

**Is Migration Welfare-Enhancing?  
The Impacts of Economic and Forced  
Migration amid Conflict**

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# Migration: a coping mechanism

- Migration: a mechanism to increase welfare and cope with **economic risks** or **violence**.
- Scarce empirical evidence of migration as a **strategy** to minimize the impacts of **conflict**.
- Accounting for this effect is crucial to:
  - Understand migration as a coping mechanism during conflict
  - Estimate its impact on welfare.

# Evidence on forced displacement

- Empirical evidence on the decision to migrate ([Morrison and May 1994](#); [Engel and Ibáñez 2007](#); [Czaika and Kis-Katos 2009](#)):
  - Violence is the main driver of internal displacement.
- Welfare impacts:
  - Risk of falling into poverty traps ([Ibáñez and Moya 2010a, 2010b](#); [Moya 2013](#); [Carter and Moya 2014](#)).
  - Yet internally displaced people seem **better off** than those who decide to remain in violent environments ([Kondylis 2008](#); [Verpoorten 2009](#); [Justino and Verwimp 2013](#)).

# Evidence on forced displacement: some drawbacks of current studies

- Studies focus on direct violence
  - Violence is **only ONE** of the many dimensions of **conflict**.
  - Some households **migrate** in spite of not being direct victims of conflict and experiencing sharp drops in welfare.
  - Other households **stay** in regions with intense violence: better able to cope with the risks imposed by conflict: lower risk of victimization.
- Collecting data on conflict countries is difficult and thus studies rely on cross-sectional data: difficult to discern between
  - Self-selection into displacement, selective victimization, and negative economic effects of war before displacement from
  - Welfare impacts after displacement.

# Objectives

- Estimate the returns from migration
- Estimate the **heterogeneous effects** of **conflict dynamics** on returns to migration.
  - Direct violence (direct victimization)
  - Indirect violence (violence at the community level)
  - Extent control of armed groups in the community.
- Determine if **migration** is an effective strategy to cope with conflict

# Data

- Colombian Longitudinal Survey of Universidad de los Andes (ELCA) in 2010 and 2013
  - Tracks migrants before and after migration.
  - Sample in 2010:
    - 4 regions, 17 municipalities and 224 rural communities
    - 4,555 rural household.
  - Follow up in 2013: 3% of attrition rate.
- Two questionnaires
  - Household questionnaire: incidence direct victimization.
  - Community questionnaire: presence of armed groups, the history of conflict and the behavior of armed groups.
- Households geocoded.
- Geographic information from IGAC, IDEAM, INVIAS.
- Community information: Sisbén.
- Municipality information: Municipal panel CEDE.

# Data

- Qualitative and quantitative data at the community level: extent of control of non-state armed actors (NSAA)
  - Applied in 35 communities that reported presence of NSAA.
  - Key informant interviewees.
  - Information on participation of NSAA on the imposition of social norms, the provision of public goods and security, and economic, political and social influence.
  - Yearly information for each armed group present.
- Index of control of NSAA
  - Normalize the yearly index:
    - Zero: no control.
    - One: total control.

# Forced migration in Colombia

- Between 1985 and 2015
  - 5.3 million people displaced
  - 90% of the Colombian municipalities affected
- Strategy to terrorize the population, weaken support to other opponent groups, prevent civil resistance and seize valuable assets.
- Forced displacement was not random
  - Deliberate targeting of land-owners, community leaders and political actors.
- The welfare impacts of displacement have been large:
  - 65% of the displaced population is below the poverty line
  - 27% for the whole of the Colombian population
  - 42% for the rural population.



# Two empirical challenges

- Victimization and control of NSAA are not randomly allocated:
  - NSAA attack particular groups.
  - Community level violent shocks depend on whether NSAA are hegemonic in the community.
  - NSAA establish themselves in regions with lower operating costs.
- People migrate to improve their economic conditions and migration improves economic conditions (simultaneous relationship)
- Unobservables that determine selective targeting and decision to migrate also affect changes in consumption: biased estimates

# Empirical strategy

- Compare changes in per capita consumption for individuals of the same household
  - One stays
  - One migrate
- By comparing individuals of the same household:
  - Control of unobservables that determine migration and changes in consumption: risk aversion
  - Control of unobservables that determine selective targeting and interaction with NSAA: potential alliances and NSAA
- We need to control unobservables at the individual level

# Empirical strategy

- Changes in per capita consumption of individual  $i$  in household  $j$  and community  $k$ .

$$\Delta c_{ijk} = \beta_0 + \alpha_j + \beta_1 M_{ijk} + \Delta \mathbf{X}_{jk}' \boldsymbol{\beta} + \beta_3 M_{ijk} * AAP_{jk} + \beta_4 CShock_k + \beta_5 IShock_{ijk} \\ + \beta_6 CShock_k * M_{ijk} + \beta_7 IShock_{ijk} * M_{ijk} + u_{ijk}$$

$\Delta c_{ijk}$ : changes in per capita consumption of individual  $i$  in household  $j$ , and community  $k$ .

$\alpha_j$ : original household fixed effects (2010)

$M_{ijk}$ : dummy = 1 if individual  $i$  migrates between 2010 and 2013

$\Delta \mathbf{X}'_{jk}$ : changes in individual and household characteristics between 2010 and 2013

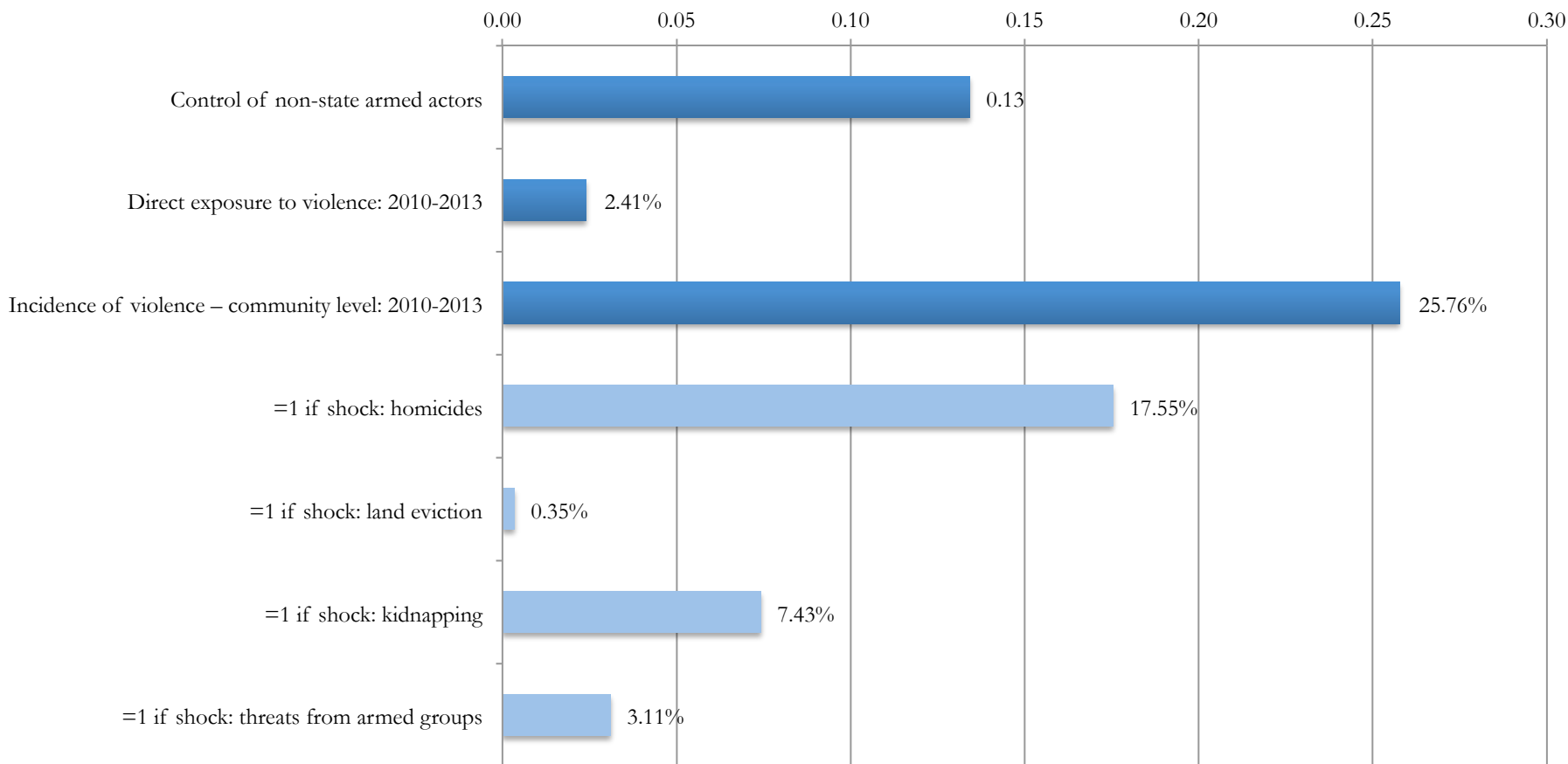
$AAP_{jk}$ : Armed Actor Presence (2010)

$CShock_k$ : incidence of violence at the community level 2010 and 2013

$IShock_{ijk}$ : whether household was a direct victim of violence between 2010 and 2013

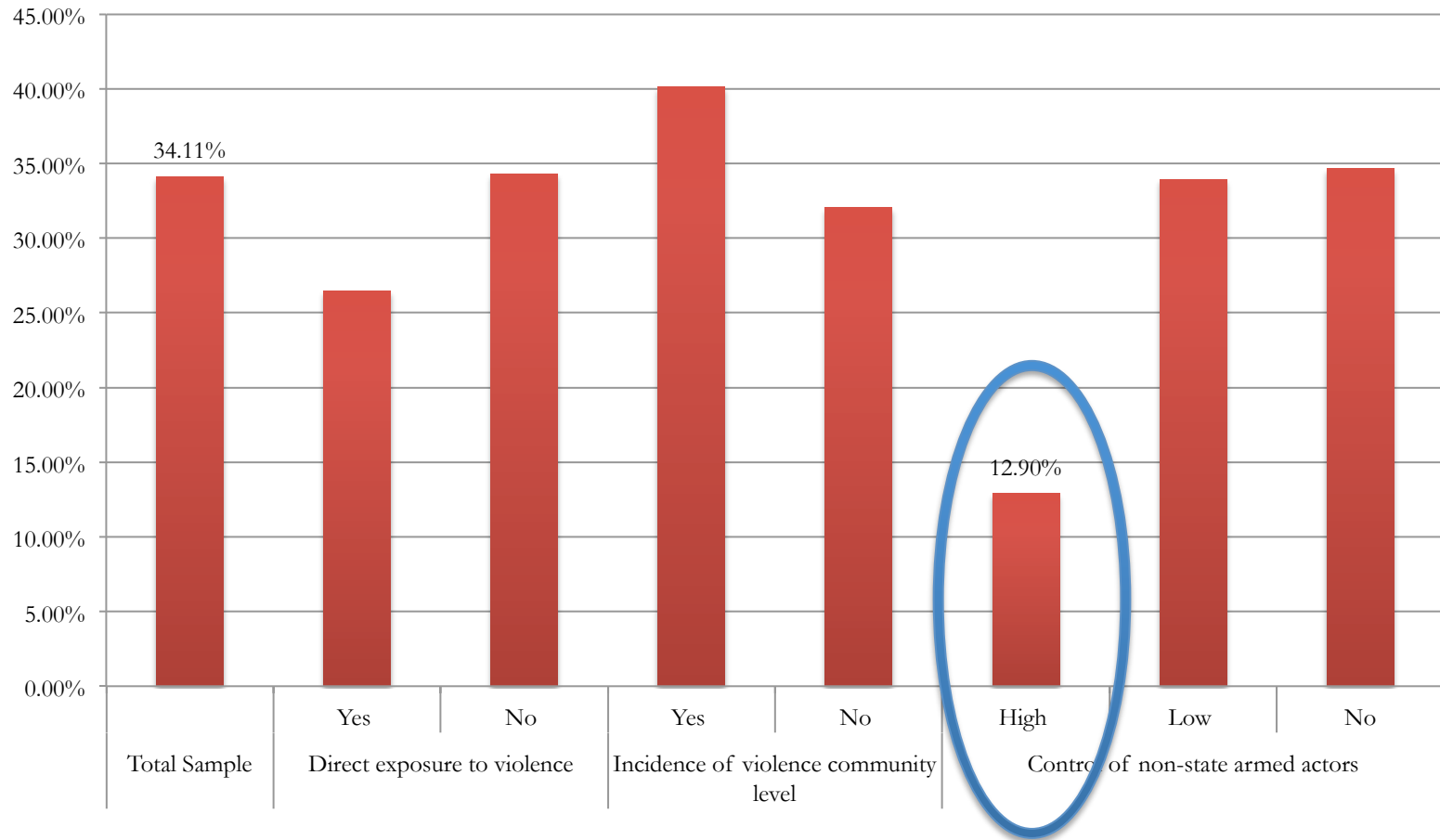
$u_{ijk}$ : random error

# Graph 1. Descriptive statistics: Conflict dynamics



Source: Authors' calculations based on ELCA (Waves I & II) and Arjona (2015)

# Graph 2. Descriptive statistics: Migration rates between 2010 and 2013



# Table 1. Descriptive statistics: Changes in consumption between 2010 and 2013

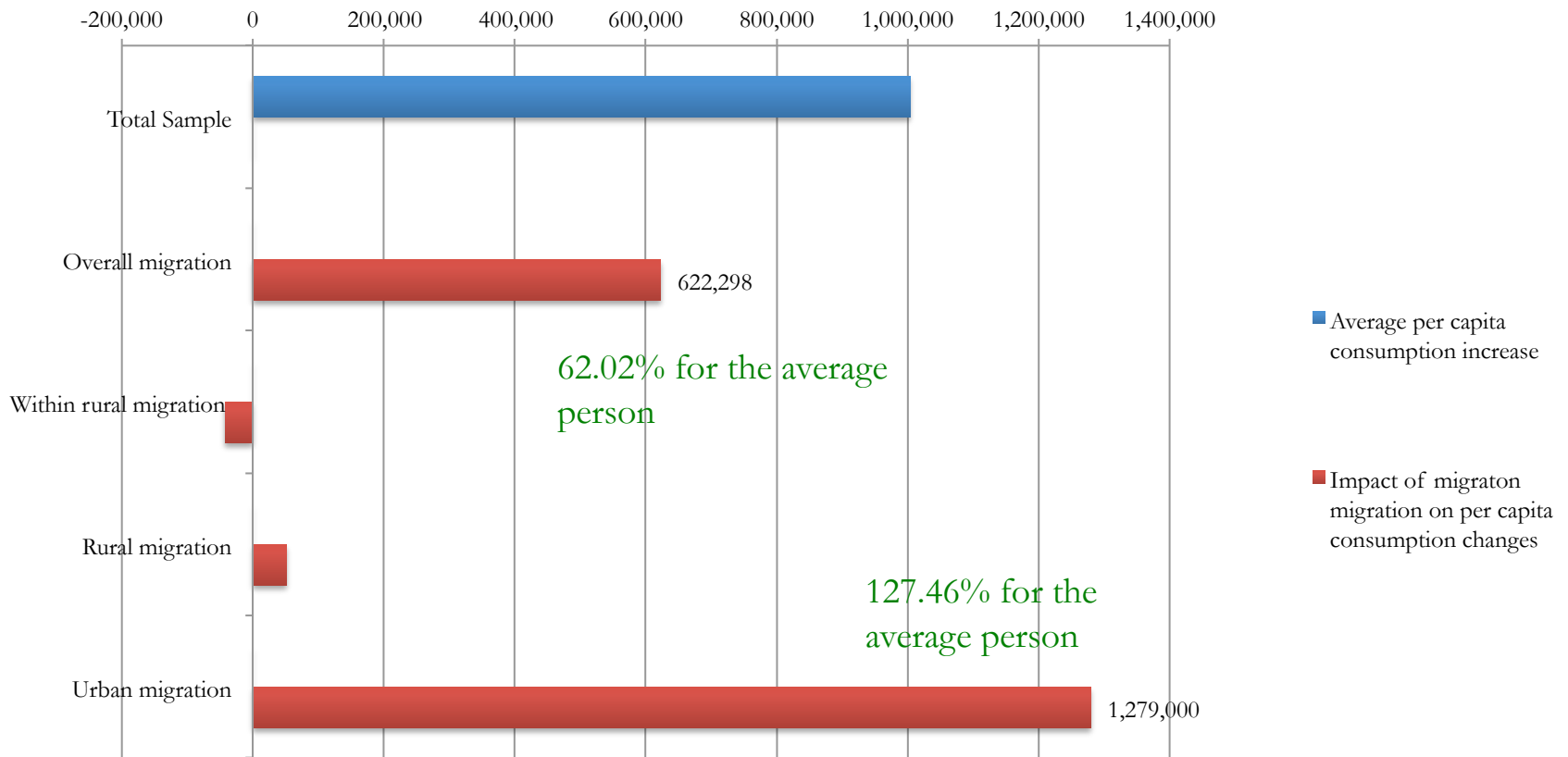
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	Total Sample	Overall migration	Within rural migration	Rural migration	Urban migration
Per capita consumption increase	1,003,453	1,160,489	950,055	821,416	1,419,277
	(1,740,632)	(1,912,645)	(1,652,038)	(1,643,357)	(2,125,758)

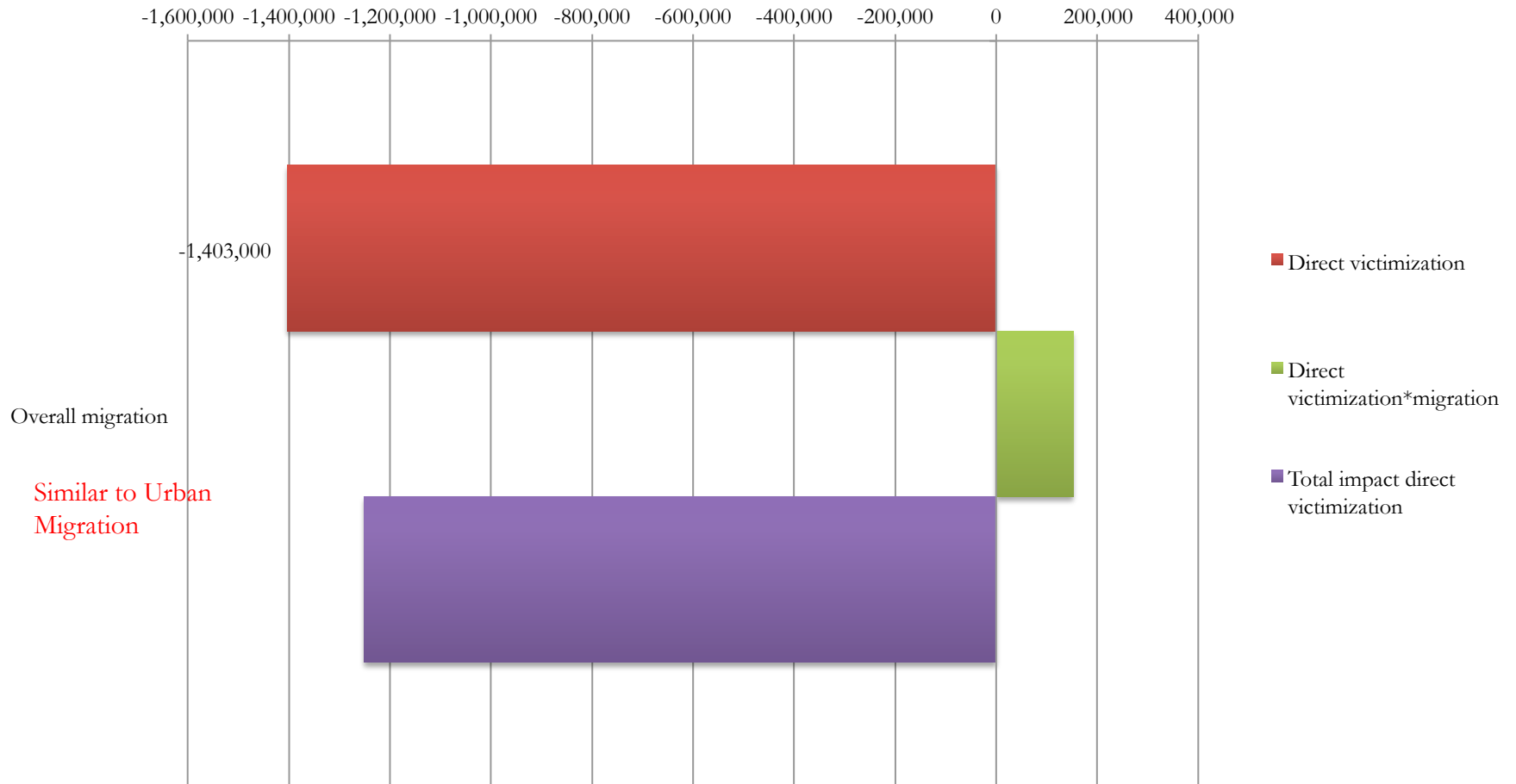
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Source: Authors' calculations based on ELCA (Waves I & II)

# Graph 3. Contribution of migration to changes in consumption

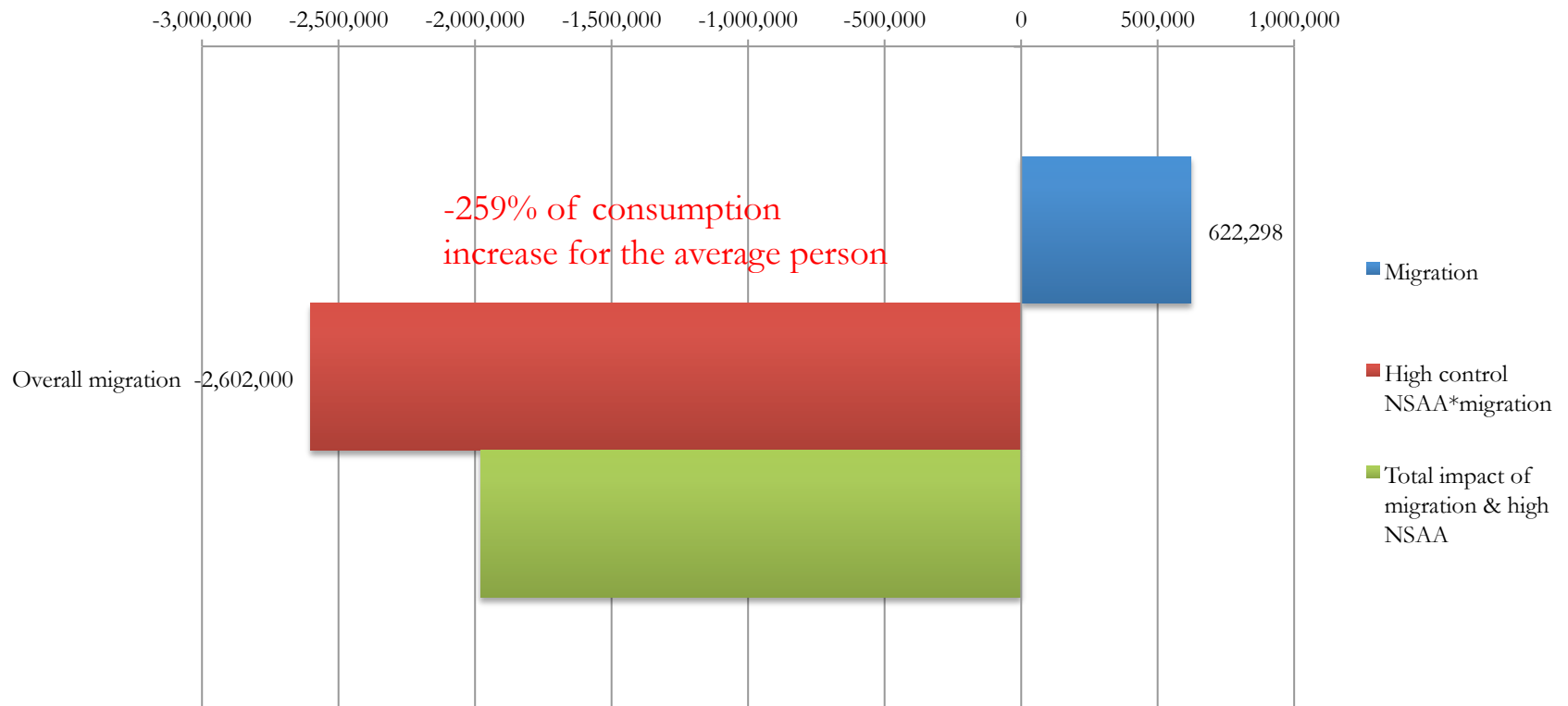


# Graph 4. Estimation Results: Migration and **direct victimization**





# Graph 5. Impact of migration estimation: **High control NSAA**



# Conclusions

- Total returns to migration are sizeable
  - 62% of the increase for the average person
  - But driven by urban migrants
- Rural migrants:
  - Apparently no returns to migration.
  - [Arjona, Cárdenas et al. \(2015\)](#): rural migrants in this sample are very likely internally displaced persons
- People are willing to trade reductions in income for improved safety
  - Migration from communities with **high control of NSAA**: threefold reduction in consumption compared to average person
    - Is migration a last resort with sizeable economic costs? Imminent victimization, extremely vulnerable conditions, or are compelled to migrate by NSAA.

# Conclusions

- Migration is not enough to overcome the negative impacts of conflict and may in fact further deepen these negative impacts.
- Negative effects of conflict go beyond direct victimization.
- Largest negative returns to migration are for individuals living in households with high control of non-state armed actors:
  - Since these households are not necessarily direct victims of conflict, public policies to assist them are practically non-existent
- **Policies should go beyond direct victims of conflict.**

END

(other potential graphs)

# Table 1. Estimation for changes in consumption between 2010 and 2013

	Changes in consumption (2010-2013)			
	<i>Overall migration</i>	<i>Within rural migration</i>	<i>Rural migration</i>	<i>Urban migration</i>
Migration	622,298** [261,183]	-42,283 [484,515]	51,053 [448,600]	1.279e+06*** [421,906]
Direct victimization	-1.403e+06** [653,150]	-1.568e+06* [911,098]	-1.444e+06 [909,307]	-1.327e+06* [694,109]
Incidence violence at community level	859,437* [498,801]	-129,840 [533,826]	5.410e+06** [2.090e+06]	2.381e+06** [1.003e+06]
Migration*Idiosyncratic shock	152,288 [470,491]	1.223e+06* [706,364]	-373,627 [665,334]	-212,554 [697,025]
Migration*Covariate shock	1.274e+06 [1.054e+06]	3.270e+06** [1.293e+06]	0 [0]	391,844 [1.154e+06]
Migration*High NSAA presence	-2.602e+06*** [420,366]	-2.839e+06*** [685,008]	0 [0]	-2.924e+06*** [619,150]
Migration*Low NSAA presence	-44,863 [954,334]	1.743e+06 [1.123e+06]	-3.443e+06** [1.719e+06]	736,331 [1.007e+06]
Observations	1,413	1,100	1,007	1,168
R-squared	0.644	0.761	0.801	0.702

Robust standard errors in brackets

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# Table 2. The heterogeneous impacts of migration: Estimations

	Overall migration	Within rural migration	Rural migration	Urban migration
Migration	622,298** [261,183]	-42,283 [484,515]	51,053 [448,600]	1.279e+06*** [421,906]
Direct victimization*migration	152,288 [470,491]	1,223,000* [706,364]	-373,627 [665,334]	-212,554 [697,025]
<i>Total impact of migration</i>	<i>774,586</i>	<i>1,180,717</i>	<i>-322,574</i>	<i>1,066,446</i>
Community shock*migration	1,274,000 [1,054,000]	3,270,000** [1,293,000]	0 [0]	391,844 [1,154,000]
<i>Total impact of migration</i>	<i>1,896,298</i>	<i>3,227,717</i>	<i>51,053</i>	<i>1,670,844</i>
High control NSAA*migration	-2,602,000*** [420,366]	-2,839,000*** [685,008]	0 [0]	-2,924,000*** [619,150]
<i>Total impact of migration</i>	<i>-1,979,702</i>	<i>-2,881,283</i>	<i>51,053</i>	<i>-1,645,000</i>
Low control NSAA*migration	-44,863 [954,334]	1,743,000 [1,123,000]	-3,443,000 [1,719,000]	736,331 [1,007,000]
<i>Total impact of migration</i>	<i>577,435</i>	<i>1,700,717</i>	<i>-3,391,947</i>	<i>2,015,331</i>
Number of observations	1,413	1,100	1,007	1,168
R-squared	0.644	0.761	0.801	0.702

Robust standard errors in brackets

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

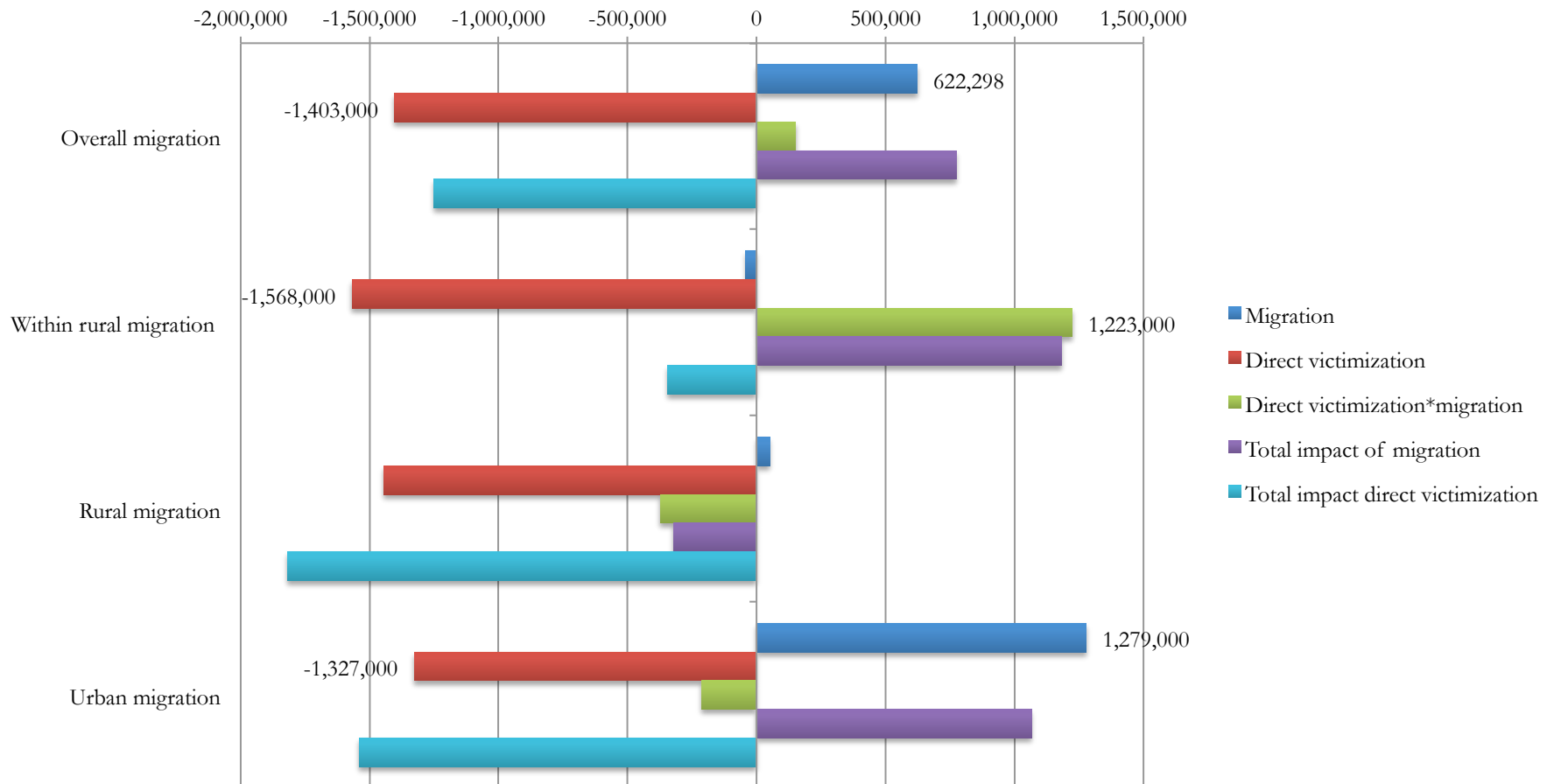
# Table 3. Estimation on the impacts of conflict:

	Overall migration	Within rural migration	Rural migration	Urban migration
Direct victimization	-1,403,000** [653,150]	-1,568,000* [911,098]	-1,444,000 [909,307]	-1,327,000* [694,109]
Direct victimization*migration	152,288 [470,491]	1,223,000* [706,364]	-373,627 [665,334]	-212,554 [697,025]
<i>Total impact direct victimization</i>	<b>-1,250,712</b>	<b>-345,000</b>	<b>-1,817,627</b>	<b>-1,539,554</b>
Community shock	859,437* [498,801]	-129,840 [533,826]	5,410,000** [2,090,000]	2,381,000** [1,003,000]
Community shock*migration	1,274,000 [1,054,000]	3,270,000** [1,293,000]	0 [0]	391,844 [1,154,000]
<i>Total impact community shock</i>	<b>2,133,437</b>	<b>3,140,160</b>	<b>5,410,000</b>	<b>2,772,844</b>
High control NSAA*migration	<b>-2,602,000***</b> [420,366]	<b>-2,839,000***</b> [685,008]	0 [0]	<b>-2,924,000***</b> [619,150]
Low control NSAA*migration	<b>-44,863</b> [954,334]	1,743,000 [1,123,000]	<b>-3,443,000</b> [1,719,000]	736,331 [1,007,000]
Number of observations	1,413	1,100	1,007	1,168
R-squared	0.644	0.761	0.801	0.702

Robust standard errors in brackets

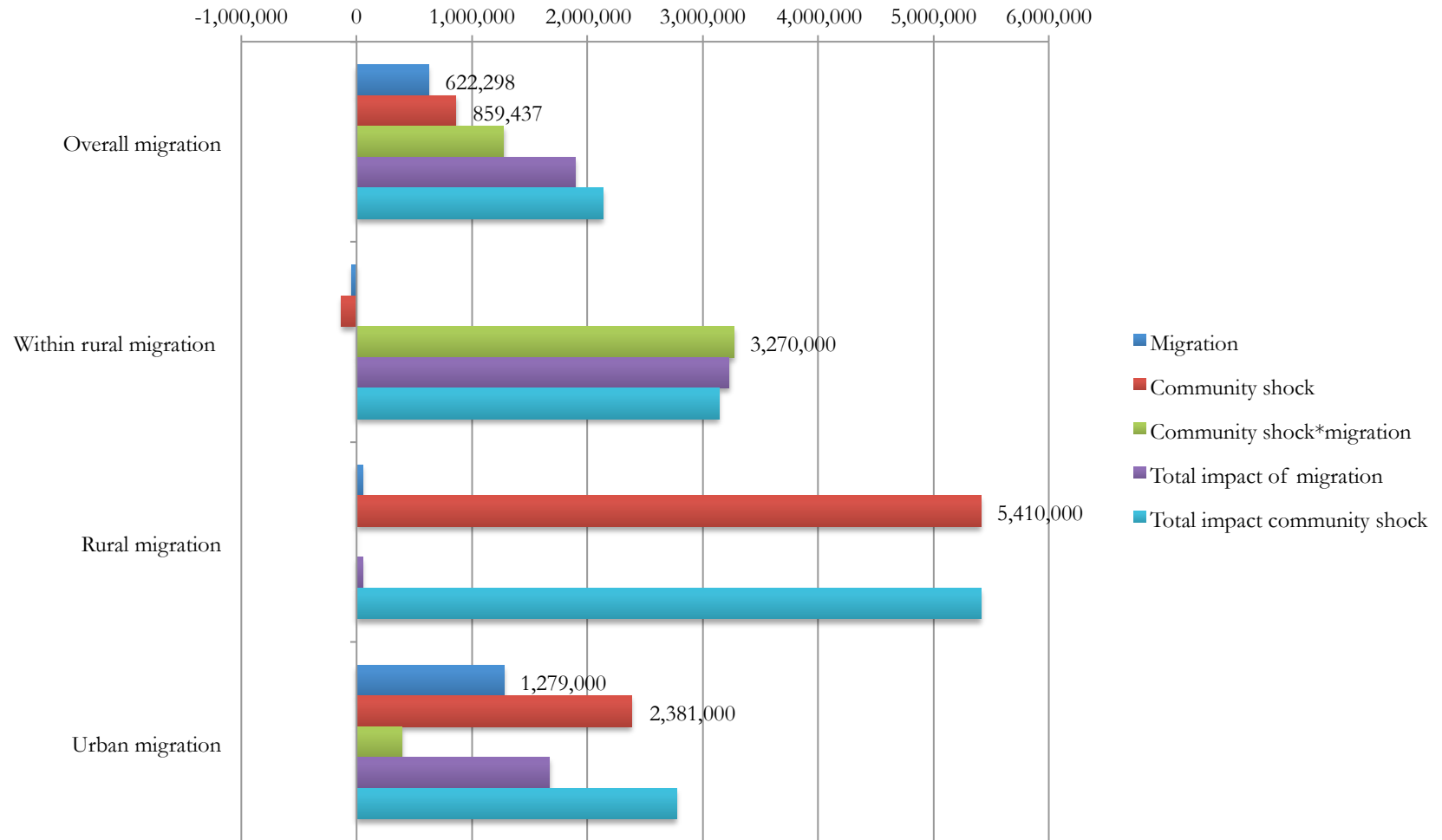
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

# Graph 1. Impact of migration: Direct victimization

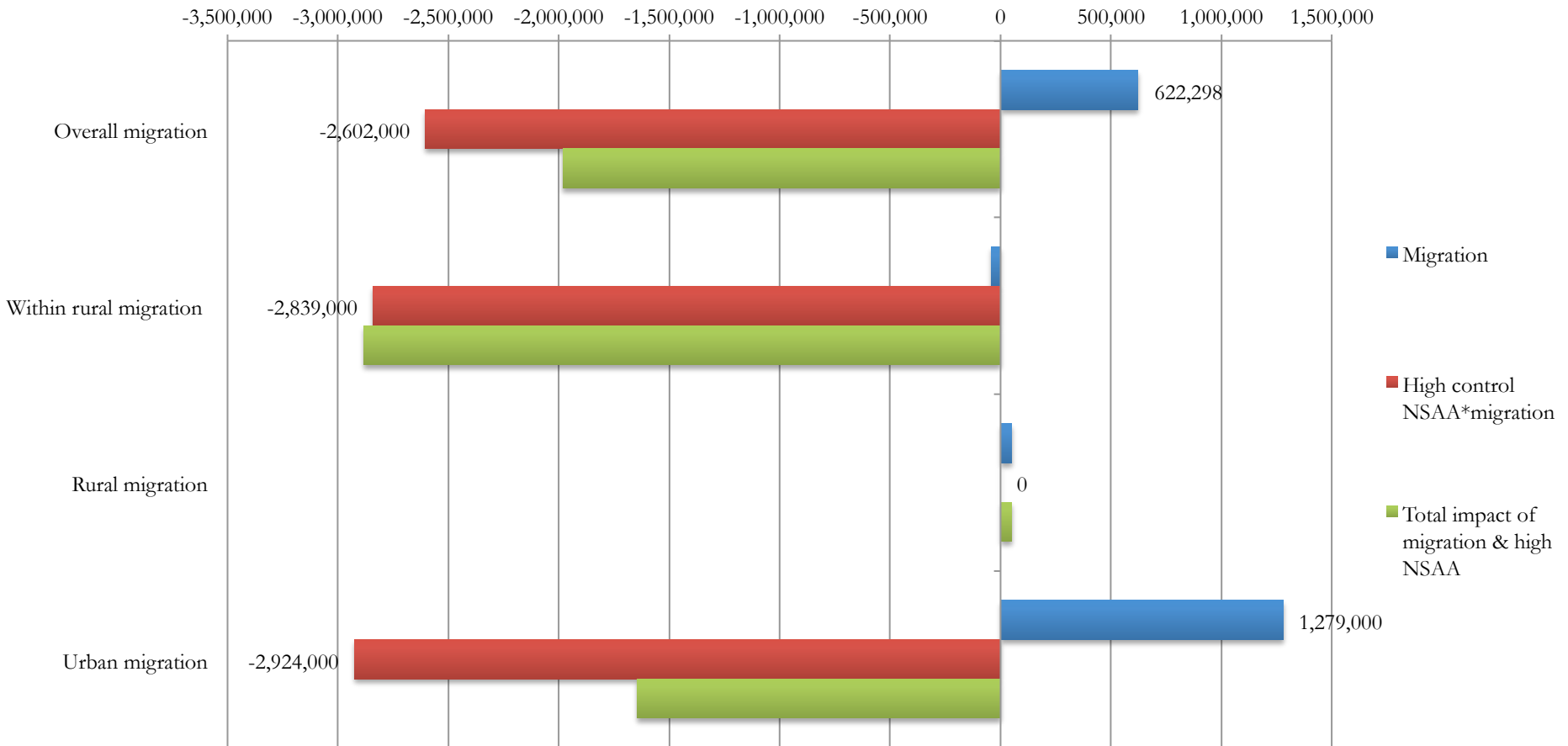




# Graph 2. Impact of migration estimation: Community shocks



# Graph 3. Impact of migration estimation: High control NSAA



# Graph 4. Impact of migration estimation: Low control NSAA

