

MARCH 2024

# Discussion: “Gender gaps in financial literacy: a multi-arm RCT to break the response bias in surveys” by Hospido, Iriberry and Machelet

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5th Conference on Diversity, Equity and Inclusion in Economics, Finance, and Central Banking - Banco de España, Bank of Canada, Bank of England, Board of Governors of the Federal Reserve System, and European Central Bank

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THANKS TO DANIELA BALUTEL KIM P. HUYNH, CHRIS HENRY AND MARCEL VOIA IN PREPARING  
THIS DISCUSSION, SPECIAL THANKS TO BALUTEL ET AL FOR ACCESS TO A PREPRINT OF THEIR  
FORTHCOMING PAPER.



# Outline of the discussion

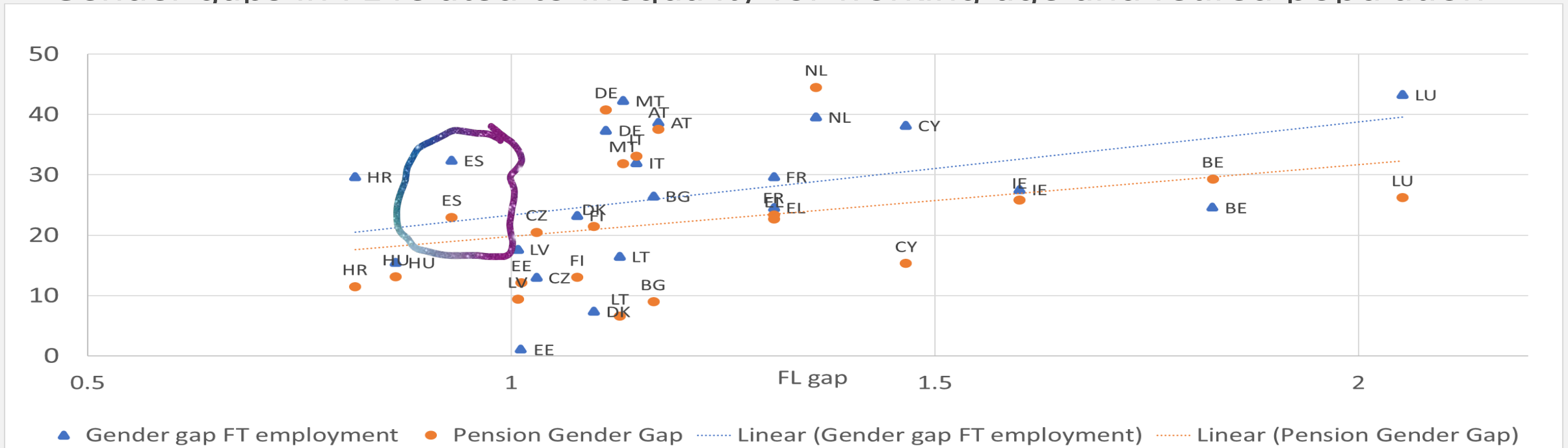
- Related Literature
- Impact on EDI initiatives
- Technical and econometric suggestions

## Upfront messages

- Really enjoyed this thought-provoking paper.
- Important and promising implications for policy
- The data set is unique and rich, the authors should exploit it.

# Financial literacy a tool to reduce wealth inequality and financial exclusion

- Low FL affects decision making, and inhibits financial participation
  - › Rooj et al. (JFE, 2010): [Financial literacy and stock market participation](#)
  - › Neelakantan and Chang (AER PP, 2010): [Gender Differences in Wealth at Retirement](#)
  - › Schneebaum et al (RIW, 2018) : [The Gender Wealth Gap Across European Countries](#)
- Gender gaps in FL related to inequality for working age and retired population





# This paper provides more accurate measures of FL

- Women score low on financial knowledge tests, Big 5 Questions (Lusardi et al) : i.e. low share of correct answers.
- Measurements are imprecise and potentially biased due to the high share of missing or “I don’t know” (IDK)
- The authors disentangle
  - › Womens’ lack of confidence or abilities
  - vs.
  - › Survey questionnaire design and methodology
- First paper to use a **Random Control Trial** to investigate and correct gender bias in survey-based FL measures, gold standard in impact evaluation.

# The paper also contributes to how we treat missing data or DK in surveys

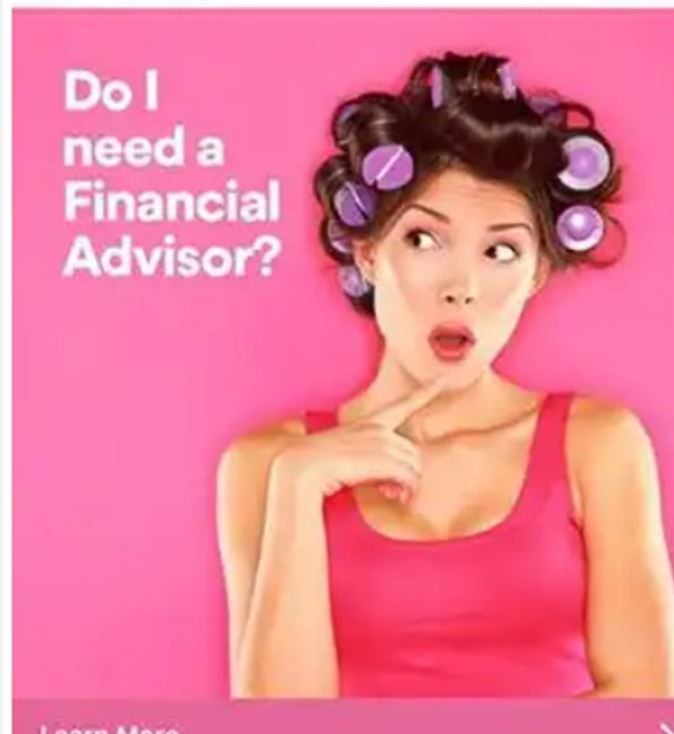
- The authors identify a situation of Non-ignorable missing data (Rubin and Little)
- RCT analysis points toward gender biases in economic survey data, induced by survey designs
  - › Men respond to competitiveness : financial incentives (see also [Chen et al, 2017](#))
  - › Women are more risk averse/aware and less confident, less likely to guess.
- Understanding why respondents answer “IDK” is important for FL
  - › Variations in survey designs, incentives and nudges to monitor the pre-conditions for acquiring skills and confidence necessary for FL
- **RCT** informative for how interventions could impact FL gender gap.

# A more diverse and inclusive financial industry is needed that respects a broad set of economic objectives

- **Financial industry norms** may favour men (on supply and demand side): Only [18% of financial advisors in Canada](#) are women.
- ESG investing ([CFA Institute 2022](#)), driven by females
- Depiction of women by financial industry perpetuates stereotypes



Source: [funny](#)




Source: [The Sun](#)


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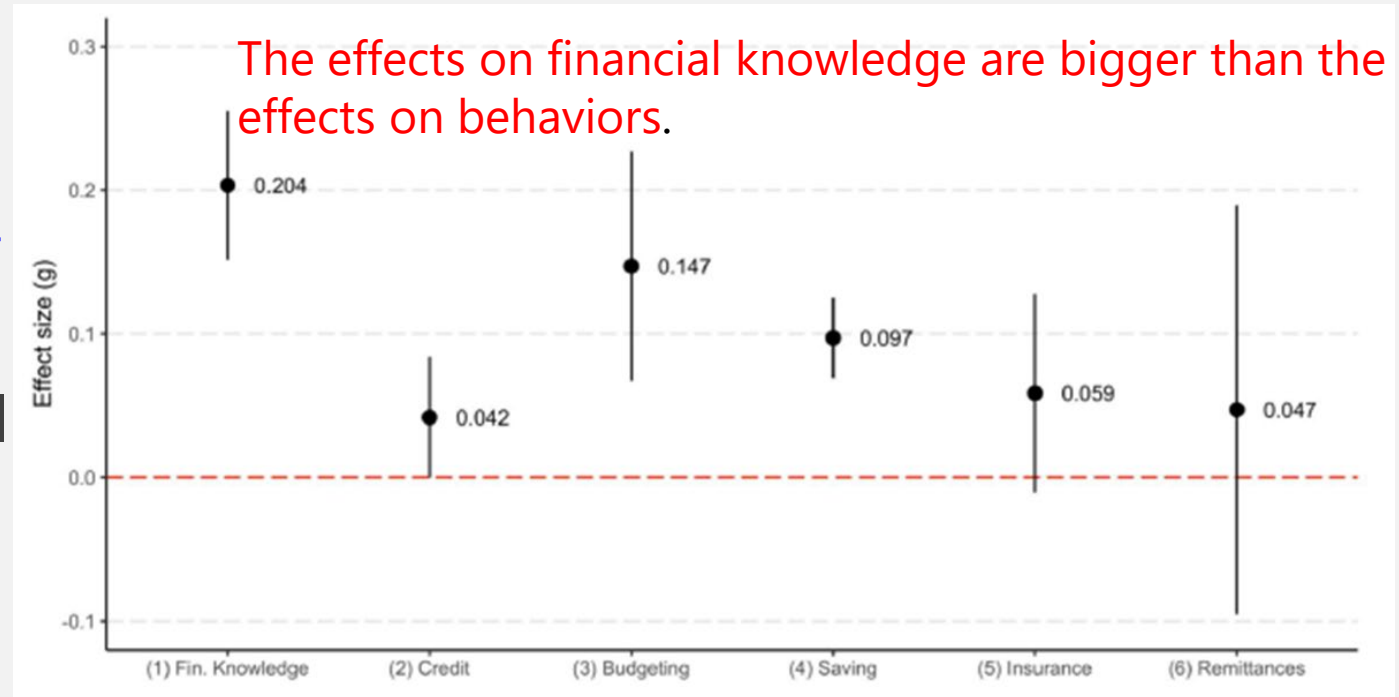
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Source: [Hellenic Bank](#)

# Effective accessible financial education (FE)

## Modelled on STEM initiatives

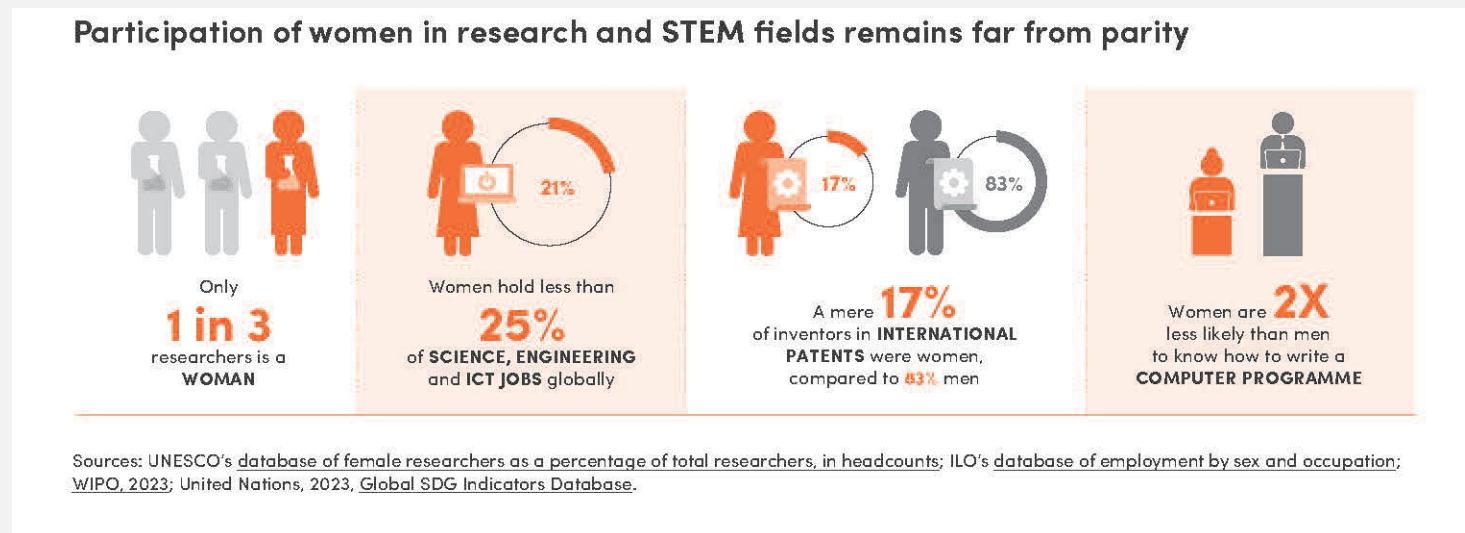
- **Lusardi (2015)** : [Financial Literacy Skills for the 21st Century: Evidence from PISA](#)
- **Good news**: Boys and girls have the same average scores in financial literacy and FE increases FK.
- Still work to do:
  - › 15% of boys and 14% of girls low FL
  - › 11% of boys and 8% of girls high FL
- [Bover et al.](#) : Randomized Control Trial further explores knowledge and behaviour.



Source: Kaiser et al: Financial Education Affects Financial Knowledge and Downstream Behaviors (OECD-WEBINAR)

# Promoting Digital (Financial) Literacy

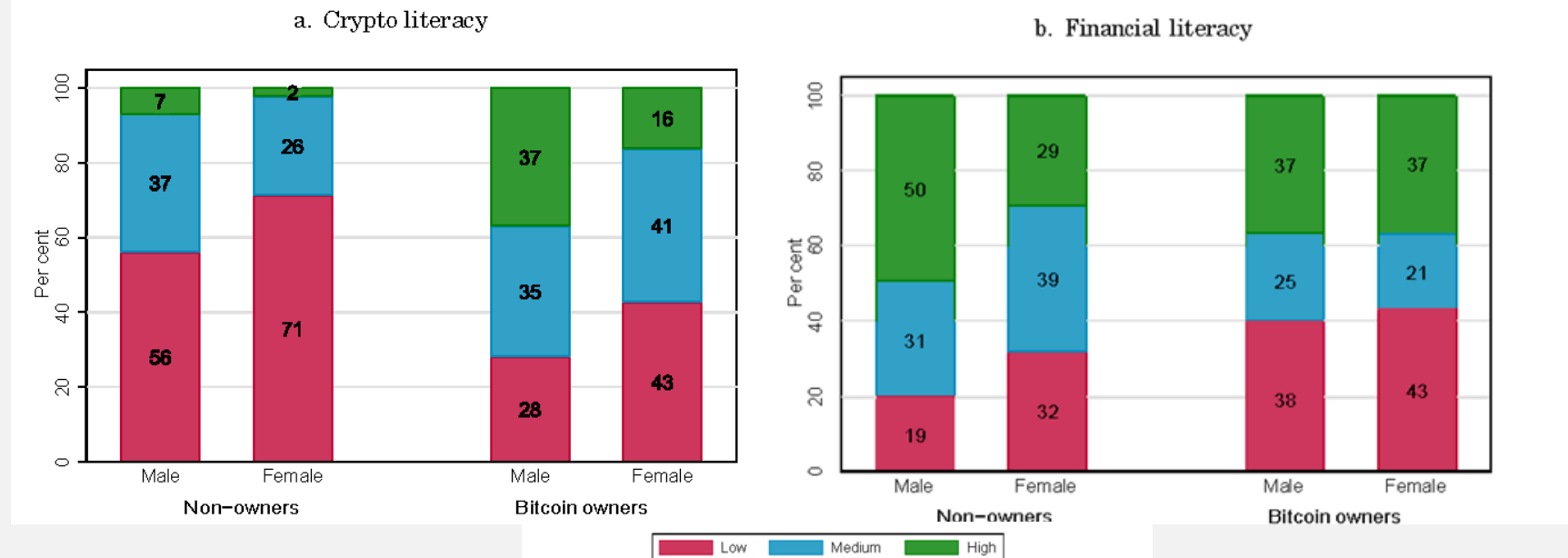
- [United Nations](#): “For women and girls, the digital revolution represents one of the biggest opportunities and threats to gender equality.”
  - › Feedback loop between self-confidence and acquiring knowledge/skills.
- DL and FL will play a role in success of digitization initiatives and are strongly correlated (Prete 2022) [European Digital Identity](#), [Central Bank Digital Currency](#).
- DL can promote FL and provide economic opportunities, but systemic barriers





# Flipside of the Coin? Crypto Assets...

- [Do You Even Crypto, Bro? Cryptocurrencies in Household Finance](#) (Weber et al NBER WP): Crypto holders are young, white, male, libertarian.
- Many Bitcoin owners have low FL and low crypto knowledge. [Balutel et al 2023](#), [Jones et al \(2023\)](#):
  - › “Cryptoasset Owners Versus Non-Owners: **The Role of Gender**” in Familiarity with Crypto and Financial Concepts, **Balutel et al** (forthcoming in Journal of Financial Literacy and Wellbeing)



Source: [Balutel et al 2024 \(forthcoming\)](#).

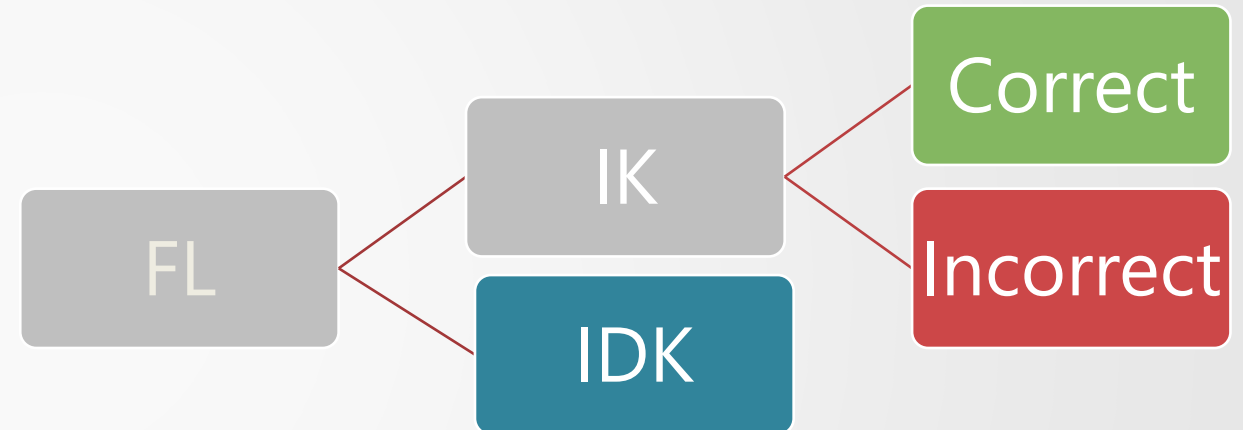
# Unobserved heterogeneity and selection

- › **Baseline model** : OLS model , IDK share modelled separately/independently from True/False answers.
- › The OLS models explain less than 30% of variation
- › Important to consider **unobserved heterogeneity**

## FL could be treated as unobserved in IDK:

- › RCT data could be used for 2 stage model
- › Gender as exclusion restriction?
- › Gender x treatment as exclusion restriction?
- › Some of treatments may affect Step 1 or 2 only, some may affect both Steps.

## Response model:



$$\text{Step 1: } IK = I(X_i\beta_1 + Z\gamma + u_i > 0) \quad (1)$$

$$\text{Step 2: } Correct_i^* = I(X_i\beta_2 + v_i > 0) \quad (2)$$

$$\text{corr}(u, v) = \rho$$

# Gracias/Eskerrik asko/Merci/Thanks/Danke!

- [More research is available at:  
Bank notes: Research and reports](#)





# Financial Literacy Month with Financial and Consumer Affairs Authority

*Released on November 3, 2023*


This November, to mark Financial Literacy Month, the Financial and Consumer Affairs Authority of Saskatchewan (FCAA) will help investors learn about crypto investment scams through a month-long social media campaign.

"Unfortunately, the trend we are seeing is that crypto investment scams are prevalent all over the country and Saskatchewan is no exception," FCAA Enforcement with the Securities Division Director Brett Wawro said. "We want investors to know that these scams are out there and to have the information they need to spot them before it's too late."

The campaign will focus on sharing "scam facts," such as information, trends and typical aspects observed in crypto online investments scams that are happening in the province. These insights will help investors learn more about crypto scams and the serious consequences that can result from investing in a fake crypto opportunity.

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# Financial literacy is thought to have a positive impact on prosperity and financial well-being

## Financial Consumer Agency of Canada:

“Financial literacy is having the knowledge, skills and confidence to make responsible financial decisions. ”

