The nature and impact of repeated migration within households in rural Ghana

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Motivation

– Open question whether migration has positive or negative impact on sending household → empirical evidence needed

– Migration is a diverse phenomenon. People move for many reasons (work, family, education) and repeatedly and more than one family member might leave.

– Within New Economics of Labour Migration (NELM), but allowing for this diversity

– 1st migration specific panel study for Ghana

Research question

– Are new migrants different from the previous migrants of same household?

– How does having a new migrant affect the welfare of households who already engage in migration?

Data

- Household panel 2013 and 2015 in five regions of Ghana

- Collected by the Migrating out of Poverty project / University of Ghana, Legon (supported by University of Sussex and funded by DFID)

- Focus on migration:
  - Oversample households with migrants
  - Questionnaire covers migration history, remittances, and return migrants

Survey regions

Conceptual framework

Household with migration experience and "new" migrant:

Household member	Migrant in baseline	Migrant in follow-up
A	1	1
B	0	0
C	0	0
D	1	0
E	0	1
Total:	2	2

→Household member E is a "new"migrant.
→Household member D is a returned migrant.

Description of new migrants and their households

- New migrant households: larger, family farmers, more of their migrants have job, more have returnee
- New migrants: younger generation, straight from education or unpaid work, move for work, education, marriage, few and low remittances, lower moving costs
- All migrants: permanent and migration is financed with savings, i.e. credit constraint environment

Table 18: Migration costs by number of times migrant moved before

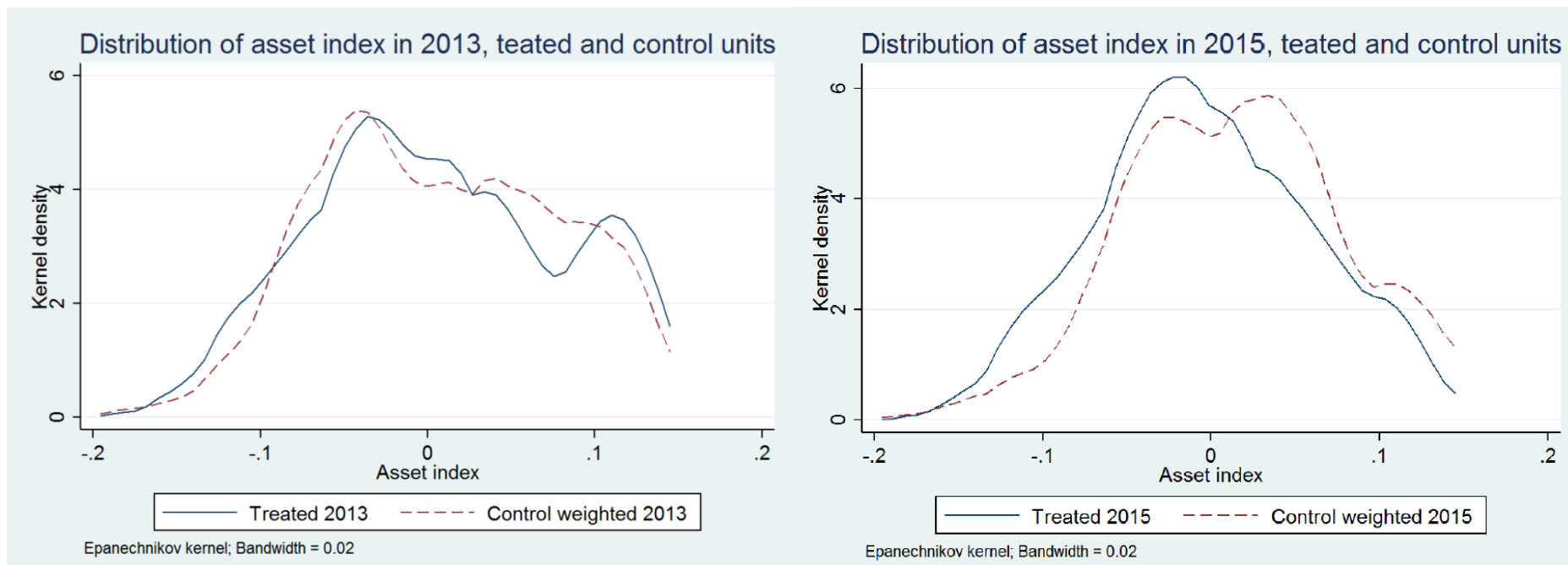|	New migrant in GHS of 2015	N	Baseline migrant in GHS of 2015	N
First time	160.3	74	331.0	137
Moved at least once before	78.2	41	142.3	132

Impact of new migrant on welfare
Methodology

$$\Delta Y_{i,t} = \beta_1 NewMig_i + \beta_2 \Delta X_{i,t} + \beta_3 \Delta LM_{c,t} + \Delta\epsilon_{i,t}$$

- First difference model of wealth index (Y) on indicator for new migrant (NewMig) and observable household (X) and community characteristics (LM)

- Endogeneity: Reverse causality and selection
  - 1st difference takes care of time-invariant unobservables
  - Baseline *entropy balancing weights* reduce selection by making households look comparable

Outcome variable: Asset index

- Composite measure of housing quality (number of rooms, presence of bathroom and toilet, wall material, floor material)
- Computed using Multiple Correspondence Analysis (similar to Principle Component or Factor Analysis)

Distribution of asset index in 2013, teated and control units — Treated 2013 / Control weighted 2013; Epanechnikov kernel; Bandwidth = 0.02

Distribution of asset index in 2015, teated and control units — Treated 2015 / Control weighted 2015; Epanechnikov kernel; Bandwidth = 0.02

Results

	Asset index		
	(1)	(2)	(3)
New Migrant	-0.011	-0.017	-0.016
	(0.007)	(0.011)	(0.011)
Household has return migrant (=1)			-0.015*
			(0.008)
Dependency ratio			0.002
			(0.004)
Employment status of household head (base = inactive/others)			
Employee			0.014
			(0.015)
Self-employed			-0.001
			(0.016)
Unpaid work / unemployed			-0.003
			(0.018)
Local employment rate			0.138
			(0.104)
Entropy balancing weights	No	Yes	Yes
Observations	*960*	*960*	*960*
Adjusted R-squared	0.584	0.522	0.528
Number of clusters	93	93	93

Significance levels * 10% ** 5% *** 1%. First difference estimator. S.E. clustered at community level.

Table 13: Interaction of treatment with the characteristics of new migrants

	Dependent variable: Asset index		
Migrant characteristics (X):	Female migrant	Seasonal migrant	Remained in region
New Migrant * X	-0.009	0.010	-0.013
	(0.011)	(0.014)	(0.021)
New Migrant	-0.010	-0.017	-0.005
	(0.014)	(0.012)	(0.022)
Entropy balancing weights	Yes	Yes	Yes
Other controls	Yes	Yes	Yes
Observations	960	960	960
Adjusted R-squared	0.528	0.528	0.528
Number of clusters	93	93	93

Significance levels * 10% ** 5% *** 1%. First difference estimator. S.E. clustered at community level. Other controls include whether the household has a returned migrant, employment status of the household head, dependency ratio and community employment rate.

Interpretation

- Asset index changes slowly and tends to rather capture increase than decline
- Short period might also imply that positive effects of remittance receipt haven't materialised yet
- Low costs of new migrants' move and low remittances means no loss in labour
- Financing of migration through savings means savings cannot be used for investments

Conclusion

- New panel study of migration in Ghana.

- Repeated migration patterns and different motivations for migration within the same household.

- `New' migrants often from younger generation, moving relatively more for education and family reasons, pay less for their move, remit rarely and less.

- No impact found of having a new migrant on households left-behind who already had engaged in migration. Lower costs and use of savings can explain result.

- More longitudinal data and more outcome measures needed for conclusive analysis.

Appendix

Entropy balancing weights

- Ex-ante definition of balance:
  - choose variables and moments (mean, variance…) to be balanced
- Compute weights and keep all observations that allow weights.
- Treated units have a weight of 1, control according to formula below.
- Run weighted least squares regression

$$\min_{w_i} H(w) = \sum_{i|D=0} w_i log(\frac{w_i}{q_i})$$

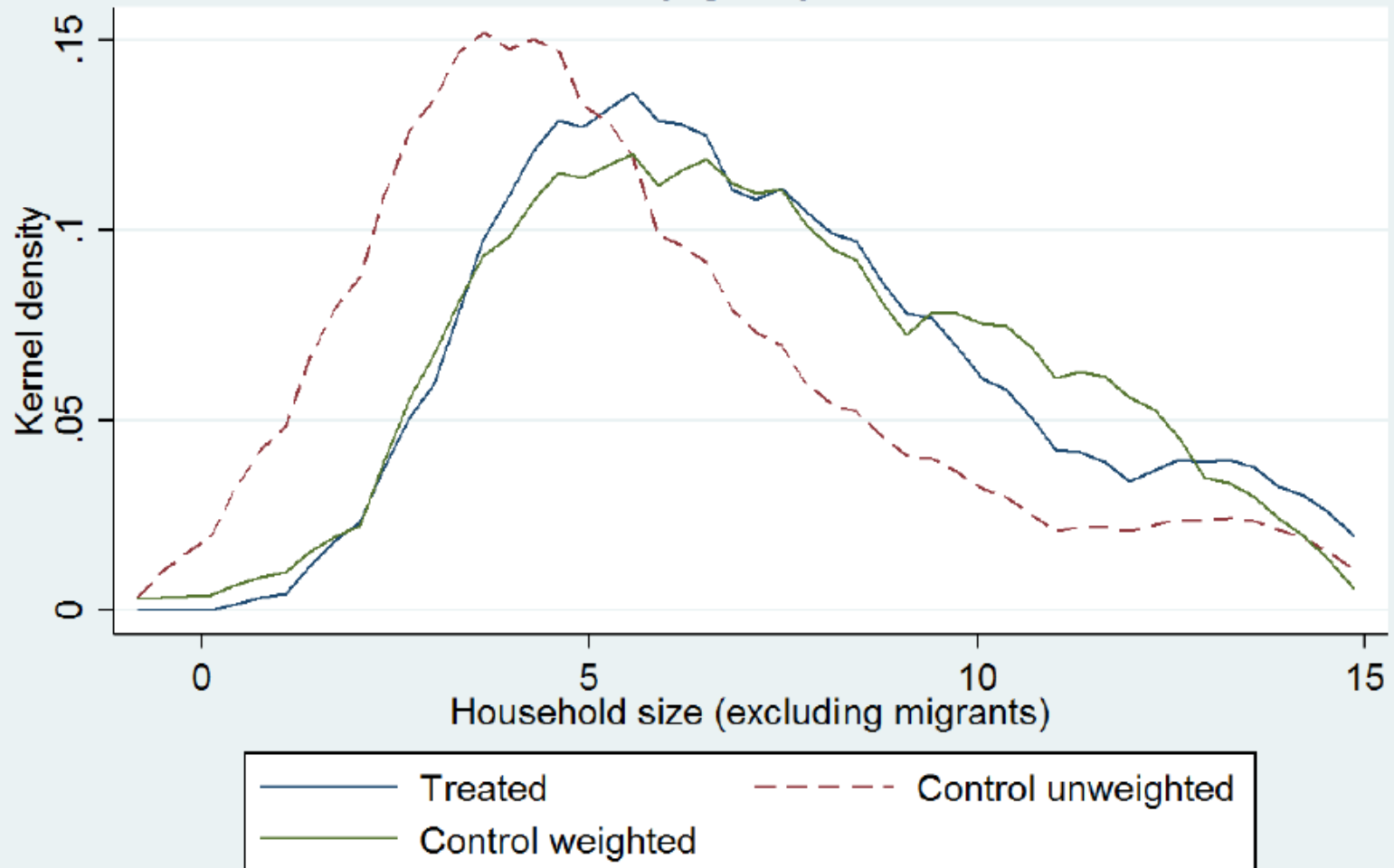$$\sum_{i|D=0} w_i c_r i(X_i) = m_r \qquad \text{with} \qquad r \in 1,...,R \qquad \text{and}$$

$$\sum_{i|D=0} w_i = 1 \qquad \text{and}$$

$$w_i \geq 0 \qquad \text{for all} \qquad i \qquad \text{such that} \qquad D = 0$$

Balance statistics

Household size by group at baseline, 2013

Epanechnikov kernel; Bandwidth = 0.85

Table 15: Sensitivity of results of asset index using different ways to construct the asset index, weighted least squares

	Dependent variable: Asset index						
	Exclude specific item from asset index construction						
	(1) Number of rooms	(2) Dwelling ownership	(3) Bathroom	(4) Toilet	(5) Drinking water	(6) Floor material	(7) Wall material
New Migrant	0.019	-0.017	-0.017	-0.015	-0.020	-0.013	-0.009
	(0.014)	(0.012)	(0.012)	(0.011)	(0.015)	(0.009)	(0.008)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Entropy balancing weights	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	960	960	960	960	960	960	960
Adjusted R-squared	0.515	0.473	0.524	0.47	0.462	0.544	0.485
Number of clusters	93	93	93	93	93	93	93

Significance levels * 10% ** 5% *** 1%. First difference estimator. S.E. clustered at community level. Other controls include whether the household has a returned migrant, employment status of the household head, dependency ratio and community employment rate.

Community shocks

	Asset index
New Migrant	-0.021
	(0.018)
New Migrant * Shock	0.015
	(0.023)
Shock	-0.018
	(0.017)
Entropy balancing weights	Yes
Other controls	Yes
Observations	*902*
Adjusted R-squared	0.521
Number of clusters	87

Significance levels * 10% ** 5% *** 1%. First difference estimator. S.E. clustered at community level.

Other controls include whether the household has a returned migrant, employment status of the household head, dependency ratio and community employment rate.