Rural–Urban Migration and Urban Unemployment

"Cities will increasingly become the main players in the global economy" Kofi Annan

Fall 2009

Facts on Rural–Urban Migration

- The distribution of population between rural and urban areas is an important structural difference between developed and less developed nations
- Nearly half of the world's population lives in cities.
- Projection: by 2025 two–thirds will live in cities.
- Urban population growth is far more rapid than population growth generally
- Cities in the developing world are growing far more rapidly than those in developed countries.

**Figure I.3. Urban and rural populations of more developed regions
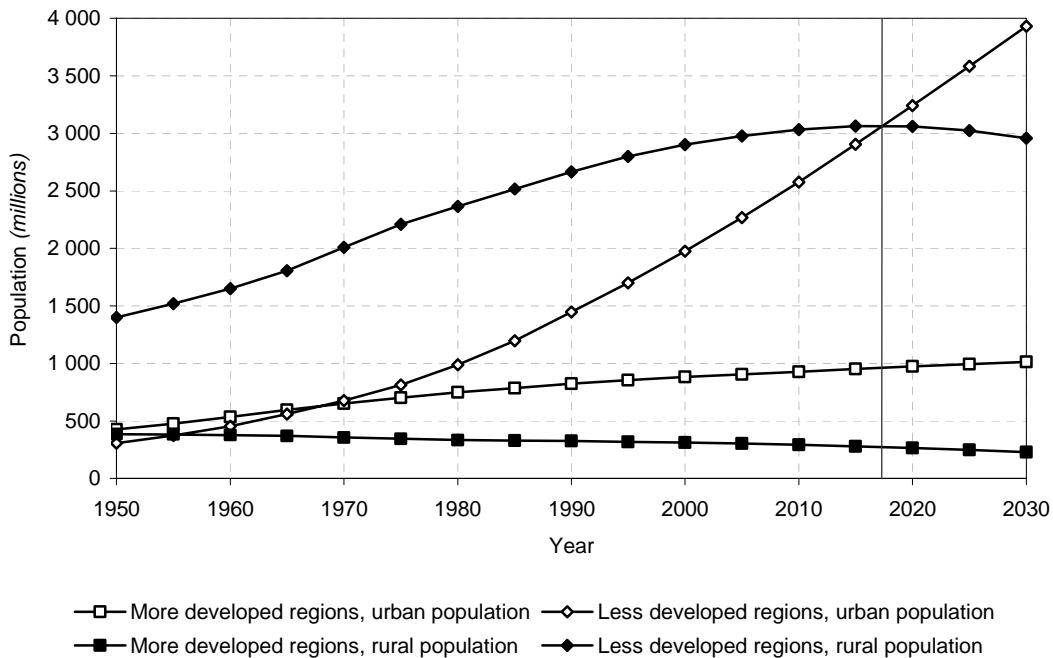and less developed regions: 1950-2030**

TABLE IV.2. URBAN AGGLOMERATIONS WITH 5 MILLION INHABITANTS OR MORE: 1950, 1975, 2000 AND 2015

	1950			1975			2000			2015	
Rank	*Urban agglomeration*	*Population (thousands)*	*Rank*	*Urban agglomeration*	*Population (thousands)*	*Rank*	*Urban agglomeration*	*Population (thousands)*	*Rank*	*Urban agglomeration*	*Population (thousands)*
1	New York-Newark	12 338	1	Tokyo	26 615	1	Tokyo	34 450	1	Tokyo	36 214
2	Tokyo	11 275	2	New York-Newark	15 880	2	Mexico City	18 066	2	Mumbai (Bombay)	22 645
3	London	8 361	3	Shanghai	11 443	3	New York-Newark	17 846	3	Delhi	20 946
4	Paris	5 424	4	Mexico City	10 690	4	São Paulo	17 099	4	Mexico City	20 647
5	Moscow	5 356	5	Osaka-Kobe	9 844	5	Mumbai (Bombay)	16 086	5	São Paulo	19 963
6	Shanghai	5 333	6	São Paulo	9 614	6	Calcutta	13 058	6	New York-Newark	19 717
7	Rhein-Ruhr North [1]	5 295	7	Buenos Aires	9 143	7	Shanghai	12 887	7	Dhaka	17 907
8	Buenos Aires	5 041	8	Los Angeles [2]	8 926	8	Buenos Aires	12 583	8	Jakarta	17 498
	TOTAL	58 424	9	Paris	8 630	9	Delhi	12 441	9	Lagos	17 036
			10	Beijing	8 545	10	Los Angeles [2]	11 814	10	Calcutta	16 798
			11	Calcutta	7 888	11	Osaka-Kobe	11 165	11	Karachi	16 155
			12	Moscow	7 623	12	Jakarta	11 018	12	Buenos Aires	14 563
			13	Rio de Janeiro	7 557	13	Beijing	10 839	13	Cairo	13 123
			14	London	7 546	14	Rio de Janeiro	10 803	14	Los Angeles [2]	12 904
			15	Mumbai (Bombay)	7 347	15	Cairo	10 398	15	Shanghai	12 666
			16	Chicago	7 160	16	Dhaka	10 159	16	Metro Manila	12 637
			17	Seoul	6 808	17	Moscow	10 103	17	Rio de Janeiro	12 364
			18	Rhein-Ruhr North [1]	6 448	18	Karachi	10 032	18	Osaka-Kobe	11 359
			19	Cairo	6 437	19	Metro Manila	9 950	19	Istanbul	11 302
			20	Tianjin	6 160	20	Seoul	9 917	20	Beijing	11 060
			21	Milan	5 529	21	Paris	9 693	21	Moscow	10 934
				TOTAL	195 832	22	Tianjin	9 156	22	Paris	10 008
						23	Istanbul	8 744	23	Tianjin	9 874
						24	Lagos	8 665	24	Chicago	9 411
						25	Chicago	8 333	25	Lima	9 365
						26	London	7 628	26	Seoul	9 215
						27	Lima	7 454	27	Santa Fé de Bogotá	8 900
						28	Tehran	6 979	28	Lahore	8 699
						29	Hong Kong	6 807	29	Kinshasa	8 686
						30	Santa Fé de Bogotá	6 771	30	Tehran	8 457
						31	Rhein-Ruhr North [1]	6 542	31	Bangalore	8 416
						32	Chennai (Madras)	6 353	32	Chennai (Madras)	8 092

U.N. Facts about Urban Informal Sectors

- In 2001, 924 million people, (31% percent of the world's urban population), were living in informal settlements or slums
- By 2030, the number of worldwide slum dwellers is projected to reach 2 billion
- In Dhaka (Bangladesh), 3.4 million of the city's 13 million residents live in 5,000 squatter settlements
- 60% of Nairobi's city dwellers are packed into 5 percent of the city's total land area
- The slums of Mumbai (India) are growing 11 times faster than the city itself, with 300 people arriving from the countryside per day.

Figure 5.3. Informal economy and levels of development (measured as GDP per capita)
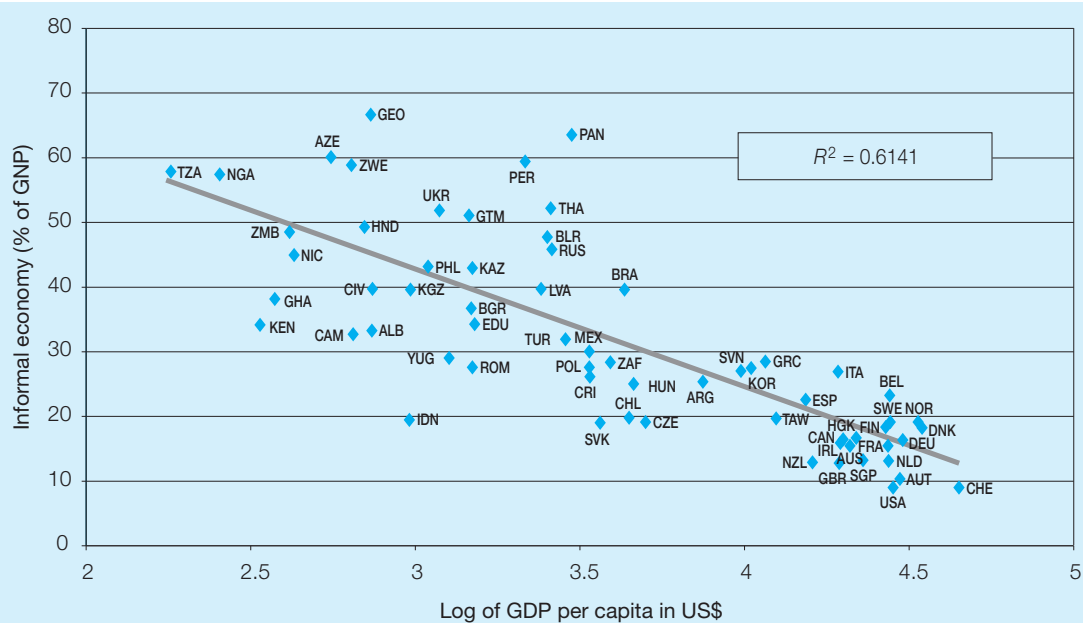
Notes: Natural log of GDP per capita is taken to decrease dispersion since there are large differences in GDP per capita levels between countries. Informal economy values are calculated as averages over 1999/2000.

Sources: Ayyagari et al., 2003 and Schneider, 2002.

Key Characteristics of Urban Informal Sectors

- Accounts for up to a third of urban income
- Low capital–intensity
- Low productivity
- Limited access to formal credit
- High rates of unemployment/underemployment (e.g. 30%)
- Stress on infrastructure
- Low levels of sanitation, access to clean water
- Environmental problems

If the informal sector is so bad, why do people migrate into it?

- Development planning view: migration viewed as irrational/uninformed

- Chicago school view: "bright city lights."

↪ if migrants appear worse off, other non–wage benefits are being overlooked

- New Institutional View: Harris–Todaro model
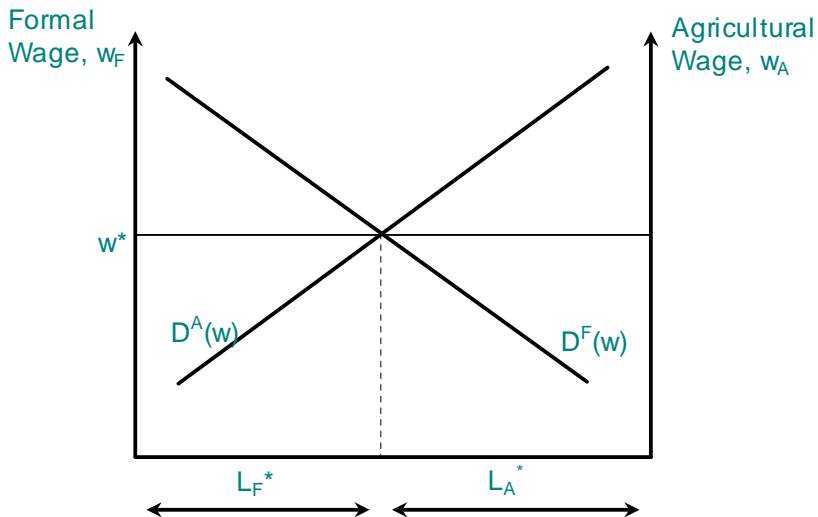
Figure: Competitive Equilibrium with Flexible Wages

Harris–Todaro Migration model

- Migration is individually rational, but depends on expected, not actual, wage differences

- A key assumption: formal sector wage is above the market wage

- Why? — institutionally determined due to
$\hookrightarrow$ trade policy biased towards manufacturing
$\hookrightarrow$ unionization of formal sector
$\hookrightarrow$ government interventions to support the "effective" wage
$\hookrightarrow$ efficiency wages
$\hookrightarrow$ political urban bias

Migration Equilibrium

- Migration occurs until *expected* wages are equal across regions:

$$w_A = p\underline{w} + (1-p)w_I$$

where

$$
\begin{aligned}
w_A &= \text{agricultural wage} \\
\underline{w} &= \text{"institutionally–determined" formal wage} \\
w_I &= \text{informal wage} \\
p &= \text{probability of finding formal job}
\end{aligned}
$$

- If all workers are identical, then

$$p = \frac{L_F(\underline{w})}{L_I + L_F(\underline{w})} = \frac{\underline{L}_F}{L_I + \underline{L}_F},$$

where

$$\underline{L}_F = \text{"institutionally–determined" formal employment}$$
$$L_I = \text{informal employment}$$

- Equilibrium conditions:

$$w_A = \left(\frac{\underline{L}_F}{L_I + \underline{L}_F}\right)\overline{w} + \left(\frac{L_I}{L_I + \underline{L}_F}\right)w_I$$
$$L = \underline{L}_F + L_I + L_A(w_A)$$

where

$$L_A = \text{agricultural employment}$$
$$L = \text{total labour force}$$
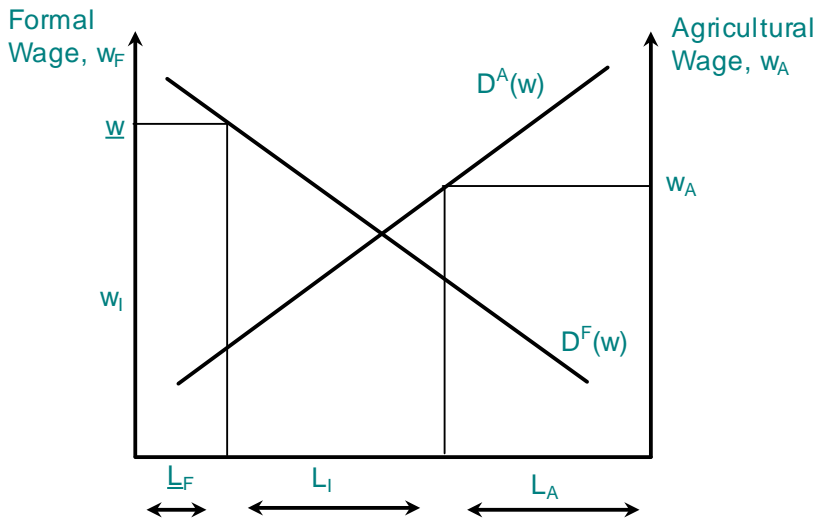
Figure: Harris–Todaro Equilibrium

The Harris–Todaro Paradox

- Undesirable properties of informal sectors
↪ policies to encouage formal employment (tax incentives, job creation)

  - Harris–Todaro model $\Rightarrow$ such policies could actually *expand* the informal sector
↪ increase in formal employment raises p and hence the expected wage
↪ induces further rural–urban migration until the agricultural wage increases.
↪ if labour supply is sufficiently elastic, this may induce more migration than the increase in demand
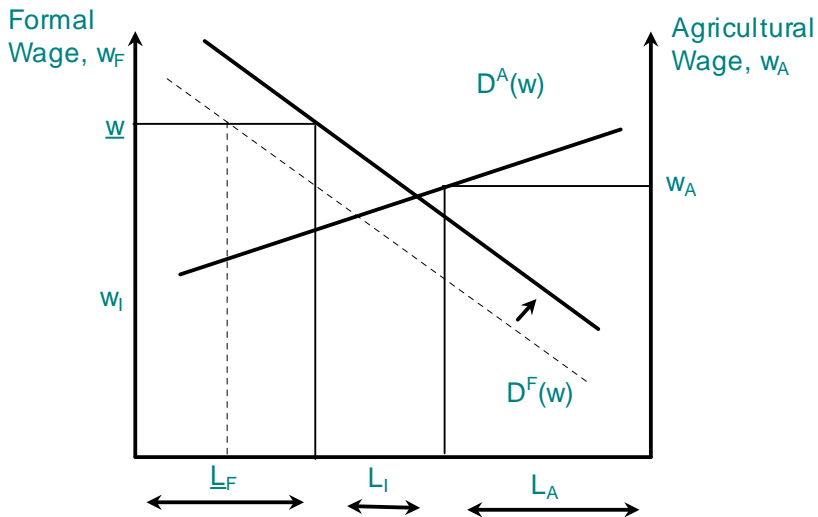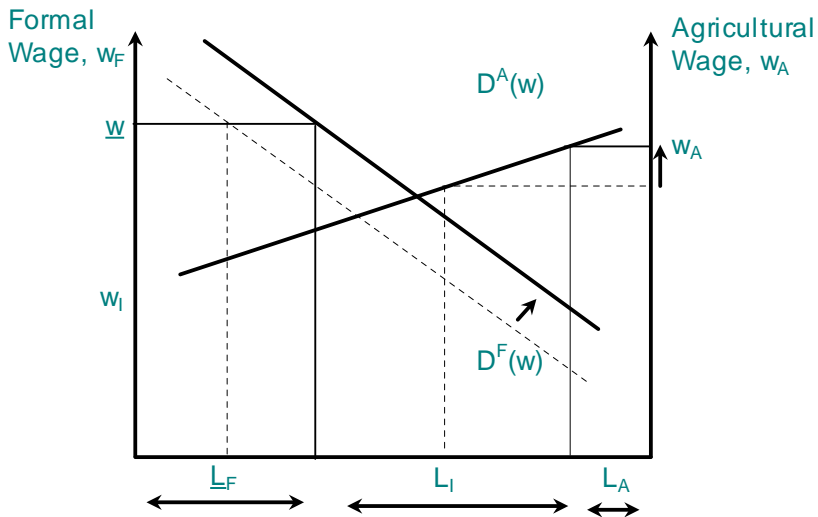
Figure: Impact Effect of Job Creation Policy

Figure: Long Run Migration Equilibrium

Example: Rural–Urban Migration in Botswana

- R. E. B. Lucas used detailed microeconomic data on individual migrants and non–migrants

  Results

- unadjusted urban earnings: 68% higher than rural earnings
↪ difference much smaller after controlling for schooling and experience

- higher estimated wage and probability of employment in urban centre
  $\Rightarrow$ more likely to migrate

- higher estimated wage and probability of employment in home village
  $\Rightarrow$ less likely to migrate

- creation of one job in an urban centre draws more than one new migrant

Alternative Migration Policies

- Restrict individuals without formal jobs from entering city ?

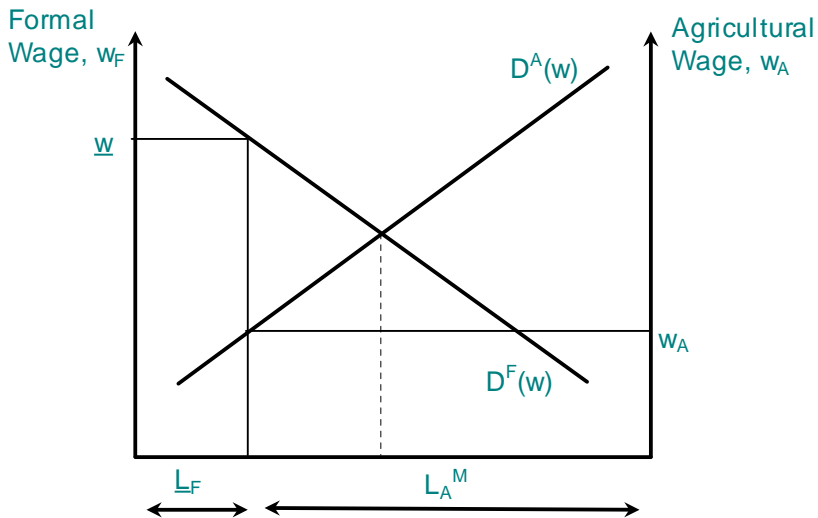- Need **balanced** policies to stimulate demand in both sectors
↪ remove urban bias
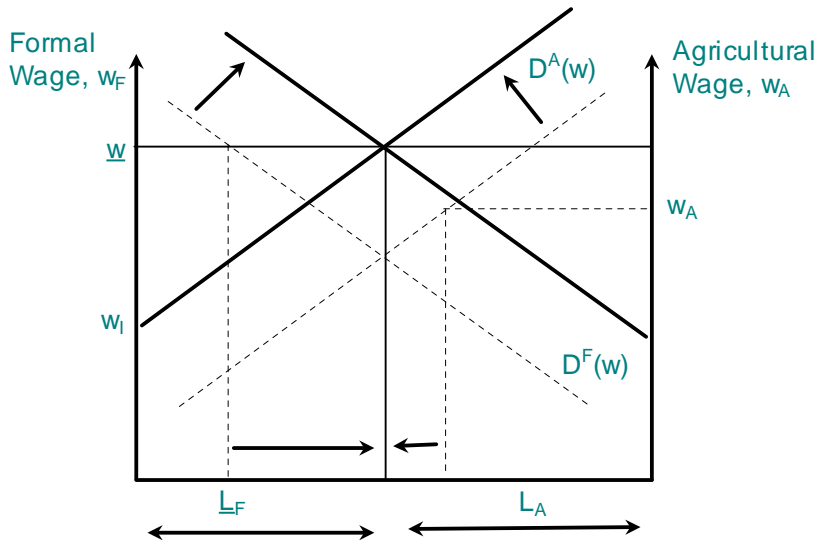↪ rural development policies

Figure: Migration Restrictions

Figure: Balanced Policy