Structural poverty dynamics in urban South Africa
A mixed methods investigation

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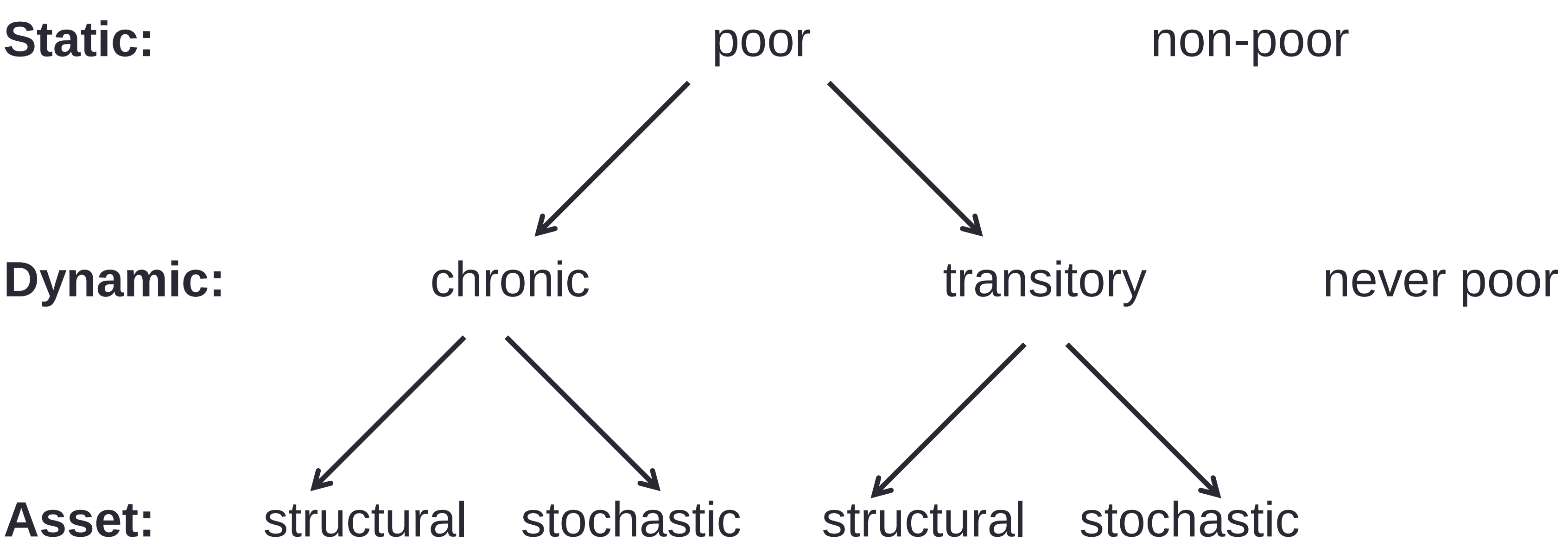
Motivation

Aim: Provide a nuanced understanding of the complex social realities and key factors that drive, facilitate and undermine structural poverty transitions among the socio-economically disadvantaged, urban, black population in South Africa.



Not all transitions are equal!

Data and methodology

Approach: Combine quantitative findings from the dynamic analysis of panel data, with findings from a qualitative case study.

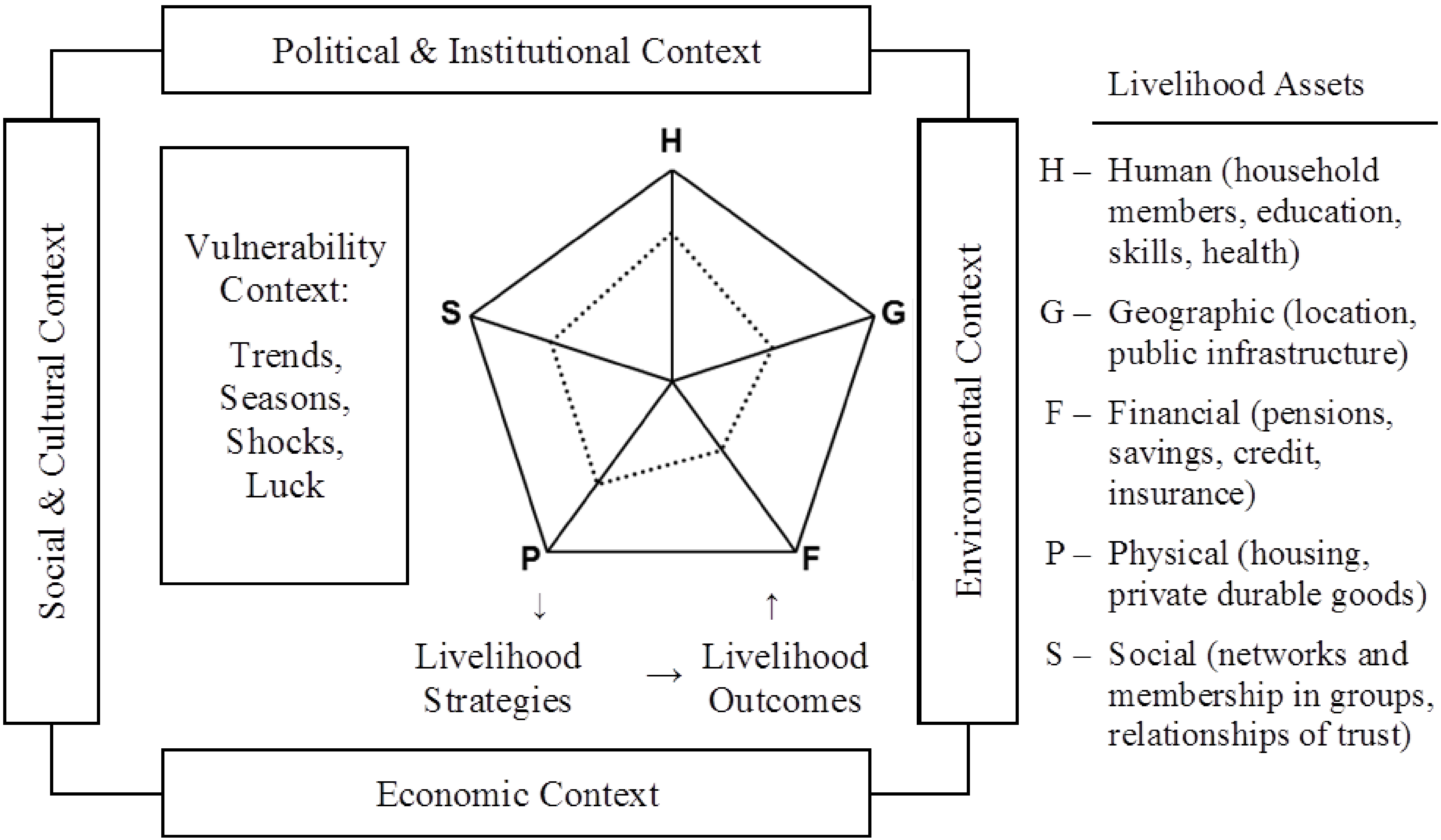
Quantitative | Large-N

- Panel data from the South African National Income Dynamics Study (NIDS) implemented by SALDRU (2008, 2010/11, 2012, 2014/15).
- Data from consecutive waves were pooled (74,217 observations).
- StatsSA upper bound CoBN poverty line at R 963 a month (~$4 PPP a day).
- Asset-based approach drawing on Carter & May (1999, 2001); Carter & Barrett (2006); Radeny et al. (2012).

Qualitative | Small-N

- 30 life history interviews conducted from July to September 2017 in the township of Khayelitsha, Cape Town.
- Supplemented by four focus groups discussions to derive a four-tier schema of social stratification.
- Qualitative research design informed by life-history interview techniques used by Davis & Baulch (2011) in rural Bangladesh and Adato et al.'s (2007) "household events mapping" technique used in rural KwaZulu-Natal.

Livelihoods framework



Source: Developed from Rakodi (2002) drawing on Carney (1998).

QUANTITATIVE ANALYSIS

Magnitude of structural and stochastic poverty transitions based on NIDS panel data

Asset-based poverty measures

- A household, i, is classified as poor at time t if

$$\mathrm{c_{it}} < \mathrm{PL}\,.$$

- Parallel to PL, an *asset poverty line* can be defined.
  - Multiple correspondence analysis (MCA) is used to construct five asset indices, normalised to a range between 0 and 1. These indices are intended to capture ownership of and access to human ($\mathrm{H_{it}}$), financial ($\mathrm{F_{it}}$), physical ($\mathrm{P_{it}}$), social ($\mathrm{S_{it}}$), and geographic capital ($\mathrm{G_{it}}$).

- The asset indices are mapped to the consumption space as follows:

$$\mathrm{NP:}\;\; \ln(c_{it}) = g(X_{it}) + \epsilon_{it} = g(\mathrm{H}_{it}, \mathrm{F}_{it}, \mathrm{P}_{it}, \mathrm{S}_{it}, \mathrm{G}_{it}) + \epsilon_{it}$$

$$\mathrm{P:}\; \ln(c_{it}) = \alpha + \sum_j \beta_j X_{it}^j + \sum_k \sum_l \gamma_{kl} X_{it}^k X_{it}^l + \sum_j \delta_j \left(X_{it}^j\right)^2 + \sum_t \varphi t_t + \varepsilon_{it}$$

Asset-based poverty measures

- Drawing on the regression results, the *asset poverty line*, $\underline{A}_t$, denotes the combination of assets that yields an expected level of household welfare, $\hat{c}(A_{it})$, equal to the *money metric poverty line.*

- A household is considered **stochastically poor** in t

$$\text{if } c_{it} < \mathrm{PL} \text{ and reject } H_0\text{: } \hat{c}(A_{it}) < \mathrm{PL}.$$

- A household is considered **stochastically non-poor** in t

$$\text{if } c_{it} \geq \mathrm{PL} \text{ and reject } H_0\text{: } \hat{c}(A_{it}) \geq \mathrm{PL}.$$

- Following Radeny et al. (2012), I use the 95% confidence bands of $\hat{c}(A_{it})$ to account for imprecision in the estimation of $\hat{c}(A_{it})$.

Decomposing poverty transitions

	$c_{it+1} < \text{PL}$	$c_{it+1} \geq \text{PL}$
$c_{it} < \text{PL}$	**a) Twice poor:** 54.44	**b) Upwardly mobile:** 11.17
$c_{it} \geq \text{PL}$	**c) Downwardly mobile:** 8.67	**d) Twice non-poor:** 25.72
Total	63.11	36.89

Poor in t	**a) Twice poor**			**b) Upwardly mobile**		
	Structural $A_{it+1} < \underline{A}_{t+1}$	*Stochastic* $A_{it+1} \geq \underline{A}_{t+1}$	Total	*Stochastic* $A_{it+1} < \underline{A}_{t+1}$	*Structural* $A_{it+1} \geq \underline{A}_{t+1}$	Total
$A_{it} < \underline{A}_t$	85.50	6.94	92.45	41.01	33.30	74.31
$A_{it} \geq \underline{A}_t$	3.51	4.04	7.55	3.77	21.92	25.69
Total	89.01 *(NP: 87.28)*	10.99 *(NP: 12.72)*	100	44.78 *(NP: 44.02)*	55.22 *(NP: 55.98)*	100

Non-poor in t	**c) Downwardly mobile**			**d) Twice non-poor**		
	Structural $A_{it+1} < \underline{A}_{t+1}$	*Stochastic* $A_{it+1} \geq \underline{A}_{t+1}$	Total	*Stochastic* $A_{it+1} < \underline{A}_{t+1}$	*Structural* $A_{it+1} \geq \underline{A}_{t+1}$	Total
$A_{it} < \underline{A}_t$	46.07	5.97	52.04	5.25	6.51	11.76
$A_{it} \geq \underline{A}_t$	24.60	23.36	47.96	5.86	82.38	88.24
Total	70.67 *(NP: 68.91)*	29.33 *(NP: 31.09)*	100	11.10 *(NP: 10.74)*	88.90 *(NP: 89.26)*	100

"Dual entitlements failure"

Q-SQUARED ANALYSIS

Triangulate quantitative findings with qualitative data to investigate the drivers of structural vs. stochastic poverty escapes and descents

Case Study: Khayelitsha

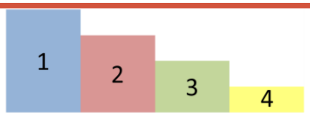
- 2nd largest township in South Africa (after Soweto in Johannesburg).
- Rapid growth driven by population growth and rural to urban migration (~50% of new migrants that arrive in Cape Town settle in Khayelitsha).
- Census 2011: area of 38.7 km^2 with an estimated population of 391,749 inhabitants grouped into 118,810 households.
- Very heterogeneous in terms of income, housing type (old formal areas built by the apartheid government and newer areas that contain a mix of informal settlements, government provided housing, and informal backyard dwellings), service level and employment statuses.
- Less heterogeneous in terms of race (98.6% Black African) and language (90.5% isiXhosa).

Field Research

Stage 1 – Sampling Survey (300 questionnaires)

- Ideally, re-interview households from the NIDS panel → impossible.
- 2nd best: Use data on the small area level from 2011 census to design a sampling frame that ensured an adequate coverage of different (i) area types; (ii) wealth levels, and (iii) settlement durations → selected 15 study areas.
- Quick wealth assessment (Progress out of Poverty Index for South Africa).

Stage 2 – Focus Group Discussions (FGDs) (4 groups)



- Using visual aids in form of 4 boxes, participants were prompted to discuss what it meant for someone to be in each respective box, representing different “levels” of society, and what determined movements between boxes (upward and downward).

Stage 3 – Structured Survey (43 questionnaires)

- Collect detailed information on the current economic situation of the household.
- Module to record shocks that occurred in the past 5 years.

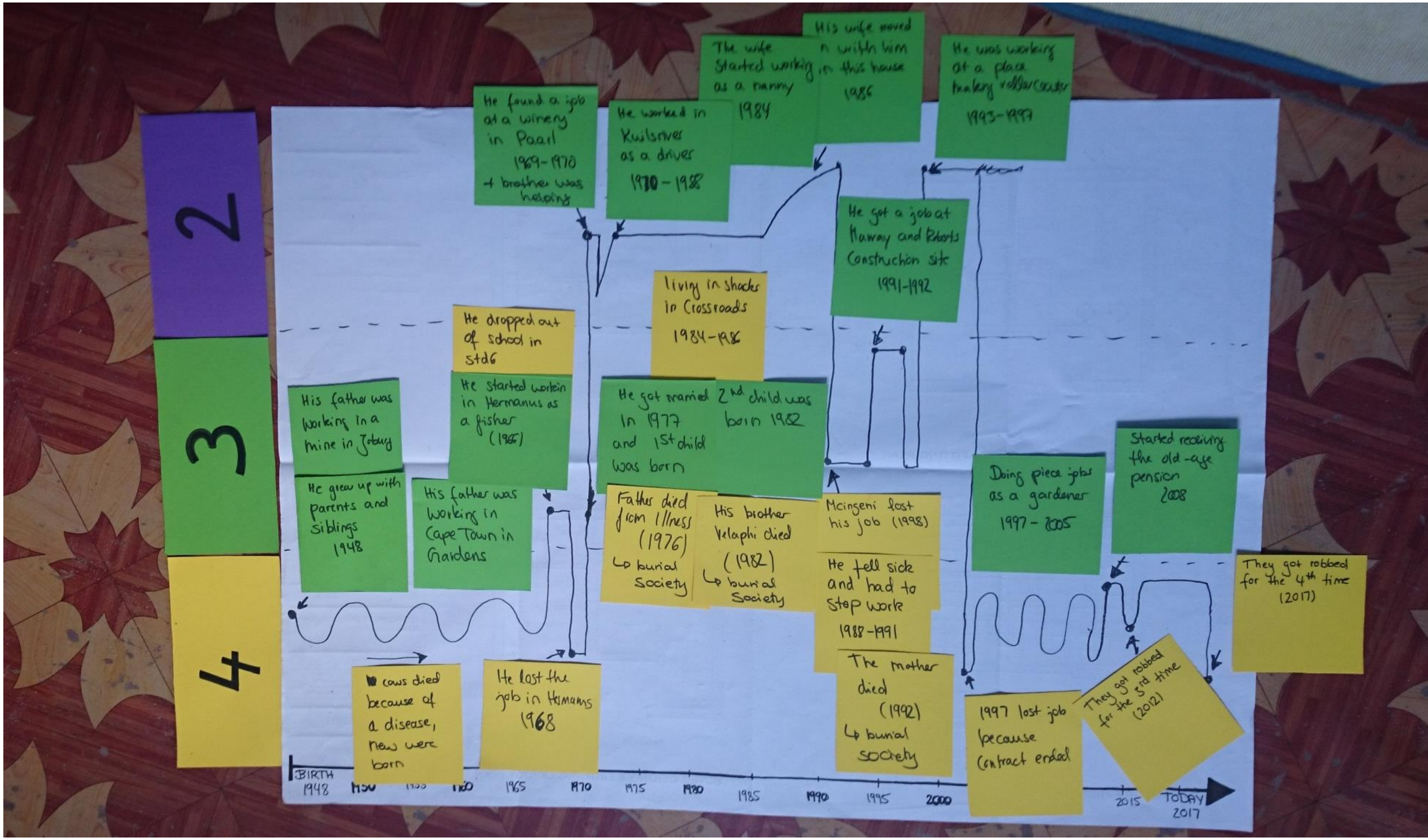
Stage 4 – Life History Interviews (LHIs) (30 interviews)

- Semi-structured life-history interviews including “household events mapping”.

FGDs: Social stratification schema

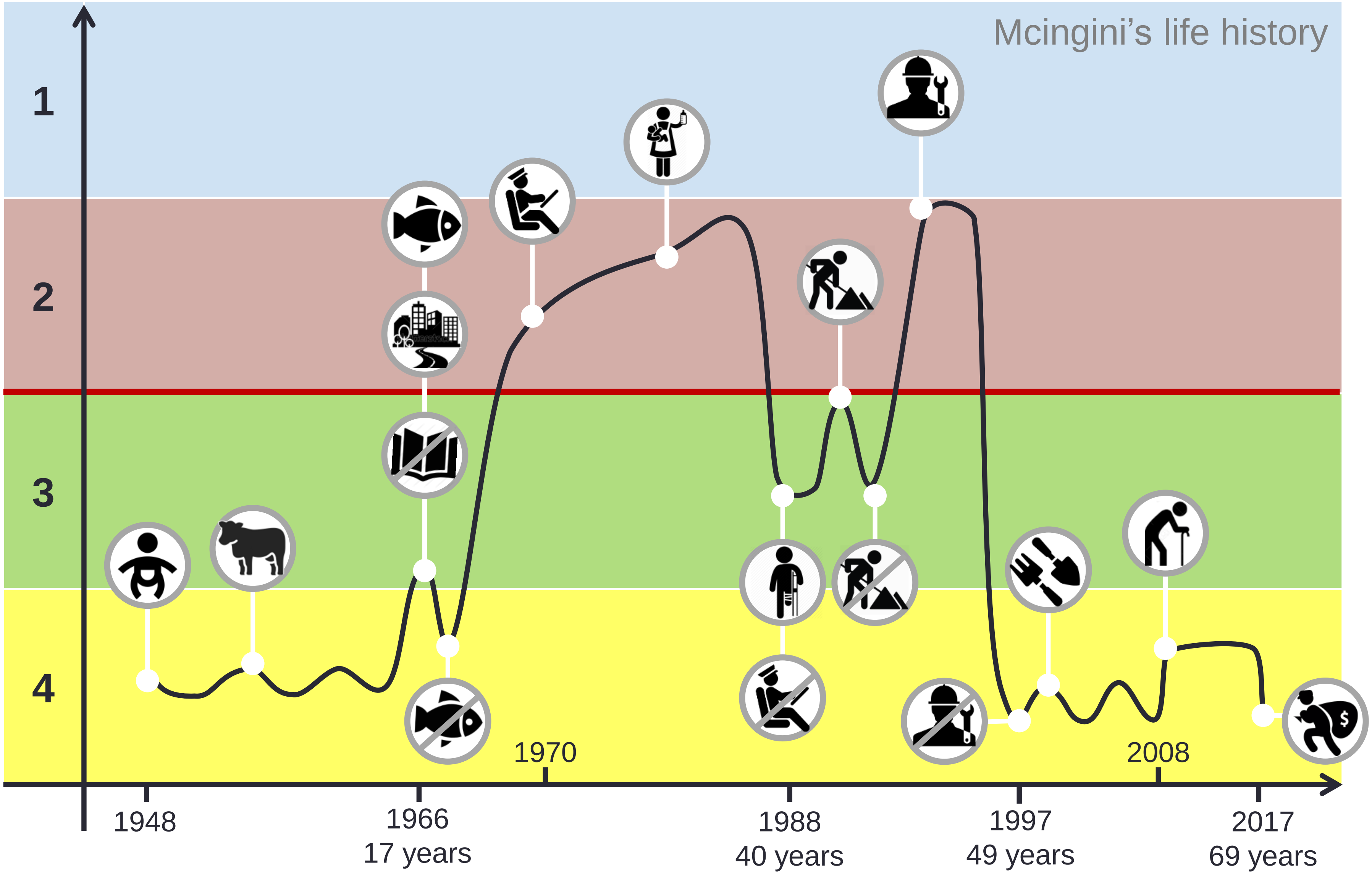
1	• Successful entrepreneurs • Permanent white collar job in public or private sector
2	• Employed, usually in lower-level white collar occupations • Need to support a large number of dependents (extended family)
PL	
3	• Low-skilled jobs with low pay, limited duration, high volatility • Most elementary needs satisfied • No financial cushion
FPL	
4	• No access to labour income • Survive on child support grants and/or support from others • Go to bed on an empty stomach

Life History Interviews

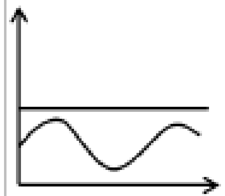
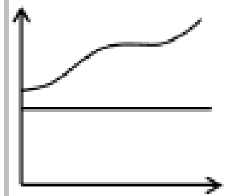
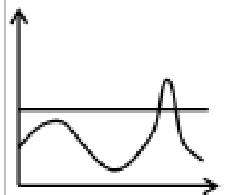
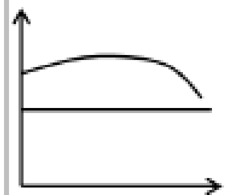
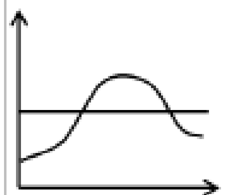
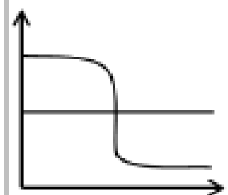
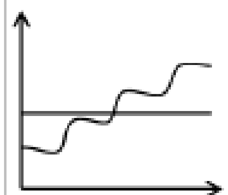
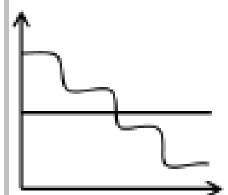
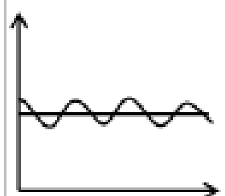
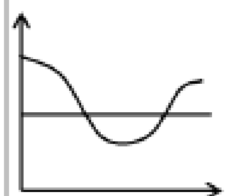


Methods drew on the life-history interview techniques used by Davis (2011) in rural Bangladesh and on Adato et al.'s (2007) "household events mapping" technique used in rural KwaZulu-Natal.

Escape from poverty during working life

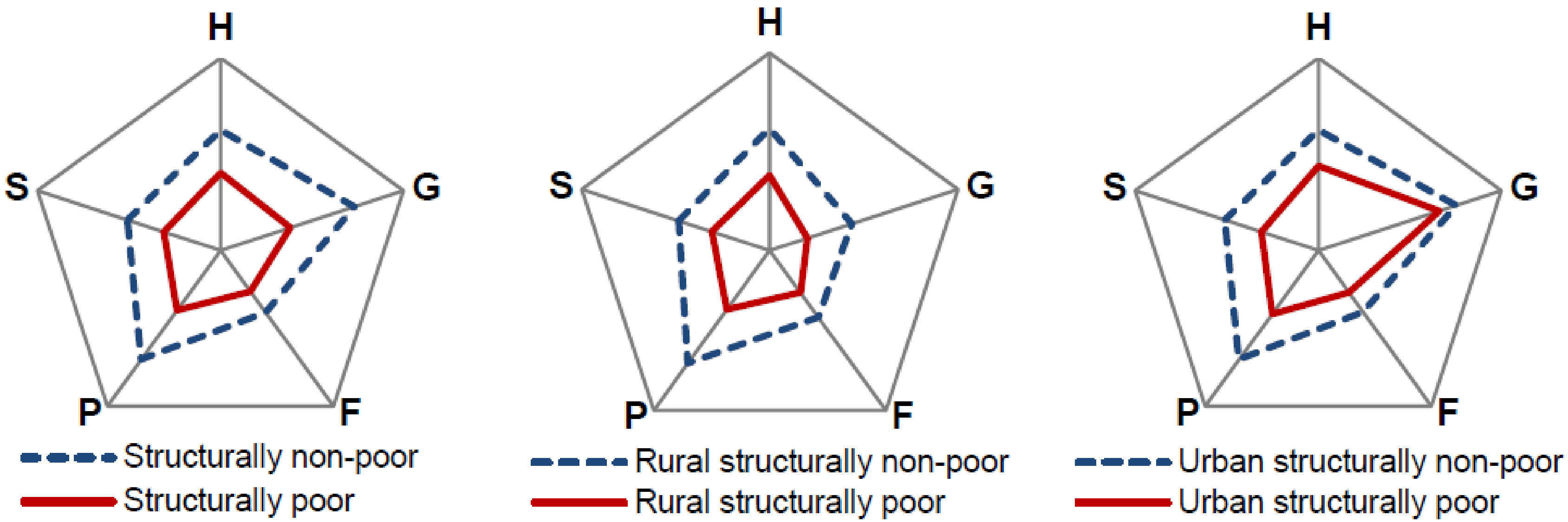


Livelihood trajectory patterns

Starting Poor			Starting Non-Poor		
Trajectory Pattern	**Depiction**	**Cases** (migrant)	**Trajectory Pattern**	**Depiction**	**Cases** (migrant)
Structurally poor		10 (6)	**Structurally non-poor and upwardly mobile**		2 (0)
Stochastically upwardly mobile		4 (4)	**Structurally non-poor and stable**		3 (1)
Structurally upwardly mobile (reverted)		4 (4)	**Structurally downwardly mobile (one-step)**		2 (2)
Structurally upwardly mobile (non-reverted)		0 (0)	**Structurally downwardly mobile (multiple steps)**		2 (0)
Churners		2 (1)	**U-shaped**		1 (0)

Markers of structural poverty

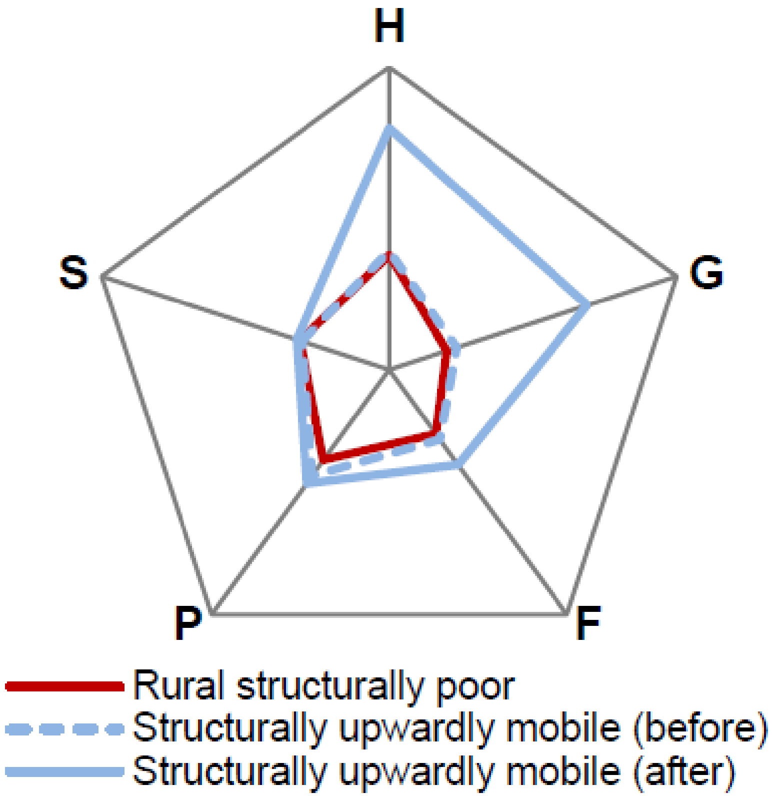
- Two thirds of the LHI respondents (20 out of 30) started off in a situation of structural poverty (boxes three or four), and half of these never ascended to boxes two or one
- Those classified as structurally poor were generally deprived in all five livelihood dimensions.



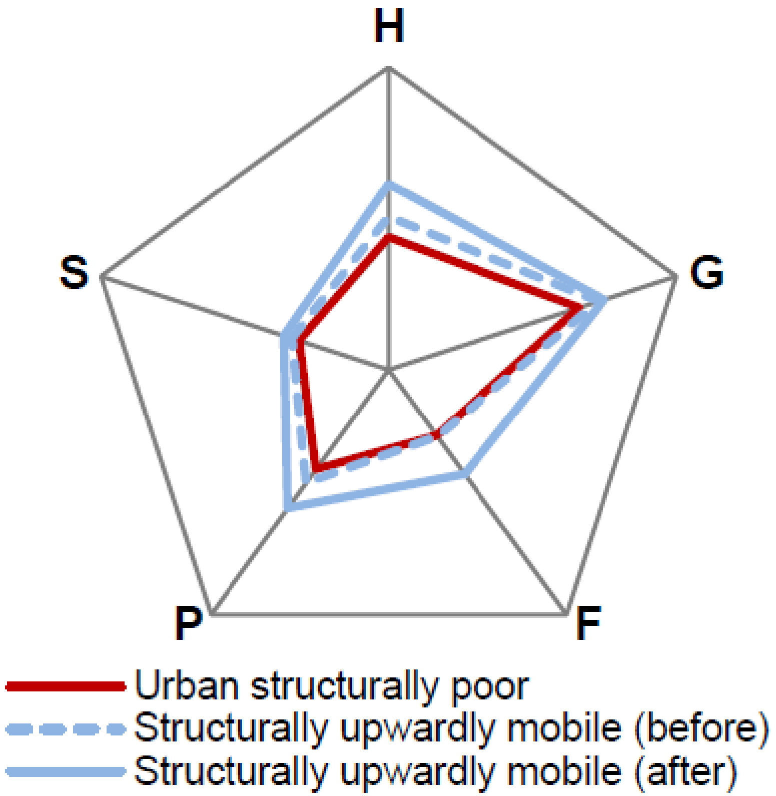
a) Average b) Rural c) Urban

Structural escapes from poverty

a) Rural-to-urban migrants

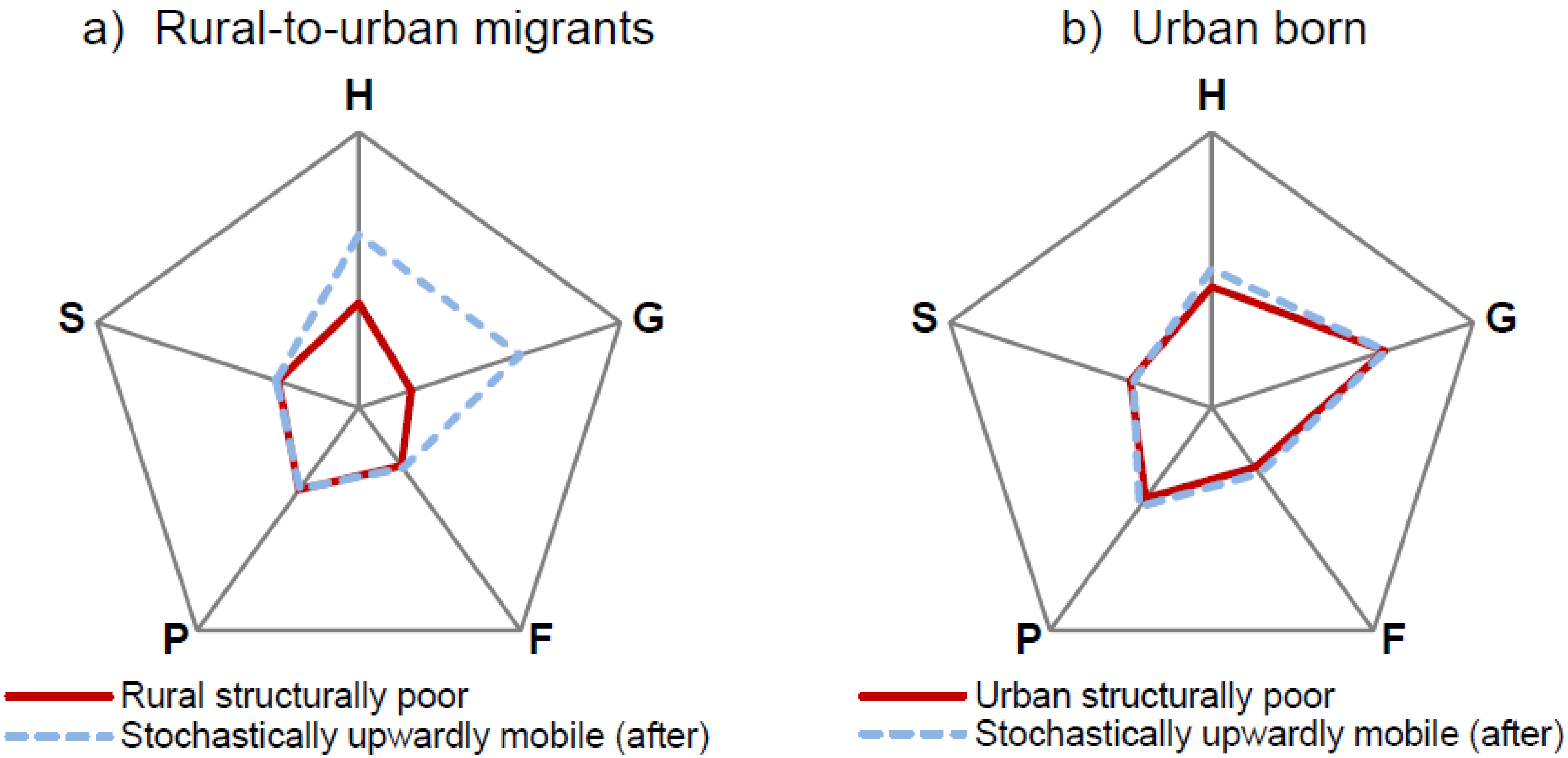


b) Urban born



- In contrast to those who remained structurally poor, the upwardly mobile were integrated into better-functioning family networks and were more successful in seizing opportunities to enhance their human capital.

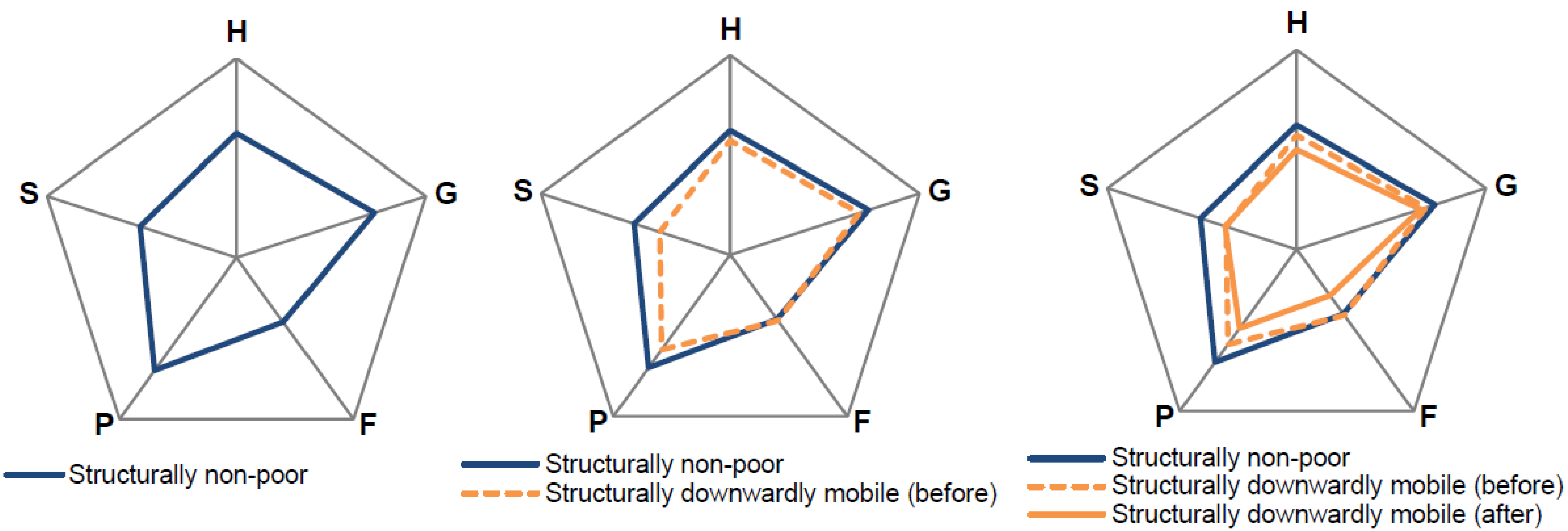
Structural vs. stochastic escapes from poverty



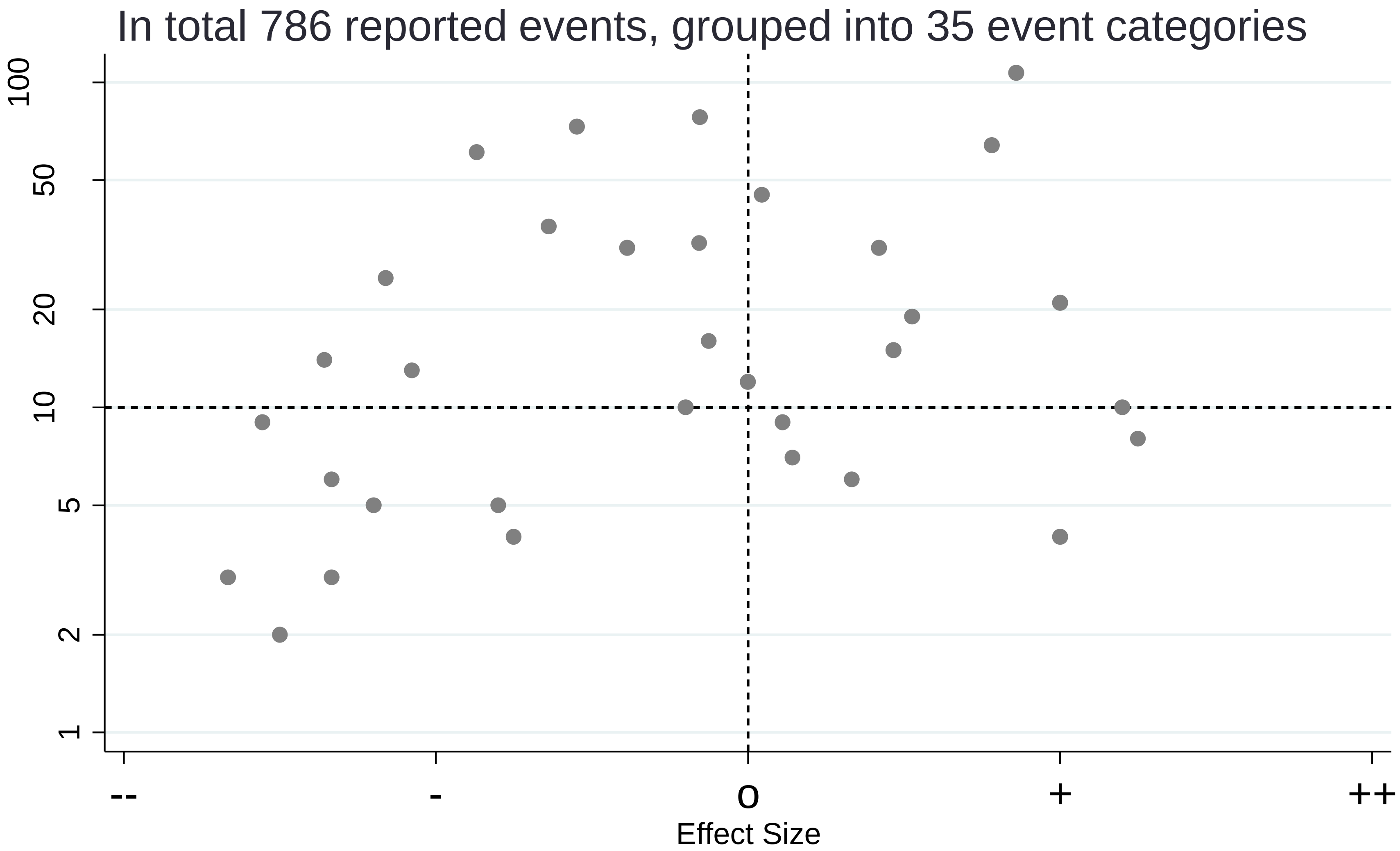
- Short-lived poverty escapes occurred when individuals found employment in better paying jobs. What made this upward mobility temporary was the fact that employment in these jobs could not be maintained over the longer term, due to issues such as contract expiration, business closure, or health issues

Structural descents into poverty

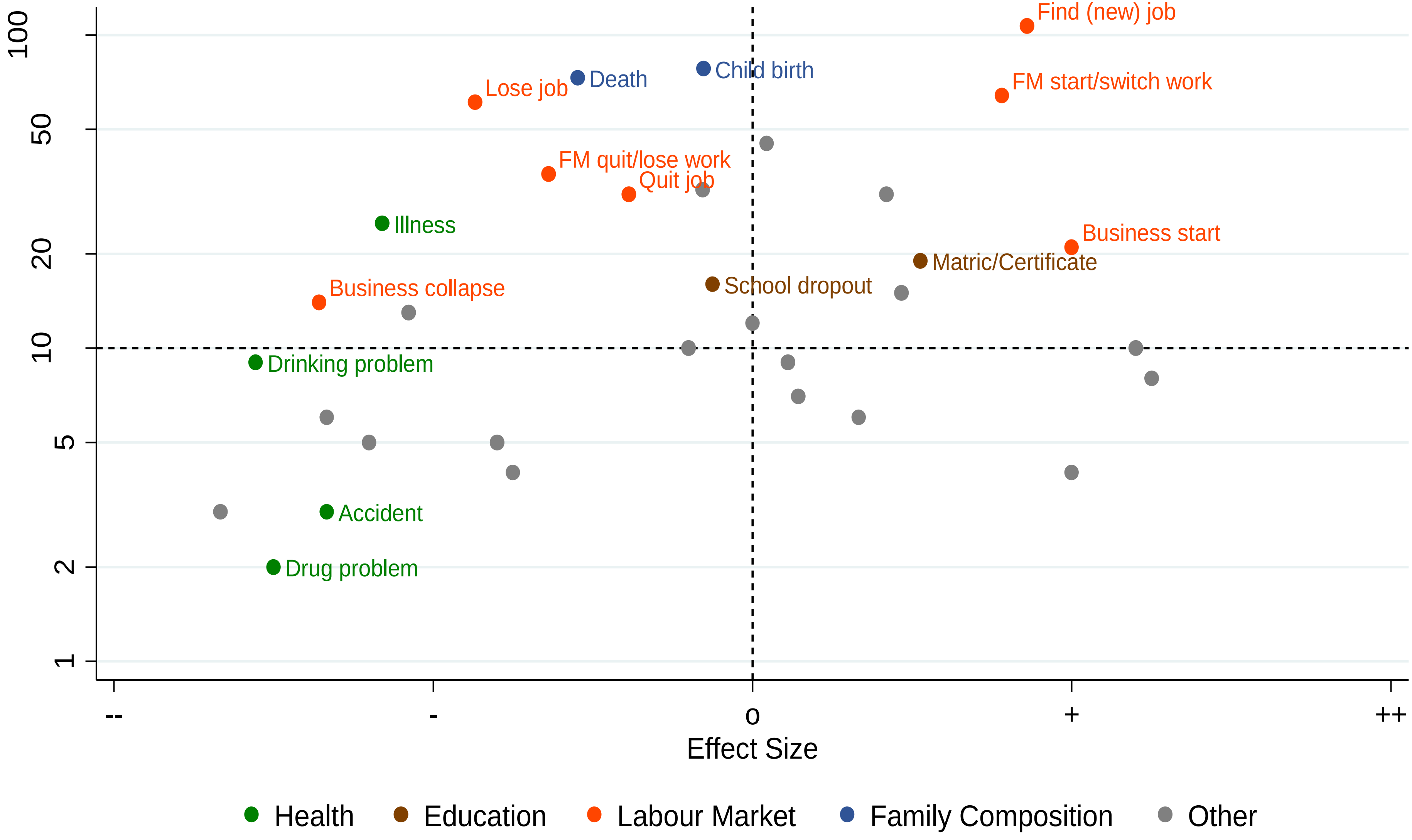
- 4 out of the 10 respondents who started off their lives structurally non-poor had fallen into deep structural poverty over time.
- In two cases, the impoverishment occurred within a narrow time frame (single step), caused by a major external shock that irrevocably destroyed human or physical capital. In the other cases, the impoverishment occurred rather gradually, in multiple linked steps.



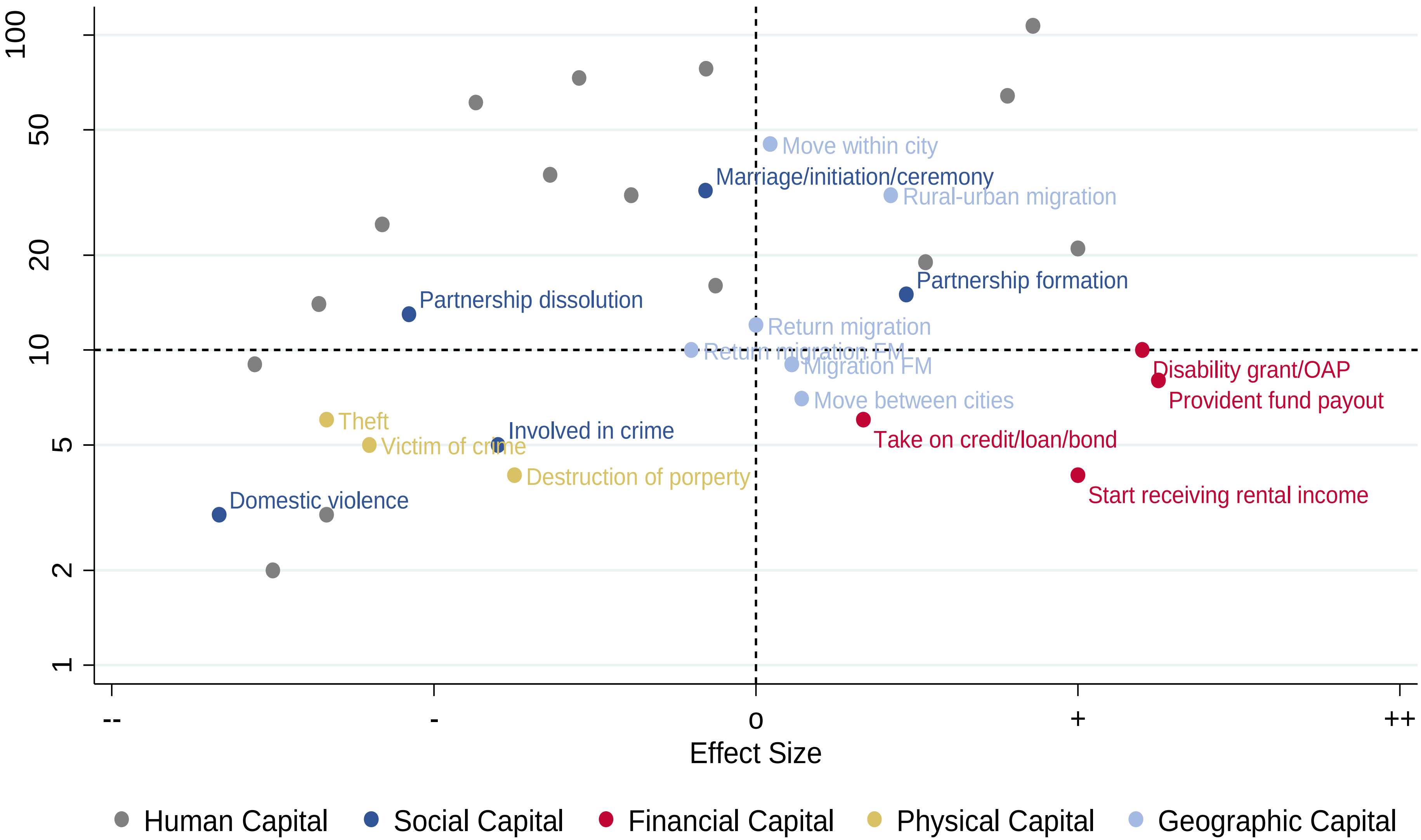
Event Analysis



Events associated with rise/fall in human capital



Events associated with rise/fall in other capital types



Key contributions

- The urban focus and differentiation between structural and stochastic movements distinguish this research from previous mixed-method investigations of poverty dynamics in SSA.

- Four interrelated dimensions characterising urban poverty:
  1. Transitions into or out of employment and job-to-job transitions are among the main trigger events associated with both poverty entries and exits.
  2. Given the low returns and high job volatility associated with low-skilled labour, people require additional physical and social assets to achieve and sustain a position of economic security. In this regard, family networks and dependency relationships may both enable and constrain upward mobility.
  3. Higher levels of education constitute an important enabling factor for upward social mobility. Nonetheless, today's youth struggle to enter the labour market despite often having completed secondary schooling.
  4. Poverty is not only a matter of few assets, but also of constraints to effectively using these assets. Lack of access to financial capital as well as the costs and risks associated with the geographic location of the urban poor further constrain opportunities.

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