Poverty and the Composition of Urbanization

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Outline

- Introduction (Ravi)
- Urbanization: A Global Perspective (Ravi)
- The “Missing Middle”: Cross-Country Evidence (Luc)
- Small Towns and Poverty Reduction in Tanzania (Joachim)
- Conclusion (Ravi)

PART 1:
A global perspective

Introduction

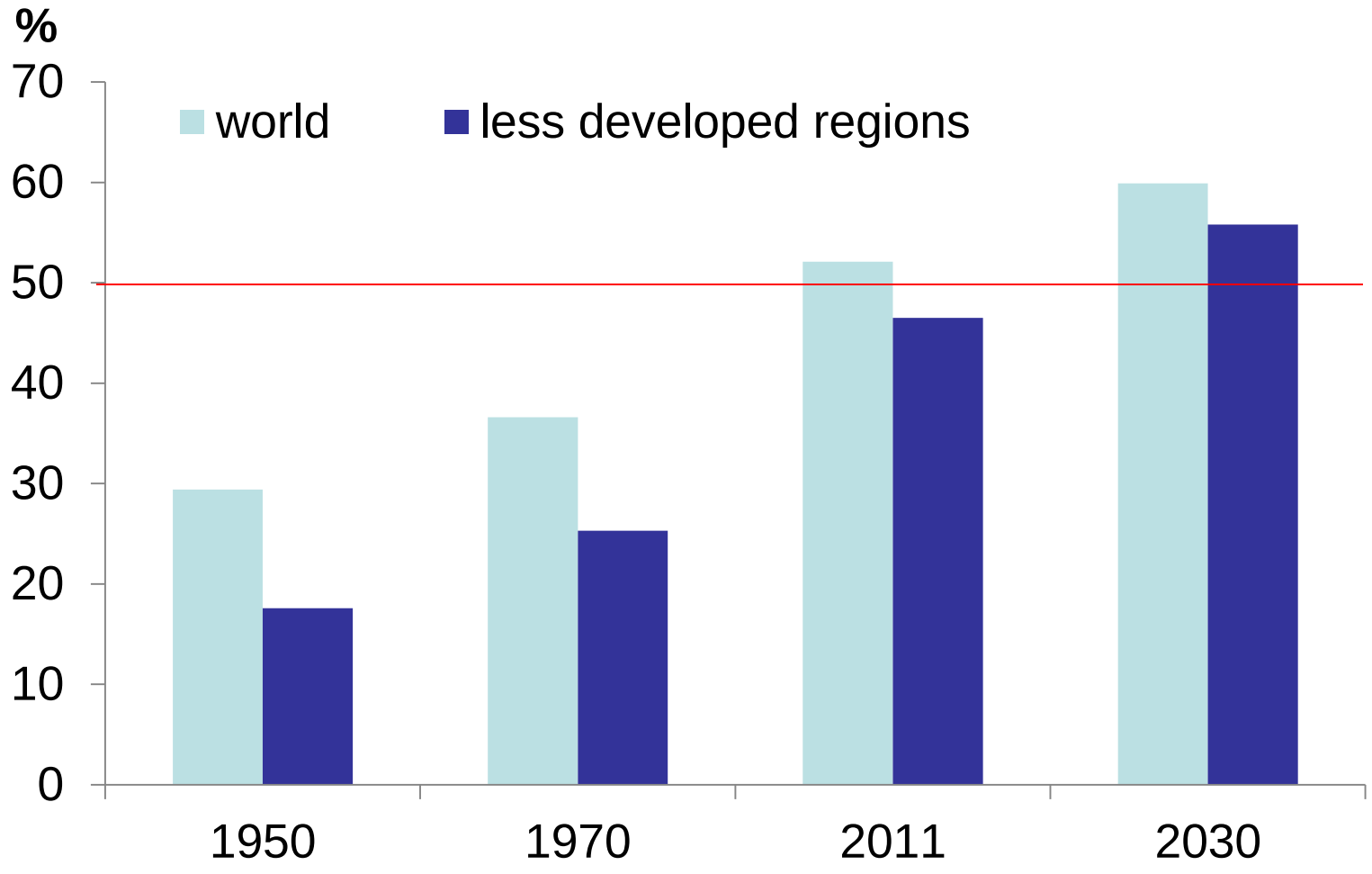
- Urbanization and Poverty is an old topic, and a lot has been done on it.
- In this presentation we highlight a twist on the story on which not as much has been written, and which we think is interesting from the analytical and the policy perspective.
- The purpose is to set out a research agenda rather than to present definitive conclusions and recommendations.

Urbanization: A Global Perspective

- Stylized facts we are all (more or less) familiar with:

✓The world is urbanizing rapidly. (In 2007 the "tipping point" was reached where half the world's population became urban).

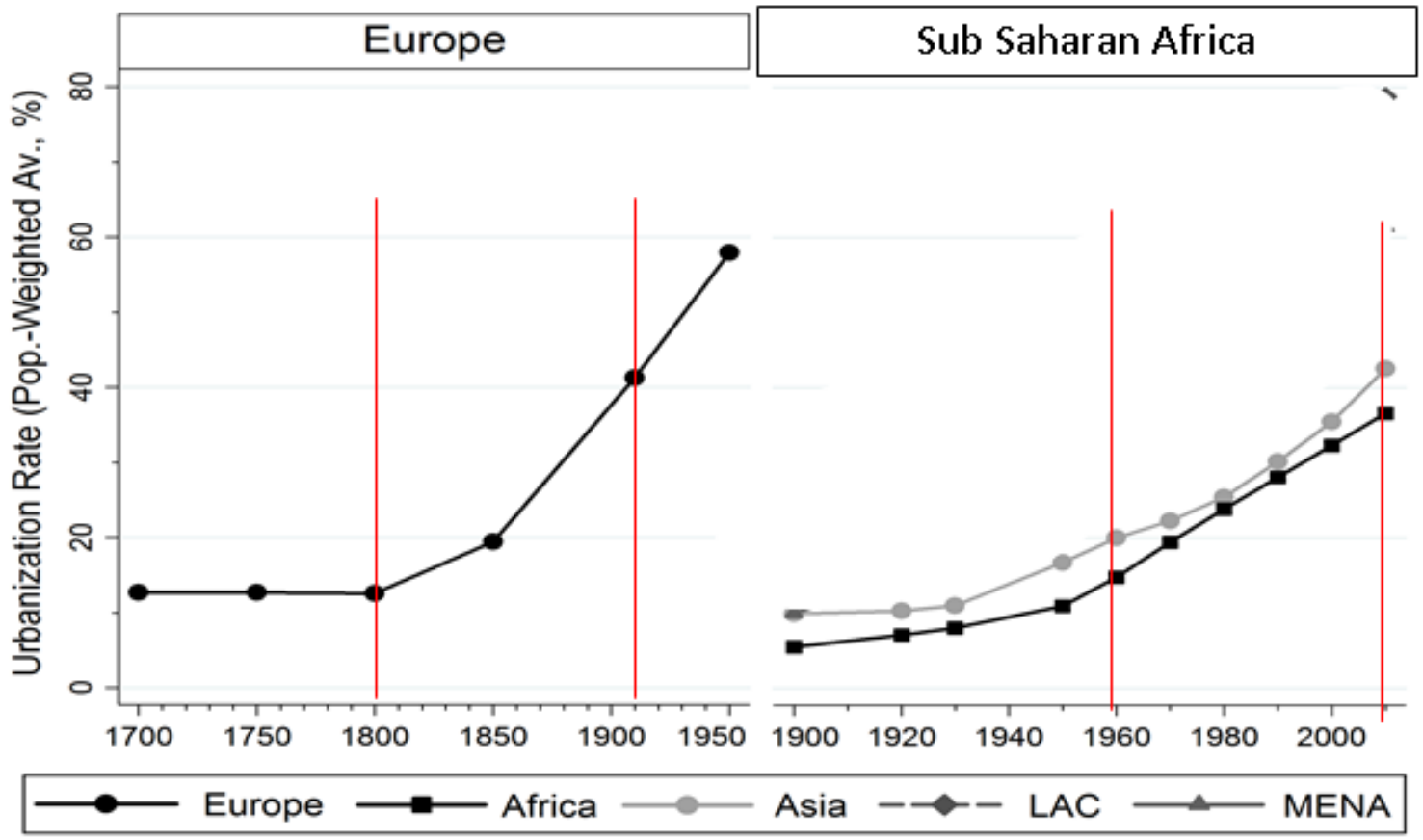
The world is urbanizing



Urbanization: A Global Perspective

- ✓ The pace of urbanization is extraordinary.

The Speed of Urbanization



Urbanization: A Global Perspective

- Many issues remain hotly debated.
  - Association between Urbanization and Growth. Essential to theories of development (eg the Lewis model).
  - Asia vs Africa. Is African urbanization different? (Henderson, Gollin etc)
  - Association between Unemployment, Poverty Reduction and Urbanization. (eg Harris-Todaro model).
  - Again, Asia vs Africa. Is African urbanization different?
  - Urbanization and Formalization (Ghani and Kanbur, 2014; Kanbur, 2015)
  - Etc etc

Urbanization: A Global Perspective

- However, note that all of the above is in an *aggregative* perspective.
- It is the *national* rate of urbanization which is being focused upon, either as the variable to be explained, or the as the variable doing the explaining.
- This is, in fact, the dominant mode of reasoning and analysis in the literature.
- BUT…

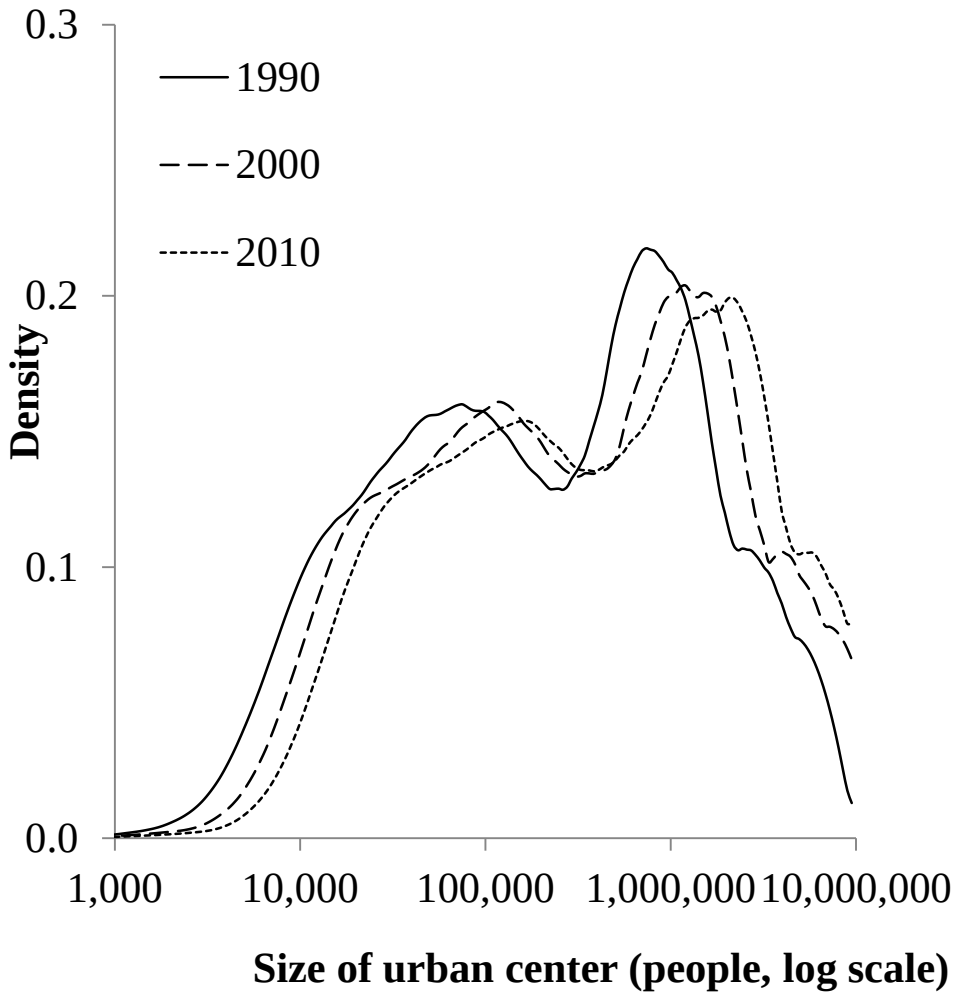
Urban concentration in Africa

Concentrated (2010)

- 2/5 of Africa's urban population in big cities (> 1 million)
- 2/5 in small towns (<250,000)

…and concentrating

- Big cities growing at 6.5 % ➔ metropolitization
- Small towns at 2.4%



Source: Dorosh and Thurlow, 2013

Urbanization: A Global Perspective

- In other words, the *composition* of urbanization might be as important as its aggregate rate.
- But the literature, and perhaps policy mindsets, are more focused on the aggregate rate.

Urbanization: A Global Perspective

- Some exceptions, of course.
  - Vernon Henderson (2003) on “urban concentration”
  - Kanbur-Venables (2006) on “spatial disparities”
  - Christiaensen, De Weerdt and Todo (2013) on “missing middle”
  - In policy and political arena, push for decentralization
  - New Indian Government; massive investment in secondary towns

Urbanization: A Global Perspective

- However……
- In most countries, “urbanization” is treated either as an aggregative national phenomenon, or as an issue for large cities or indeed just the capital city.
- Take, for example, Tanzania and Dar Es Salaam.

Urbanization: A Global Perspective

- According to the 2012 census around 10% of the population lived in Dar, and at around 4.5 million this was the largest urban agglomeration in Tanzania by a huge margin.
- The population of Dar grew dramatically over the past fifty years. Further, the bulk of this growth was accounted for by in-migration. (Wenban Smith (2015) calculates that between the last two censuses, more than 60% of the growth of Dar was accounted for by migration.)

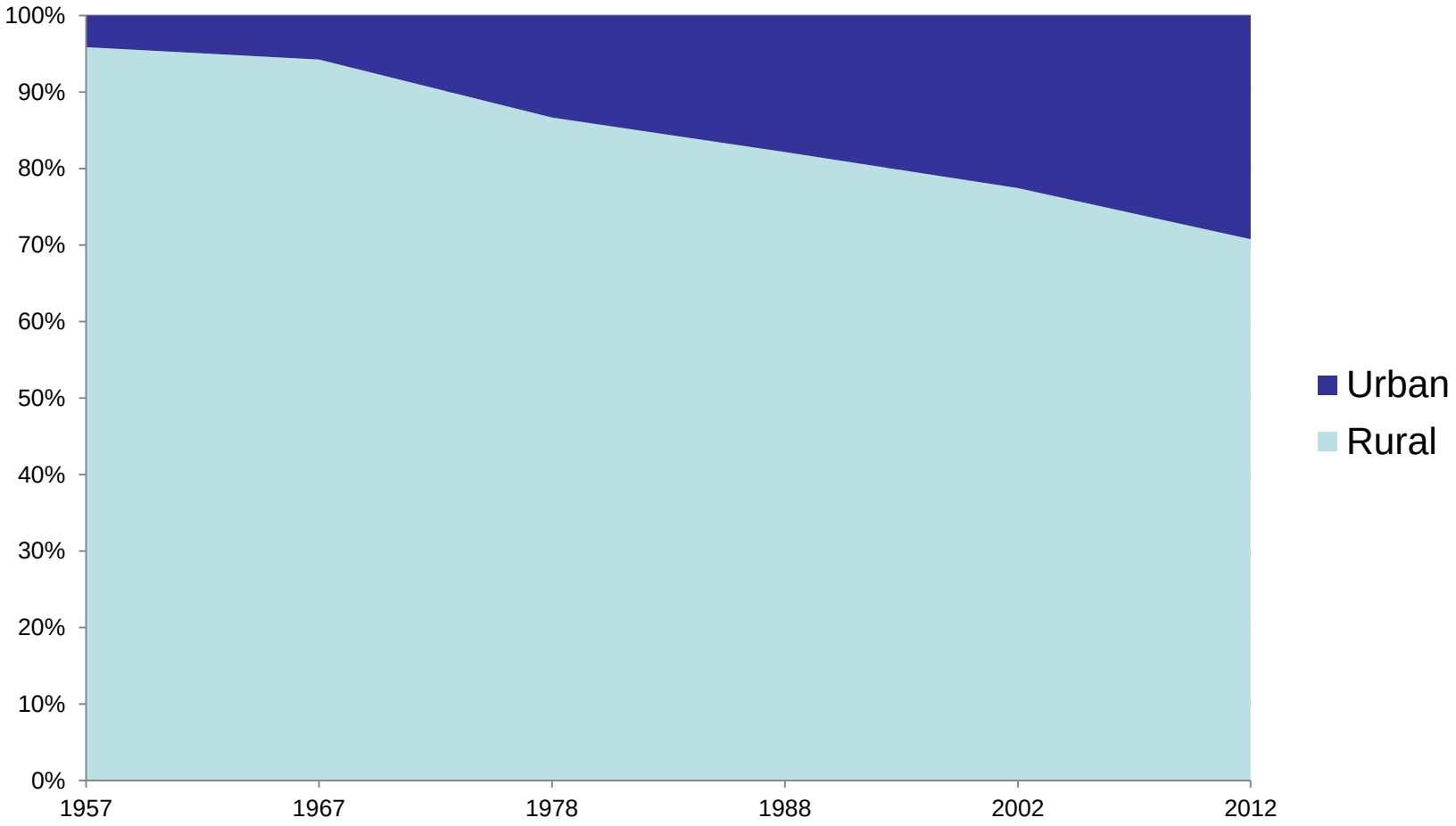
Urbanization: A Global Perspective

- Facts such as these, seen in this way, colour much of the urbanization discourse, all over the world.
- They lead to a focus on investment in large cities, in response in-migration. And because these are migrants from poor rural areas, the argument goes, such urban investment is also addresses poverty.
- Consider, however, the following perspective on the *composition* of urbanization in Tanzania, also taken from Wenban Smith (2015).

Urbanization: A Global Perspective

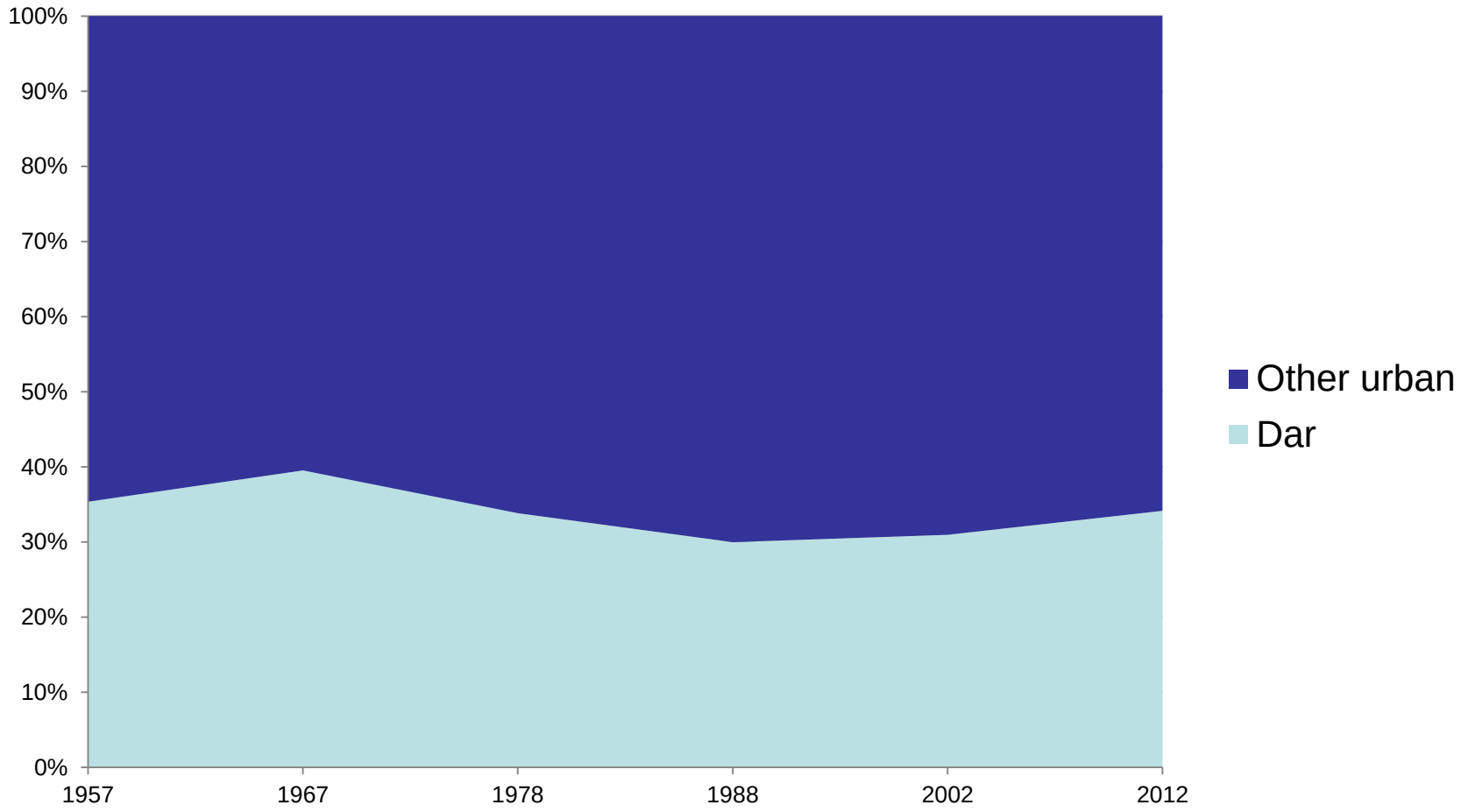
- In 2012 Dar accounted for about one third of the urban population.
- But it also accounted for about one third of the urban population in 2002, in 1988, in 1978 and so on back.
- Thus non-Dar urban areas have grown as fast as Dar in Tanzania's history.

Tanzania Share of Urban Population



Source: Wenban-Smith (2015)

Share of Dar in Urban

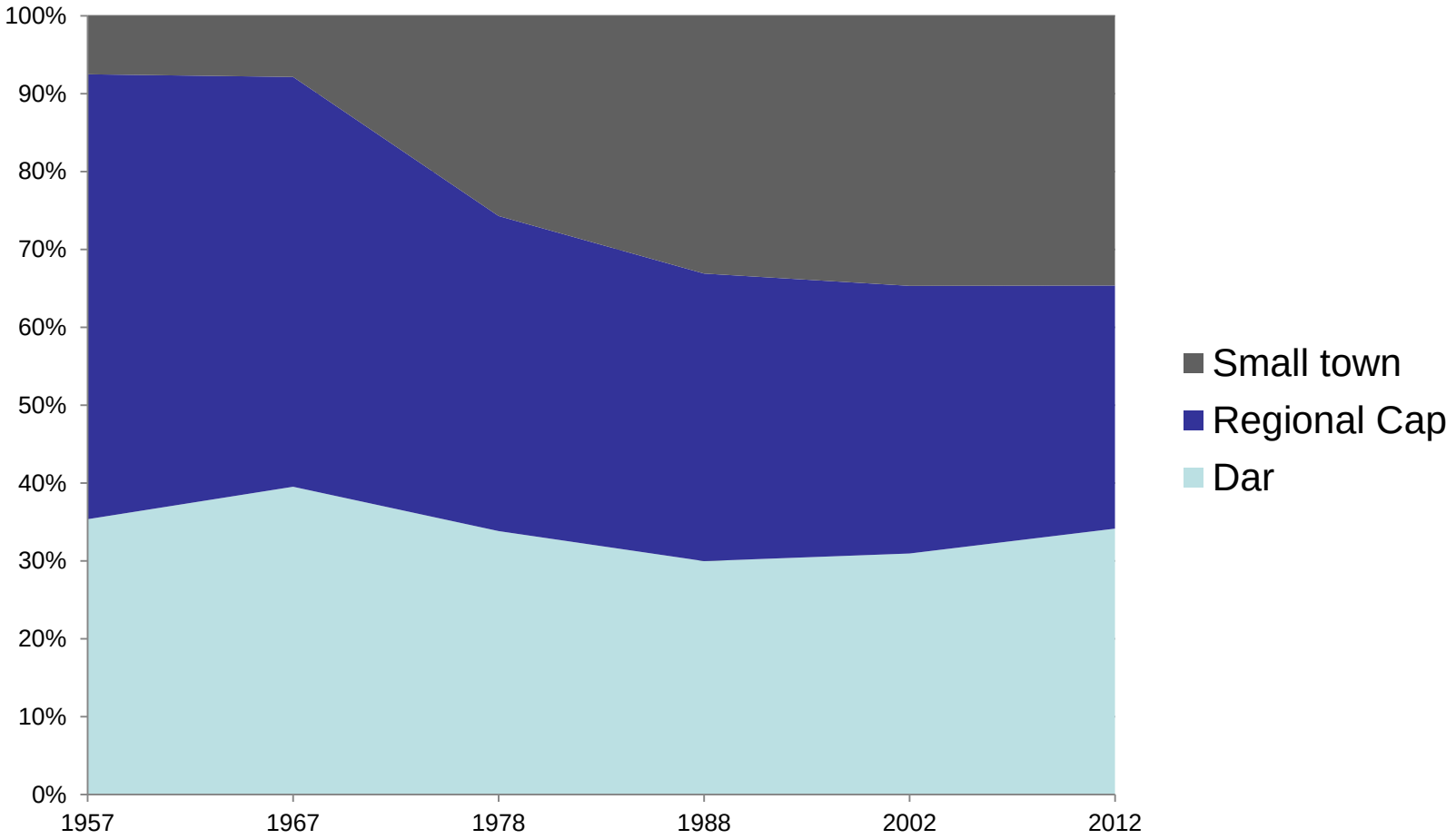


Source: Wenban-Smith (2015)

Urbanization: A Global Perspective

- And, actually, if we further divide non-Dar urban into regional capital and small towns, an even more interesting trend appears—small towns are forming an ever increasing proportion of the urban population of Tanzania.
- Even if this wasn't the case, even if urban composition held constant, the basic point is that there is a LOT of urbanization action going on in small towns! The movement out of rural areas, which is undeniable as a major trend, is as much to small towns as to Dar.

Urban Composition



Source: Wenban-Smith (2015)

Urbanization: A Global Perspective

- This compositional perspective on urbanization raises several questions on the sources of growth and poverty reduction. It also poses policy tradeoffs somewhat sharply—at the margin, should the Government of Tanzania tilt towards public investment in small towns rather than the capital city?

Urbanization: A Global Perspective

- On poverty reduction, the following type of exercise might give us an empirical handle on the effect of the composition of urbanization.
- Suppose we had nationally representative panel data at time t and time t+1, which gave us individual location as well as income (or consumption). Then we could, in effect, decompose national poverty change into (i) the poverty effects of income growth in rural areas, small towns, and Dar, and (ii) the poverty effects of income changes as the result of (net) migration across these categories.

Urbanization: A Global Perspective

- We could do this, for example, for the National Panel Survey (2009, 2011 and 2013).
- BUT
  - To the best of our knowledge this has not been done as yet; and in our view it is an important part of the research agenda.
  - Census extrapolations would be needed to give us appropriate sectoral population weights.
  - At most this would give us a 4 year time horizon, which may not be long enough to see the full effects of migration.

Urbanization: A Global Perspective

- While we wait for the NPS (including hopefully the 2015 round data to give us a six year span) to be analyzed, let us consider two complementary approaches to addressing the interactions between poverty reduction and the composition of urbanization.
  - First, we can do cross country analysis using national level urban composition as a key variable. Luc Christiaensen will do that.
  - Second, we can see what insights the famous Kagera panel data can provide on the question. Joachim De Weerdt will make a presentation on that.

PART 2:
Cross-country Evidence[1]

Source: Christiaensen and Todo, 2014, Poverty Reduction During the Rural–Urban Transformation – The Role of the Missing Middle, World Development, 63: 43-58.

Why might the composition of the urbanization process matter?

- Agglomeration economies
  - Possibly, larger for cities than in secondary town → faster growth/employment → favors city development;
  - But agglomeration economies and their relevance differ by activity and thus level of development, and political factors & congestion make it difficult to properly quantify them
- Migration – jobs in secondary towns (ST) easier to reach for the poor?
  - Sec. towns: Lower migration costs, easier to maintain ties, commuting
  - Cities: higher wages, but higher unemployment, poor can queue less
- Linkages to the Hinterland
  - Urbanization externalities through consumption linkages, upward pressures on ag wages, rural non-farm generation
  - Possibly stronger for cities, but overall reach possibly smaller in the aggregate when accounting for hinterland effects of all STs

→ Forces can go in opposite ways; ultimately it is an empirical matter

Empirical Methodology

Population divided in 3 groups

- 1 = rural agriculture (A)
- 2 = RNF & ST (middle) (N)
- 3 = city (U)

		Agriculture	Non-agric
Rural	Rural	1	2
Urban	Secondary town/ peri-urban		
	Metropolitan (>1million)		3

Data:

- Cross-country experience
- Case study Kagera, TZ

Estimated relationships

$$\frac{dP_j}{P_j} = \beta_U \frac{dS_{jU}}{S_{jU}} + \beta_N \frac{dS_{jN}}{S_{jN}} + \gamma \frac{dy_j}{y_j} + v_j + v_t + e_{jt}$$

P=decomposable poverty measure

Si = share of population in i=A,N,U

Y=GDP per capita

The data

- Poverty data – Povcal ($1-day, $2-day)
- Population data
  - s_U = share of people (%) living in cities > 1 million (UN World Urbanization Prospects),
  - S_A= share of people employed (%) in agriculture (FAO)
  - S_N = share of people (%) in intermediate space employed in nonagriculture =1- s_U – S_A
- GDP Growth/capita – WDI

Country coverage (1980-2004)

	Number of countries	Number of survey periods	Percent of survey periods
Sub-Saharan Africa	14	34	16.5
South Asia	3	17	8.3
East Asia and Pacific	6	34	16.5
East Europe and Central Asia	10	31	15.1
Latin America and the Caribbean	13	81	39.3
Middle East and North Africa	5	9	4.4
Total	51	206	100.0

The sample

Variable	Mean	S. D.	Min.	Max.
Poverty headcount ratio at $1 a day (%)	17.13	20.07	0.09	90.26
Poverty headcount ratio at $2 a day (%)	39.88	27.45	1.16	98.07
Gini coefficient	44.15	9.64	27.16	63.42
Share of rural nonfarm employment (%)	41.86	17.70	6.85	79.02
Share of metropolitan population (%)	19.54	9.93	3.88	37.11
Share of agriculture employment (%)	38.60	21.38	6.60	84.00
Annual percentage change of				
Poverty headcount ratio at $1 a day	-5.48	29.60	-86.52	82.17
Poverty headcount ratio at $2 a day	-2.30	12.10	-61.35	38.95
GDP per capita	2.20	3.50	-9.65	13.52
Annual percentage-point change in				
Share of rural nonfarm employment	0.45	0.47	-1.35	2.04
Share of metropolitan population	0.13	0.13	-0.17	0.62
Share of agriculture employment	-0.58	0.45	-2.20	1.10

Empirical results

$$\frac{dP_j}{P_j} = \beta_U \frac{dS_{jU}}{S_{jU}} + \beta_N \frac{dS_{jN}}{S_{jN}} + \gamma \frac{dy_j}{y_j} + \nu_j + \nu_t + e_{jt}$$

I. Move to the middle larger effect on poverty reduction, controlling for growth

Change rate of the poverty headcount ratio		
(Poverty line)	$1	$2
Change rate of the share of people in the middle	-9.7***	-3.5***
Change rate of the metropolitan share of the population	-5.4	-2.9
GDP growth per capita	-2.3**	-1.4***

GDP growth, flood, country fixed effects and time dummies as controls

Metropolitization is less poverty reducing

	Change rate pov gap		Quadratic specification		Metropolis (750k)	
(Poverty line)	$1	$2	$1	$2	$1	$2
Change rate of the share of people in the middle	**-13.67*** **	**-5.827*** **				
Change rate squared						
Change rate of the metropolitan share of the population	**-9.008**	**-4.484**				
Change rate squared						
Per capita GDP Growth rate	**-2.346**	**-1.616** **				

Flood, country fixed effects and time dummies as controls

Metropolitization less poverty reducing

	Change rate pov gap		Quadratic specifiction		Metropolis (750k)	
(Poverty line)	$1	$2	$1	$2	$1	$2
Change rate of the share of people in the middle	-13.67***	-5.827***	**-13.08*** **	**-4.816*** **		
Change rate squared			**1.896*** **	**0.867*** **		
Change rate of the metropolitan share of the population	-9.008	-4.484	**-2.134**	**-2.874**		
Change rate squared			**-2.101**	**-0.396**		
Per capita GDP Growth rate	-2.346	-1.616**	**-2.516** **	**-1.560*** **		

Flood, country fixed effects and time dummies as controls

Metropolitization less poverty reducing

	Change rate pov gap		Quadratic specification		Metropolis (750k)	
(Poverty line)	$1	$2	$1	$2	$1	$2
Change rate of the share of people in the middle	-13.67***	-5.827***	-13.08***	-4.816***	**-9.370*** **	**-3.188*** **
Change rate squared			1.896***	0.867***		
Change rate of the metropolitan share of the population	-9.008	-4.484	-2.134	-2.874	**-6.124*** **	**-2.070** **
Change rate squared			-2.101	-0.396		
Per capita GDP Growth rate	-2.346	-1.616**	-2.516**	-1.560***	**-2.238** **	**-1.411*** **

Flood, country fixed effects and time dummies as controls

That metropolitization is less poverty reducing is robust to other factors affecting urban primacy

	Include (lagged) pop growth and (lagged) change in democracy		+(lagged) change road density, years of schooling, drought		Initial poverty
(Poverty line)	$1	$2	$1	$2	$1
Change rate of the share of people in the middle	-9.919***	-3.525***	-21.23***	-6.884***	-8.906***
Change rate of the metropolitan share of the population	-0.460	-2.345	-7.850	-4.502	-5.327
Per capita GDP Growth rate	-2.014*	-1.533***	2.498	0.103	-2.099**
#obs	199	199	77	77	206

Flood, country fixed effects and time dummies as controls

Results robust against

Alternative measures

- Poverty gap – depth of shortfall
- Alternative metropolis (>750K in 2007)

Functional relationship

- Non-linear relationship

Metropolitization as conduit of

- Poverty
- Connectedness, democracy, population growth

II. Accounting for differential effects on growth, migration to middle remains more poverty reducing

Change rate of the population headcount (%)	**Poverty head count**		**Poverty head count**	
(Poverty line)	$1	$2	$1	$2
change rate in share of middle	-9.7**	-3.5***	-10.75***	-3.99***
change rate in share of metropole	-5.4	-2.9	-2.5	-1.19
GDP growth rate	-2.3**	-1.4***		

Flood, country fixed effects and time dummies as controls

Inequality associated with agglomeration in mega-cities

Gini coefficient	First Difference	OLS	OLS
Share of people in the middle	0.210	-0.246**	-0.080*
Metropolitan share of the population	0.536	0.513**	0.245**
GDP per capita	1.289	3.151**	2.175**
GDP per capita squared	-0.068	-0.218**	-0.151**
Observations	230	232	232
R-squared	0.152	0.596	0.790
Year dummies	Yes	Yes	Yes
Regional dummies	No	No	Yes

Metropolitan agglomeration associated with faster growth

	GDP Growth /capita (2SLS)
Change rate of share people in the middle (instrumented by own lags)	0.630*
Change rate of the metropolitan share of the population (instrumented by own lags)	1.072**
Initial GDP per capita (instrumented by own lags)	-0.373
Year dummies	Yes
Country dummies	Yes
Observations	209

Concluding remarks

- Composition of urbanization affects pace of poverty reduction
- Migration out of agriculture into the middle is associated with faster poverty reduction than agglomeration in mega-cities.
  - Metropolitization associated with faster growth & higher inequality
  - RNFE and secondary town development yield possibly slower growth, but less inequality and more poverty reduction
  - Size effect seems especially important, i.e. the ability of the poor to connect to opportunities nearby

PART 3:
Evidence from Tanzania (KHDS)

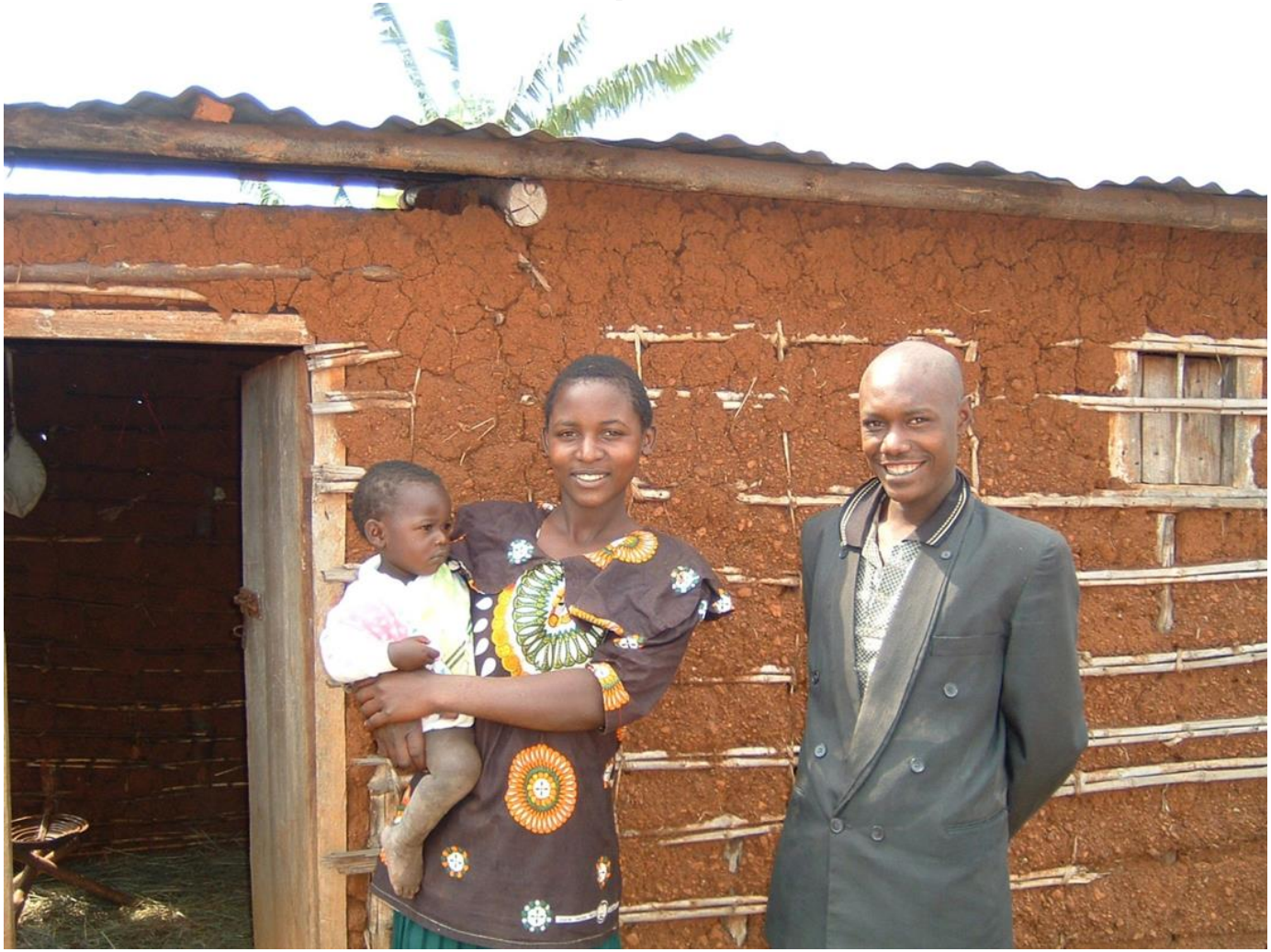
Kagera Health and Development Survey

Baseline in 1991-1994: 915 households, representative of the region

Follow-up rounds in 2004 and 2010 that aim to track every household member from the baseline survey, including those who split and those who migrated.

Baseline household

Follow-up household



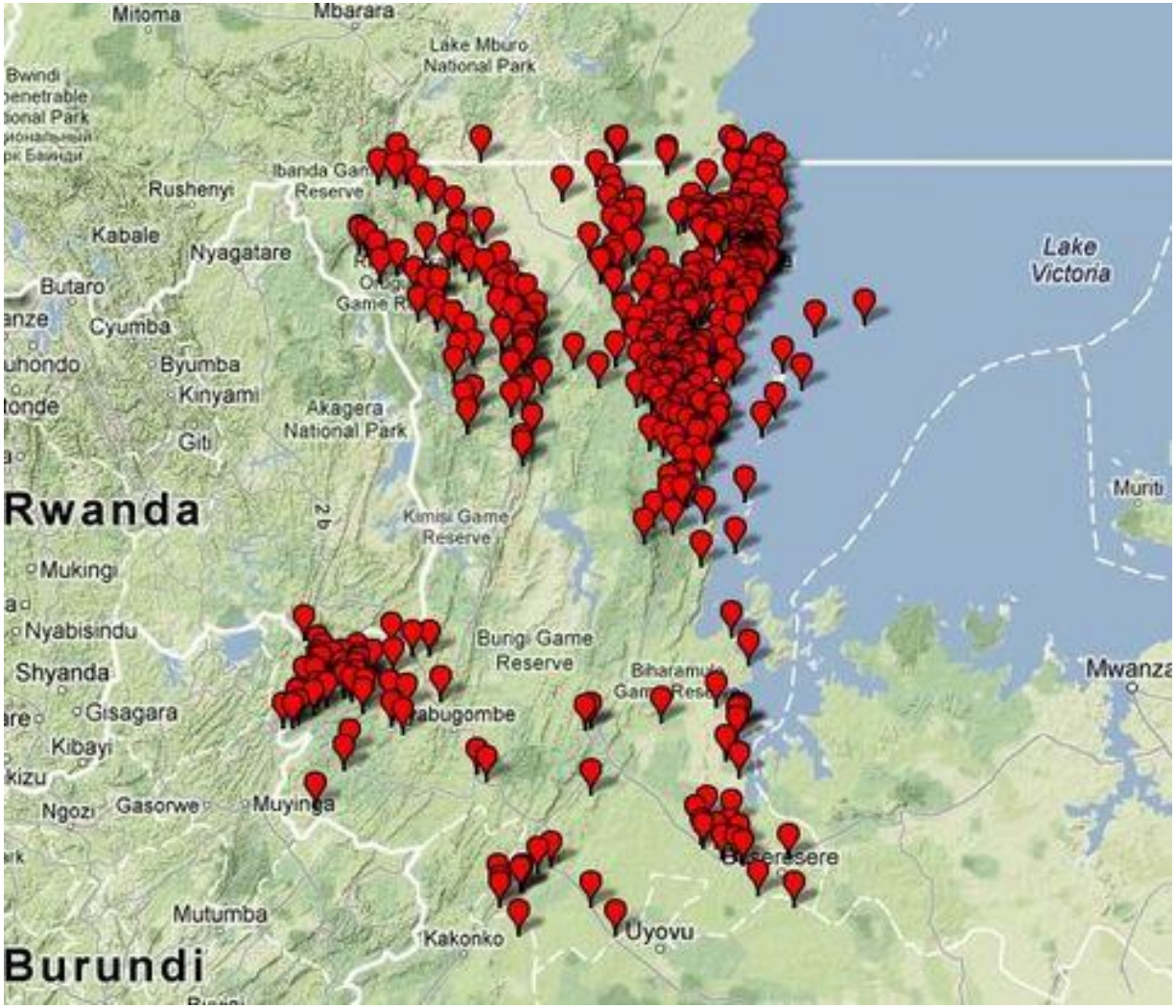
KHDS Baseline = 1991-1994

915 households

from 51 villages

93% from rural areas

2010: Kagera


Mitoma
Mbarara
Lake Mburo National Park
Rushenyi
Kabale
Nyagatare
Butaro
Cyumba
Byumba
Kinyami
Akagera National Park
Giti
Rwanda
Kimisi Game Reserve
Mukingi
Nyabisindu
Shyanda
Gisagara
Kibayi
Ngozi
Gasorwe
Muyinga
Burigi Game Reserve
Mutumba
Kakonko
Uyovu
Burundi
Lake Victoria
Muriti
Mwanza

2010: Other regions & Uganda

Tracking Success

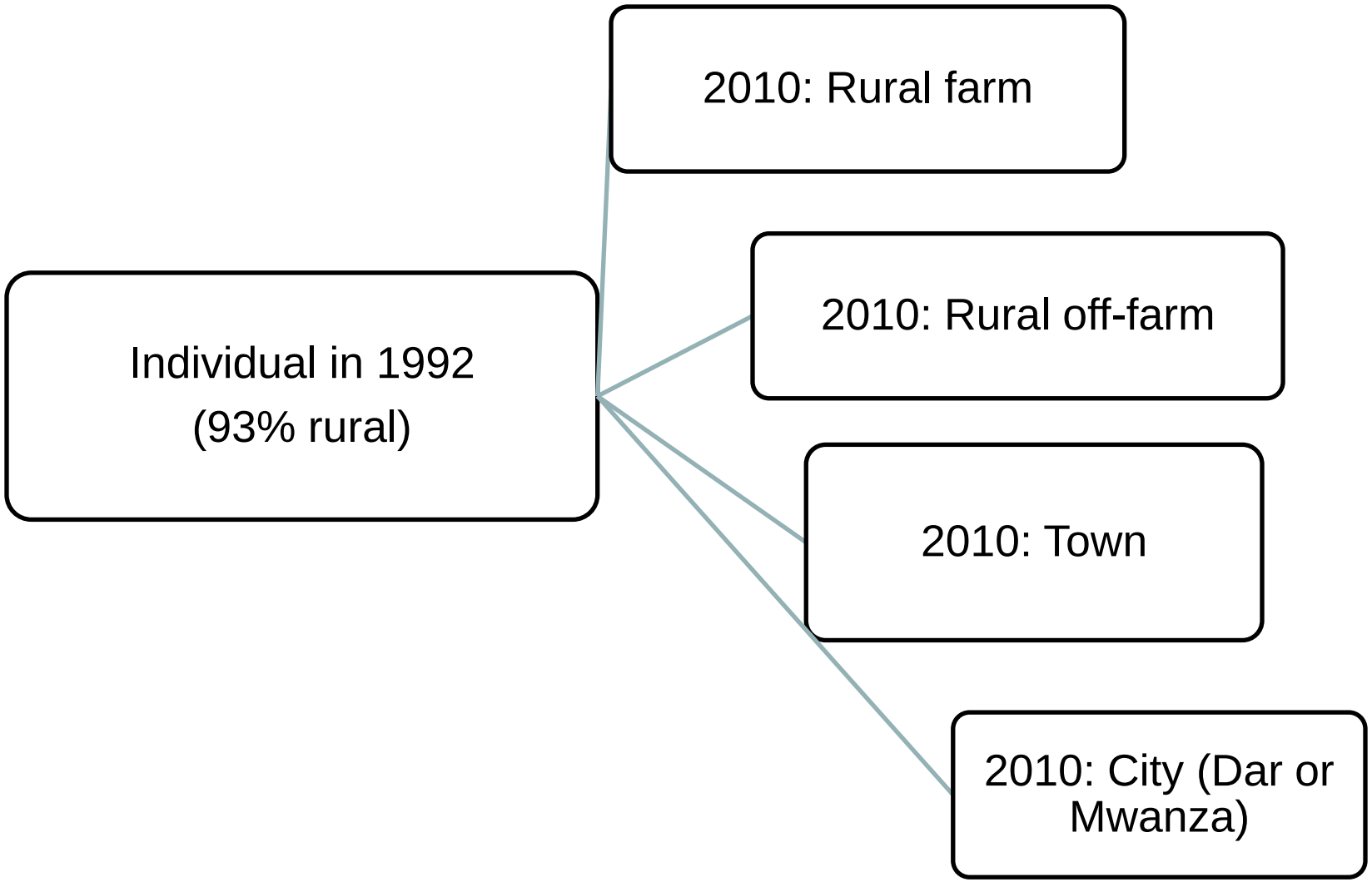
For 92% of baseline households we contacted at least 1 individual.

Table: Status of the 6353 original respondents:

	2010
interviewed	4336 (68%)
deceased	1275 (20%)
untraced	742 (12%)
TOTAL	6353 (100%)

PS: data publicly available

Decomposing Growth & Poverty



Transition Frequencies

	N	%		
Rural farm	1,906	44%		
Rural off-farm	972	22%		
Town	1,175	27%		
City	286	7%		

Average Growth

	N	%	Avg. growth	
Rural farm	1,906	44%	55%	
Rural off-farm	972	22%	92%	
Town	1,175	27%	129%	
City	286	7%	228%	

Growth Decomposition

	N	%	Avg. growth	Share in growth
Rural farm	1,906	44%	55%	23%
Rural off-farm	972	22%	92%	20%
Town	1,175	27%	129%	38%
City	286	7%	228%	19%

Poverty Decomposition

	N	Head-count 1992	Head-count 2010	
Rural farm	1,906	66%	44%	
Rural off-farm	972	62%	31%	
Town	1,175	47%	17%	
City	286	47%	2%	

Poverty Decomposition

	N	Head-count 1992	Head-count 2010	Share in net poverty reduction
Rural farm	1,906	66%	44%	34%
Rural off-farm	972	62%	31%	25%
Town	1,175	47%	17%	30%
City	286	47%	2%	11%

Possible Policy Implications

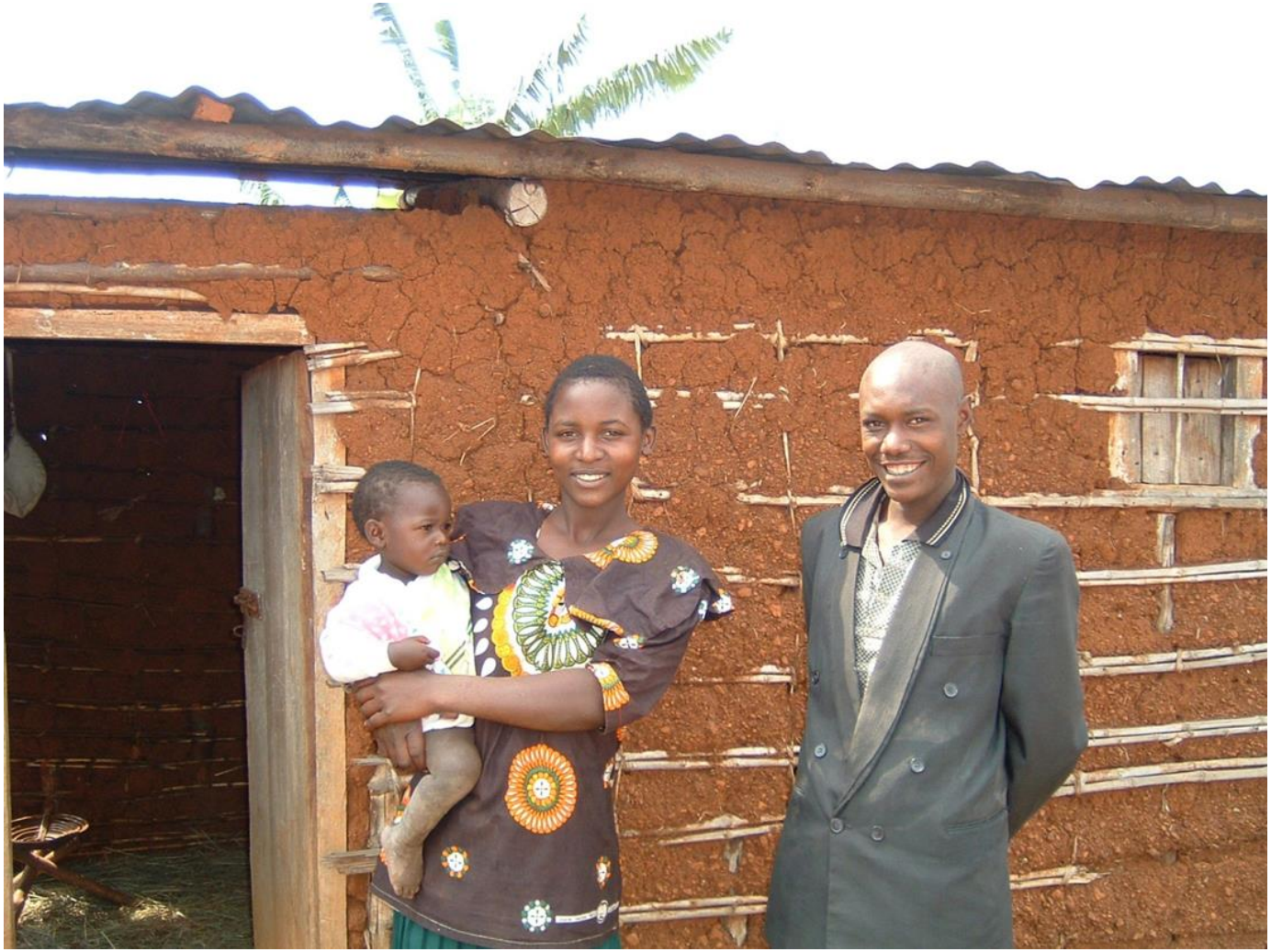
- A lot of action in smaller towns (tbc country-wide)

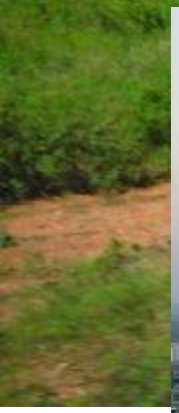
- Should Tanzania invest in secondary town development or should it invest in larger cities? Answer depends on
  - Agglomeration economies & congestion costs
  - Linkages with the rural areas
  - Rural-urban migration -> our current focus, through analysis of the determinants of destination choice

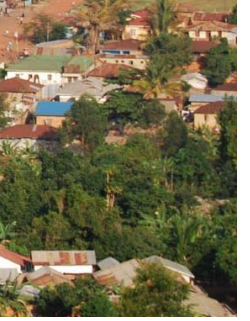
On-going research: Destination Choice

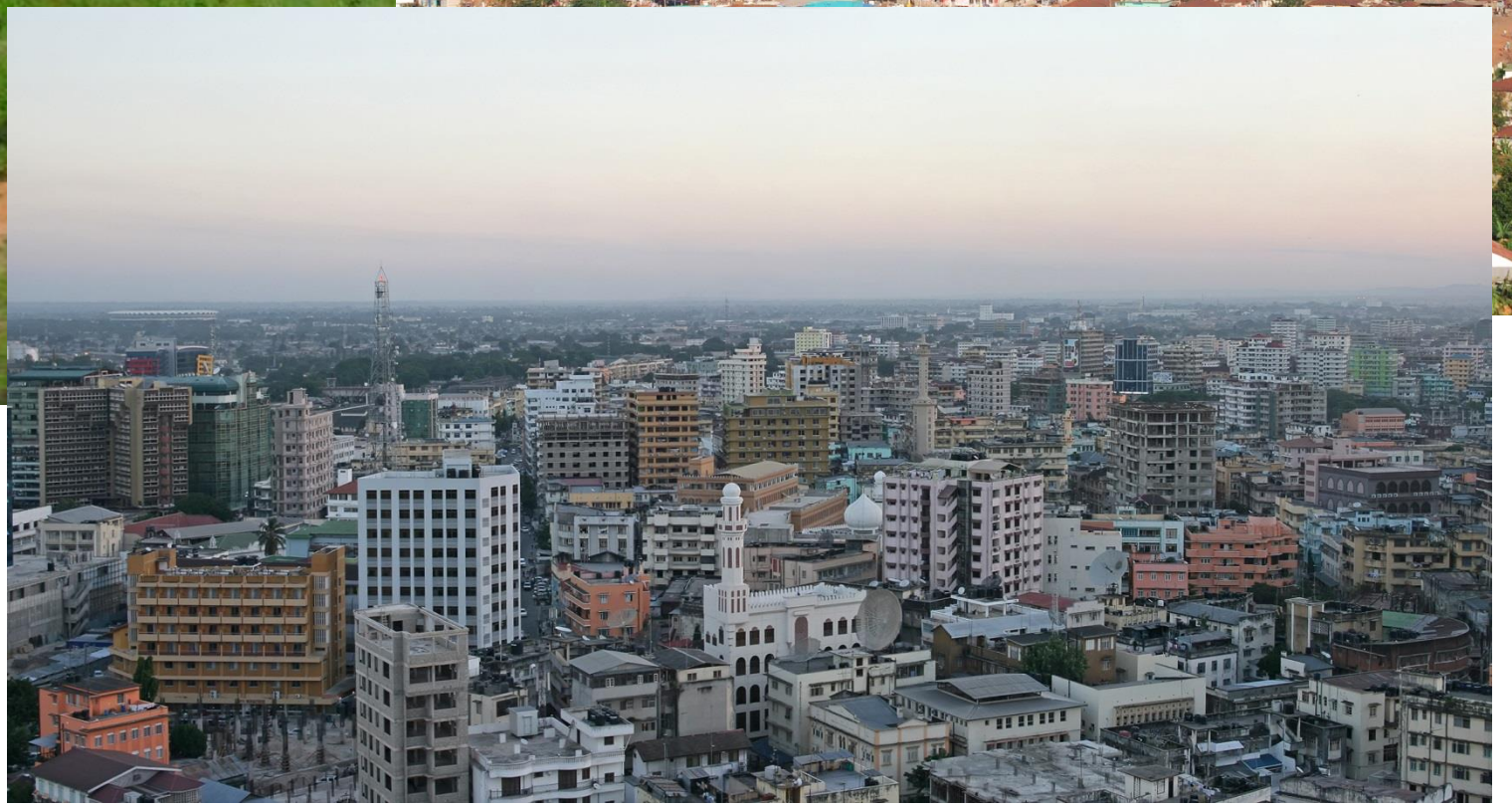
- Migration to cities: large average income effect, small size effect (few poor make it, i.e. small *N*)
- Migration to towns: smaller average income effect, but larger size effect (many poor make it, large *N*)
- To understand the size (*N*) effect, we need to know why and how migrants (especially the poor) choose their destinations: networks, socio-cultural similarity, proximity to home, local labour market, etc.…
- For example where would the man in this picture migrate to: a village, Bukoba Town or Dar?

Destination Choice









On-going research: destination choice

- Further quantitative work, estimating

$$Y_{id} = \mathbf{D}_d\beta_1 + \mathbf{R}_{id}\beta_2 + \alpha_i + \epsilon_{id},$$

- IGC funding qualitative work: FGDs, life histories with rural-urban migrants (cities, large towns, small towns)
  - ~100 life histories with sampledKHDS respondents
  - Link back to the KHDS data for mixed methods work
- By understanding drivers of destination choice of the poor, we hope to shed light as to why the poor may find it easier to go to secondary towns, and thus why jobs generated in ST may be more poverty reducing.

Concluding remarks

- Most of the urbanization and poverty discourse considers urbanization in the aggregate
- Indications that the composition of urbanization may also matter, for example b/c the poor may find it easier to reach jobs nearby
- This suggests and important research agenda in TZ & beyond:
  - To conceptually and empirically explore the importance of agglomeration economies, hinterland linkages and migration by city size, and their overall effect on economic growth and poverty reduction
  - On the factors that can foster job generation for the poor in secondary towns, such as the location and development of agricultural value chains, the retention of high skilled labor in secondary towns, infrastructure development (electrification, ICT, rural roads).