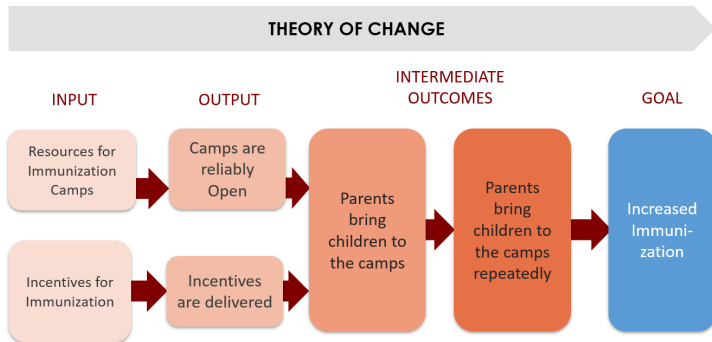


Data Collection

รศ.ดร.วีระชาติ กิเลนทอง
สถาบันวิจัยเพื่อการประเมินและออกแบบนโยบาย (RIPED)
มหาวิทยาลัยหอการค้าไทย (UTCC)

9 ตุลาคม 2565

นักวิจัยควรเก็บข้อมูลที่จะช่วยตอบ Theory of Change



- ต้องการข้อมูลอะไรบ้างที่จะตอบโจทย์ที่ทำการทดลอง
 - Primary outcomes
 - Secondary outcomes
 - Control variables
- ข้อมูลที่ต้องการจะได้อะไร?
 - Administrative data?
 - Survey data: interviewed or self-completed? on-paper or on-tablet/mobile?
- มีทรัพยากรทั้งด้านการเงิน กำลังคน และเวลา มากน้อยแค่ไหน?
- Logistic เป็นประเด็นสำคัญมาก

HighScope Perry Preschool Program

Authors: James J. Heckman et al.

Journal of Public Economics, 2010 and

American Economic Review, 2013

- This paper program using a (small-scale of 123 children) RCT to evaluate the effectiveness of the HighScope Perry Preschool Program
 - The overall annual social rate of return to the Perry program is in the range of 7–10%
 - The benefit-cost ratio for the Perry program, accounting for dead-weight costs of taxes and assuming a 3% discount rate, ranges from 7 to 12 dollars per person
 - the Perry Preschool Project boosts long-term outcomes through noncognitive skills, by reducing externalizing behavior problems
 - cognitive skills play almost no role
 - academic motivation has an important role for females but not much for males

- use local data on costs of education, crime, and welfare participation whenever possible
- estimate that adjust for the dead-weight costs of taxation
- use methods to extrapolate missing future earnings (for age 40-65 years old) and interpolates missing earnings (for age 19-40 years old) for both treatment and control group participants
- formulate a systematic way to estimate the mediating effects of those key factors
- use a factor model, where key inputs are latent factors but an outcome is not

- Numerous measures were collected annually from ages 3–15 on a variety of socioeconomic outcomes for treatment and control participants. There were three additional follow-ups at ages 19, 27, and 40
- Early Cognition:
 - Stanford-Binet: IQ test (Terman and Merrill, 1960), age 3-10 years old
 - Leiter test: non-verbal IQ test (Arthur, 1952), age 7 and 9 years old
 - PPVT: IQ test (Dunn, 1965), age 9 years old
 - CAT: California Achievement Test, age 8 and 14 years old
- **Early Noncognitive Skills:** both were reported by teachers, age 6-9 years old
 - Pupil Behavior Inventory (Vinter et al., 1996)
 - Ypsilanti Rating Scale (Weikart, Bond, and McNeil, 1978)
- BUT not much information from the household

- Follow-up interviews were conducted when participants were approximately 3-15, 19, 27, and 40 years old.
 - with over 90% of the original sample participating in the age-40 interview.
 - these provided detailed information about their life-cycle trajectories including schooling, economic activity, marital life, child rearing, and incarceration.
 - Perry researchers collect administrative data in the form of school records, police and court records, and welfare program participation records

Estimating the Production Function for Human Capital:
Results from a Randomized Controlled Trial in Colombia

Authors: Orazio Attanasio et.al

American Economic Review, 2020

- examines the channels through which a randomized early childhood intervention in Colombia led to significant gains
 - estimates the determinants of parents' material and time investments and evaluates the impact of the treatment on such investments
 - estimates the production functions for cognitive and socio-emotional skills, showing that the effects of the program can be explained mainly by increases in material investment

- a large-scale home visiting program in Colombia has a significant impact on child cognition and social-emotional skills
 - this project is interesting, especially on how the home visitors are chosen from local women (make it scalable)
 - this is another example of an attempt to scale up a smaller-scale successful intervention
- the key channel of the treatment effect is through material investment

● Household survey

- socioeconomic characteristics, parenting, parental characteristics, and maternal skills including verbal ability, IQ (Raven), depressive symptoms (CES-D)
- **parental investment using UNICEF Family Care Indicators**
 - ▶ material: types and numbers of play materials (interviewer observations)
 - ▶ quality time: types and frequency of play activities with adult older than 15 (last 3 days)

● Children developmental outcomes

- maternal reports: vocabulary checklists (MacArthur), child temperament (ICQ); attention and inhibitory control (ECBQ)
- direct assessment of the child: the Bayley Scales

The Impacts of a Multifaceted Pre-natal Intervention
on Human Capital Accumulation in Early Life

Authors: Pedro Carneiro, Lucy Kraftman, Giacomo Mason, et al.

American Economic Association, 2021

- They have evaluated the longer-run impacts of The Child Development Grant Programme (CDGP) using a large-scale randomized control trial in Northern Nigeria
 - Father and mother receive information and practices of child care and nutrition during the pre-, peri- and post-natal periods
 - The mother receives unconditional cash transfers each month from pregnancy until the child turns two

- The impact of this program are:
 - improved health outcomes of children
 - notable reductions in rates of stunting
- The program boosts women labor supply, and allows them to expand self-employment activities through investing in livestock assets
 - It builds resilience to shocks when food is typically scarce
 - Children can have more protein

- They surveyed pregnant women and their husbands:
 - knowledge related to pregnancy and infant nutrition, infant and young child feeding practices,
 - **consumption, savings/borrowing, asset ownership/investments, and their labor activities,**
 - characteristic of the household
- Survey for three rounds:
 - The baseline survey took place from August to October 2014.
 - The midline survey was conducted in October/November 2016.
 - The endline survey took place from August to October 2018.

Outsourcing Education: Experimental Evidence from Liberia
Authors: M. Romero, J. Sandefur, and W. Sandholtz
American Economic Review, 2020

- This paper evaluates the Partnership Schools for Liberia (PSL) program, which delegated management of 93 public schools to 8 different private organizations
 - teachers in PSL schools were civil servants
 - providers were responsible for daily management of schools

- These gains in test scores reflect a combination of additional inputs and improved management
 - The ITT effects on English and Maths are 0.18 and 0.18 SD
 - The ToT effects on English and Maths are 0.21 and 0.22 SD
- They do not find heterogeneity in learning gains or enrollment by student characteristics, but there is significant heterogeneity **across providers.**

- Data from schools were collected twice
 - Sept-Oct 2016: beginning of school year (2-8 weeks after the intervention began)
 - May-June 2017: end of school year
- Student Outcomes:
 - test both targeted subjects and also non-targeted subjects (to check if the effects result from teach-to-test approach)
 - one-on-one tests (either at school or at home) since many students cannot read
 - single adaptive test for all grades with stop rules using IRT to estimate test scores
- School Data:
 - Stallings Classroom Observation Tool
 - Spot checks for teacher absence and class time
- Household survey: for 33 percent of the sample (about 1,200)
- BUT they decided not to use the baseline score because some of the schools were tested (baseline) after the program has started

Activities of Each Providers

- The data are from teacher interview
- Stella Maris did not do much
- Omega and Bridge provided computer
- Most of them focus on textbooks and teacher trainings

| | | Provider | | | | | | | |
|------------------|-----------------------------------------------------|----------|------|-------|------|--------|--------|-----------|-----|
| | | Stella M | YMCA | Omega | BRAC | Bridge | Rising | St. Child | MtM |
| Provider support | Provider staff visits at least once a week (%) | 0 | 54 | 13 | 93 | 76 | 94 | 91 | 96 |
| | Heard of PSL (%) | 42 | 85 | 61 | 42 | 87 | 90 | 68 | 85 |
| | Heard of (provider) (%) | 46 | 96 | 100 | 95 | 100 | 100 | 100 | 100 |
| | Has anyone from (provider) been to this school? (%) | 42 | 88 | 100 | 94 | 100 | 100 | 99 | 100 |
| Ever provided | Textbooks (%) | 12 | 96 | 73 | 94 | 99 | 71 | 94 | 96 |
| | Teacher training (%) | 0 | 77 | 62 | 85 | 87 | 97 | 93 | 96 |
| | Teacher received training since Aug 2016 (%) | 23 | 46 | 58 | 45 | 50 | 81 | 58 | 37 |
| | Teacher guides (or teacher manuals) (%) | 0 | 69 | 75 | 54 | 97 | 94 | 68 | 98 |
| | School repairs (%) | 0 | 12 | 25 | 24 | 53 | 52 | 13 | 93 |
| | Paper (%) | 0 | 92 | 30 | 86 | 70 | 97 | 88 | 98 |
| | Organization of community meetings (%) | 0 | 54 | 27 | 69 | 73 | 87 | 83 | 91 |
| | Food programs (%) | 0 | 8 | 2 | 1 | 1 | 10 | 0 | 17 |
| | Copybooks (%) | 4 | 65 | 30 | 92 | 18 | 97 | 94 | 91 |
| | Computers, tablets, electronics (%) | 0 | 0 | 94 | 0 | 99 | 3 | 3 | 2 |

Activities of Each Providers (Con't)

- BRAC, More than Me and Street Child emphasize on classroom observation
- More and Me and Rising Academies used activities across several dimensions
- Almost none of them monitor sanitation issues nor met with PTA committee

| | | | | | | | | | |
|-------------------|-----------------------------------------------------|----|----|----|----|----|----|----|----|
| Most recent visit | Provide/deliver educational materials (%) | 0 | 4 | 45 | 17 | 18 | 26 | 29 | 50 |
| | Observe teaching practices and give suggestions (%) | 0 | 19 | 45 | 81 | 65 | 45 | 74 | 85 |
| | Monitor/observe PSL program (%) | 0 | 12 | 23 | 11 | 13 | 13 | 35 | 65 |
| | Monitor other school-based government programs (%) | 0 | 0 | 7 | 5 | 10 | 6 | 18 | 9 |
| | Monitor health/sanitation issues (%) | 0 | 8 | 9 | 2 | 5 | 0 | 10 | 28 |
| | Meet with PTA committee (%) | 0 | 12 | 8 | 10 | 7 | 0 | 21 | 41 |
| | Meet with principal (%) | 0 | 12 | 54 | 36 | 38 | 6 | 51 | 63 |
| | Deliver information (%) | 0 | 12 | 36 | 16 | 8 | 6 | 16 | 35 |
| | Check attendance and collect records (%) | 42 | 23 | 43 | 56 | 39 | 19 | 66 | 70 |
| | Ask students questions to test learning (%) | 4 | 4 | 24 | 33 | 18 | 58 | 44 | 43 |