

Rural-urban synergies in development and propensity to migrate



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Overview

- **Objective:** examine drivers of rural-urban migration in developing countries and link to structural transformation
- Provide a **framework** that enables the estimation of the incentives to migrate and the propensity of people to respond to such incentives (in a broad set of countries)
- The presentation will cover:
 - Introduction to the approach
 - A graphical illustration of the framework
 - Preliminary results based on estimations at the regional level
 - Advantages and caveats of the approach

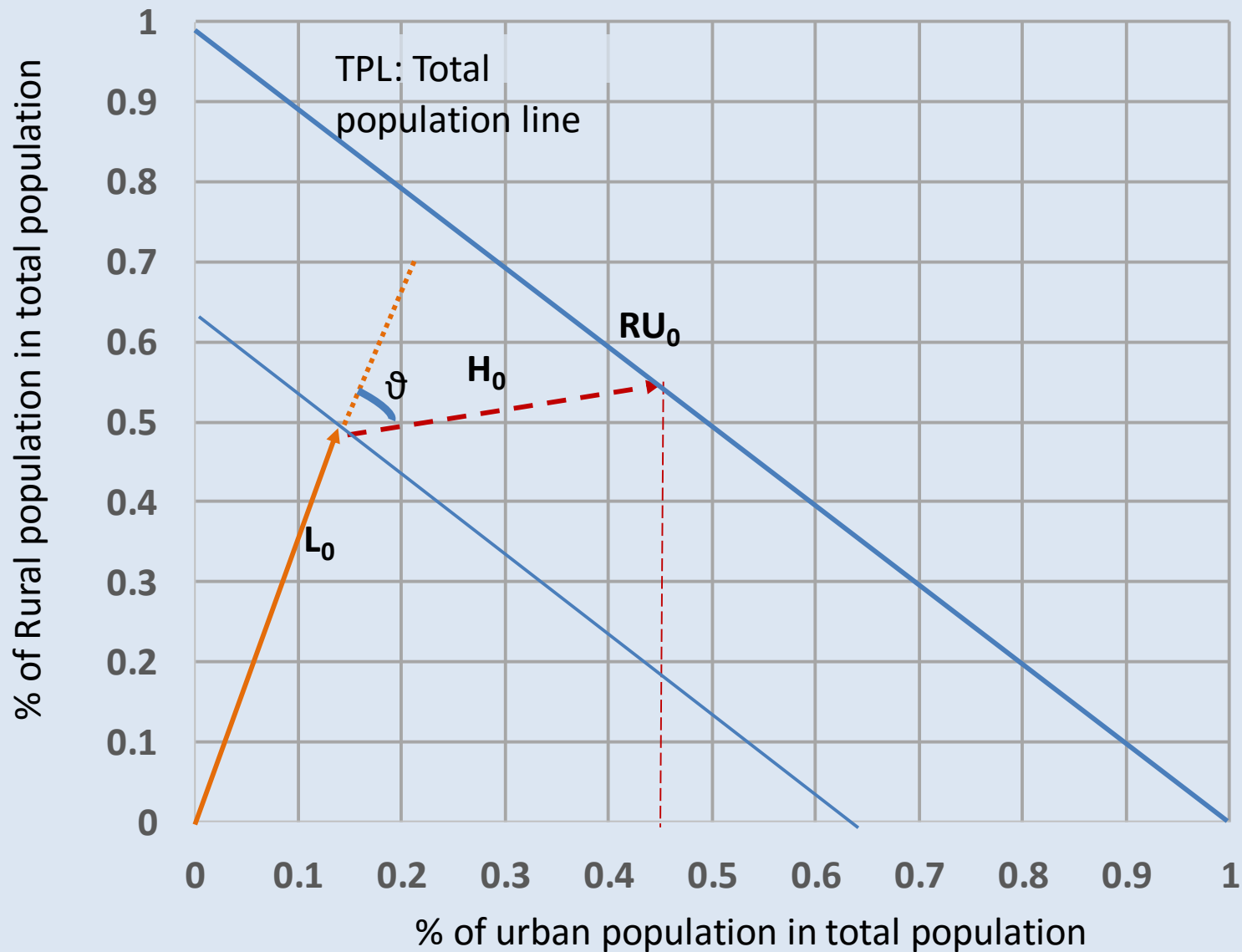
Introduction

- “macro” perspective using aggregate data at the country level to look into the main drivers of rural-urban migration
- Some share of the population that is at a disadvantage migrates in response to the rural-urban breakdown of population that is “advantaged”.
- The starker the rural-urban divide, and more people affected, the more migration there will be.
- **The model** is compatible with the Harris-Todaro approach, but is designed to take into account multiple drivers

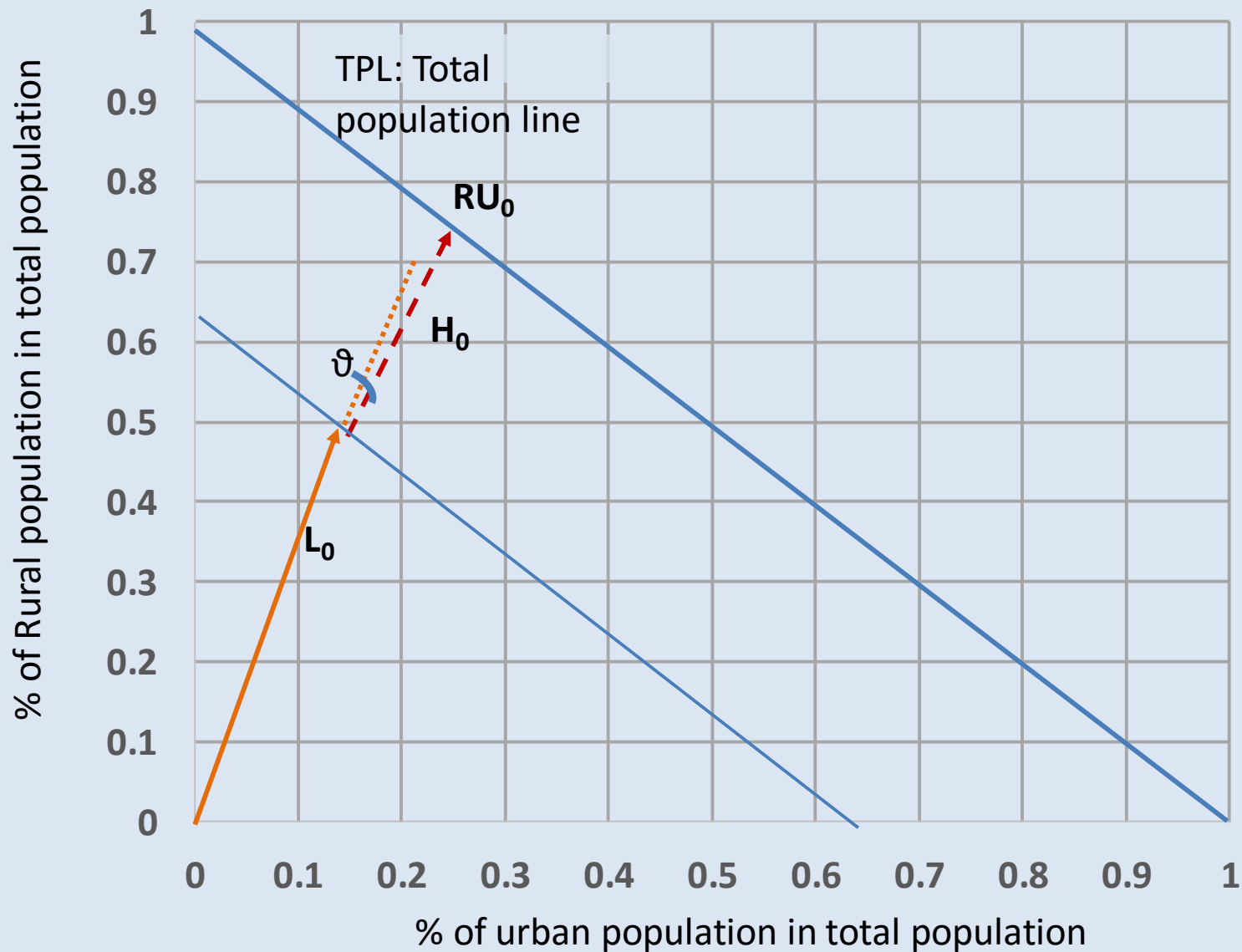
The basics of the approach

- The basic premise of the approach is that there is a cut-off income level separating the poor from the non-poor
- We will be operating with shares of the national population that are above or below the poverty line, both in rural and urban areas
- Will be dealing with net migration rates between rural and urban areas
- The rest is best explained graphically...

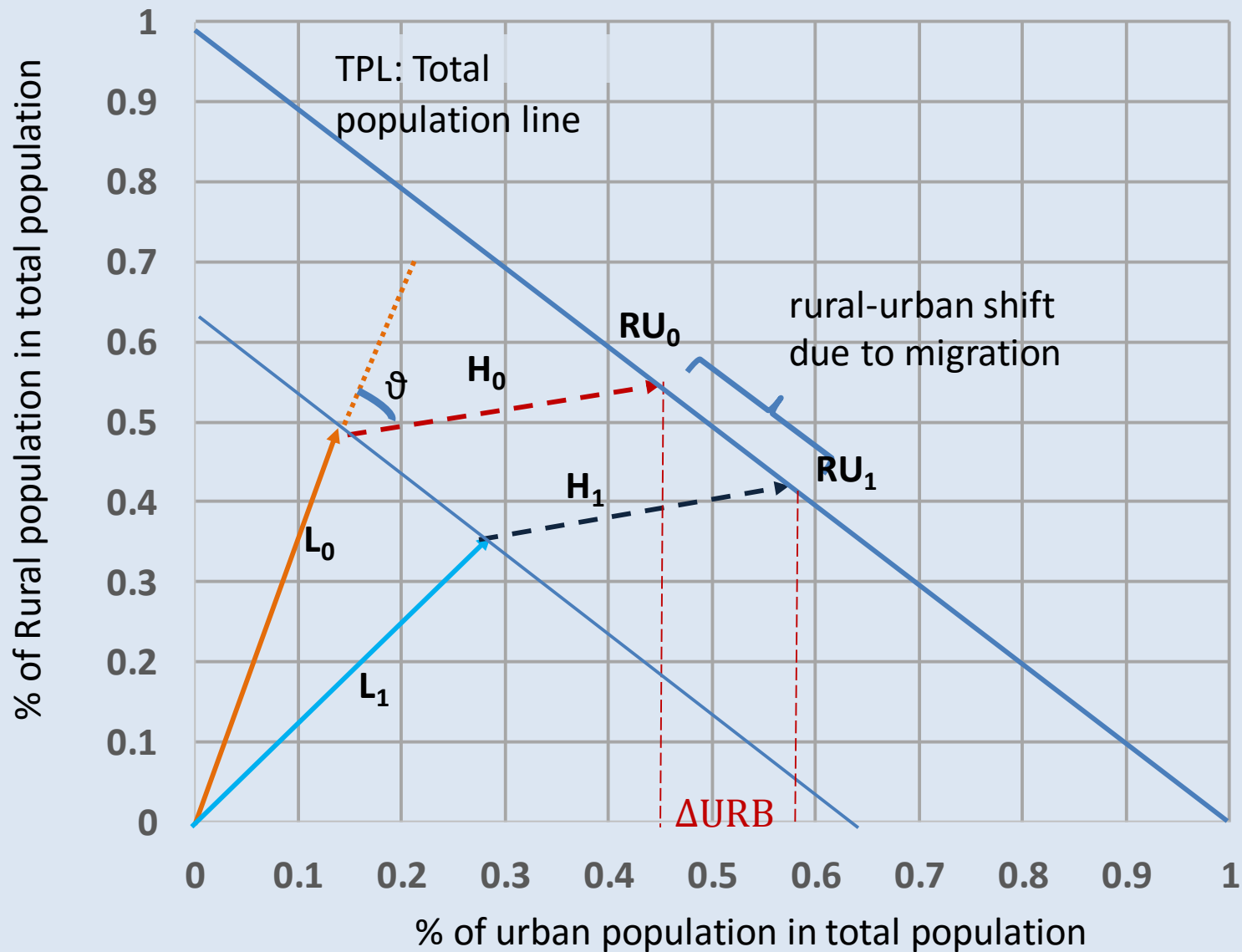
A graphical view of incentives to migrate: the short term



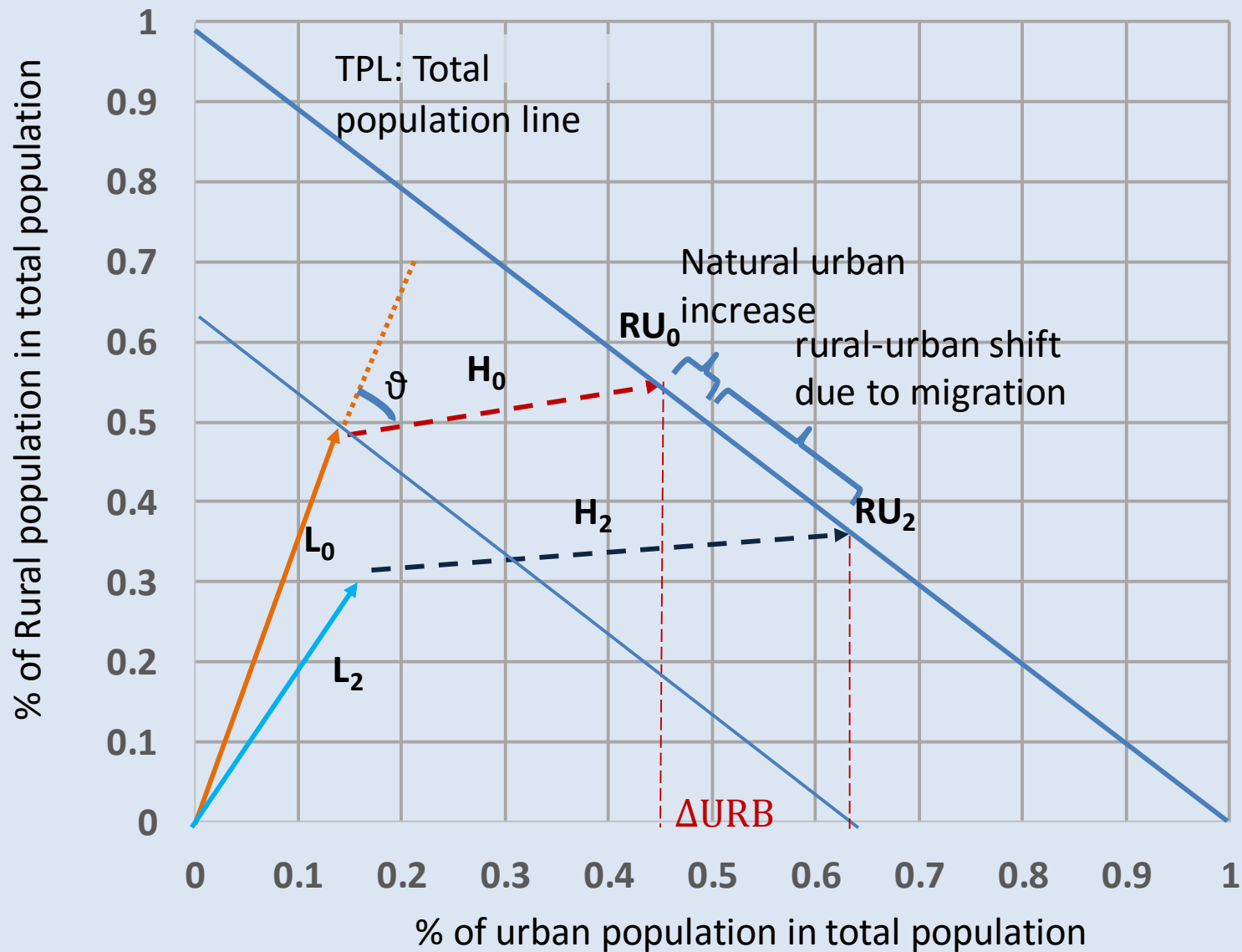
A graphical view of incentives to migrate: the short term



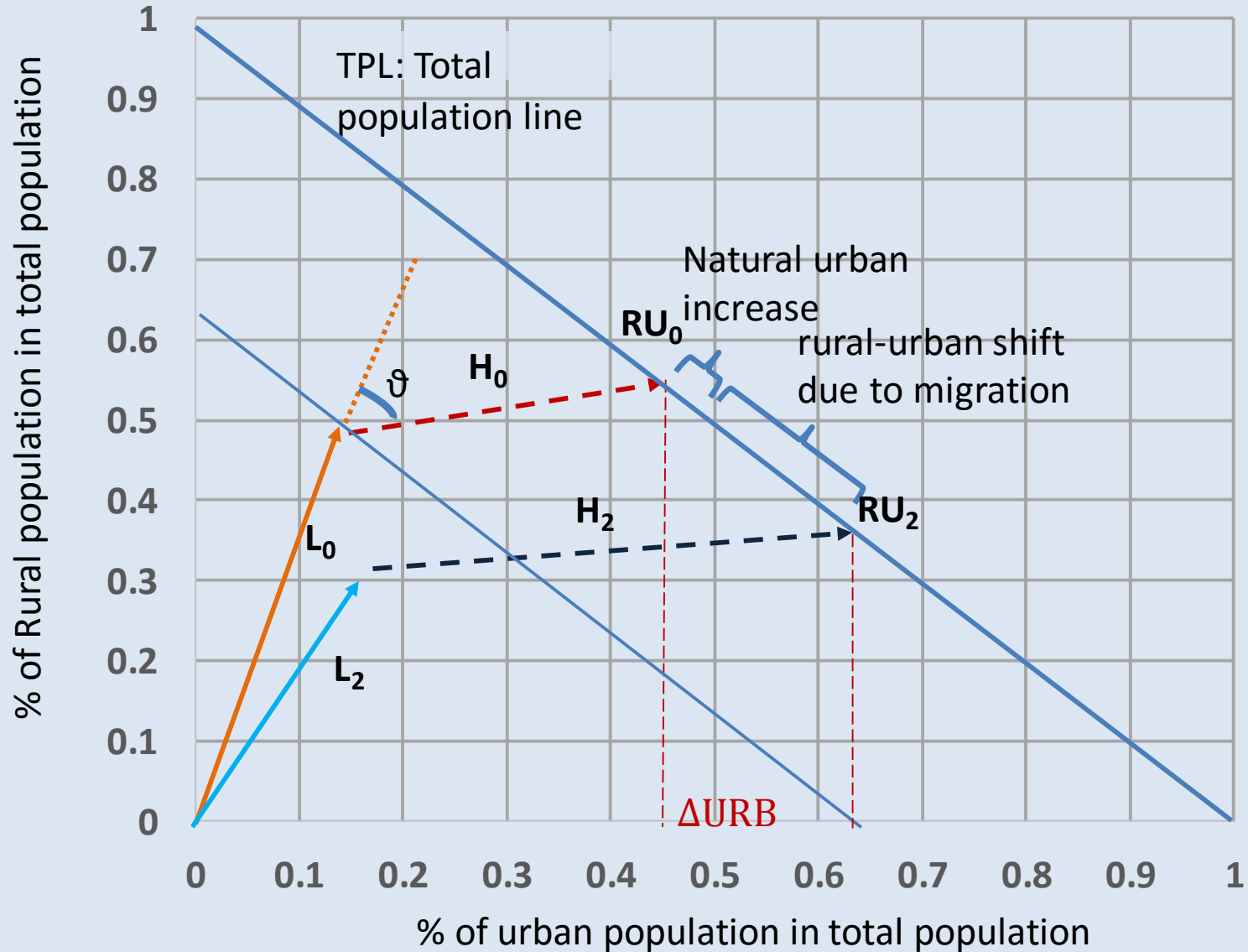
A graphical view of incentives to migrate: the short term




A graphical view of incentives to migrate: the longer term



$$\text{migration rate} = a \cdot |L| \cdot |H| \cdot \sin\theta$$



Measuring the incentive to migrate

$$\text{migration rate} = a \cdot |L| \cdot |H| \cdot \sin\theta$$


Incentive to migrate

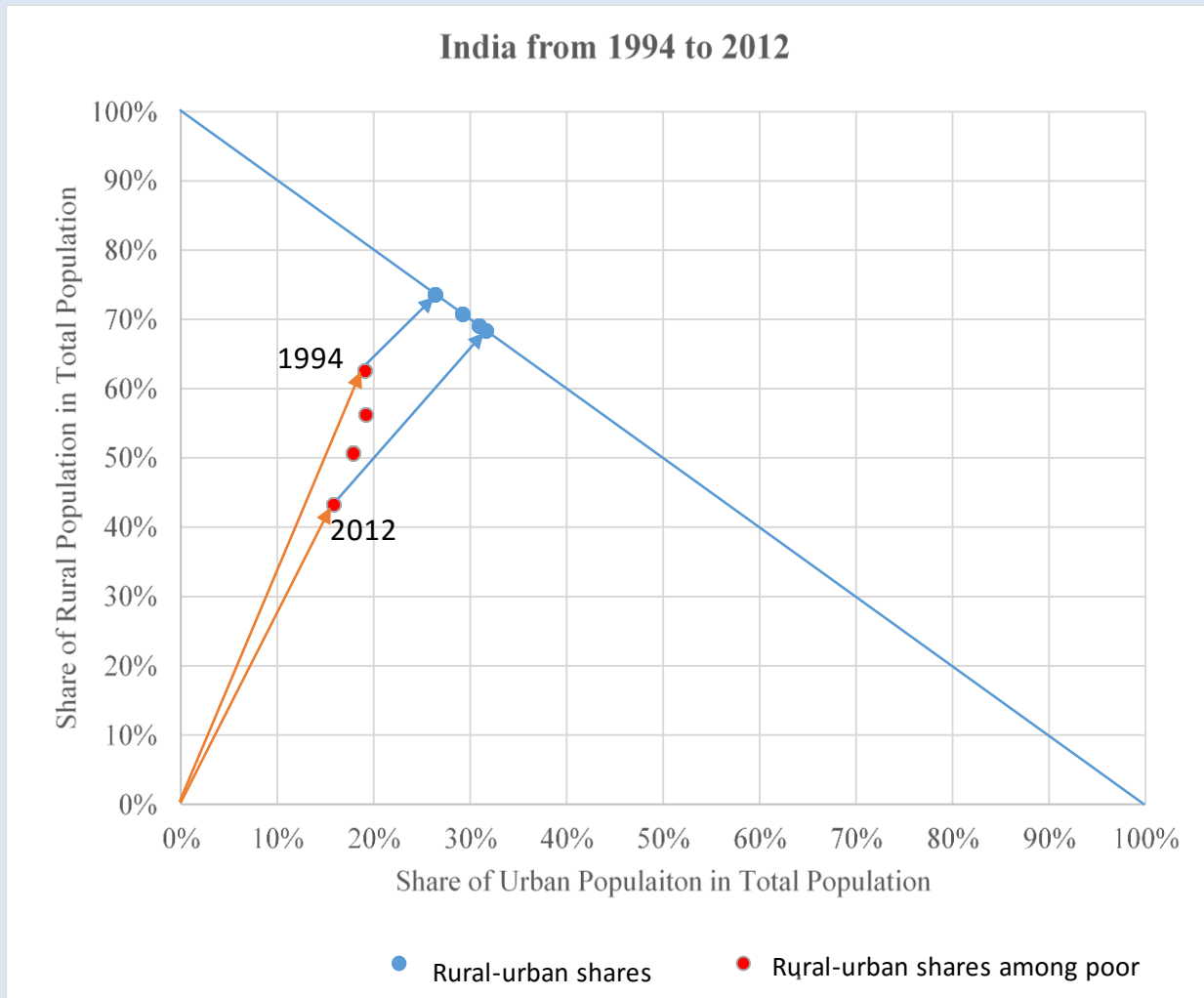
- Parameter “ a ” represents the propensity to migrate
- **Larger** $|L|$ means larger shares of population are poor and thus more people may try to improve livelihoods migrating
- **Larger** $|H|$ implies that the higher income population is large, meaning that improving livelihoods is a possibility
- **Larger** $\sin\theta$ means unequal distributions of poor and non-poor between rural areas and urban areas
- Goes beyond “push-pull” narrative, capturing the nuance of differentials

Putting real data to the graphical approach



Data on rural/ urban poverty breakdown provided by **IFAD and World Bank 2016**

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Evolution of the incentive to migrate

China (year)	Incentive to migrate
1990	0.060
1996	0.098
2008	0.109
2011	0.083

India (year)	Incentive to migrate
1994	0.025
2005	0.028
2010	0.034
2012	0.028

- Magnitude of incentive to migrate to urban areas very different in China and India
- Despite very different development paths the relative impact on the incentive to migrate are similar

From incentives to actual flows: Propensity to migrate

$$\text{migration rate} = a \cdot |L| \cdot |H| \cdot \sin\theta$$

- Parameter “a” represents the propensity to migrate and it can be estimated if data on migration rate, L and H are available.
- Propensity to migrate depends on cultural norms:
 - barriers to women migrating for educational purposes.
 - the age profile of the population, since younger people tend to have a higher propensity to migrate

An empirical application

- Sources used for estimating number of migrants as shares of total population:
 - **UN DESA Population** data on fertility and mortality at national level
 - **Demographic and Health Surveys (DHS)** for fertility and mortality (infant mortality) rates at rural and urban level
- Differentials between infant mortality in rural and urban areas as reported in the DHS are considered as proxies for mortality for the total population
- Migrant shares are estimated as the share of total population growth that is not due to natural population growth

Propensity to migrate: preliminary estimates

Dependent variable: share of migrants in the total population in the following year

	Value of the coefficient	R Squared	Fisher
Asian countries (35 obs)	0.0484 (.016) ***	0.203	8.41 ***
Latin American countries (20 obs)	0.1941 (.0385) ***	0.58	25.32 ***
Sub Saharan African countries (36 obs)	- 0.12473 (.0417) ***	0.2076	8.91***

- Propensity to migrate should be estimated at country level, or at least in homogenous regions
- Paper extends approach also to access to education and health services.

Advantages

- The parameters being estimated have a clear interpretation and have a structural relationship to drivers
- It captures in a continuous manner the push-pull dynamics linked to differences in rate of development between rural and urban areas
- It can be extended beyond segmenting the population into just two categories
- *Differentials in amenities can be included in the approach* –in paper focused on poverty, education, and health services differentials, but...

Caveats

- **Three sources of potential errors in estimating the model:**
 - Model misspecification (eg. omitted variables)
 - Threshold to distinguish between “advantaged” and “disadvantaged” is not reflective of drivers
 - Migration flows: disentangling natural growth rates, and also reclassification of rural areas to urban
- **Assumed propensity to migrate is a fixed parameter to be estimated... but maybe not stationary**
 - affected by laws restricting rural-urban migration, such as the Hukou system in China of allocating residence permits
 - Can separate propensity to migrate from migration costs

To conclude...

- **Very much work-in-progress driven by need to do a global report on rural migration**
- **Interested in the feasibility of the approach and possible sources of data**
- **Suggestions on moving forward are welcome**



Thank you!

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