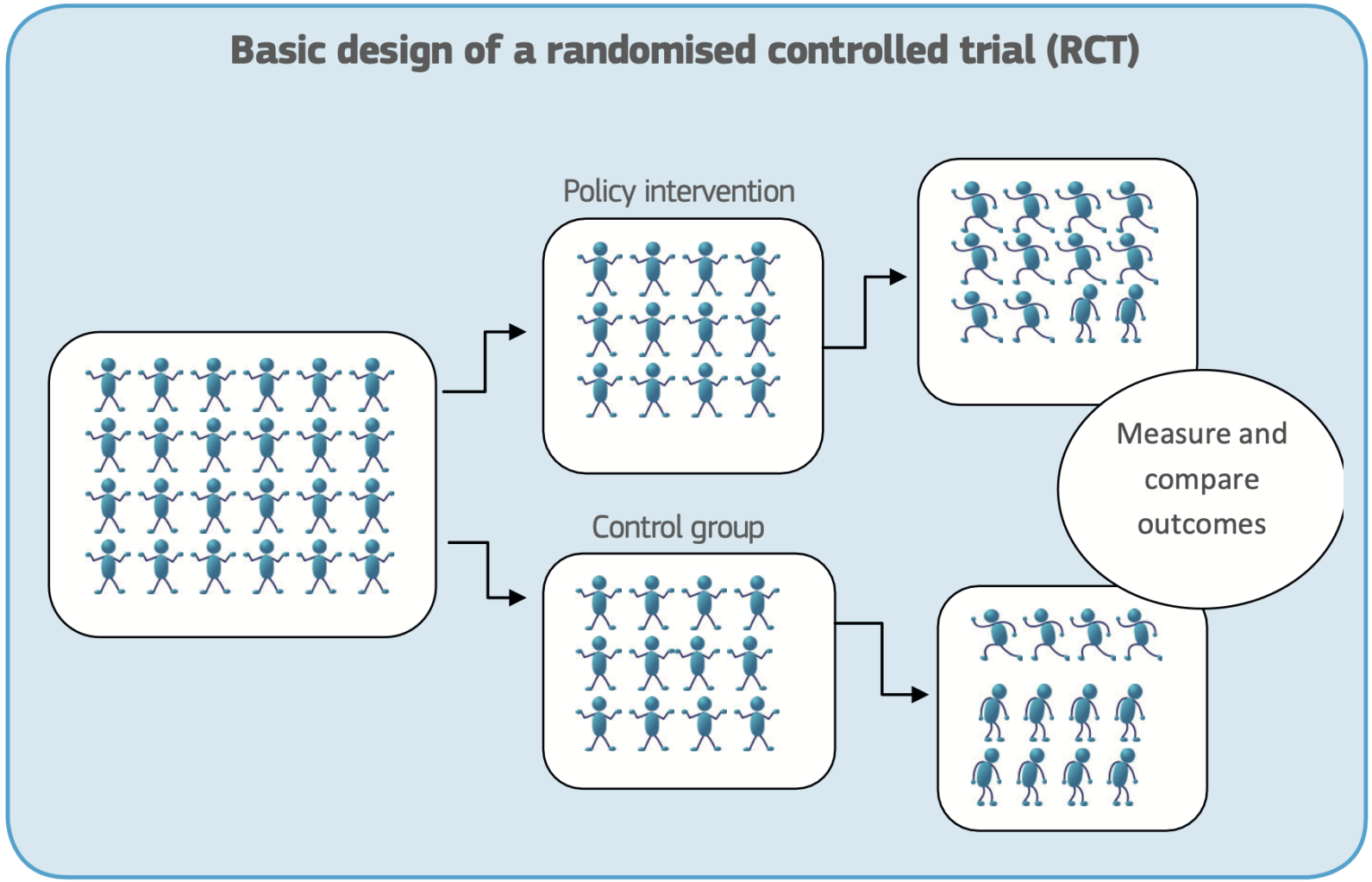
Behavioral Economics Institute

First randomization

# Science

Universidad Europea

Behavioral Economics Institute




Lourenço, J. S., Ciriolo, E., Almeida, S. R., & Troussard, X. (2016). JRC Science Hub, European Commission.

Second randomization

# Vignette experiment

Universidad Europea

Behavioral Economics Institute

A client enters your office in the last minute of a busy workday.

**Luis** is a 35-year-old **Peruvian** with two kids (3 and 14 years old), a high school diploma, and owns a small convenience store where his family works. **Luis** is applying for a loan to buy some appliances to renovate his business. He brings a folder with the documents needed to apply.

**Luis** is a 35-year-old **Venezuelan** with two kids (3 and 14 years old), a high school diploma, and owns a small convenience store where his family works. **Luis** is applying for a loan to buy some appliances to renovate his business. He brings a folder with the documents needed to apply.

**Ana** is a 35-year-old **Peruvian** with two kids (3 and 14 years old), a high school diploma, and owns a small convenience store where her family works. **Ana** is applying for a loan to buy some appliances to renovate her business. She brings a folder with the documents needed to apply.

**Ana** is a 35-year-old **Venezuelan** with two kids (3 and 14 years old), a high school diploma, and owns a small convenience store where his family works. **Ana** is applying for a loan to buy some appliances to renovate her business. She brings a folder with the documents needed to apply.

Universidad Europea

Behavioral Economics Institute

# Improving digital inclusion in conflict areas

External factors

BANCO DE DESARROLLO DE AMÉRICA LATINA Y EL CARIBE

Cauca Valley

# DMP in Southwest Colombia

Universidad Europea

Behavioral Economics Institute

Violence

Scarcity

Gender bias

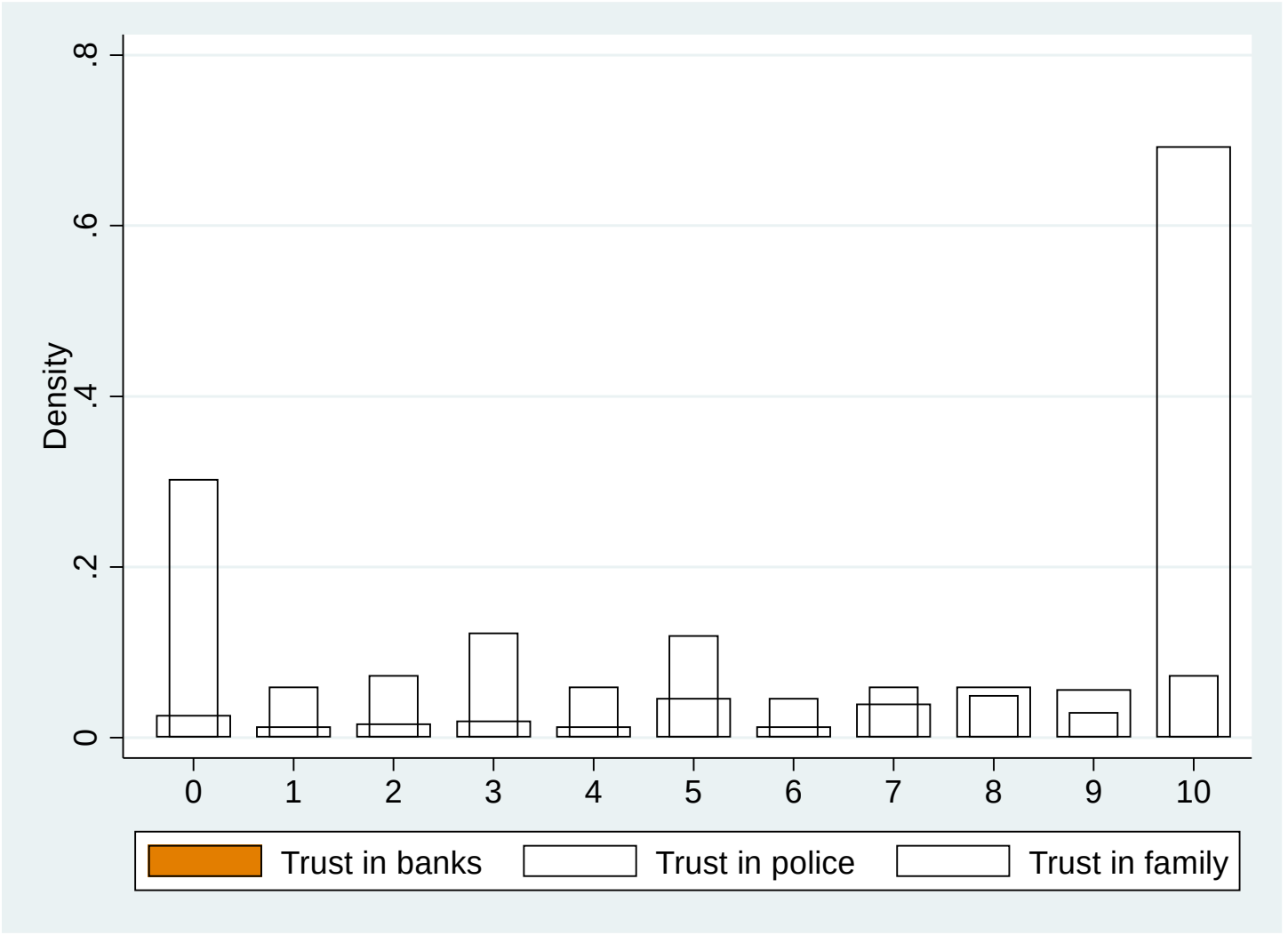
Powered by Bing
© Microsoft, Overture Maps Fundation

Police and family

# Trust

Universidad Europea

Behavioral Economics Institute

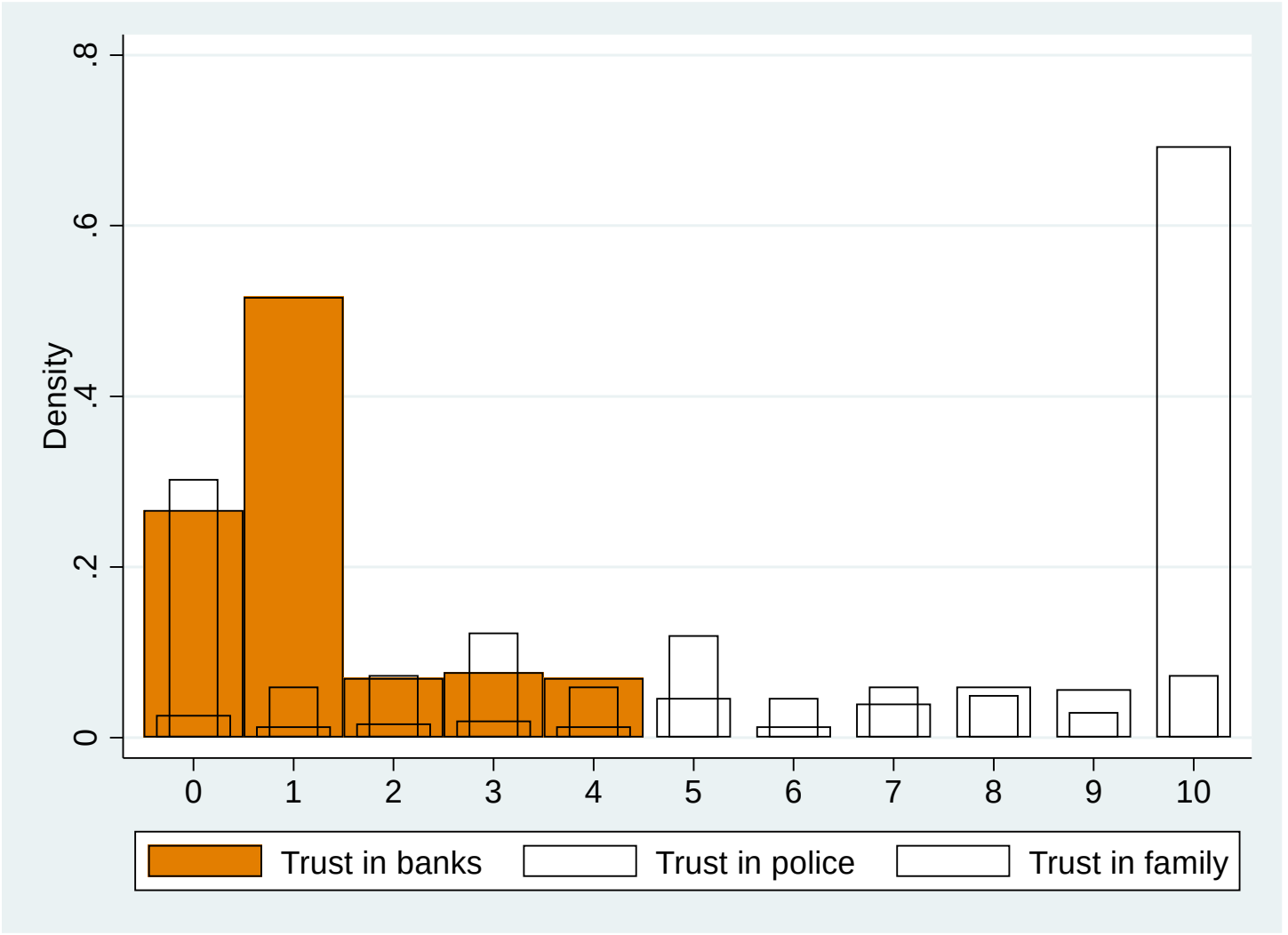


Police, family and banks

# Trust

Universidad Europea

Behavioral Economics Institute



Universidad Europea

Behavioral Economics Institute

Social norm
(expectations)

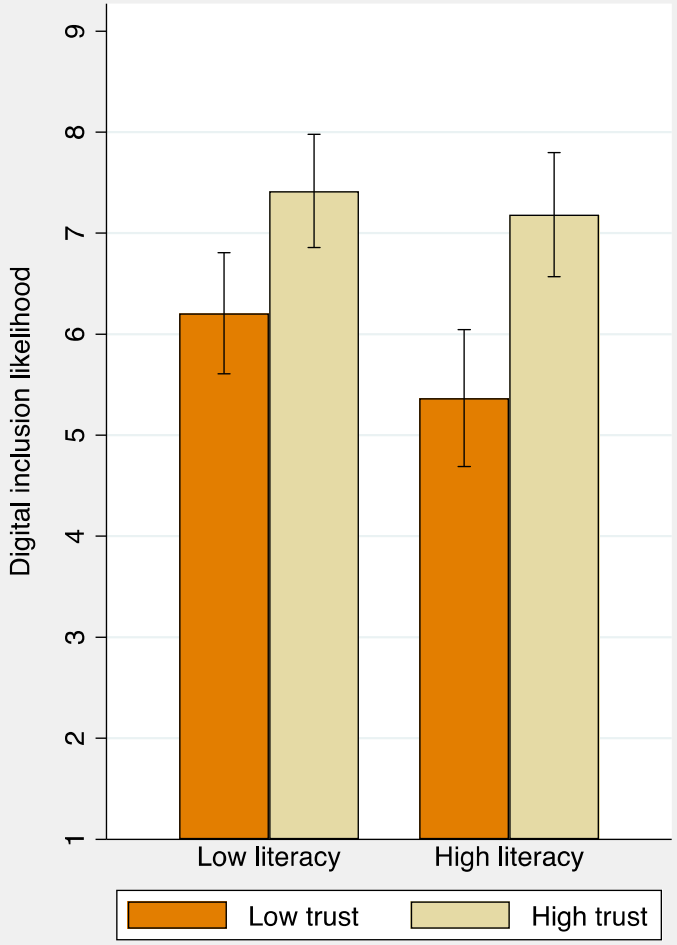
| | Trust: High | Trust: Low |
|---|---|---|
| Social norm: High | T1 | T2 |
| Social norm: Low | T3 | T4 |

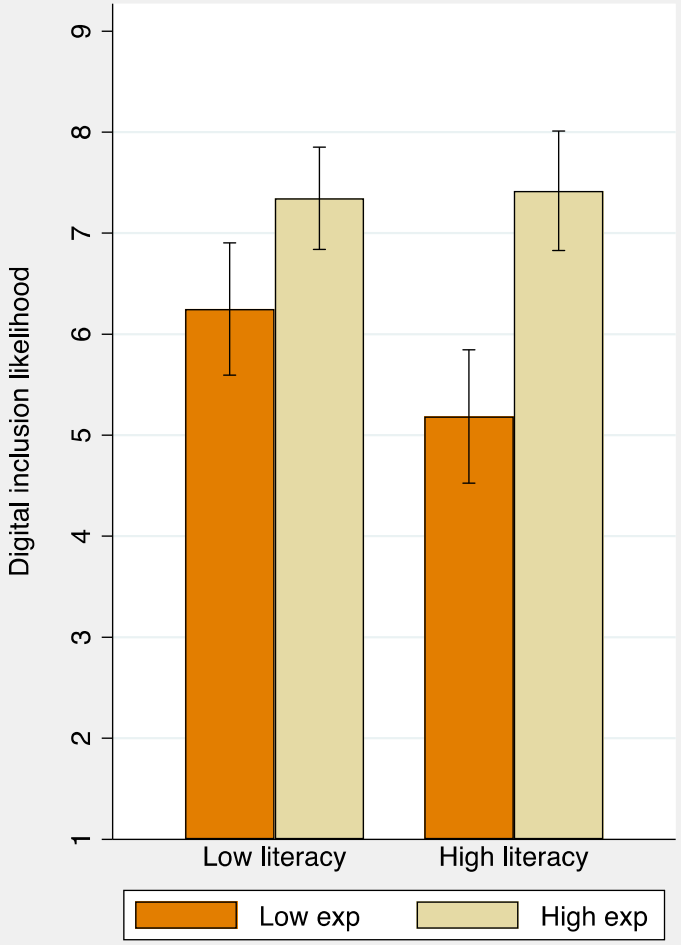
Literacy and inclusion

# Frustration

Universidad Europea

Behavioral Economics Institute



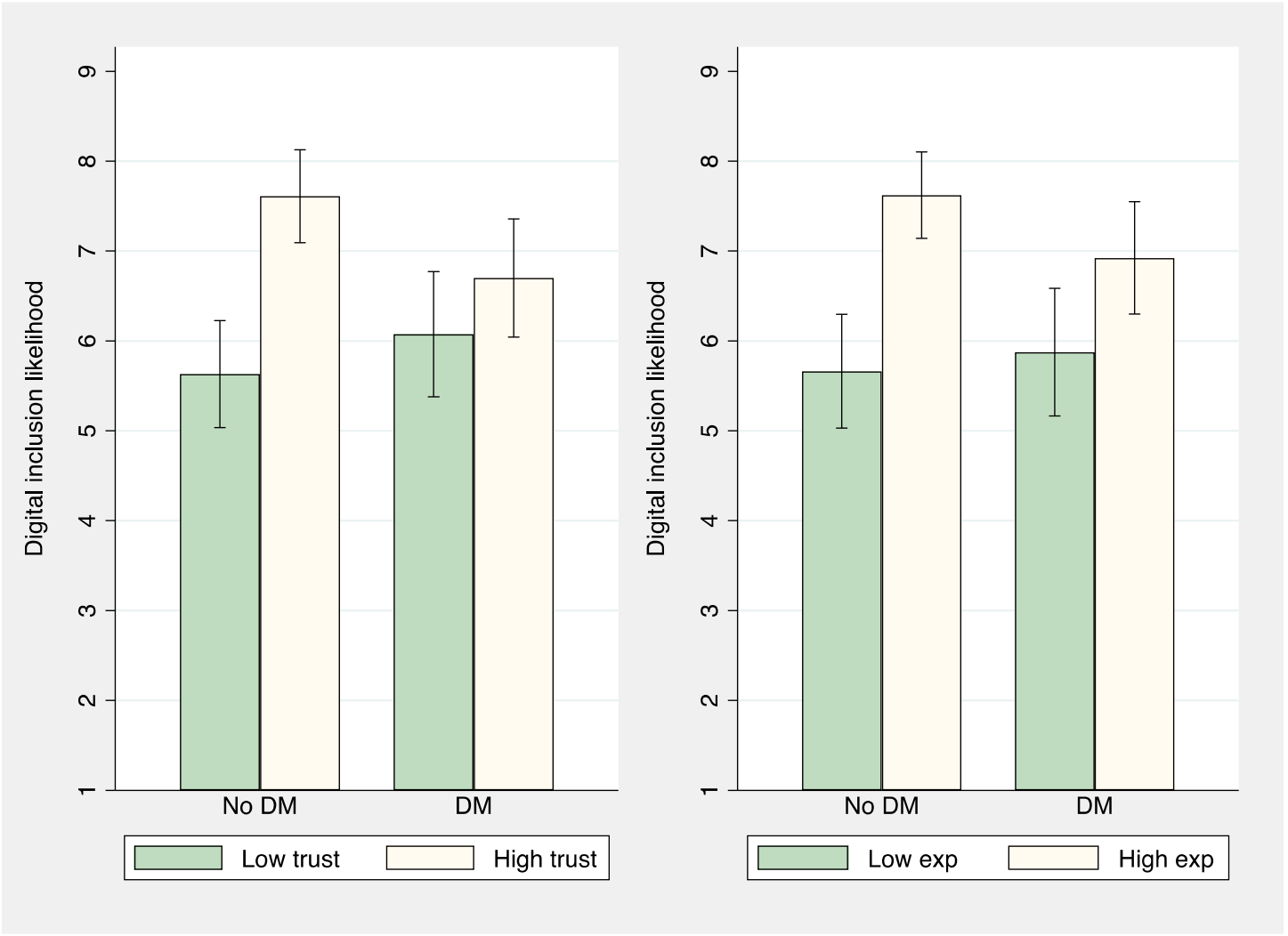



Learning by doing

# Agency

Universidad Europea

**Behavioral Economics Institute**



Conflict areas in Colombia

# Lessons #1

Universidad Europea

Behavioral Economics Institute

Financial Education goes beyond numerical and financial literacy

Discriminatory norms substantially reduce inclusion (-24pp/50%)

Low trust in financial intermediaries prevent rural women from fintech inclusion (-22pp/44%)

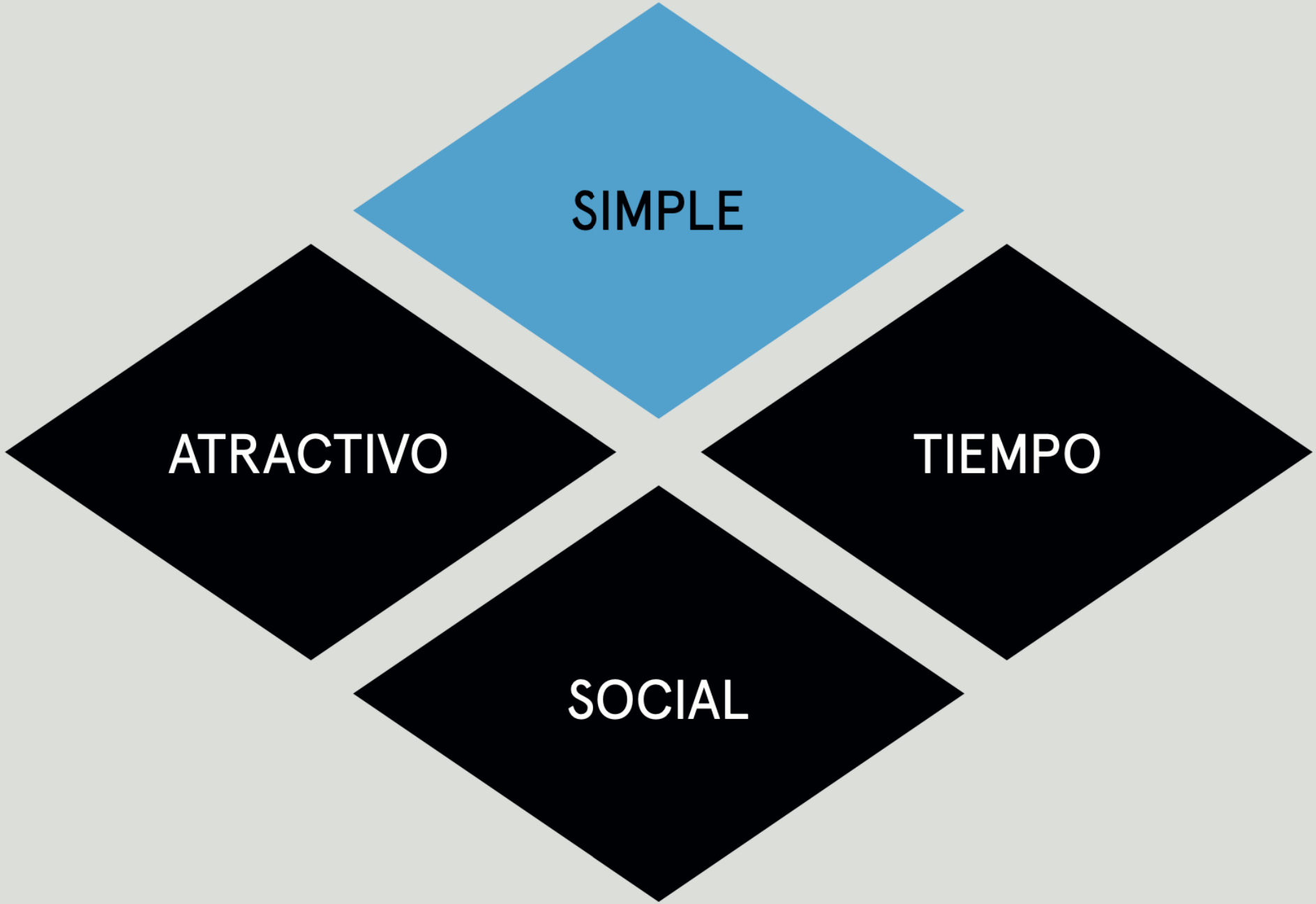
Universidad Europea

Behavioral Economics Institute

# Reducing over-indebtedness in payday borrowers

Diagnosis and Intervention

eMBeD
Mind, Behavior, and Development Unit

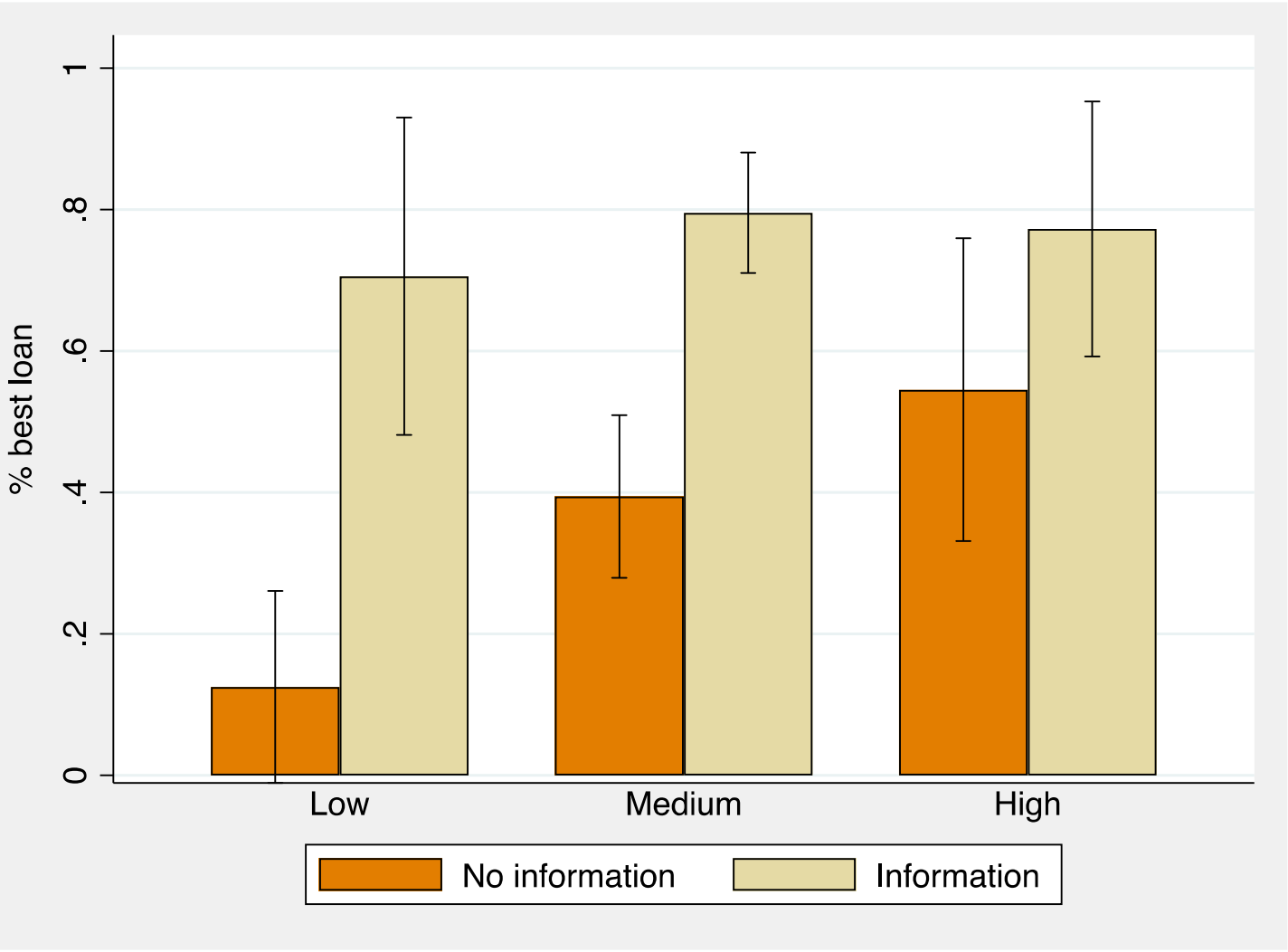

SIMPLE
ATRACTIVO
TIEMPO
SOCIAL

Literacy

# Choosing right

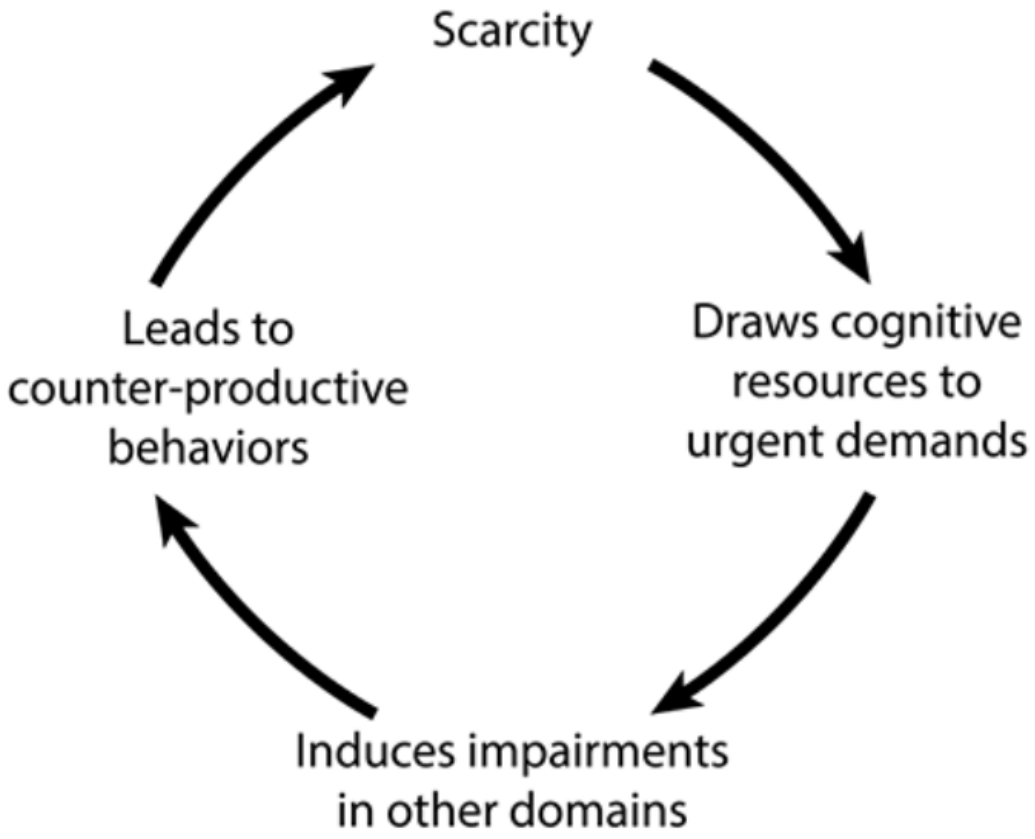
Universidad Europea

Behavioral Economics Institute



Scarcity

# The vicious circle




Universidad Europea

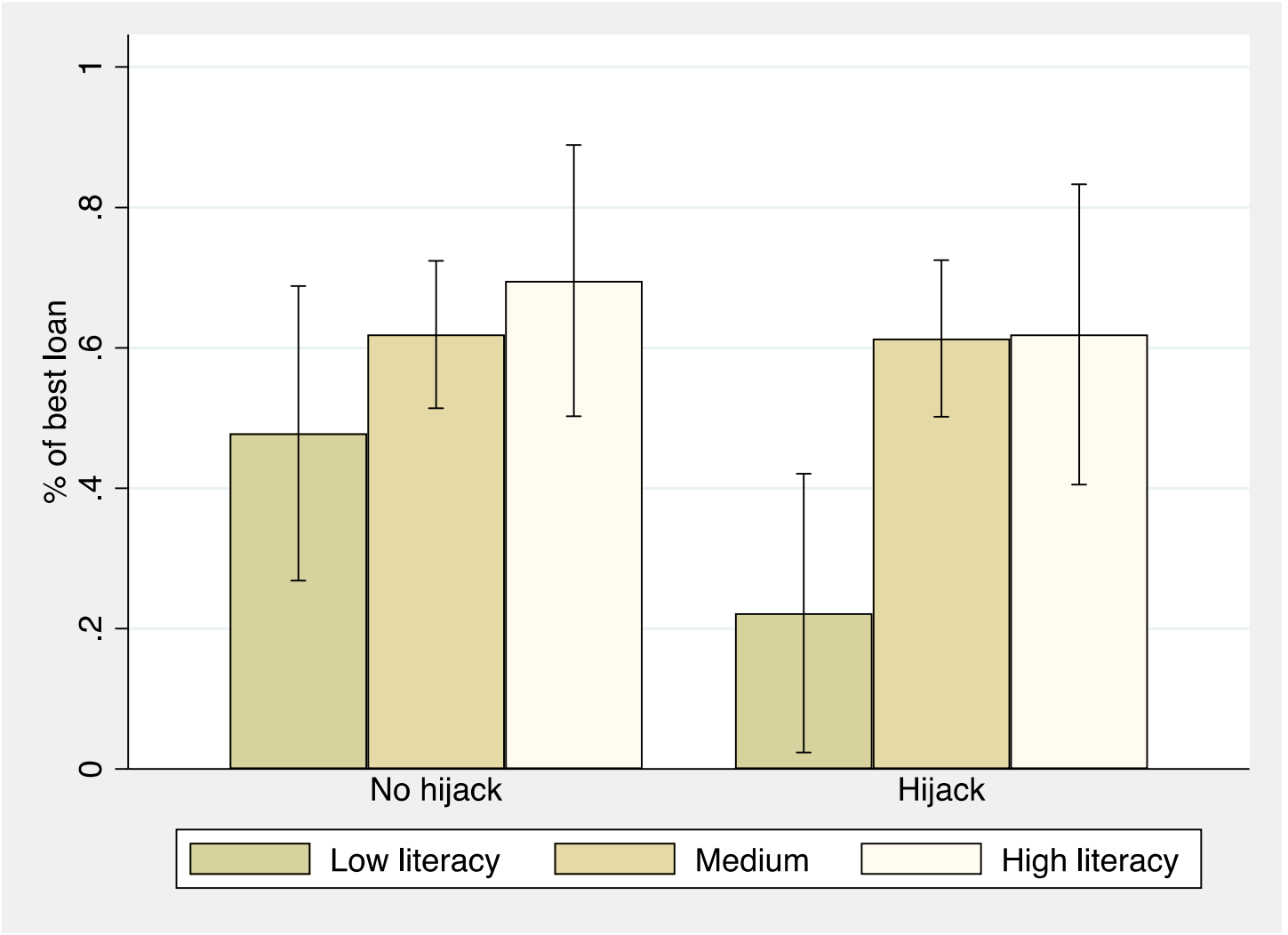
**Behavioral Economics Institute**

Scarcity and literacy

# Choosing right

Universidad Europea

Behavioral Economics Institute



Over/indebtedness in large cities

# Lessons #2

Universidad Europea

Behavioral Economics Institute

Information helps to reduce over-indebtedness

Financial literacy boosts the positive effect of information

Scarcity hijacks the cognitive resources of illiterate (+23pp/55%)

Universidad Europea

Behavioral Economics Institute

# Discriminatory Beliefs of Bank Executives in Peru

## Diagnosis and intervention

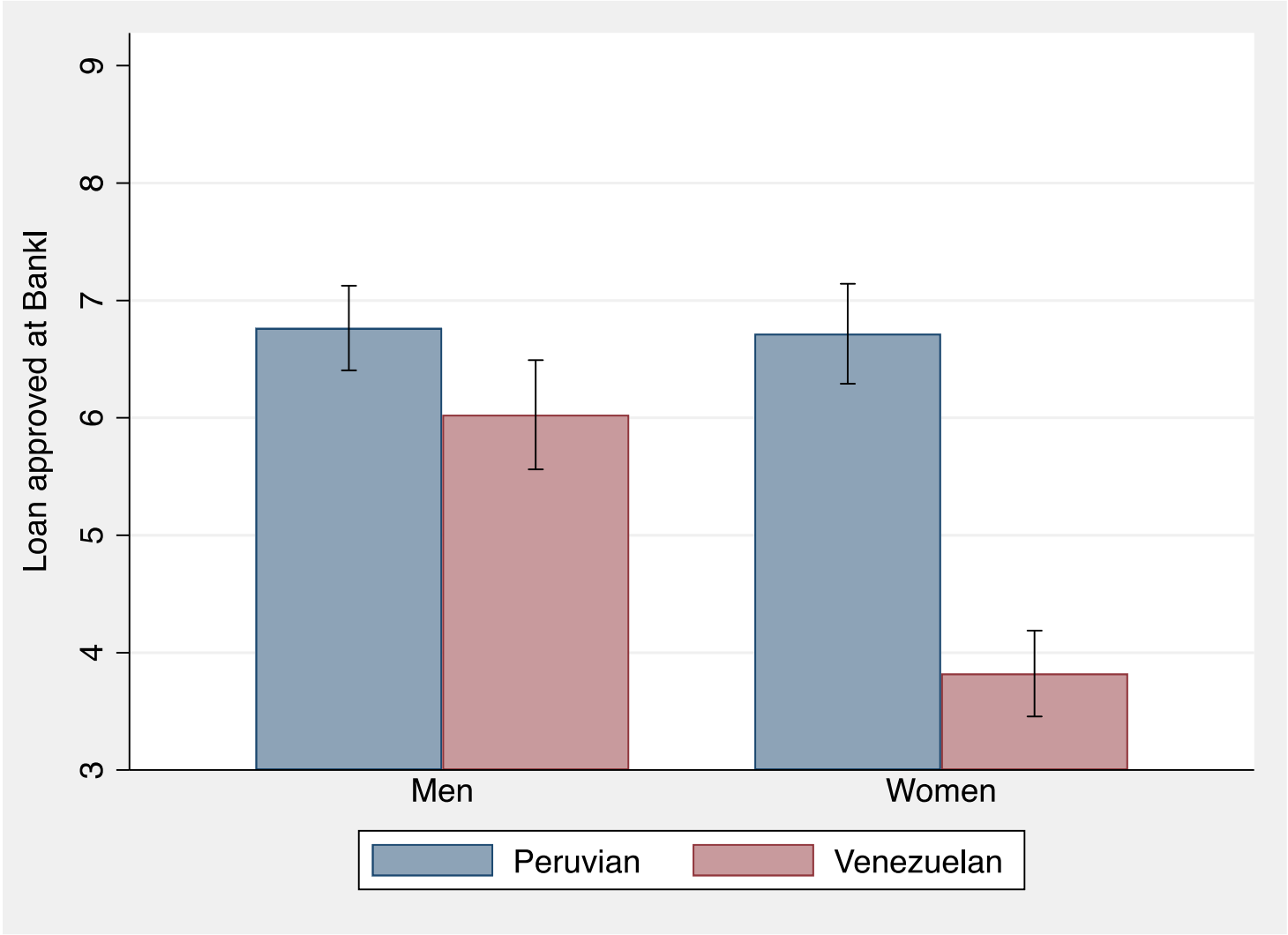
IFC International Finance Corporation
WORLD BANK GROUP

Sex and origin

# Intersectional discrimination

Universidad Europea

Behavioral Economics Institute



Financial literacy and preferences' beliefs

# Knowledge bias

Universidad Europea

Behavioral Economics Institute

| | Peruvian | Venezuelan | p-value |
|---|---|---|---|
| Financial literacy | 5.558 | 5.387 | 0.335 |
| | (0.127) | (0.124) | |
| Financial abilities | 4.919 | 5.027 | 0.604 |
| | (0.158) | (0.136) | |
| | Men | Women | p-value |
| Financial literacy | 5.571 | 5.370 | 0.259 |
| | (0.127) | (0.124) | |
| Financial abilities | 5.013 | 4.932 | 0.695 |
| | (0.144) | (0.151) | |

| | Peruvian | Venezuelan | p-value |
|---|---|---|---|
| Collateral | 5.271 | 5.473 | 0.410 |
| | (0.160) | (0.185) | |
| Income | 5.403 | 5.424 | 0.927 |
| | (0.163) | (0.168) | |
| Paperwork | 5.480 | 5.286 | 0.382 |
| | (0.155) | (0.158) | |
| Website issues | 4.855 | 4.991 | 0.589 |
| | (0.185) | (0.171) | |

Biased beliefs

# Lessons #3

Universidad Europea

Behavioral Economics Institute

Intersectional discrimination rampant

Financial exclusion of migrants consistent with systemic and preference-based discrimination

Beliefs about migrants not different

Universidad Europea

Behavioral Economics Institute

# Improving the Literacy of Gatekeepers

Large intervention

eMBeD
Mind, Behavior, and Development Unit

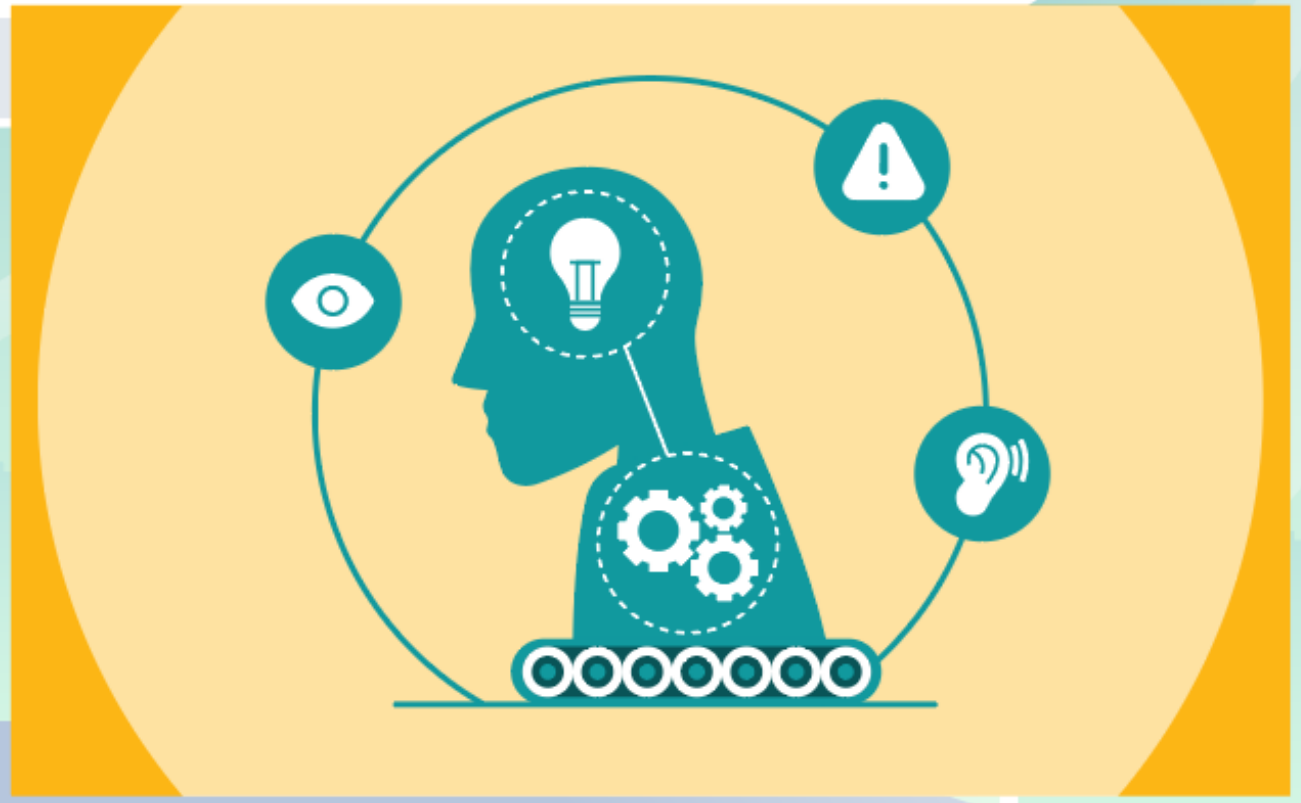
Civil servants

# Exclusion in Ecuador

Universidad Europea

Behavioral Economics Institute

# El cerebro y los sesgos



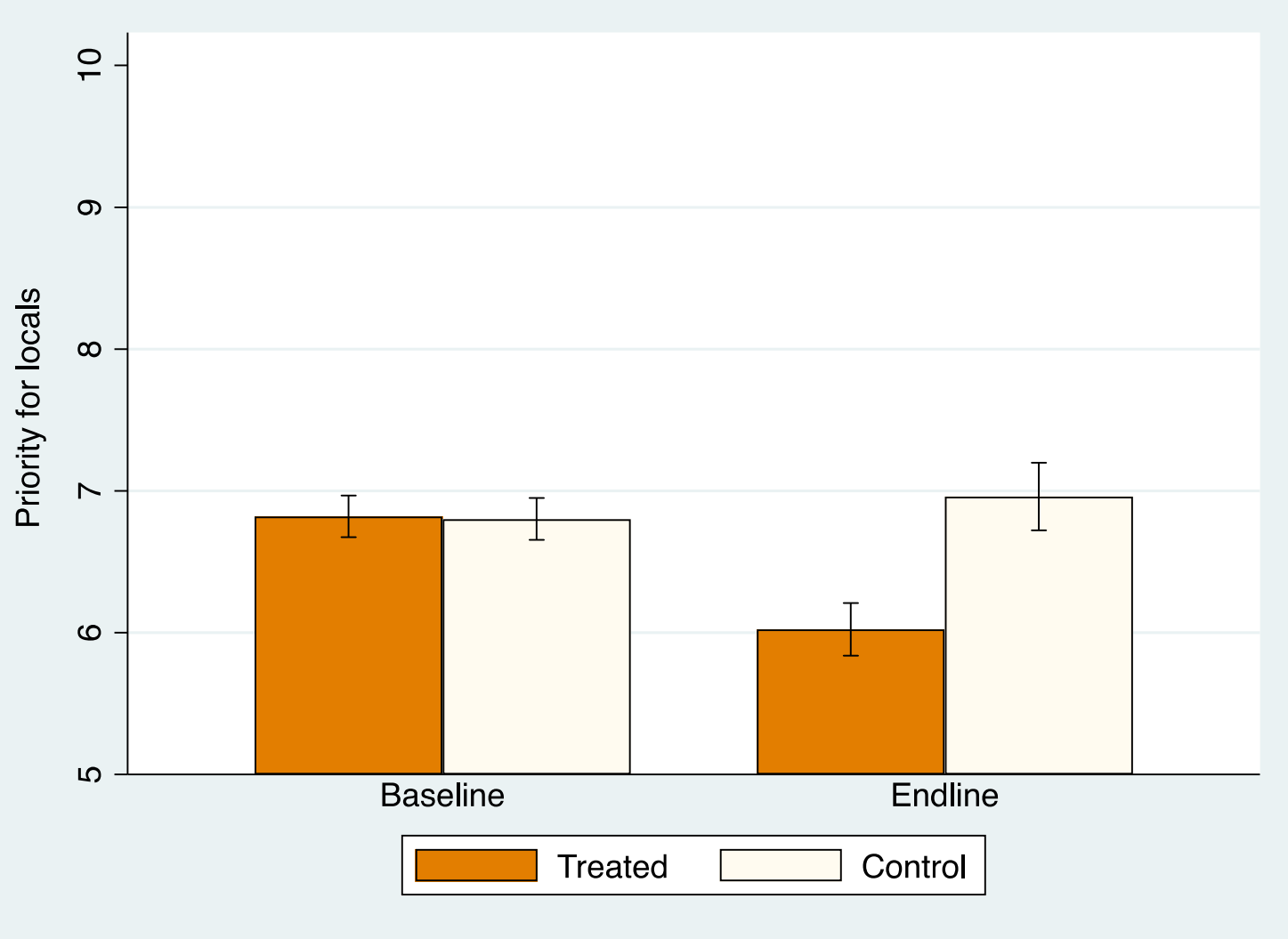
CC

Systemic (I)

# Priority for locals

Universidad Europea

Behavioral Economics Institute

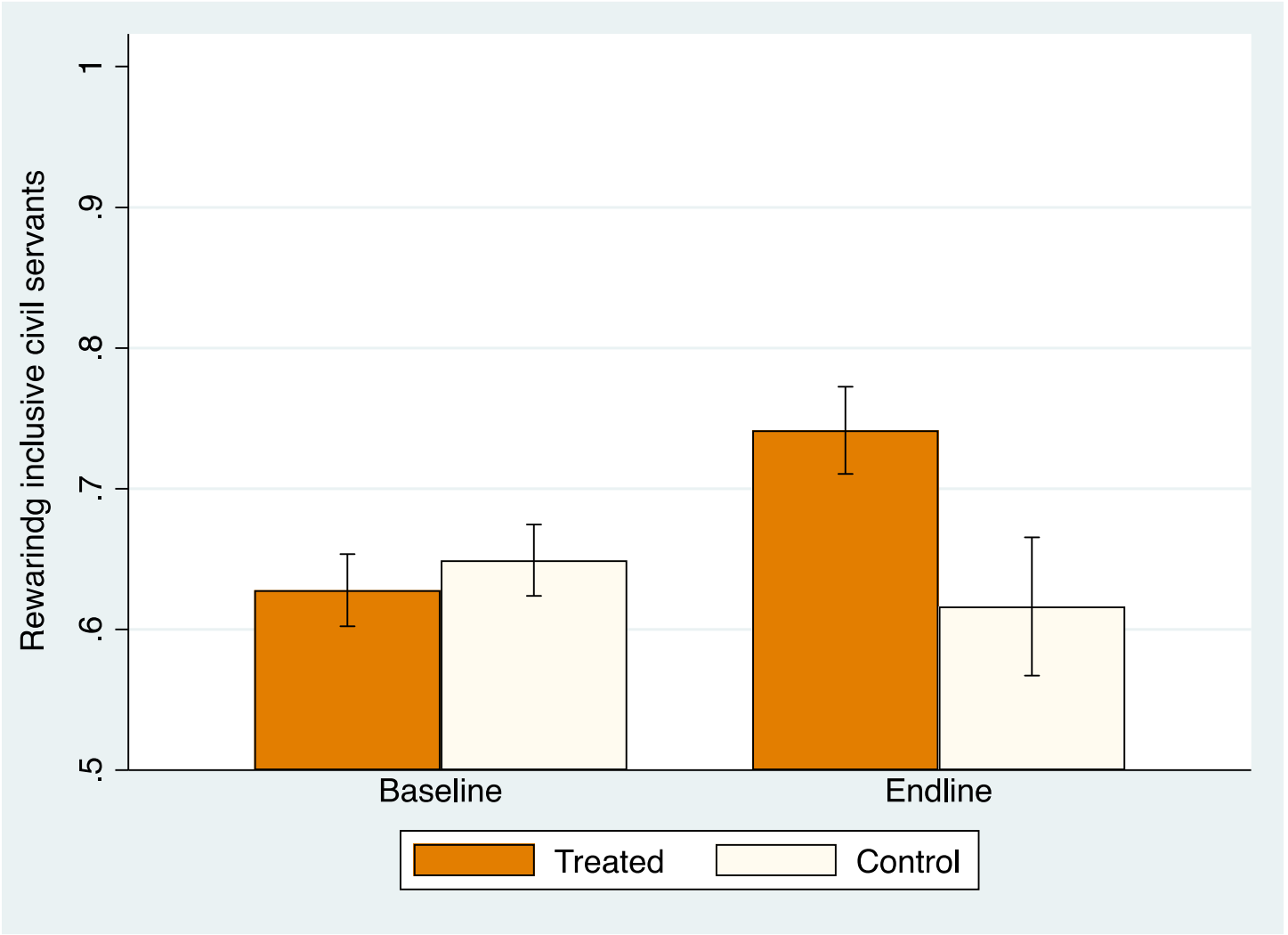


Systemic (II)

# Compensation scheme

Universidad Europea

Behavioral Economics Institute



Training gatekeepers

# Lessons #4

Universidad Europea

Behavioral Economics Institute

Improving behavioral literacy

…decreases systemic and preference-based discrimination

…makes gatekeepers more open to systemic changes

Summary

# How to inform systemic changes?

Universidad Europea

Behavioral Economics Institute

Behavioral science can help…

…fighting discriminatory norms and low trust

…designing interventions to mitigate cognitive hijacking

…identifying unconscious bias and inaccurate beliefs

…making systemic changes more likely

Universidad Europea

Behavioral
Economics
Institute

Universidad Europea

Behavioral Economics Institute

# Edutainment

Challenging groups

USAID
FROM THE AMERICAN PEOPLE

eMBeD
Mind, Behavior, and Development Unit

Exclusion (targeting youth: 480,000 impressions)

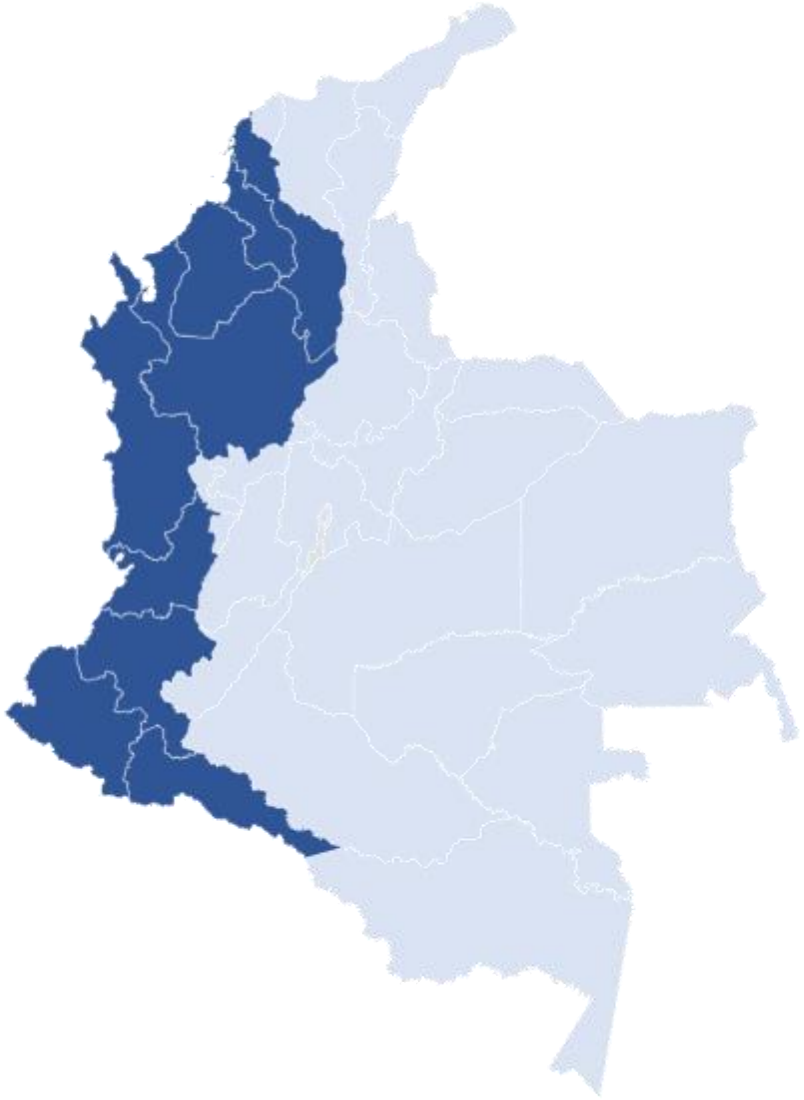
# Edutainment (I)

Universidad Europea

Behavioral Economics Institute

Exclusion (in conflict areas: civil servants and communities)

# Edutainment (II)

Universidad Europea

Behavioral Economics Institute