Discussion on Mankeekar and Jackson



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HCEO Measuring and Assessing Skills
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Outline



Summary and Relevance

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Summary



- Great ambition:
 - ► Go beyond standard measures of "intelligence"
 - ► Take into account not only **multiple skills**, but also the **context** in which they are measured
- ► Relevant to Economics and Social Science
 - ► Measurement is **not** commonly the **focus or priority**
 - Allows for much better assessment and better design of social policy
- ► Relevant to Science
 - Obtain measures of human development

Formalizing



► Follow Heckman and Cunha (2007) and write:

$$\underbrace{\boldsymbol{\theta}_{a+1}}_{\text{skills}} = \underbrace{\boldsymbol{\Psi}_a}_{\text{technology}} \left(\underbrace{\boldsymbol{\theta}_a}_{\text{o}}, \underbrace{\boldsymbol{\theta}_a^p}_{\text{o}}, \underbrace{\boldsymbol{I}_a}_{\text{investment effort unobserved}}, \underbrace{\boldsymbol{\eta}_a}_{\text{unobserved}} \right) \tag{1}$$

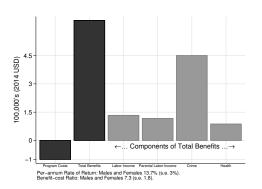
- $ightharpoonup e_a$: effort at measurement, usually in η_a
 - lacktriangle Intending to measure e is already a lot of progress

Current State I



▶ We can do a lot with what we currently measure

Life-cycle Benefits of an Influential Early Childhood Program



Source: García, Heckman, et al. (2017)

▶ But of course miss a lot: no value to skills (only inputs)

Current State II



▶ But we can also do very little

Missing the Whole Point



"We reviewed data from 67 high-quality interventions—all of which included some degree of pre-literacy and early math skill-building and most of which targeted economically disadvantaged children—and we found that the effects [on IQ tests] faded startlingly fast: falling by half within a year and by half again two years later." Source: Washington Post (February 17, 2017)—both figure and text.

▶ ...and miss the whole point

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Summary and Relevance



- ► How **predictive** are game scores?
- ▶ Is it possible to **anchor game scores** to monetary measures?
- ► How to **separate** the game score from the "gamer advantage"?
 - ... which current tests do not generally do