Measuring Success in Human Settlements Development

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DIME SEMINAR
WASHINGTON, DC, 7 JULY 2011
Department of Human Settlements has been working on impact evaluation program with World Bank since 2006

Monitoring and Evaluation has increasingly become an integral component of the Human Settlements program of work

As a middle income country, focus of collaboration with WB has been on providing technical support rather than lending
UISP in Brief

- Current Government has changed from Department of Housing to Human Settlements and is targeting 400 000 household upgrades by 2014
- Provides a holistic view to upgrading (not just houses)
- Aims to provide incremental upgrading of informal settlements to promote sustainability and economic and social integration
- Will relocate informal settlement dwellers to well-located land as a last resort
Motivation for Study

- To develop sustainable human settlements we need to measure what is working, what is not and why in order to improve service delivery
- Difficult to isolate the impact of a human settlements program when multiple other projects and programs are regularly implemented
- We use an Impact Evaluation (IE) framework to measure the causal link between human settlements interventions and the improved lives of beneficiaries
Incremental Upgrading
## Interventions

<table>
<thead>
<tr>
<th>Project Area</th>
<th>Intervention:</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>Effect of relocation</td>
<td>Control: Informal settlement dwellers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treatment: HHs relocated 1 mile away to new, fully serviced houses</td>
</tr>
<tr>
<td>Free State</td>
<td><em>In situ</em> upgrading</td>
<td>Treatment 1: Serviced stand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treatment 2: House on stand without sanitation</td>
</tr>
</tbody>
</table>
Indicators

- What impact has upgrading or relocation had on:
  - Health
  - Security
  - Education
  - Household Composition
  - Income and Expenditure Patterns
  - Employment
  - Child Development
  - Tenure Security and housing upgrades
  - Social Cohesion...

...for the recipients of the upgrading program?
Identification Strategy

SAMPLE SIZES

Ext 44/76: 444
Disteneng: 727
TOTAL: 1171
Limpopo: Prospective Sampling Design

RELOCATION TO EXT. 44 (BEFORE BASELINE)

727
CONTROL

444
TREATMENT

BASELINE

RELOCATION TO EXT. 79 (AFTER BASELINE)

363
CONTROL

364
TREATMENT

EXTENDED EXPOSURE TO TREATMENT

FOLLOW-UP

TIMELINE: 2006 2010 2011 2013
Caveats

- Difficulties with data collection in politically volatile areas increased non-response rates
- Identification strategy not foolproof
- Attrition rates and “household transfers” are common but very hard to measure
- Measures overall impact (i.e. including the ring-fencing effects in Limpopo)
- Experimental prospective studies should be conducted to confirm results
- These results are NOT nationally, or provincially representative, but rather indicative
## Structural Changes (relocation)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwelling made from brick or concrete</td>
<td>2%</td>
<td>100%</td>
</tr>
<tr>
<td>Concrete floor</td>
<td>21%</td>
<td>94%</td>
</tr>
<tr>
<td>Iron roof</td>
<td>85%</td>
<td>98%</td>
</tr>
<tr>
<td>Number of sleeping rooms</td>
<td>1.08</td>
<td>2.07</td>
</tr>
<tr>
<td>Flush toilet</td>
<td>0%</td>
<td>90%</td>
</tr>
<tr>
<td>Electricity</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Running water in property</td>
<td>3%</td>
<td>100%</td>
</tr>
</tbody>
</table>
## Structural Changes (in situ)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Treatment 1: Services</th>
<th>Treatment 2: Houses without sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwelling made from brick or concrete</td>
<td>24%</td>
<td>100%</td>
</tr>
<tr>
<td>Concrete floor</td>
<td>9%</td>
<td>57%</td>
</tr>
<tr>
<td>Iron roof</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Number of sleeping rooms</td>
<td>1.14</td>
<td>2.07</td>
</tr>
<tr>
<td>Flush toilet</td>
<td>95%</td>
<td>0%</td>
</tr>
<tr>
<td>Electricity</td>
<td>96%</td>
<td>97%</td>
</tr>
<tr>
<td>Running water in property</td>
<td>93%</td>
<td>42%</td>
</tr>
</tbody>
</table>
Overview of Results (1)

1. Child Health
Under 5 child health improves, but overall health for all HH members is unaffected (relocation)
Serviced stand improves health more than unserviced GSH

2. Effects of Improved Tenure Security
Personal expenditure on house upgrading improves dramatically for formalized houses. Serviced stands in Free State exhibit mild levels of upgrading.
A major source of income for households in formalized settlements comes from “backyard rentals”
3. Asset Accumulation
New services (e.g. electricity) increase asset accumulation which increases over the long term, but asset accumulation is sustained through loans or credit

4. Crime Perceptions and Reality
Perceptions of improved security in the house and settlement improve significantly but household burglaries remain constant (relocation)
Initial evidence suggests an adverse affect to asset accumulation (from electrification) increases likelihood house will be robbed

5. Household Size
Household sizes increase as a result of the upgrading process and this household shift also changes community engagement patterns
Main Results

1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes
Morbidity Rates (LP, FS)

Overall

Children under 5

Limpopo

Free State

Treatment  
Control  
Impact

*
Relocation Morbidity by Age

Child Morbidity Rate in Past Month

Age

0% 10% 20% 30% 40%

Treatment
Control

IMPACT
Main Results

1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes
Effects of Improved Tenure Security (Relocation)

- Upgraded Home
- Taken Loan
- Savings Used for Upgrading
- Landlord

- Treatment
- Control
- Impact

* * * *
Rental Price

Monthly Rental Price (US Dollars)

- Treatment
- Control
- Impact

*
Effects of Improved Tenure Security (*In Situ*)

![Bar chart showing the effects of improved tenure security. The chart includes categories such as upgraded home, taken loan, savings used for upgrading, and landlord. The chart indicates the percentage of each category affected by improved tenure security.](image-url)
Recommendation 1:

Given the potential source of income, regulation and possible formalization rather than eradication of backyard rentals could be considered.
Recommendation 2:

The final consolidation phase of the UISP (providing houses) can consider how best to complement, under certain circumstances, the upgrading that households already conduct on their serviced stands.
Main Results

1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes
Household Income

HH Monthly Income (US Dollars)

- Relocation
- In Situ

- Treatment
- Control
- Impact
Expenditure Patterns
(Relocation)

**CONTROL**
- Food: 53%
- Other: 23%
- Alcohol and Tobacco: 6%
- Transfers: 10%
- Transport: 8%

**TREATMENT**
- Food: 43%
- Other: 25%
- Alcohol and Tobacco: 2%
- Transport: 9%
- Services: 16%
- House Improvement: 3%
- Transfers: 2%
Recommendation 3:

Households should be provided with financial awareness support when upgrading takes place to ensure that their resultant increases in expenditure are sustainable and do not impose heavy debt burdens on themselves or the Municipality.
Main Results

1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes
Crime: Perception and Reality

RELOCATION

* * * * *
HH Burglary | Other Crime
---|---
Limpopo | Free State

- Treatment/Houses
- Control/Services
- Impact

* *
Recommendation 4

Incremental upgrading (especially the provision of electricity before top structures) should take special care to account for the potential of increased household burglaries resulting from asset accumulation.
Main Results

1. Child Health
2. Effects of Improved Tenure Security
3. Asset Accumulation
4. Crime
5. Household Sizes
Little difference in Free State, but significantly larger HH sizes for unserviced houses (4.14) than serviced stands (3.65)

Impacts for relocation:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>HH size</td>
<td>3.86</td>
<td>1.84</td>
</tr>
<tr>
<td>Spouses staying with HH Head</td>
<td>85%</td>
<td>54%</td>
</tr>
<tr>
<td>Transfers as % of expenditure</td>
<td>2%</td>
<td>11%</td>
</tr>
<tr>
<td>% of HHs with children at house</td>
<td>65%</td>
<td>23%</td>
</tr>
<tr>
<td>% HHs getting child support grants</td>
<td>55%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Household Size (Cont.)

TREATMENT

CONTROL

Household Size for Treatment Group

Household Size for Control Group
Social Interactions: Reliance on Neighbors

RELOCATION

- Treatment
- Control
- Impact

Job Search: *
Medical Care: *
Food: *
Child Care: *
HH Services: *
Transport: *
Social Interactions: Community Involvement

- Local politics
- Sports Club
- Improvement Group
- Security Watch
- PTA
- Volunteering

RELOCATION

* * *
Recommendation 5:

Careful planning should be done to develop the required social amenities and estimate expected utility usage when upgrading a settlement to account not only for the current residents, but also the potential influx of new residents that join households as a direct result of upgrading interventions.
Summary of Results

- The research has found strong program impacts in a number of areas including:
  - Household demographics and social cohesion
  - Asset accumulation and financial stability
  - Child health outcomes
  - Crime perceptions
  - Household upgrading and rental practices
Moving Forward

- So we have some numbers. What now...?
- These results are meant to stimulate debate and are not authoritative
- Further studies should build on this to guide future research, policy and implementation debate within an evidence-based framework
Thank You

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