Can Development Programs Counter an Insurgency?
Evidence from a Field Experiment in Afghanistan

Andrew Beath, Fotini Christia, and Ruben Enikolopov
June 25, 2021
Overview

Development programs as a counterinsurgency tool (Afghanistan, Iraq, Philippines);

Limited and conflicting empirical evidence on effect of development projects on violence;
Rigor of evidence hindered by non-random assignment;

We identify dynamic effects of Afghanistan’s largest development program on insurgent violence using a randomized controlled trial and detailed data on security incidents;

We explore mechanisms driving identified effects using survey data;

We find a negative effect on violence overall, but substantial effect heterogeneity;

In areas in which insurgencies are locally-rooted, program reduces violence;
In areas dominated by non-local insurgents, program aggravate violence.
Active and tacit support by local population affects strength of insurgency;
Active support – direct participation – determines numerical strength of force
Passive support – shelter, sustenance, information – determines tactical efficacy

Support affected by:
(i) opportunity costs (active)
(ii) grievances (active and/or tacit)
(iii) intimidation (tacit)

Development projects may affect insurgencies by:
(i) increasing opportunity costs (↓ active)
(ii) redressing grievances (↓ active and/or tacit)
(iii) inviting intimidation (↑ tacit)
Empirical evidence is similarly mixed:

- *Berman, Shapiro and Felter (2011)*: U.S. military spending on small infrastructure reduced insurgent violence in Iraq

- *Crost, Felter and Johnston (2016)*: Gov’t-funded CCT program in Philippines reduced conflict during project implementation

- *Crost, Felter and Johnston (2014)*: Government CDD program in Philippines increased attacks by communist and Islamic insurgents during project preparation

The study seeks to better understand:

- **general effect** of projects on insurgencies
- **conditioning effects** of local context
National Solidarity Program (NSP)
The Schools the Taliban Won’t Torch

Maybe the most surprising characteristic of NSP projects is security related. In a survey last year of school burnings by the Taliban, Human Rights Watch observed that schools built by the NSP have less chance of being destroyed by insurgents than schools built by other aid programs. The reason, as Dennis de Tray explains, relates to the matter of local ownership. "If you're the Taliban, you feel some comfort in attacking things built by foreigners," de Tray says. "But you don't want to create animosity among citizens you're trying to recruit to your side."
National Solidarity Program (NSP)

Community Driven Development (CDD) program

Funded by Int’l Donors; Managed by Gov’t; Implemented by NGOs

35k+ villages in all provinces; $330m / year (2015)

Two Village-Level Interventions:

Create Gender-Balanced **Community Development Councils** (CDCs) through Secret Ballot Elections

Fund Village-Level **Sub-Projects** ($≤$60k / village) Selected and Managed by CDCs
National Solidarity Program (NSP)

Community Driven Development (CDD) program
Funded by Int’l Donors; Managed by Gov’t; Implemented by NGOs
35k+ villages in all provinces;  $330m / year (2015)
10 districts purposefully selected
NGOs selected 50 villages in each district.
Randomization

Matched-pair cluster randomization assigned 250 villages to treatment and 250 villages to control
Sample represents ethno-linguistic diversity of Afghanistan
Insurgency Structure

Neo-Taliban

Decentralized network of semi-autonomous units

Locally-based: “majority of insurgent fighters . . . operate in or near their home districts” (U.S. DoD.)

Dependent upon tacit support

Sought to minimize civilian casualties and tolerated projects; “keep good relationships with your friends and the local people” (2009)

Source: ISAF (2009)
Haqqani Network

Non-local fighters

Violent attacks on government, foreigners and local affiliates

Favored hit-and-run cross-border attacks
Incidents Data

Combined Information Data Network Exchange (CIDNE) Database – Significant Actions (SIGACTS) Reports
908 incidents w/in 15 km. radius of 500 villages

Incident near village between:

(i) 01/2006 – 09/2007 (Baseline)
(ii) 01/2006 – 09/2007 (Midline)
Survey Data

Data on:

(i) Security Perceptions
(ii) Access to Local Public Goods
(iii) Attitudes to Government Officials and Allied Actors
Baseline Survey

14k respondents in 500 villages
Midline Survey

15k respondents in 474 villages; 91% projects started, 18% projects complete
Endline Survey

14k respondents in 447 villages; 82% sub-projects complete ≥ 1 year
Specifications

General Effect: \[ Y_{tv} = \alpha + \sum_{s=1}^{s=t} \beta_t \cdot (T_v \times \tau_s) + \varphi_{pt} + \varepsilon_{tvi} \]

Two sets of standard errors: (i) clustered at village cluster; (ii) Spatial and temporal correlation (Conley 1999; Hsiang 2010)

Effect Heterogeneity: \[ Y_{tv} = \alpha + \sum_{s=1}^{s=t} \beta_t \cdot (T_v \times \tau_s) + \sum_{s=1}^{s=t} \gamma_t \cdot (X_d \times T_v \times \tau_s) + \varphi_{pt} + \varepsilon_{tvi} \]

where \( X_d \): contextual characteristic (distance to border; ethno-linguistic composition; opium cultivation; violence at baseline).
Methodological Issues

Estimation of effects on incidents (overall effect and heterogeneity) replicates 2012 working paper which used smaller dataset

Estimation on effects on survey-based outcomes both replicates 2012 working paper and follows pre-analysis plan
## Security Incidents

### General Effect

<table>
<thead>
<tr>
<th></th>
<th>Occurrence of Security Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>-0.071</td>
</tr>
<tr>
<td>Effect at Midline</td>
<td>-0.083</td>
</tr>
<tr>
<td>(0.042)*</td>
<td>(0.038)**</td>
</tr>
<tr>
<td>[0.031]**</td>
<td>[0.022]***</td>
</tr>
<tr>
<td>Treatment</td>
<td>-0.119</td>
</tr>
<tr>
<td>Effect at Endline</td>
<td>-0.131</td>
</tr>
<tr>
<td>(0.045)***</td>
<td>(0.043)***</td>
</tr>
<tr>
<td>[0.060]**</td>
<td>[0.048]***</td>
</tr>
<tr>
<td>Incident at Baseline</td>
<td>0.433 (0.059)***</td>
</tr>
<tr>
<td>M.P.F.E.’s</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Lighter (darker) shaded area shows 5% (10%) confidence intervals based on standard errors adjusted for clustering at the village-cluster level.
Given these two different insurgencies, did effects of NSP differ based on geography?
## Security Incidents

### Non-Eastern Districts

<table>
<thead>
<tr>
<th>Treatment Effect at Midline</th>
<th>Treatment Effect at Endline</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.087 (0.047)*</td>
<td>-0.090 (0.044)**</td>
</tr>
<tr>
<td>[0.032]**</td>
<td>[0.026]**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incident at Baseline</th>
</tr>
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<tbody>
<tr>
<td>0.430 (0.060)**</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>M.P.F.E.’s</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1,000</td>
<td>1,000</td>
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</tbody>
</table>

Lighter (darker) shaded area shows 5% (10%) confidence intervals based on standard errors adjusted for clustering at the village-cluster level.
## Security Incidents
### Eastern Districts

<table>
<thead>
<tr>
<th></th>
<th>Occurrence of Security Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatment</strong></td>
<td>0.081 (0.105)</td>
</tr>
<tr>
<td><strong>Effect at Midline</strong></td>
<td>0.035 (0.085)</td>
</tr>
<tr>
<td></td>
<td>[0.032]** [0.026]</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>0.164 (0.082)**</td>
</tr>
<tr>
<td><strong>Effect at Endline</strong></td>
<td>0.117 (0.074)</td>
</tr>
<tr>
<td></td>
<td>[0.052]** [0.048]**</td>
</tr>
<tr>
<td><strong>Incident at Baseline</strong></td>
<td>0.034 (0.030)</td>
</tr>
<tr>
<td></td>
<td>[0.010]** [0.060]*****</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M.P.F.E.’s</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td>1,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Lighter (darker) shaded area shows 5% (10%) confidence intervals based on standard errors adjusted for clustering at the village-cluster level.
## Security Perceptions

### Eastern vs. Non-Eastern Districts

<table>
<thead>
<tr>
<th></th>
<th>Eastern Districts</th>
<th>Non-Eastern Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Effect at Midline</td>
<td>0.098</td>
<td>-0.107</td>
</tr>
<tr>
<td></td>
<td>(0.026)**</td>
<td>(0.050)**</td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>0.046</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.027)*</td>
<td>(0.077)</td>
</tr>
<tr>
<td></td>
<td>[0.044]**</td>
<td>[0.045]**</td>
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<table>
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<tr>
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<th>Eastern Districts</th>
<th>Non-Eastern Districts</th>
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</thead>
<tbody>
<tr>
<td>M.P.F.E.’s</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Observations</td>
<td>8,962</td>
<td>8,962</td>
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</table>

## Security Incidents

### Occurrence of Security Incidents

<table>
<thead>
<tr>
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<th>Occurrence of Security Incidents</th>
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</thead>
<tbody>
<tr>
<td>Treatment Effect at Midline</td>
<td>0.294</td>
</tr>
<tr>
<td></td>
<td>(0.026)**</td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>0.369</td>
</tr>
<tr>
<td></td>
<td>(0.027)*</td>
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<tr>
<td></td>
<td>[0.042]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Occurrence of Security Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident at Baseline</td>
<td>0.421</td>
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<tr>
<td></td>
<td>[0.060]**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Occurrence of Security Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.P.F.E.’s</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>1,000</td>
</tr>
</tbody>
</table>
# Security Incidents

**Effects of Variation in Distance to Border**

<table>
<thead>
<tr>
<th></th>
<th>Region Bordering Pakistan</th>
<th>Occurrence of Security Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment Effect at Midline</td>
<td>0.475</td>
<td>0.287</td>
</tr>
<tr>
<td></td>
<td>(0.168)***</td>
<td>(0.141)***</td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>0.422</td>
<td>0.235</td>
</tr>
<tr>
<td></td>
<td>(0.117)***</td>
<td>(0.136)*</td>
</tr>
<tr>
<td>Distance to Pakistan × Treatment Effect at Midline</td>
<td>-29.056</td>
<td>-20.076</td>
</tr>
<tr>
<td></td>
<td>(10.152)***</td>
<td>(9.344)***</td>
</tr>
<tr>
<td>Distance to Pakistan × Treatment Effect at Endline</td>
<td>-24.559</td>
<td>-15.579</td>
</tr>
<tr>
<td></td>
<td>(7.761)***</td>
<td>(8.991)*</td>
</tr>
<tr>
<td>Distance to Pakistan</td>
<td>-18.827</td>
<td>-17.842</td>
</tr>
<tr>
<td></td>
<td>(10.800)*</td>
<td>(7.365)**</td>
</tr>
<tr>
<td>Incident at Baseline</td>
<td>0.389</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.102)***</td>
<td></td>
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<tr>
<td>Observations</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>
Access to Public Goods

Normalized Index of:

(i) Access to Protected Water Source
(ii) Time Spent Collecting Water
(iii) Frequency of Poor Quality Water
(iv) Frequency of Dry Water Source
(v) Usage of Electricity

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Treatment Effect at Midline</td>
<td>0.064</td>
<td>(0.029)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.023]***</td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>0.078</td>
<td>(0.025)***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.024]***</td>
</tr>
<tr>
<td>Eastern Districts × Treatment Effect at Midline</td>
<td>-0.063</td>
<td>(0.093)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.041]</td>
</tr>
<tr>
<td>Eastern Districts × Treatment Effect at Endline</td>
<td>0.283</td>
<td>(0.122)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[0.042]***</td>
</tr>
</tbody>
</table>

Matched Pair Fixed effects: Yes
Observations: 8,990

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Midline Effect for Eastern</td>
<td>0.001</td>
<td>(0.089)</td>
</tr>
<tr>
<td>Districts</td>
<td></td>
<td>[0.041]</td>
</tr>
<tr>
<td>Endline Effect for Eastern</td>
<td>0.360</td>
<td>(0.120)***</td>
</tr>
<tr>
<td>Districts</td>
<td></td>
<td>[0.034]***</td>
</tr>
</tbody>
</table>
Perceptions of Gov’t & Allied Actors

“Does . . . act in the interests of all villagers?”

(i) District Governor
(ii) Provincial Governor
(iii) Central Government Officials
(iv) President of Afghanistan
(v) Members of Parliament
(vi) Government Judges
(vii) National Police
(viii) NGO Employees
(ix) ISAF Soldiers

<table>
<thead>
<tr>
<th>Treatment Effect at Midline</th>
<th>0.124</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0.023)***</td>
<td></td>
</tr>
<tr>
<td>[0.030]***</td>
<td></td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>0.063</td>
</tr>
<tr>
<td>(0.020)***</td>
<td></td>
</tr>
<tr>
<td>[0.039]</td>
<td></td>
</tr>
<tr>
<td>Eastern Districts ×</td>
<td>-0.170</td>
</tr>
<tr>
<td>Treatment Effect at Midline</td>
<td>(0.049)***</td>
</tr>
<tr>
<td>(0.035)***</td>
<td></td>
</tr>
<tr>
<td>Eastern Districts ×</td>
<td>-0.043</td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>(0.053)</td>
</tr>
<tr>
<td>[0.043]</td>
<td></td>
</tr>
</tbody>
</table>

Matched Pair Fixed Effects: Yes
Observations: 8,982

Midline Effect for Eastern Districts: -0.046 (0.043) [0.019]**
Endline Effect for Eastern Districts: 0.020 (0.049) [0.017]
In eastern districts, NSP brought economic benefits but not government support.

Attacks increased in immediate vicinity of villages, suggesting targeting of NSP villages; Effect is more pronounced closer to border.

Insurgency in area dominated by roving, non-local fighters;

Non-local fighters “threatened to kill anyone who cooperated with the Afghan government or foreign aid groups” (NYT 2007)
Non-Eastern Districts

NSP reduced attacks by localized insurgents in a wide area around their villages

NSP may affect violence by reducing active or tacit support

Degree of tacit support observable in IED clearances; degree of active support observable in IED explosions

No difference between two effects, suggesting that NSP affected both types of support

<table>
<thead>
<tr>
<th></th>
<th>Cleared IEDs</th>
<th>Exploded IEDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Effect at Midline</td>
<td>-0.034</td>
<td>-0.038</td>
</tr>
<tr>
<td></td>
<td>(0.024)</td>
<td>(0.029)</td>
</tr>
<tr>
<td></td>
<td>[0.016]**</td>
<td>[0.017]**</td>
</tr>
<tr>
<td>Treatment Effect at Endline</td>
<td>-0.066</td>
<td>-0.056</td>
</tr>
<tr>
<td></td>
<td>(0.032)**</td>
<td>(0.032)*</td>
</tr>
<tr>
<td></td>
<td>[0.048]</td>
<td>[0.034]*</td>
</tr>
<tr>
<td>Treatment Effect After Endline</td>
<td>-0.050</td>
<td>-0.065</td>
</tr>
<tr>
<td></td>
<td>(0.049)</td>
<td>(0.047)</td>
</tr>
<tr>
<td></td>
<td>[0.041]</td>
<td>[0.041]</td>
</tr>
<tr>
<td>Proximity to Pakistan × Treatment Effect at Midline</td>
<td>0.088</td>
<td>0.148</td>
</tr>
<tr>
<td></td>
<td>(0.142)</td>
<td>(0.179)</td>
</tr>
<tr>
<td></td>
<td>[0.016]***</td>
<td>[0.017]***</td>
</tr>
<tr>
<td>Proximity to Pakistan × Treatment Effect at Endline</td>
<td>0.231</td>
<td>0.180</td>
</tr>
<tr>
<td></td>
<td>(0.111)**</td>
<td>(0.123)</td>
</tr>
<tr>
<td></td>
<td>[0.048]***</td>
<td>[0.034]***</td>
</tr>
<tr>
<td>Proximity to Pakistan × Treatment Effect After Endline</td>
<td>0.084</td>
<td>0.136</td>
</tr>
<tr>
<td></td>
<td>(0.120)</td>
<td>(0.134)</td>
</tr>
<tr>
<td></td>
<td>[0.041]**</td>
<td>[0.041]***</td>
</tr>
</tbody>
</table>

Matched Pair Fixed Effects  Yes  Yes
Observations  1,500  1,500
R-squared  0.905  0.876
Findings in Context

Effectiveness of counter-insurgency depends on nature of insurgency – consistent with Tuft & Zhukov (2015) on differential effects on nationalist and Islamist rebels.

Insurgents sabotage development programs to intimidate population – consistent with Crost, Felter & Johnston (2014).

Projects can reduce violence given suitable enabling conditions – consistent with Berman, Shapiro & Felter (2011).

While development programs can benefit communities, they can also cause harm when not designed in view of contextual conditions.

Findings reinforce need to study and fine-tune development programs to ensure positive benefits.