How to Use Research for Advocacy
Financial Education Affects Financial Knowledge and Downstream Behaviors

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The need for a (new) meta-analysis

Does financial education work?
→ It is important to rely on data and evidence.

- The research on financial literacy/financial education has exploded.
- Very hard to do a narrative review of so much work
→ A meta-analysis may help.

→ Financial literacy has its own code in the *Journal of Economic Literature* (JEL) classification: G53. It is officially a field of research.
Citations to the term “financial literacy” over time: Time for an update of the evidence

Last paper included in Fernandes et al. (2014)
We dedicated a webpage to it on GFLEC website

https://gflec.org/metaanalysis
A meta-analysis is a statistical tool that aggregates the results of many different studies on a particular topic to summarize a body of research (in our case financial education).

Policymakers can rely not only on a few studies in making decisions but an entire body of evidence.

We restrict the analysis to randomized controlled trials (RCTs) which are considered the gold standard of impact evaluation.
Previous meta-analyses on financial education

- The first meta-analysis by D. Fernandes, J. Lynch, and R. Netemeyer was published in 2014 in *Management Science*
- Other meta-analyses with different emphasis (Miller et al. 2015, Kaiser and Menkhoff 2017, 2019) have been published since, but Fernandes et al. (2014) have been most cited, in particular these two findings:

  1) “We find that interventions to improve financial literacy explain only 0.1% of the variance in financial behaviors studied” (page 1861)
  2) “Intervention effects may decay over time – the case for ‘just in time financial education’.”(page 1866)
What we do in our meta-analysis

- (1) We take stock of the new evidence
  - Focus on RCTs, which are considered the gold standard of impact evaluation
  - Include all earlier studies and more than quintuple the number of RCTs (from 13 to 76)
    - Many more studies in top economics-journals
    - Can look at different types of behavior in addition to financial knowledge
(2) Calculations of the economic size of the effects and analysis of cost-effectiveness

- What do the statistical effect sizes mean in economic terms?
- What is the average cost of financial education and is it cost-effective?
Our study includes 76 RCTs (vs. 13) from 33 countries (vs. 8) with over 160,000 (vs. 23,000) individuals across the lifespan.

The sample include many low-income countries/target groups. The effects are measured after 30 weeks, on average, and up to more than two years.
Our findings

We found that:

- The estimated effect of financial education is at least three times as large as the effect documented in Fernandes et al. (2014)

- Accounting for differences in programs, effects are more than five times as large as the effects reported in Fernandes et al. (2014)

- We do not find clear evidence of a dramatic decay of the effects of financial education over time. Effects persist up to two years after intervention
Comparing the new evidence to the result in Fernandes et al. (2014)

Treatment effects on financial behaviors

- Fernandes et al. 2014 [common] n(studies)=13, n(estimates)=15
- Updated data [common] (RVE) n(studies)=46, n(estimates)=458
- Updated data [heterogenous] (RVE)
Treatment effects by outcome domain

The effects on financial knowledge are bigger than the effects on behaviors.
How big are the effects?

- Effects of financial education on *financial knowledge* are comparable to studies on math and reading (Hill et al. 2008; Cheung and Slavin 2016; Fryer 2016).

- Effects of financial education on *financial behaviors* are comparable to meta-analyses of interventions in other domains
  - anti-smoking (Rooney & Murray 1996)
  - tailored printed health interventions (Noar et al. 2017)
  - energy conservation (Karlin et al. 2015)
A scheme for interpreting effect sizes from causal studies (Kraft 2018)

<table>
<thead>
<tr>
<th>Effect Size</th>
<th>Cost Per Pupil</th>
<th>Cost-Effectiveness Ratio (ES/Cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (&lt; $500)</td>
<td>Moderate ($500 to &lt;$4,000)</td>
</tr>
<tr>
<td>Small (&lt;.05)</td>
<td>Small ES / Low Cost</td>
<td>Small ES / Moderate Cost</td>
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<tr>
<td>Medium (.05 to &lt;.20)</td>
<td>Medium ES / Low Cost</td>
<td>Medium ES / Moderate Cost</td>
</tr>
<tr>
<td>Large (.20 or &gt;)</td>
<td>Large ES / Low Cost</td>
<td>Large ES / Moderate Cost</td>
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</tbody>
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Notes: ES = Effect Size

(Kraft 2018, p. 20)
Are interventions cost-effective?

- Using Kraft’s (2019) scale of educational interventions, effects are "medium/large."
- Average intervention has low cost per participant (mean costs are $60.40 and median costs are $22.90)
- With the data we have, for "medium effect sizes," Kraft’s educational intervention scale would say average cost per participant of $60 implies "low cost."
Main takeaways

1) Financial education works! Recent work shows clear evidence of positive effects of financial education on financial behaviors (+knowledge)
   Statistical effect size is at three times as large as the effect in Fernandes et al. (2014)
   - It may be up to five times as large (when allowing for between-study heterogeneity in true effects)
   - Robust to a lot of different approaches to meta-analysis and even when accounting for publication selection for statistical significance

2) Policy recommendations should be based on economic effect sizes, not statistical effect sizes

3) No evidence of “rapid decay” but no evidence against it either
It is time to build a financially resilient society

Source: https://www.motherjones.com/food/2020/04/these-photos-show-the-staggering-food-bank-lines-across-america/
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