Direct and Spillover Effects of Vocational Training

KUGLER ET AL. (2016)

Effects on formal education

- The most innovative part of this project is the complementarity of VT and schooling.

  - Contrast with similar programs in SSA, where similar training programs fail – potentially because of the lack of complementary skills/education.
    - However, YiA also worked for low-educated workers who did not go back to school.

- Reminiscent of Jensen and Miller (2015)

Sustained effects on LM outcomes

- Effects on formal sector participation and earnings sustained in the longer-run…

- Why didn't these effects fade out?
  - Meaningful and relevant HC accumulation
  - Performance-based financing may have played a role here…

- The heterogeneity of effects by gender very similar to Blattman, Fiala, and Martinez (2014)
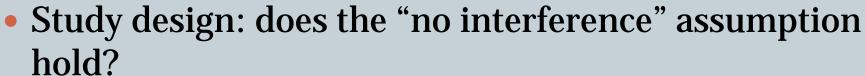 - …and, to some extent, provide a meaningful contrast to de Mel, Mckenzie, and Woodruff (2008; 2012)

Spillover effects on relatives

- Good data work using the SISBEN.
  - Fortunate to be able to match relatives of both T and C equally well...

- Positive spillovers on siblings (younger?) finishing high school:
  - Effects higher for lower educated applicants at baseline
  - Also higher for same sex siblings

- Effects on siblings important – and can be divergent from others in the community (Baird, de Hoop, Özler 2013)

Some suggestions…

- Study design: does the "no interference" assumption hold?

Suggestions

- Study design: does the "no interference" assumption hold?

Blocked Design: 50% of every cluster is treated:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Clustered Design: 50% of clusters are completely treated:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Partial Population Design: Both 'pure' controls and 'within cluster' controls, saturation fixed:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Randomized Saturation Design: Treatment saturations directly randomized:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Some suggestions...

- Study design: does the "no interference" assumption hold?

- Heterogeneity by "tightness of the labor market," but concerns about:
  - Endogeneity
  - Lack of variation
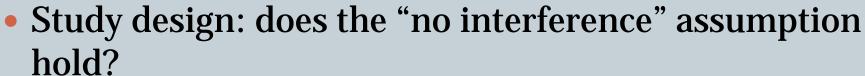 - Lack of power

AKM (2011 – Table 6, Panel A)

TABLE 6—DIFFERENTIAL IMPACT OF TREATMENT IN COURSES WITH LOW DEMAND

	Employment	Paid employment	Formal employment	Contract
Panel A. Women				
Treated	0.057	0.063	0.091	0.105
	(0.036)	(0.040)	(0.033)	(0.030)
Treated × high	−0.006	0.009	−0.053	−0.074
probability of treatment	(0.061)	(0.063)	(0.0820	(0.090)
Observations	1,367	1,474	1,202	1,173

Some suggestions…

- Study design: does the "no interference" assumption hold?

- Heterogeneity by "tightness of the labor market," but concerns about:
  - Endogeneity
  - Lack of variation
  - Lack of power

- Other RCTs also fall into this trap, so it would be useful to have proper spillover designs to establish some baseline in new explorations…

Suggestions

- Study design: does the "no interference" assumption hold?

Blocked Design: 50% of every cluster is treated:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Clustered Design: 50% of clusters are completely treated:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Partial Population Design: Both 'pure' controls and 'within cluster' controls, saturation fixed:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

Randomized Saturation Design: Treatment saturations directly randomized:

| Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 |

More (minor) suggestions

- Number of tables and analysis of heterogeneity
  - 16 tables – all broken down by sex, education, and also follow-up duration.

- I'd suggest a smaller number of tables that show direct and spillover effects for multiple outcomes, then one or two tables for heterogeneity.
  - Interact the effects with continuous years of education and sex;
  - Consistent with the fully-interacted model preferred by Imbens and Rubin (2015)...

Suggestions

- Clarify the distinction between being matched to administrative data vs. the outcome being an extensive or intensive margin variable
  - Appendix of variable definitions would be useful
  - Interpretation of geographic mobility?
- Baseline imbalance
  - Show F-test of joint significance?
  - Did randomization go OK? (more detail would be useful)
    - Imbalance more likely when P(T) moves away from 0.5...

- Did losers re-enter other lotteries?
  - Similar to issues of migration lotteries in the Pacific Islands...