Can Public Works Programs Reduce Youth Crime?

Evidence from Papua New Guinea's Urban Youth Employment Project

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Today's presentation

1. Context
   - PNG context
   - Literature review
   - The Urban Youth Employment Project
2. Results

Summary of main findings

- Program: A month of public works employment or a year of on the job training to idle youth
- Program made participants less likely to engage in several forms of anti-social behavior
  - Reduced probability of being victimized by crime
  - Increased subsequent employment rates
- But program had little discernible effect on perpetration of crime
  - Especially violent crime

Context

Crime rates are among the highest in the world

- Very high levels of crime and violence in and around Port Moresby.
  - 33 homicides per 100,000 persons in Port Moresby (NCD) in 2010
  - 54% of youth report to have been a victim of crime, and 35% report to have been engaged in crime at some point
  - At least two WB staff members robbed in last 5 years

- Compelling perception that youth crime stems from lack of economic opportunities

Empirical evidence on employment and crime

- Most evidence is from the US and traditionally finds limited effects (Bushway, 2010)
- But newer studies find larger effects
  - Increases in youth unemployment (instrumented by changes in industry structure) increases burglaries, thefts, and drug offenses (Fougere et al, 2008)
  - Other studies also find significant effects of unemployment and wage on property and violent crime (Lin, 2007, Gould, 2002)
  - Youth job corps (30 weeks of training) reduced crime but only saved 6 percent of program costs (Kluve, 2014)
  - 8 week summer jobs in Chicago greatly reduce probability of subsequent arrest by 43 percent (Heller, 2014)

What about developing countries?

- NREGS reduces kidnappings in India but results are not robust (Das, 2015)
  - NREGS did not reduce Maoist violence in India (Dasgupta et al, 2014, Feltzer, 2014, Khanna and Zimmerman, 2015)
- Employment program in Liberia reduced illicit extraction and propensity to join conflict in Cote d' Ivoire
- but led to no changes in overall illicit activity or peer groups (Blattman and Annan, 2015).

UYEP

UYEP program

PDO: To provide disadvantaged urban youth in the National Capital District (NCD) with income from temporary employment opportunities, and to increase their employability.

-But underlying objective was to reduce crime

3 Components:

(1) the Youth Job Corps (YJC)

Community awareness, mobilization and screening campaign followed by one week life skills training and 40 days of labor-intensive employment;

(2) the Skills Development and Employment Scheme

One month Pre-Employment Training (PET) and a further 5 months of on-the-job training for eligible youth;

(3) Project Management: implementation and TA to NCDC.

UYEP program

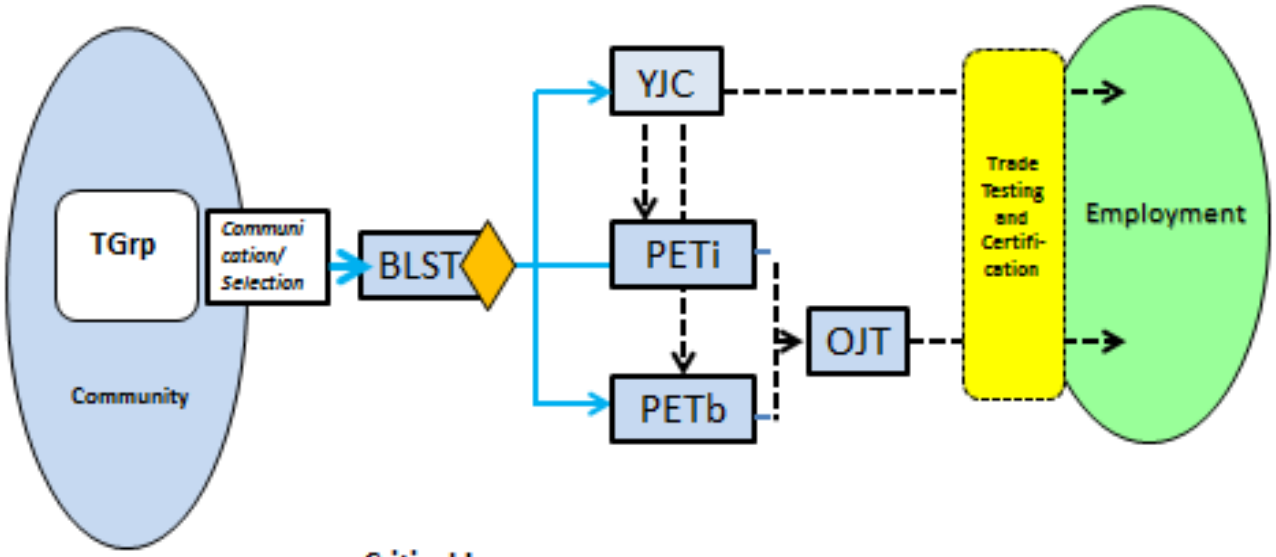
- Project financed by IDA credit of $ 15.8 million, and several Trust Funds, amounting to a total extra $ 1.8 million.

- Project began in November, 2012
  - Served 8,500 youth by December 2015
  - Recently extended and expected to reach 17,500 youth by 2019

- Youth were eligible if they were:
  - Between 16 and 35
  - Out of work and school for past 6 months
  - Resided in National Capital District for past year

UYEP program

Current Training Process



Critical Issues:

1. What is the funnelling policy from BLST-YJC-PETs-OJT
2. What to do with YJC finishers not absorbed in PETs
3. What to do with PET finishers not placed in OJT
4. What to do with OJT finishers not hired for regular employment

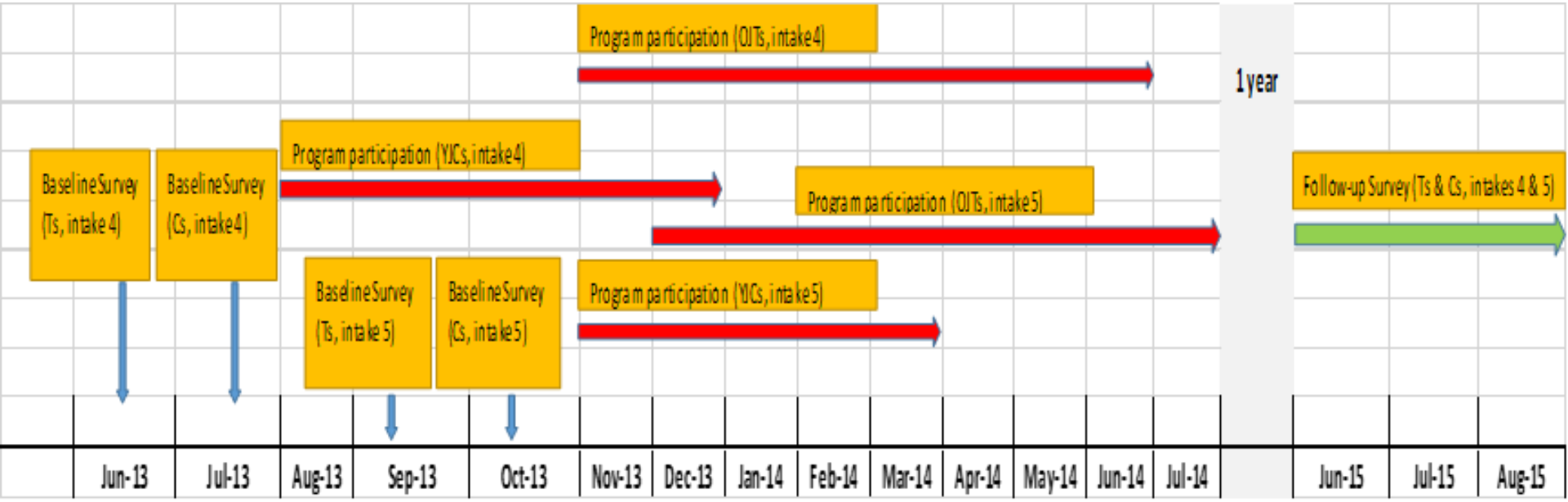
M and E Framework

Survey	Purpose	Sample population	Frequency
Eligibility Screening Survey	To determine eligibility and monitor who was screened and selected	All youth who turn up for screening	Each intake (every 2 months)
Eligibility Baseline Survey	To collect more detailed information on youth, including crime and social behavior	Eligible youth as per ESS	Intakes 4 and 5 (June, September 2013)
Follow up survey	To estimate program impact	Selected participants (N=588)	June and July, 2015 (1 year after program completion)

Selecting controls

- Initial design envisioned random selection from pool of eligible applicants
  - Carried out successfully for intakes 1 and 2
- Plan modified due to unrest
  - Rejected applicants from intake 1 and 2 attacked selected youth for intake 3
  - Because violated perceived norm of first come, first serve
- Led to change in evaluation design
  - Interviewed similar youth from control villages

Project timeline

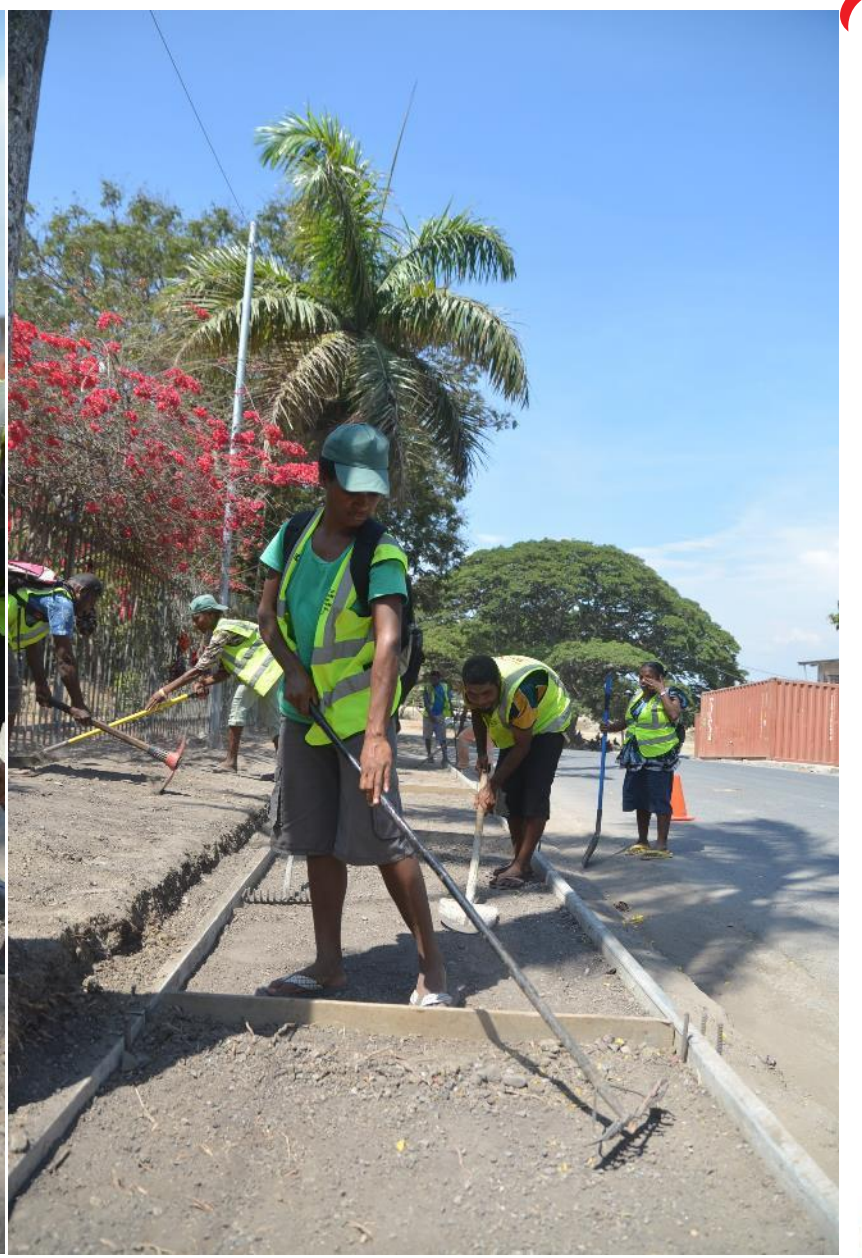


Note: Ts = treatments, Cs = controls

High attrition

	Eligible	Selected			Recontacted		
	All	Treatment	Control	Total	Treatment	Control	Total
Intake 4	1,199	381	270	651	168	110	278
Intake 5	1,014	362	299	661	170	140	310
Total	2,213	743	569	1212	338 (45.5%)	250 (44.0%)	588

- 45 percent recontacted and followed-up
  - Reflects mobility of youth and difficulty of tracking, security situation
  - How to reduce attrition in this environment?
- No significant differences in baseline outcomes between youth that were and were followed up
  - Also, attrition rates are very similar for treatments and controls
- But possible that those that weren't followed up had different program effects



URBAN YOUTH EMPLOYMENT PROJECT

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

Why would employment reduce crime?

- Intuitive appeal of employment program as crime-fighting policy can be explained by two ways
  - Rational choice theory (Becker, 1968, Ehrlich, 1973)
  - Disappearing jobs leads to destruction of social bonds and communal organization (Wilson, 1996)
- But reality could be more nuanced
  - Criminals and communities may be stigmatized,
    - Making it difficult to obtain or keep a job, or limiting the effectiveness of programs
  - Criminals may adjust to economic improvements on the intensive rather then extensive margin (Reuter et al., 1990; Berman, et al., 2011).

Empirical results – sample balance

To establish **sample balance**, we compared basic socioeconomic characteristics of the following groups:

- Treatments (Ts) vs. other eligible youth → OK
- Ts (followed-up) vs. Ts (not followed up) → OK
- Controls, Cs (followed-up) vs. Cs (not followed up) → OK
- Cs vs. Ts → we find that Ts are on average: (i) 1.7 years older; (ii) 0.8 years more education; (iii) less likely to have a formal job in the past; no significant differences in other characteristics;

Empirical results – example of the sample balance test (Ts vs. other eligible)

Variable of interest	Other eligible (mean/sd) (1)	Treatments (mean/sd) (2)	Difference (mean/se) (3)	
Individual's basic characteristics:				
Age	24.65	24.70	-0.05	
	4.92	*4.85*	*0.22*	
Male (1 if male, 0 if female)	0.65	0.63	0.02	
	0.48	*0.48*	*0.02*	
Married	0.34	0.37	-0.03	
	0.47	*0.48*	*0.02*	
Years (grades) of education completed	9.13	9.32	-0.19	
	2.79	*2.81*	*0.13*	
Individual's household characteristics:				
Household size	9.01	9.29	-0.28	
	4.59	*4.46*	*0.20*	
N of females in a household	3.91	4.09	-0.18	
	2.38	*2.63*	*0.11*	
N of males (16+) in paid work	1.11	1.18	-0.06	
	1.10	*1.20*	*0.05*	
Dwelling has floors made of concrete	0.05	0.06	-0.01	
	0.23	*0.24*	*0.01*	
Dwelling has floors made of wood	0.92	0.90	0.02	
	0.27	*0.30*	*0.01*	
Individual's employment characteristics:				
Never had a wage (formal) job	0.75	0.79	-0.04	**
	0.43	*0.41*	*0.02*	
If earned money through informal job/self-employment last month	0.35	0.36	-0.02	
	0.48	*0.48*	*0.02*	
If searched for a paid job last month	0.33	0.32	0.00	
	0.47	*0.47*	*0.02*	
N of observations	**1470**	**743**		

Notes: Table reports means and standard deviation (error) for two groups, and its difference.
*** p<0.01; ** p<0.05; * p<0.1

Empirical results – important note on Ts and Cs

- The DD evaluation strategy amounts to comparing the *change* in the outcome of interest for our treatment group to the *change* for the control group.
- The key assumption for any DD strategy is that the outcome in treatment and control group would follow the same time trend in the absence of the treatment (i.e., common trend assumption).
- This does not mean that the treatment and control group have to have the same mean of the outcome of interest.

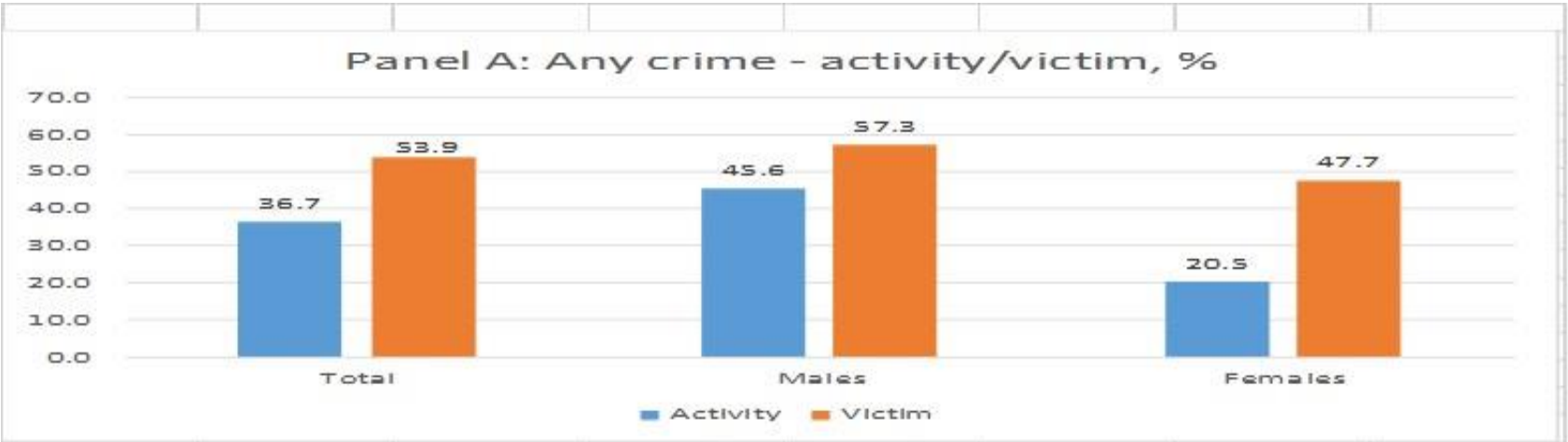
Empirical results

We focus on 3 groups of outcomes:

- **Social behavior and social environment** (e.g., hanging out with friends late night; getting drunk often, etc.);
- **Engagement in antisocial behavior or criminal activity**;
- **Incidence of being a victim** of a violence/criminal activity;

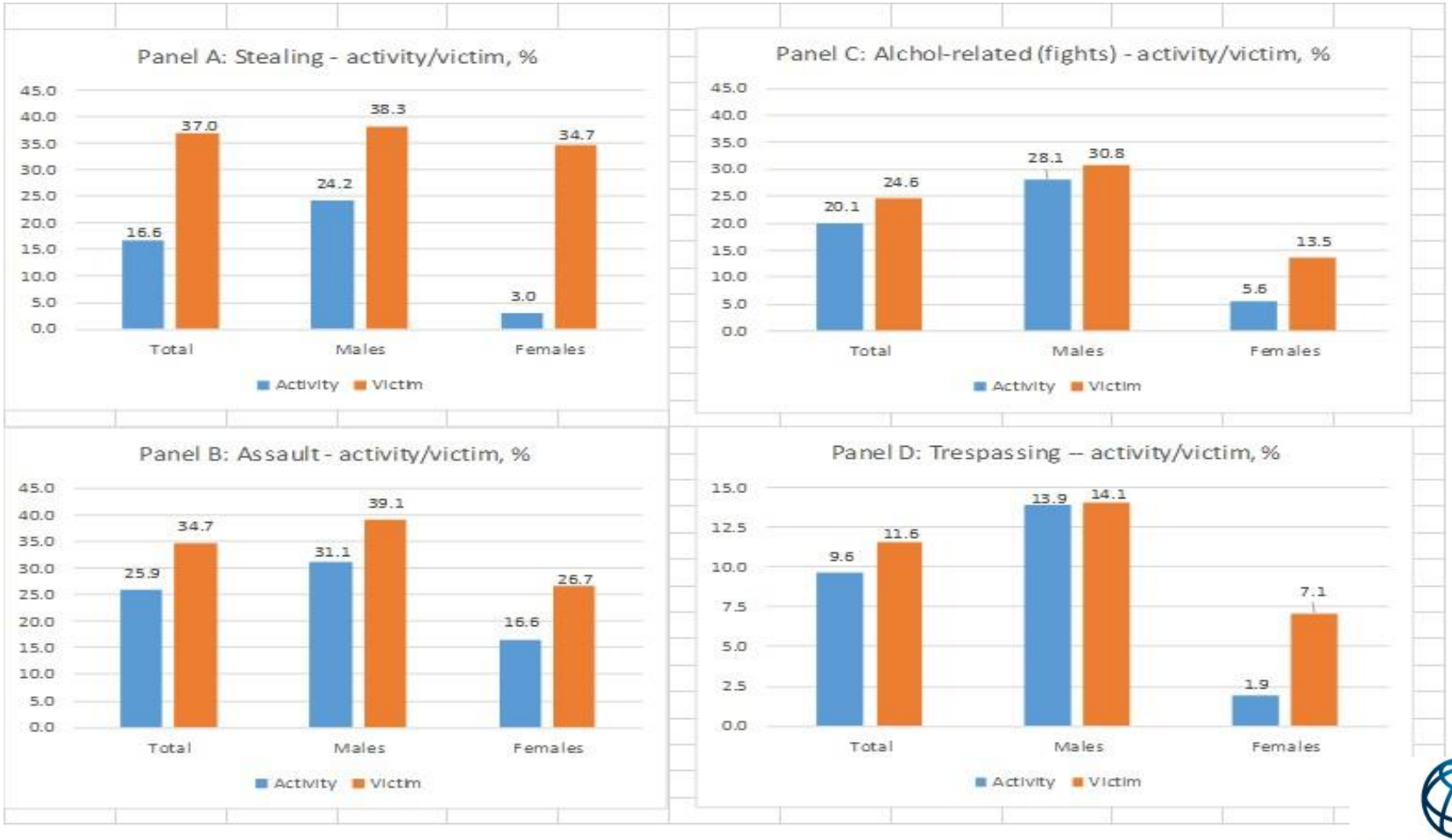
Empirical results – levels of some selected outcomes

High incidence of reported crime perpetration and victimhood



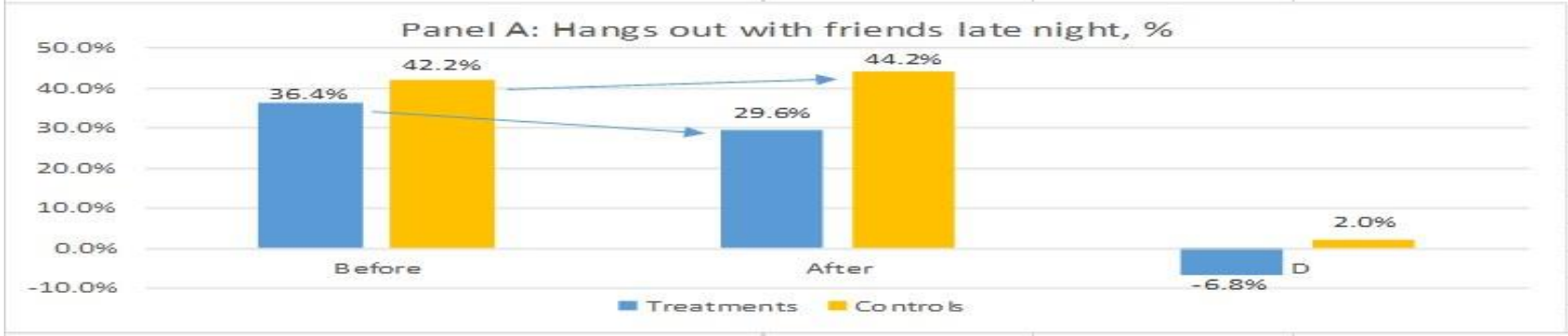
Empirical results – levels of some selected outcomes

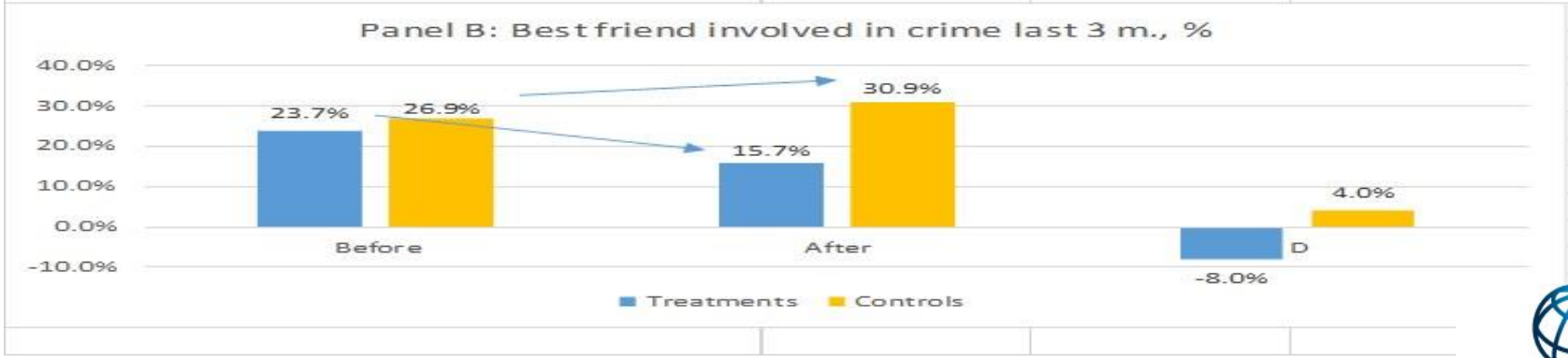
High incidence of stealing and assault (or being a victim of it)



Empirical results – (a) *Impacts* (of UYEP) on social behavior/environment

Significant reduction in the reported incidence of hanging out with friends late at night & having a friend involved in crime – Panel A: DD value of 8.8 pp (significant at 5% level); 24.2% decline relative to the baseline value for Ts; Panel B: DD value of 12 pp (1% level);





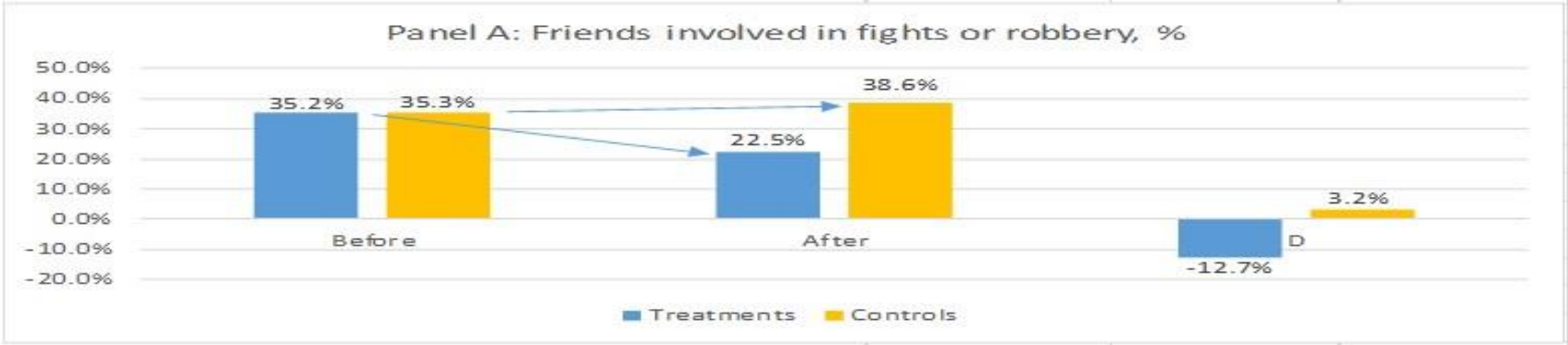
Empirical results – (a) *Impacts* (of UYEP) on social behavior/environment

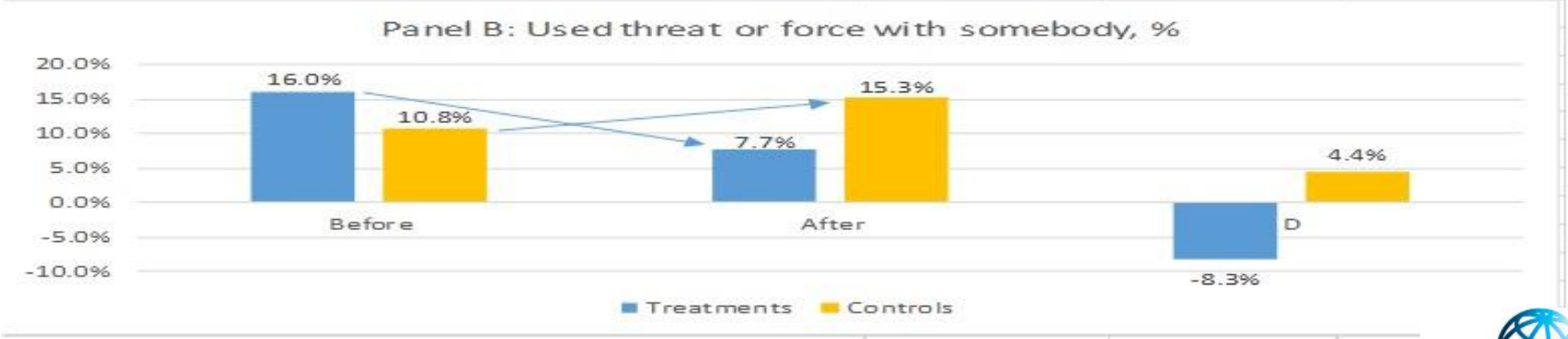
We do not find any significant impact for the following outcomes of interest:

- *Reported incidence of getting drunk often* (declining trend for both Ts and Cs)
- *Chewing a betel nut*, which is a mild stimulant very popular in PNG;
- *Use of drugs*, such as marijuana/cannabis;

Empirical results – (a) *Impacts* (of UYEP) on social behavior/environment

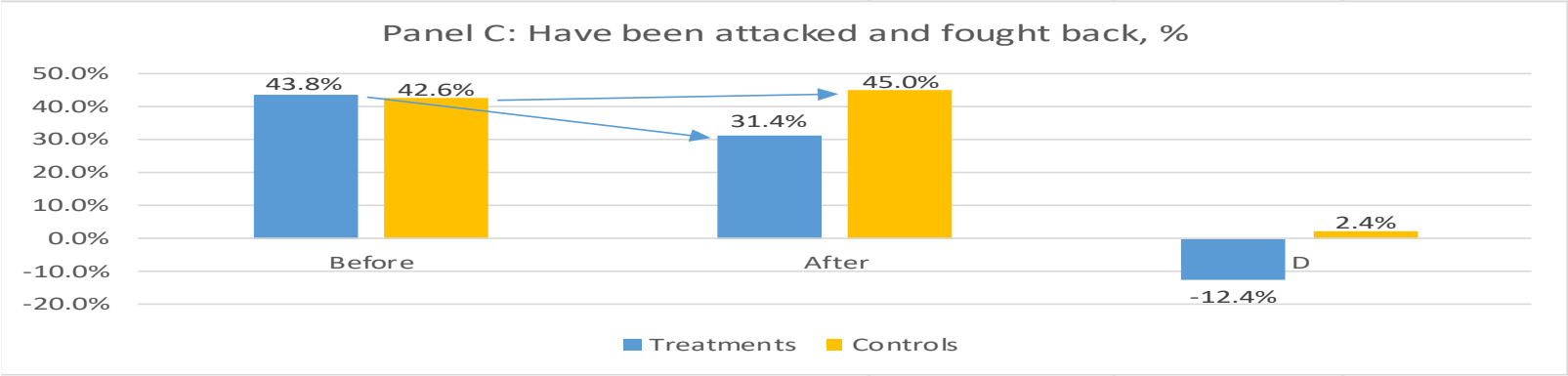
Significant reduction in the reported incidence of: (i) having friends involved in fights/robbery recently; (ii) incidence of using threat/force with somebody;

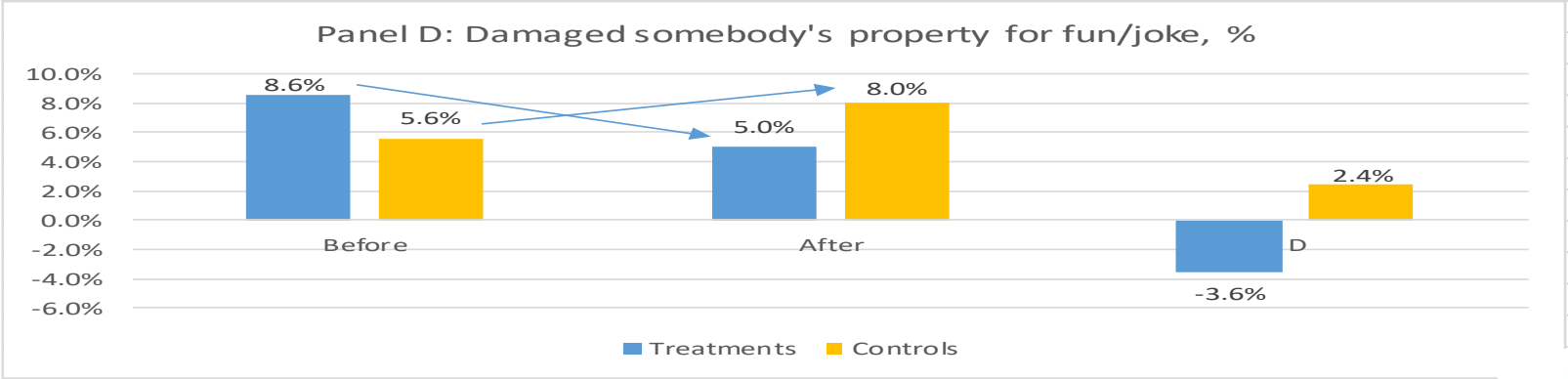




Empirical results – (a) *Impacts* (of UYEP) on social behavior/environment

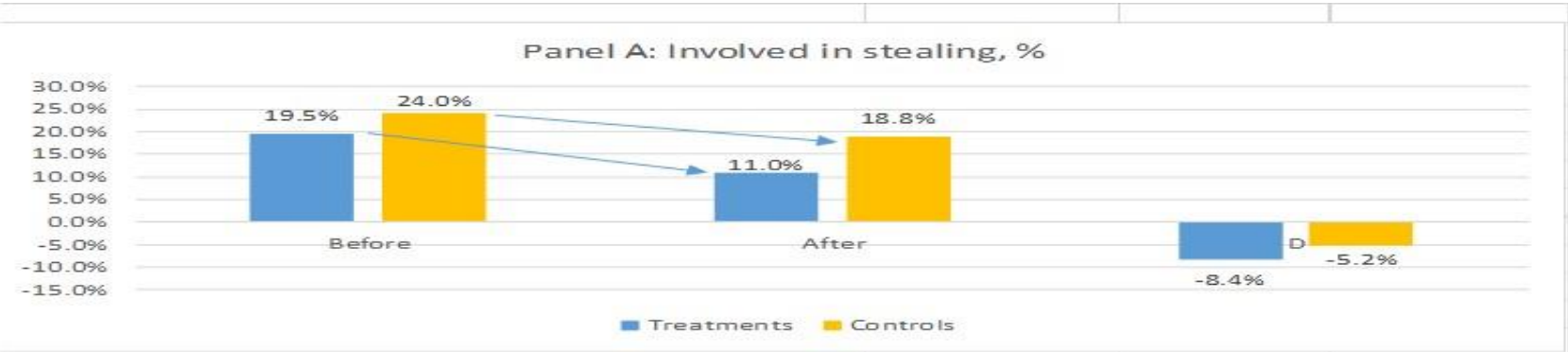
Significant reduction in the reported incidence of: (iii) having being attacked and fighting back; (iv) doing damage to somebody's property for fun or joke;

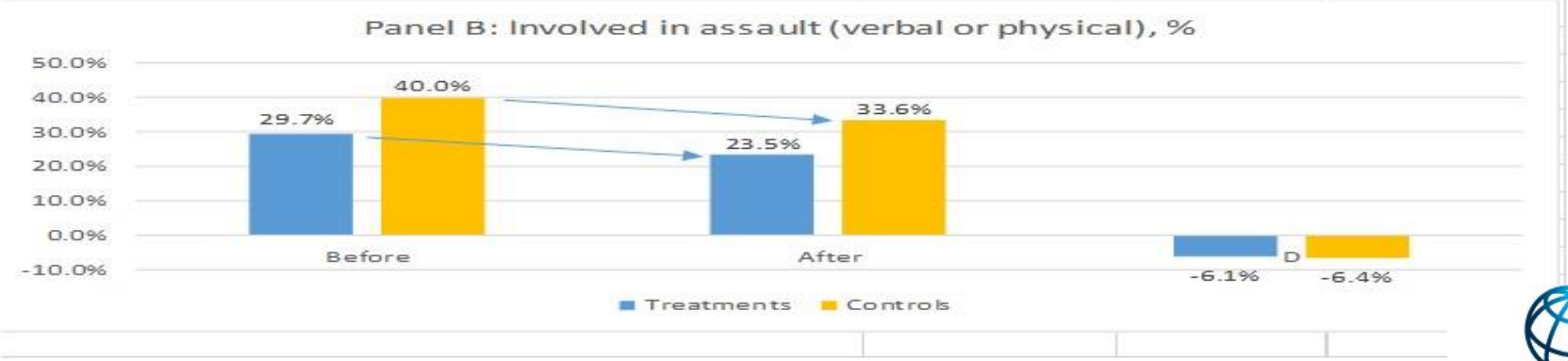




Empirical results – (b) *Impacts* (of UYEP) on criminal activity

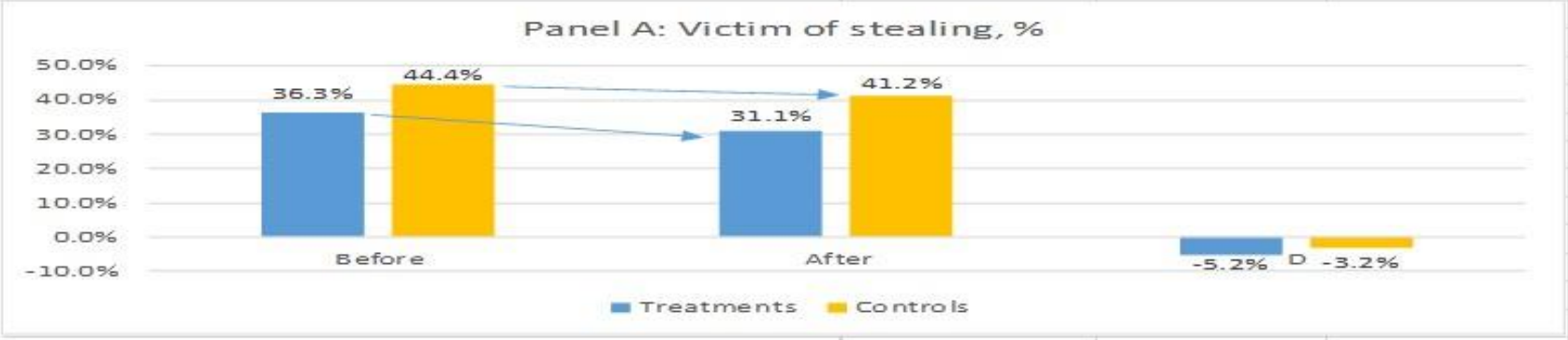
We find <u>no impact</u> on: (i) stealing; (ii) engagement in assault (physical or verbal) (there is a decline in these indicators for both Tc & Cs); (iii) *alcohol-related crime* (even though decline for Ts is significant at a 1% level); (iv) trespassing (there is a decline for Ts and Cs)

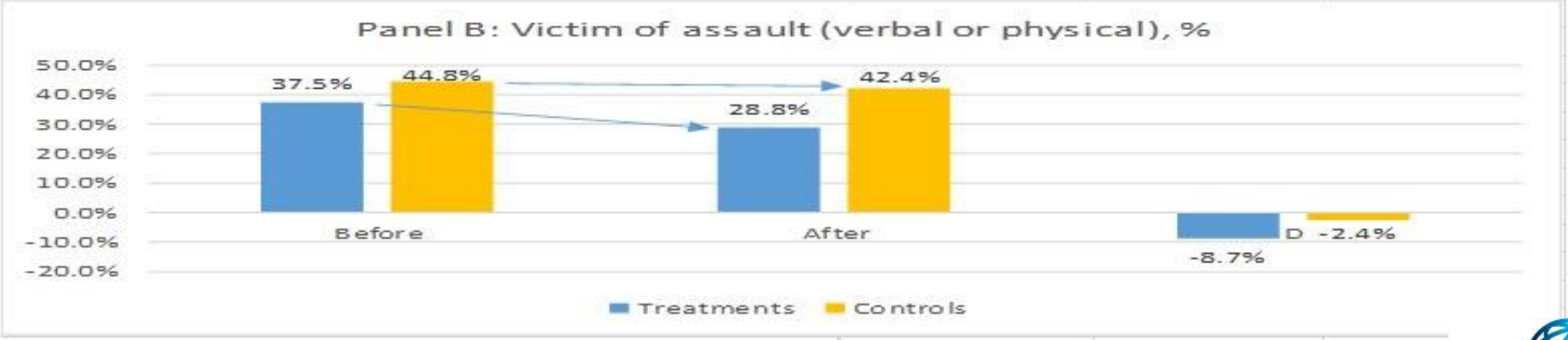




Empirical results – (c) *Impacts* (of UYEP) on being a victim of criminal activity

We find: (i) no impact on being a victim of stealing/theft; (ii) *impact on being a victim of assault* (DD value of 6.3pp, or a decline of 16.9% (significant at a 5% level) relative to baseline for Ts)





Potential explanations for positive results:

- Youth in the treatment group learned *positive social values* through program participation, and built quality social networks;
- Youth in the treatment group are *more likely to be employed* post program-participation, which raises the opportunity cost of anti-social or criminal activity;
  - 44 percent of participants report getting a job after program ended
  - Only 15 percent of control group had a wage job in the past 6 months.

Potential explanations for positive results:

- Those who report not being employed after graduation from the program *exhibit a more active (compared to pre-program participation) job search behavior*, which forces them to spend more time on this activity and to, likely, exhibit a better behavior; unemployed segment of the treatment group is more active in job search and is more confident in finding a job, compared to the control group;
- Youth participating in a program has a *safer money saving environment*, which puts them at a lower risk of opportunistic crime.

Lessons learned

- Executing program impact evaluations in fragile environments is challenging but worthwhile
- No sign of stigma when self-reporting criminal activity
  - Good to experiment in questionnaire design
- Randomization can be risky
  - Requires outstanding communication to manage expectations
- Alternatives raise issues
  - Selecting control villages requires assuming common trend
    - Scope to collect pre-baseline data or use census?
  - Would ranking applicants and comparing those just above and below the threshold have worked better?
    - But would only evaluates applicants close to the threshold…
- Reducing attrition is a challenge

Concluding remarks:

- The evidence on impacts across indicators is mixed;
- Significant impacts on several outcomes related to social behavior and social environment → hence **the benefits of UYEP can be seen in terms of changing attitudes and behaviors**, and not only in terms of employment;
  - Compared with employment outcomes, less likely to be influenced by graduates "jumping the queue" (i.e. general equilibrium effects)
- "It is not just what you do, it is how you do it" that matters: (i) Investing in youth, showing them respect and giving them credit for what they have done is important (e.g. graduation ceremonies, certificates, references, demand for more consultations); (ii) Youth now demanding increasing voice and participation.
- But no discernible effects on committing violent crime. Suggests that public works program is more of an investment in youth than a crime reduction program

Thank you