Chapter 7

Urbanization and Rural-Urban Migration: Theory and Policy

ALWAYS LEARNING

PEARSON

7.1 Urbanization: Trends and Living Conditions

- As a pattern of development, the more developed the economy, the more urbanized

- But many argue developing countries are often excessively urbanized or too-rapidly urbanizing

- This combination suggests the migration and urbanization dilemma

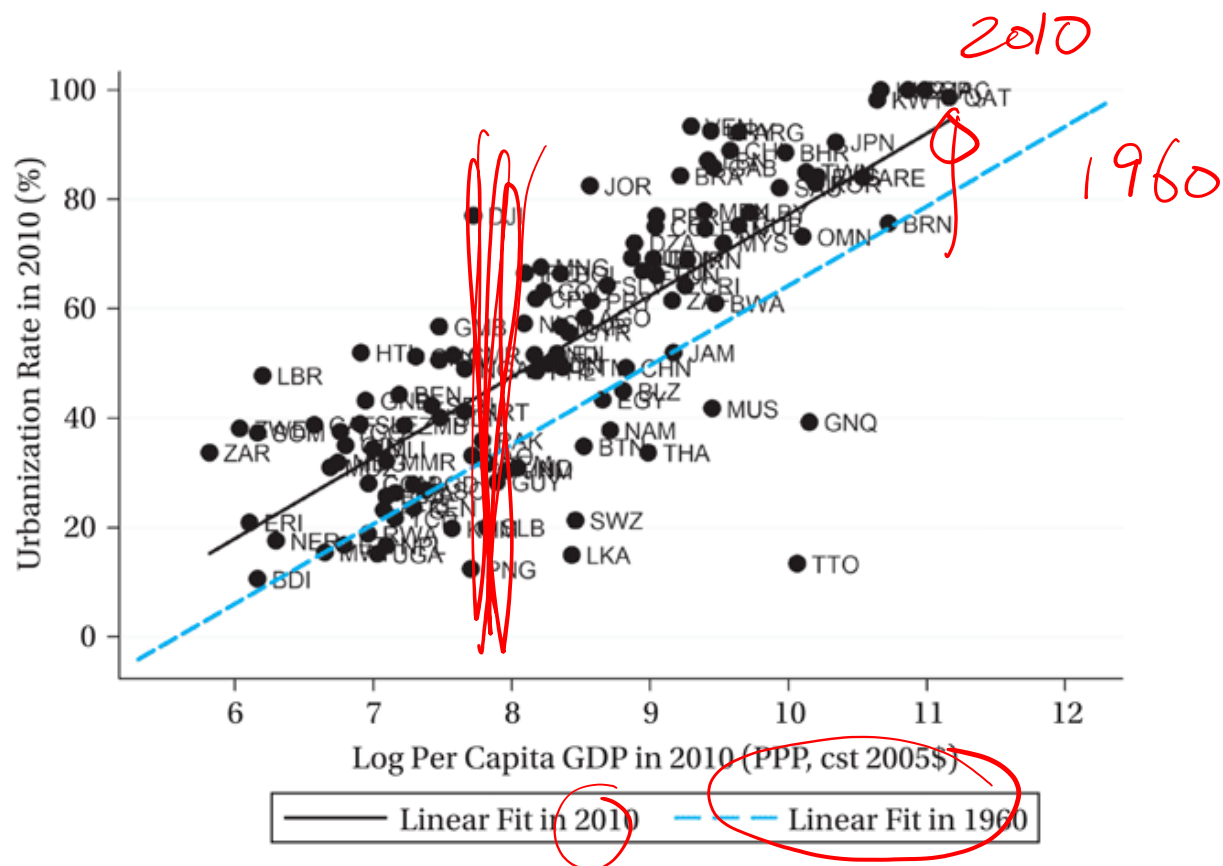- Urbanization: Trends and Projections

Figure 7.1 Changes in Urban and Rural Population by Major Areas between 2011 and 2050 (in millions)
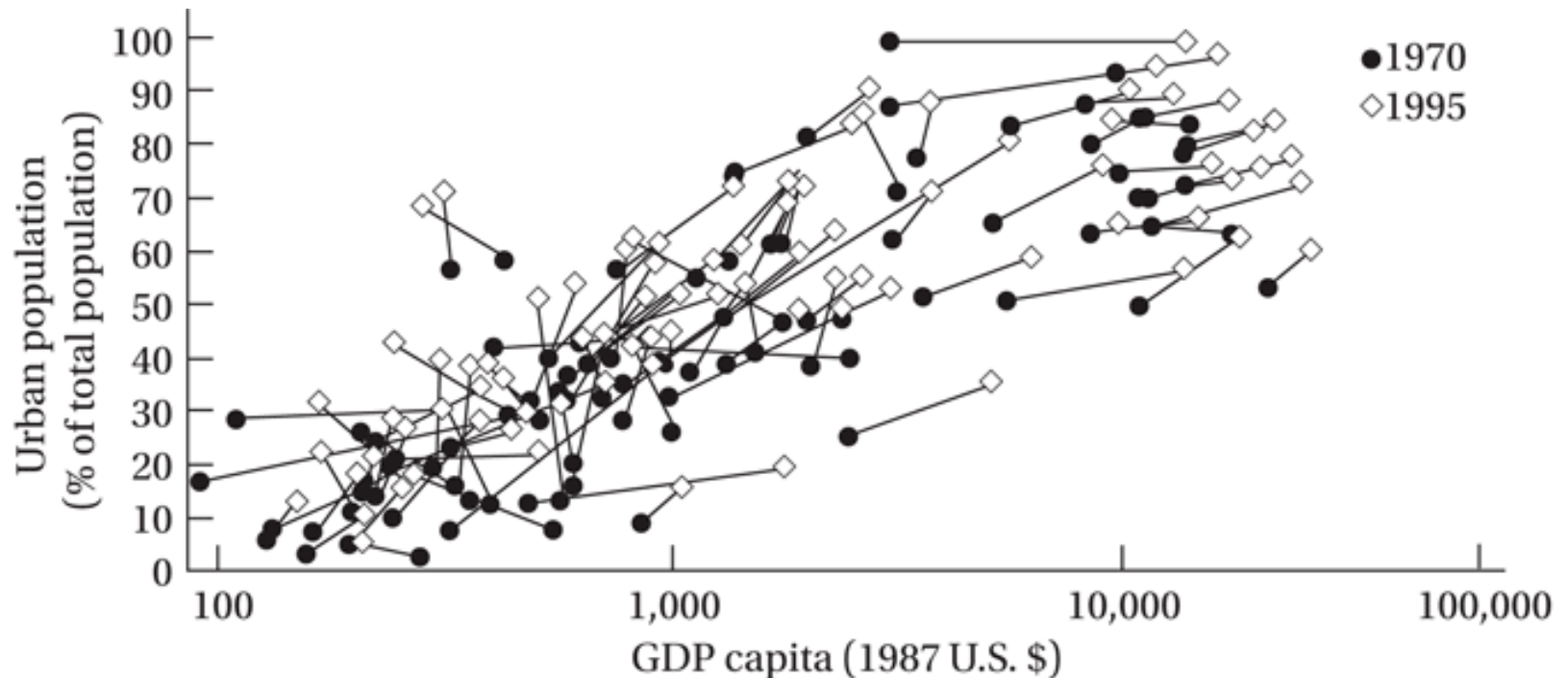
Figure 7.2
Relationship between Urbanization and Per Capita GDP, 2010 with Comparison to Relationship in 1960

Sources: Luc Christiaensen, Remi Jedwab, Peter Lanjouw, and Harris Selod, "Urbanization and Poverty Reduction," draft working paper, 2014 – special thanks to Remi Jedwab.
Data sources: Maddison (2008), United Nations (2011) and World Bank (2013).
Note: This figure shows the relationship between the urbanization rate and the log per capita of GDP, in 2005 PPP, for 119 developing countries in 2010. The solid line is a linear fit for the data in 2010. The dashed line is a linear fit for the data in 1960 (the scatter plot is not shown for 1960).

Figure 7.3 Proportion of Urban Population by Region, 1970–1995

Source: The United Nations is the author of the original material. *World Urbanization Prospects: The 2009 Revision.* © 2009 United Nations. Reproduced with permission.

Figure 7.4 Megacities: Cities with 10 Million or More Inhabitants
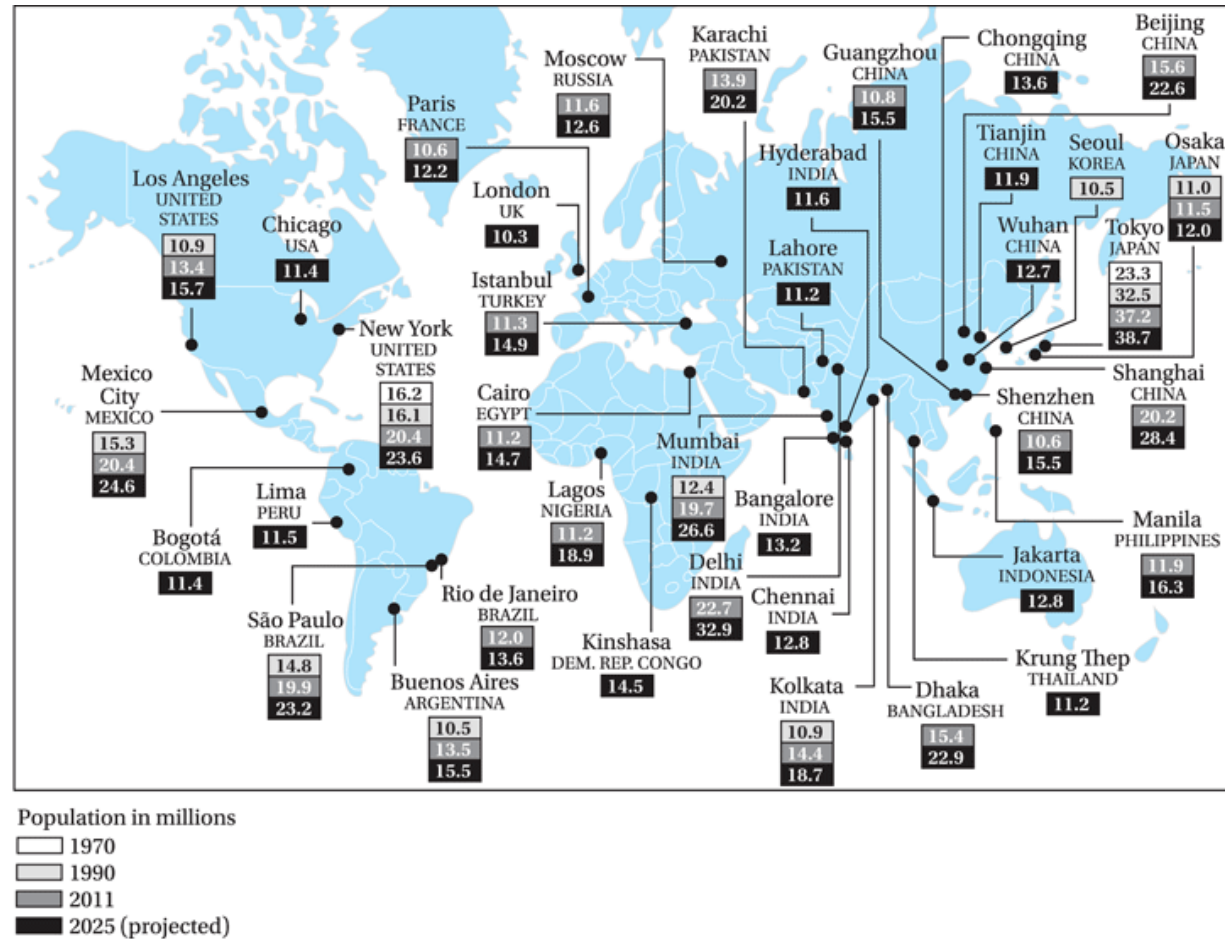
Source: Data drawn from United Nations Population Division, World Urbanization Prospects: The 2011 Revision (New York: United Nations, 2011), at http://esa.un.org/unup/pdf/WUP2011_Highlights.pdf

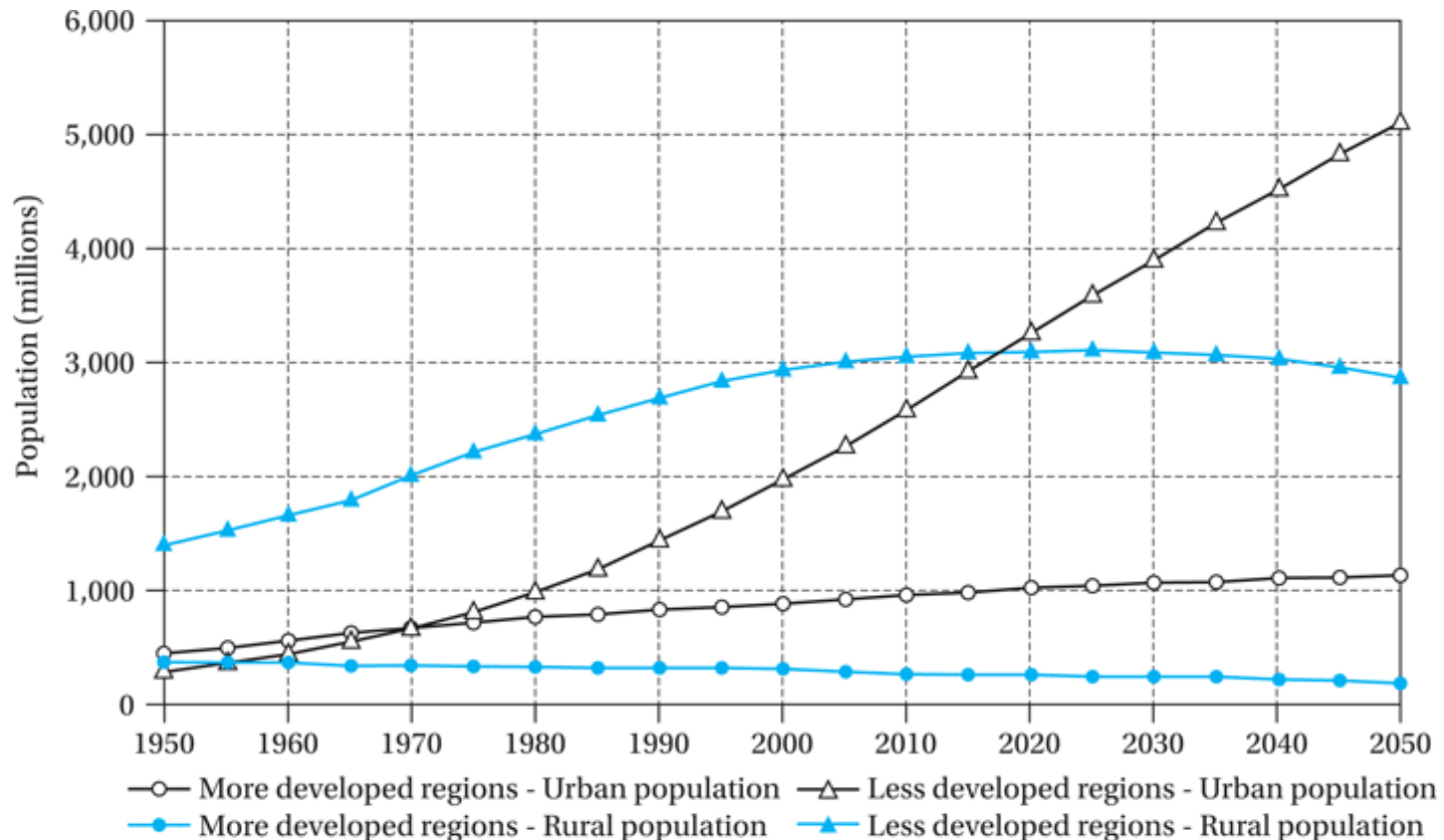# **Figure 7.5** Total Population in Millions by City Size Class, 1970, 1990, 2011 and 2025
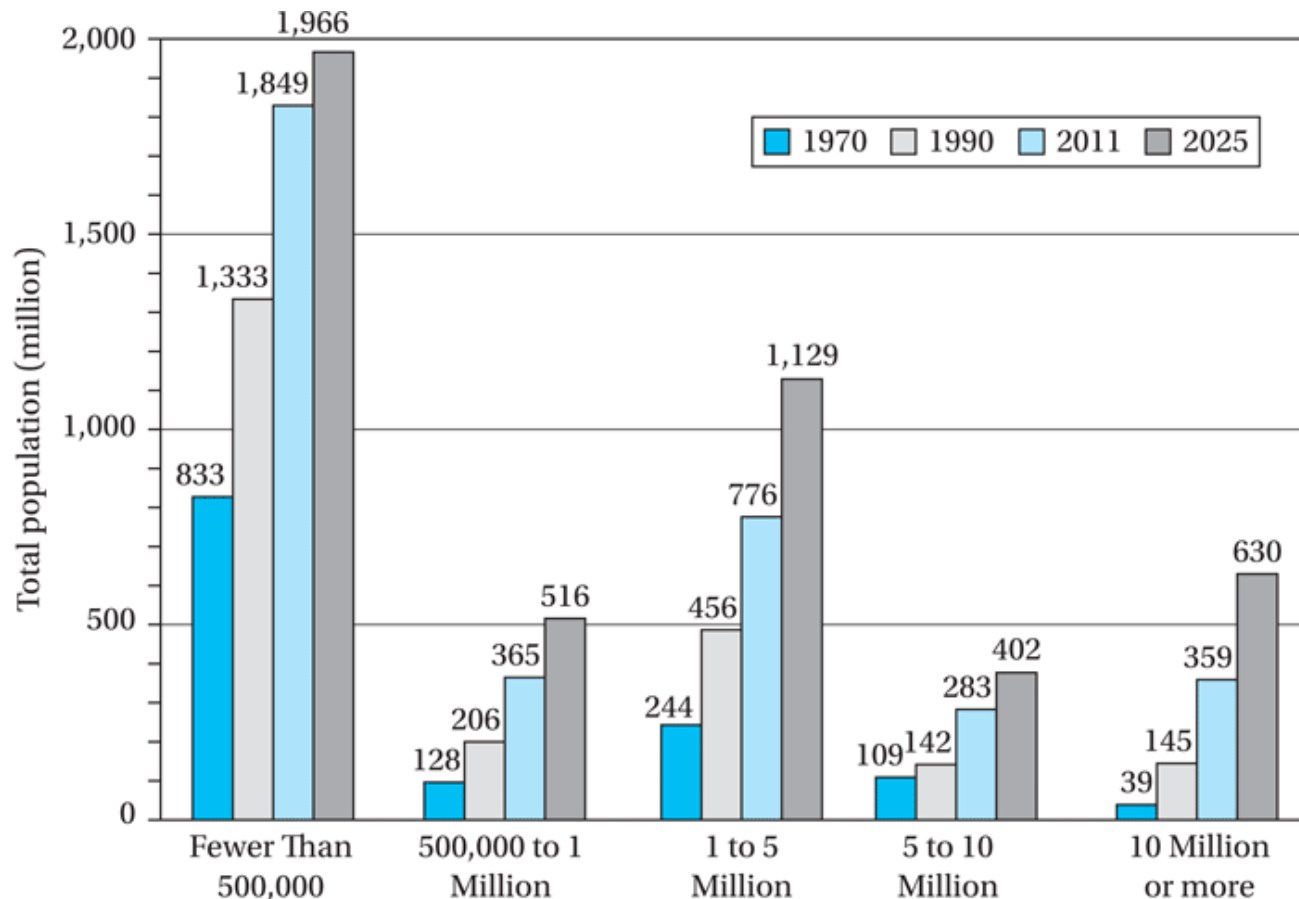
Source: United Nations Population Division, *World Urbanization Prospects: The 2011 Revision* (New York: United Nations, 2011), http://esa.un.org/unup/pdf/WUP2011_Highlights.pdf.

Figure 7.6 Estimated and Projected Urban and Rural Population of the More and Less Developed Regions, 1950–2050

Source: *Millennium Development Goal Report 2010.* © 2010 United Nations. Reproduced with permission of United Nations Publications.

Figure 7.7 Annual Growth of Urban and Slum Populations, 1990–2001
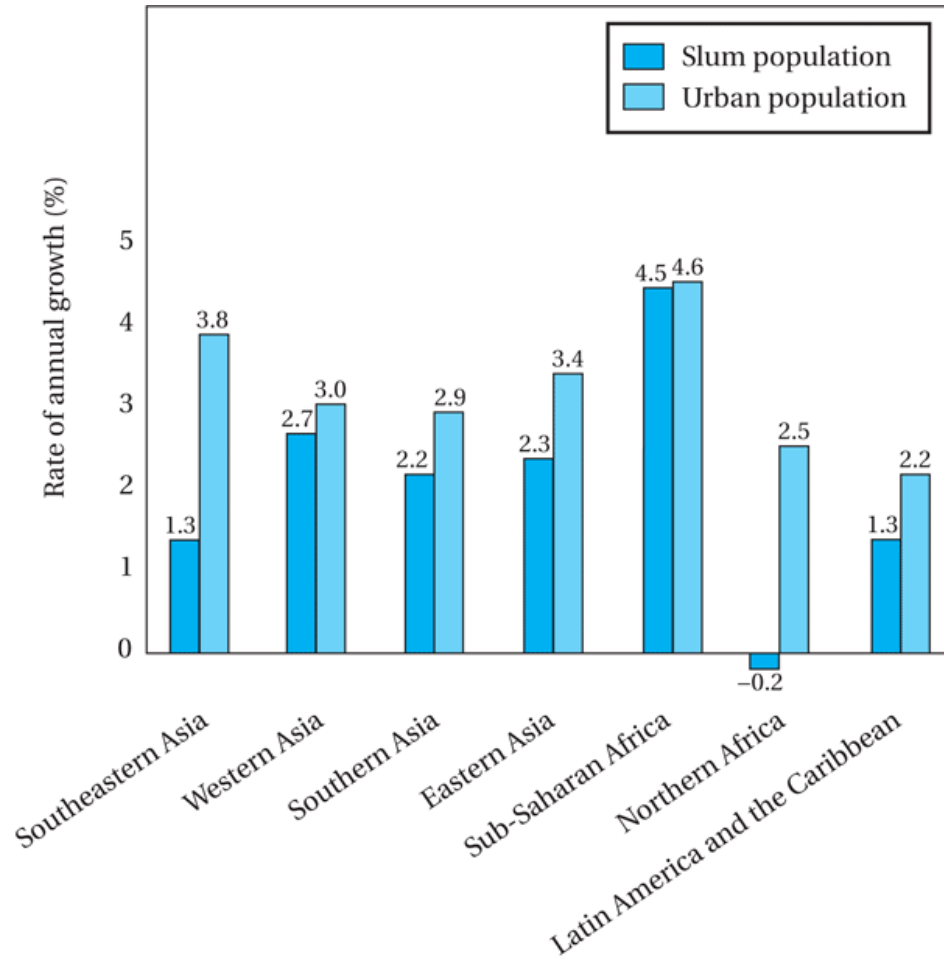
Source: Adapted from United Nations, *Millennium Development Goals Report, 2006* (New York: United Nations, 2006), p. 20. Reproduced by permission of United Nations Publications.

7.2 The Role of Cities

- Agglomeration economies: Urbanization (general) economies, localization (industry or sector) economies

- Saving on firm-to-firm, firm-to-consumer transportation

- Firms locating near workers with skills they need

- Workers locating near firms that need their skills

- Firms benefit from (perhaps specialized) infrastructure

- Firms benefit from knowledge spillovers in their and related industries

- (Also: consumers may benefit from urban amenities)

Industrial Districts and Clustering

- Quality of clusters, or Industrial Districts, is a key to sectoral efficiency

- Unfortunately a majority of developing countries have made only limited progress

- China: a country that has made huge strides in generating industrial districts over the last decade (Findings Box 7.1)

Urbanization Costs, and Efficient Urban Scale

- But, cities also entail "congestion costs"
- Economically efficient urban scale (from point of view of productive efficiency) found where average costs for industries are lowest
- Generally, differing efficient scales for different industrial specializations imply different city sizes
- More extensive (expensive) capital, infrastructure required in urban areas
- Smaller cities may be expected in labor-intensive developing countries

7.3 The Urban Giantism Problem

- There may be general urban bias
- Cities are capital intensive, so may expect that large cities are commonly located in developed countries
- But urbanization in developing countries has taken place at unexpectedly rapid pace
- Huge informal sectors in shantytowns, favelas
- Large fraction of workers outside formal sector
- Much urban growth is in mid-size cities, but urban bias remains a serious issue in many developing countries

7.3 The Urban Giantism Problem

- There may be First-City Bias (favoring largest city)
- Causes of Urban Giantism:
  - Import substitution industrialization: less trade, incentive to concentrate in a single city largely to avoid transportation costs
  - "Bread and circuses" to prevent unrest (evidence: stable democracies vs. unstable dictatorships)
  - Hub and spoke transportation system (rather than web) makes transport costs high for small cities
  - Compounding effect of locating the national capital in the largest city

Table 7.1 Population of the Largest and Second-Largest Cities in Selected Countries (millions)

Country	Largest-City Population	Second-Largest-City Population	Ratio
Canada	Toronto, 5.035	Montreal, 3.603	1.40
United States	New York, 18.727	Los Angeles, 12.303	1.52
Argentina	Buenos Aires, 12.551	Cordoba, 1.423	8.82
Brazil	São Paulo, 18.647	Rio de Janeiro, 11.368	1.64
Chile	Santiago, 5.605	Valparaiso, 0.837	6.70
Mexico	Mexico City, 18.735	Guadalajara, 4.057	4.62
Peru	Lima, 8.081	Arequipa, 0.732	11.04

Note: Definitions of city size differ across studies.
Source: From UN World Urbanization Prospects 2009 Revision.

Figure 7.8 Politics and Urban Concentration
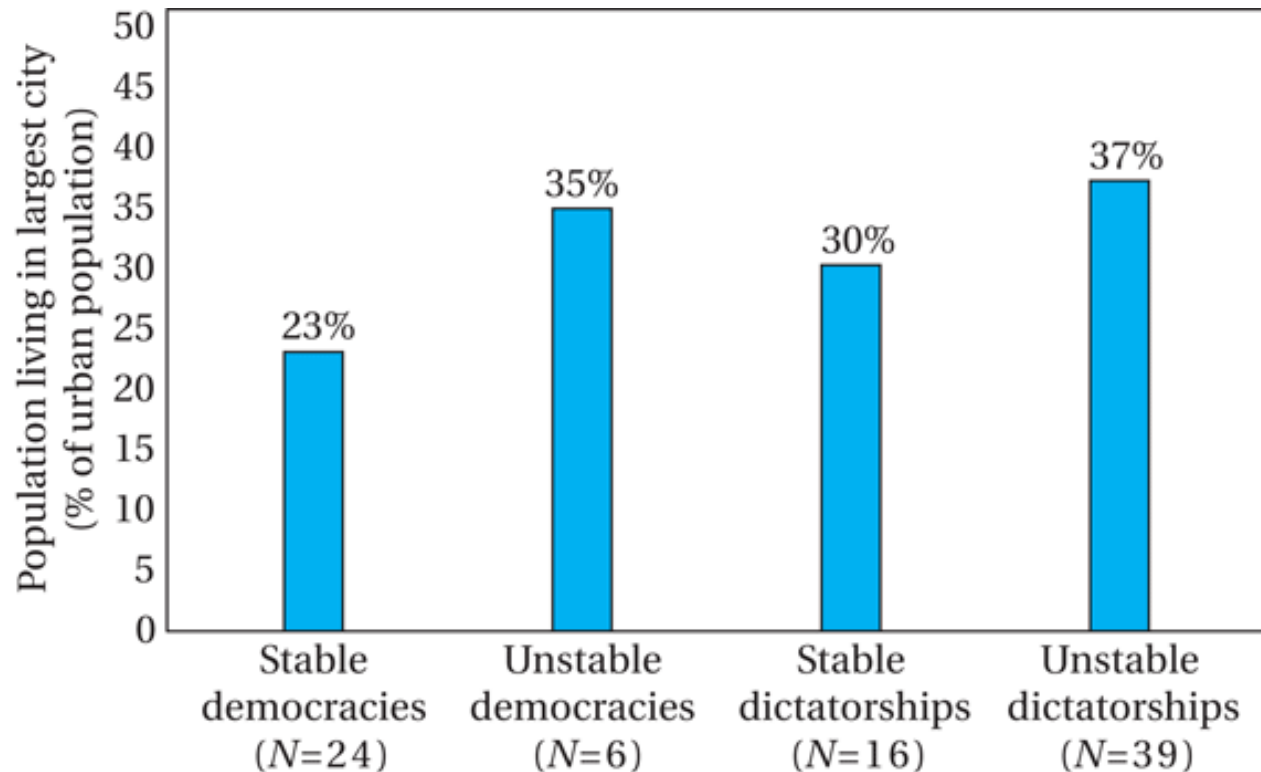
Source: Data from Alberto F. Ades and Edward L. Glaeser, "Trade and circuses: Explaining urban giants," *Quarterly Journal of Economics* 110 (1995): 196. Copyright © 1995 by the President and Fellows of Harvard College and the Massachusetts Institute of Technology. *Note:* N = number of countries in group.

7.4 The Urban Informal Sector

- Why promote the urban informal sector?
  - Generates surplus despite hostile environment
  - Creating jobs due to low capital intensivity
  - Access to (informal) training, and apprenticeships
  - Creates demand for less- or un- skilled workers
  - Uses appropriate technologies, local resources
  - Recycling of waste materials
  - More benefits to poor, especially women who are concentrated in the informal sector
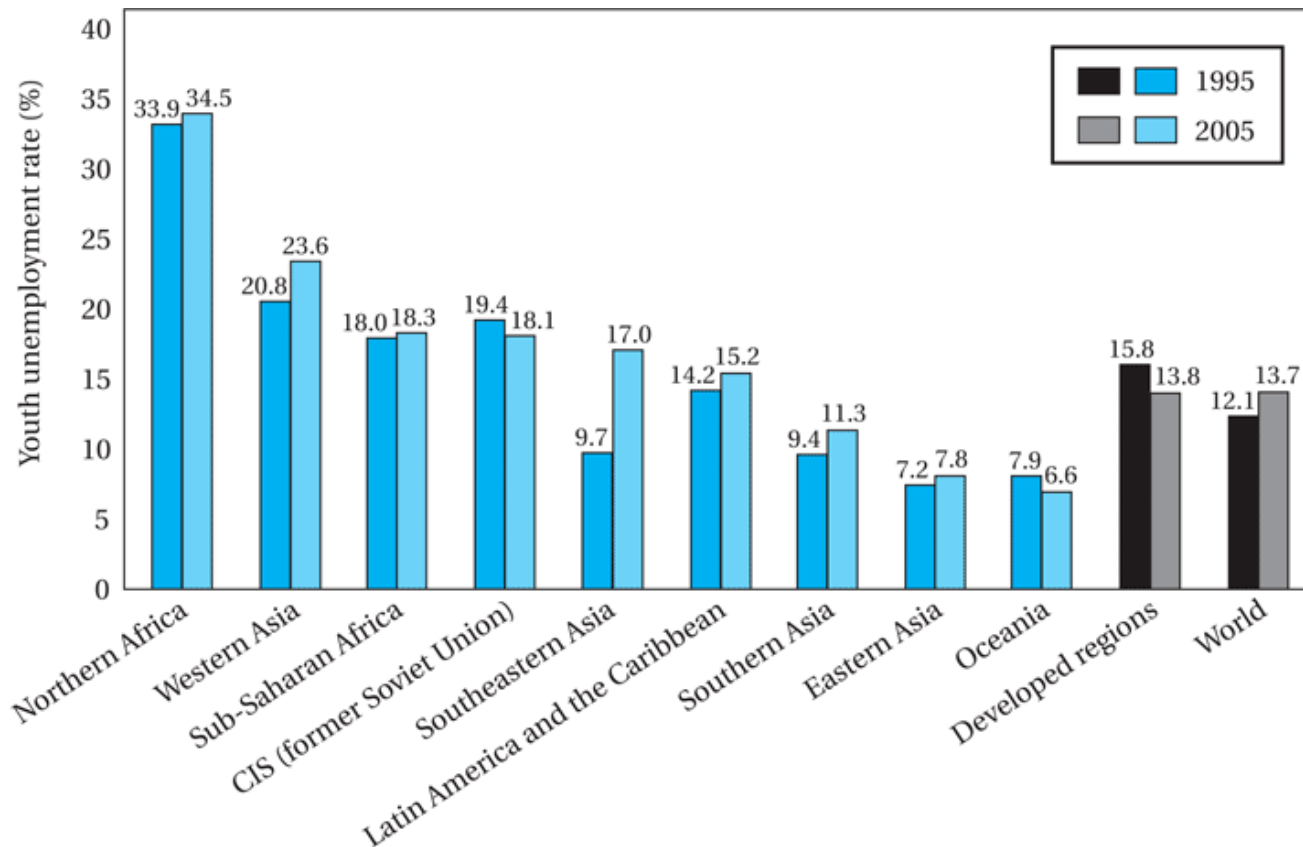
7.4 The Urban Informal Sector

- Policies for the Urban Informal Sector
- Women in the Informal Sector

Figure 7.9 Importance of Informal Employment in Selected Cities
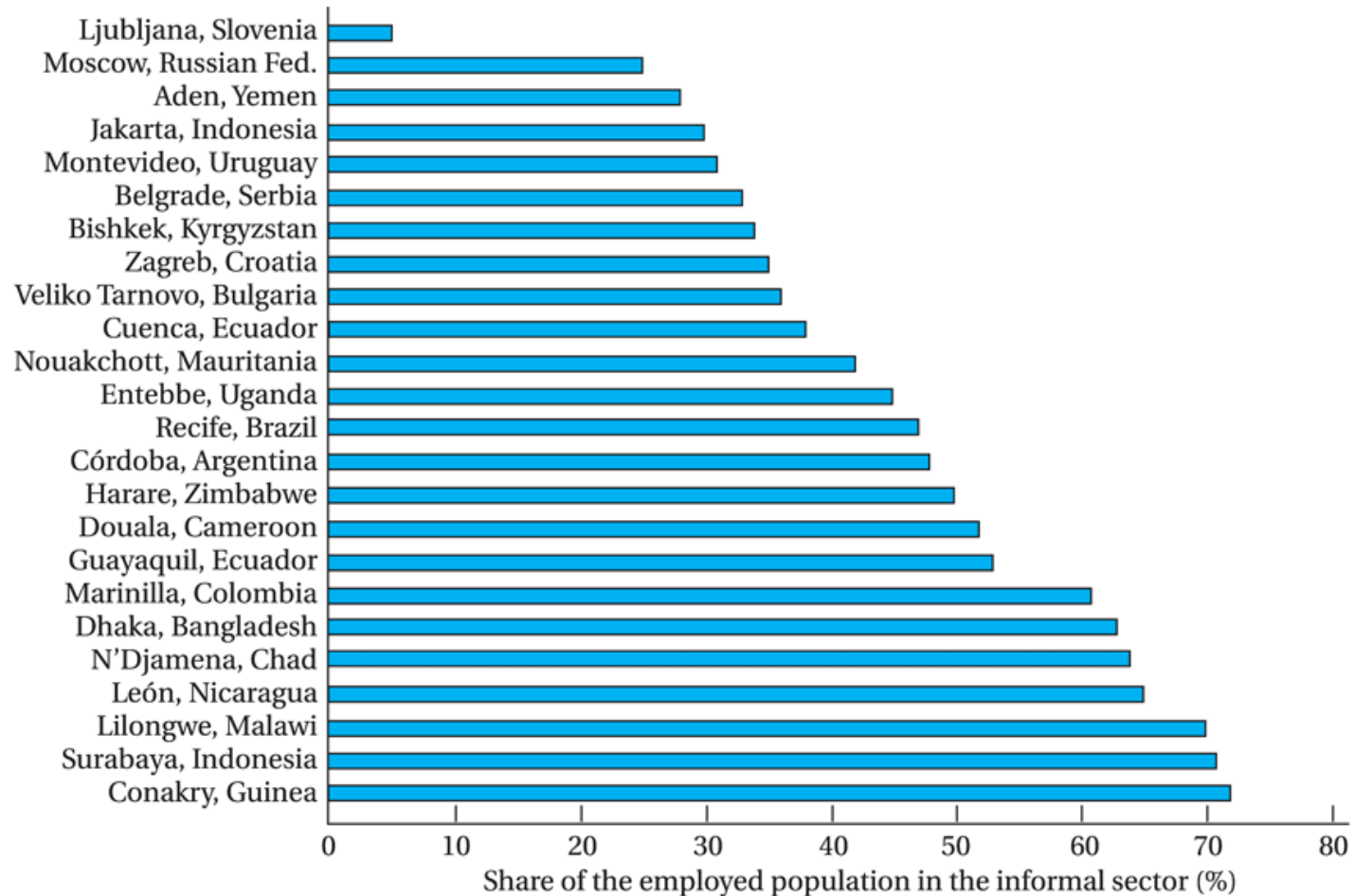
Source: UN-Habitat, "State of the World's Cities, 2001," http://www.unchs.org/Istanbul+5/statereport.htm. Reprinted with permission.

# **Figure 7.10** Youth Unemployment Rates, 1995 and 2005

Source: Adapted from United Nations, *Millennium Development Goals Report, 2006* (New York: United Nations, 2006), p. 24. Reproduced by permission of United Nations Publications.

7.5 Migration and Development

- Rural-to-urban migration was viewed positively until recently
- The current view is that this migration is greater than the urban areas' abilities to
  - Create jobs
  - Provide social services

# **Figure 7.11** Components of Migration in Selected Countries
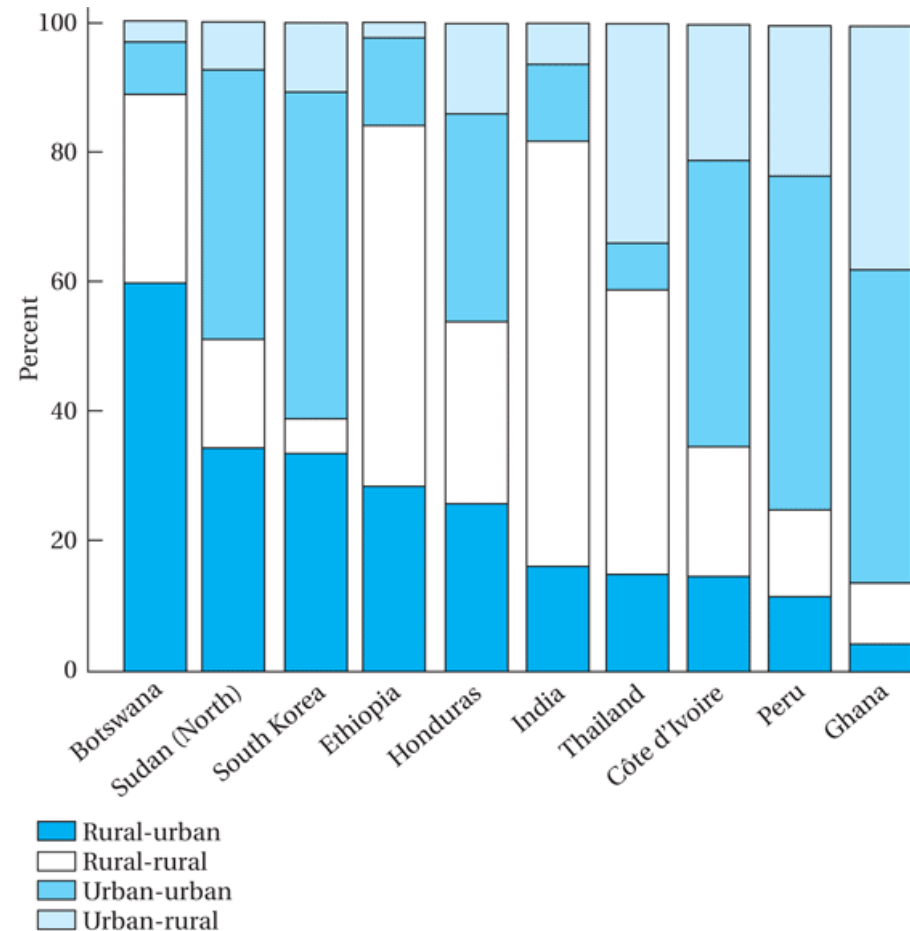
Source: World Development Report, 1999–2000, "Internal migration and urbanization: Recent contributions and new evidence," by Robert E. B. Lucas. Copyright 1999 by the World Bank.

7.6 Toward an Economic Theory of Rural-Urban Migration

- A Verbal Description of the Todaro Model
  - Migration is a rational decision
  - The decision depends on expected rather than actual wage differentials
  - The probability of obtaining a city job is inversely related to the urban unemployment rate
  - High rates of migration are outcomes of rural urban imbalances
- A Diagrammatic Presentation

Figure 7.12 The Harris-Todaro Migration Model
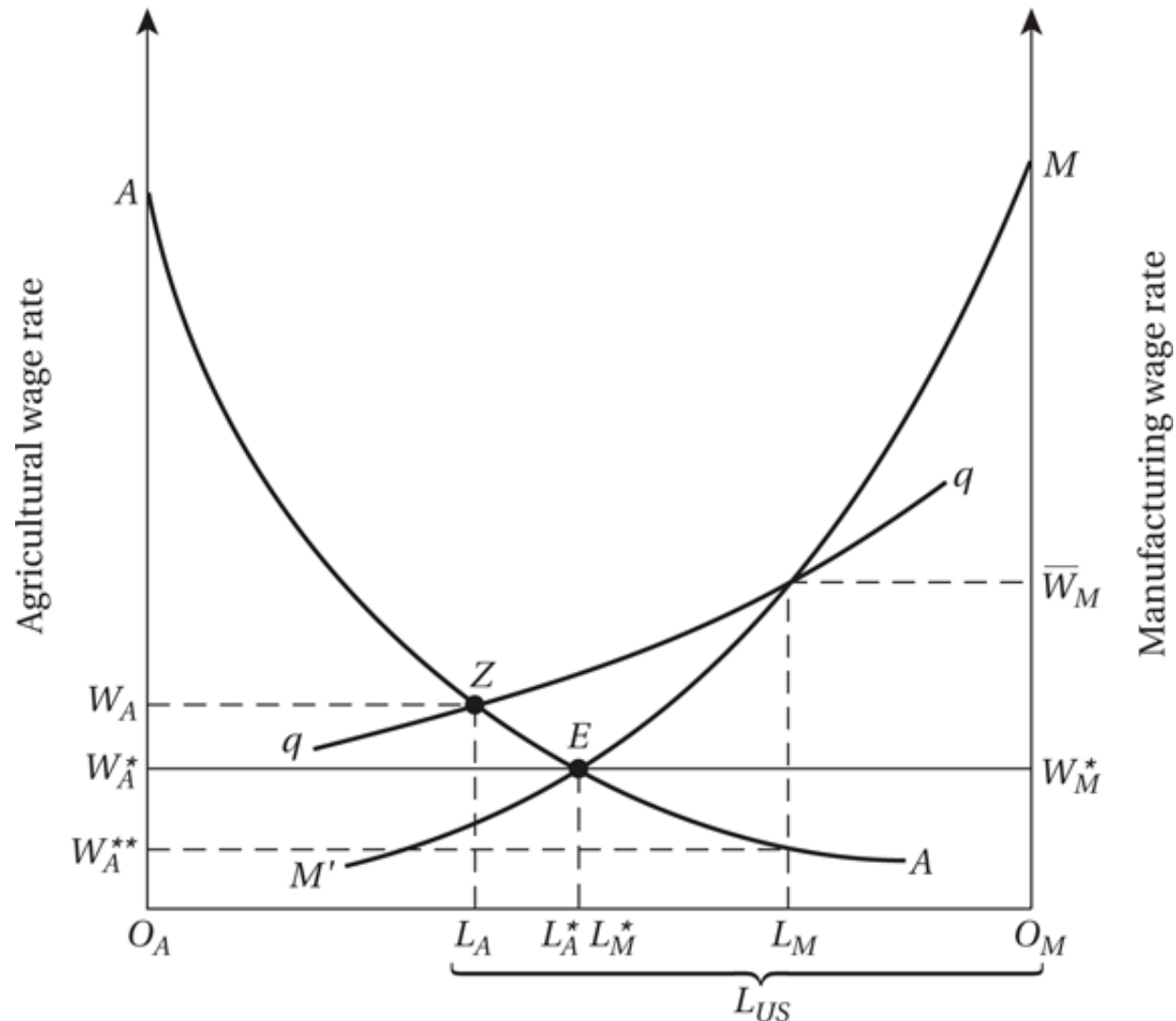
$$W_A = \frac{L_M}{L_{US}}(\bar{W}_M)$$

Where

W_A is agricultural income,

L_M is employment in manufacturing

L_{US} is total urban labor pool

W_M is the urban minimum wage

7.6 Toward an Economic Theory of Rural-Urban Migration (cont'd)

- Five Policy Implications
  - Reduction of urban bias
  - Imbalances in expected income opportunities is crucial
  - Indiscriminate educational expansion fosters increased migration and unemployment
  - Wage subsidies and scarcity factor pricing can be counterproductive
  - Programs of integrated rural development should be encouraged

Generalizing the Harris-Todaro Model

- If informal-sector income is greater than zero, we include it as a weighted component of expected urban income (on the right side of Equation 7.1), specifically we add (as in Endnote 30):

- The informal-sector wage WUI times the probability of receiving it:
    - $W_{UI}(1 - L_M/L_{US})$
    - where $(1 - L_M/L_{US})$ is the probability of <u>not</u> receiving the preferred urban formal wage.

- We can further elaborate with other wages for different activities - and probabilities of receiving them - in this period; and, more generally, in future periods

Generalizing the Harris-Todaro Model

$$W_A = \frac{L_M}{L_{US}}(\bar{W}_M) + (1 - \frac{L_M}{L_{US}})(W_T)$$

In-Class Example of the Harris-Todaro Model

- Start with equation on the previous slide:
- Rural wage = $1.50 per day
- Urban modern wage = $3 per day
- Urban traditional income = $.25 per day
- Suppose there is a .5 probability of getting a modern job. Will there be migration?
- Calculate expected urban income and compare to rural income. Important: you cannot work in two sectors at the same time!
- $E(Y^{URB}) = (.5)(3) + (.5)(.25)$
- $= 1.50 + .125 = 1.625 > 1.50 = Y^{RUR}$
- So the individual migrates - even though half receives just a small fraction of the rural income.

7.7 Summary and Conclusions: A Comprehensive Migration and Employment Strategy

- Create a urban-rural balance
- Expand small-scale, labor intensive industries
- Eliminate factor price distortions
- Choose appropriate labor-intensive technologies of production
- Modify the linkage between education and employment
- Reduce population growth
- Decentralize authority to cities and neighborhoods

Concepts for Review

- Agglomeration economies
- Congestion
- Efficiency wage
- Harris-Todaro model
- Induced migration
- Informal sector
- Labor turnover
- Localization economies

- Present value
- Rural-urban migration
- Social capital
- Todaro migration model
- Urban bias
- Urbanization economies
- Wage subsidy