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Migration and Mega-cities

Economic Demography

Econ/Demog c175

Prof. Goldstein

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Week 11, Lecture B

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Megacity quiz

Have you have ever been to a city with more than 10 million people in the developing world? (A means yes, B means no)

Would you rather be (A) a typical urban person in that country or (B) a typical rural person?

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Migration, Unemployment and Development: A Two-Sector Analysis

By JOHN R. HARRIS AND MICHAEL P. TODARO*

Throughout many less developed economies of the world, especially those of tropical Africa, a curious economic phenomenon is presently taking place. Despite the existence of positive marginal products in agriculture and significant levels of urban unemployment, rural-urban labor migration not only continues to exist, but indeed, appears to be accelerating. Conventional economic models with their singular dependence on the achievement of a full employment equilibrium through appropriate wage and price adjustments are hard put to provide rational behavioral explanations for these sizable and growing levels of urban unemployment in the absence of absolute labor redundancy in the economy as a whole. Moreover, this lack of an adequate analytical model to account for the unemployment phenomenon often leads to rather amorphous explanations such as the "bright lights" of the city acting as a magnet to lure peasants into urban areas.

determined minimum urban wage at levels substantially higher than agricultural earnings.[1] We shall then consider the effect of this parametric urban wage on the rural individual's economic behavior when the assumption of no agricultural labor surplus is made, i.e., that the agricultural marginal product is always positive and inversely related to the size of the rural labor force.[2] The distinguishing feature of this model is that migration proceeds in response to urban-rural differences in *expected earnings* (defined below) with the urban employment rate acting as an equilibrating force on such migration.[3] We shall then use the overall model for the following purposes:

1) to demonstrate that given this po-

[1] For some empirical evidence on the magnitude of these real earnings differentials in less developed economies, see Reynolds, Berg, Henderson, and Ghai.

[2] We do not make the special assumption of an agricultural labor surplus for the following reasons: Most available empirical evidence to date tends to cast

American Economic Review (1970)

Voted in Top 20 Articles Ever in AER
http://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.101.1.1

Agenda

- Why migrate?
- Growth of mega-cities
- Todaro's (first) Economic Model of Urban Growth
  - Pessimistic
- For next time, Harris and Todaro's (second) Model
  - More optimistic

Why migrate?

- Simple answer: Life is better *there* than *here*
- Push and Pull effects
  - high wages, better life
  - persecution, famine, ...
- Other important factors
  - Proximity (physical and cultural)
  - Social networks
  - Frictions / transaction costs
  - Policy matters!

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Spatial distribution of people

- In developing countries, growth of megacities a huge concern (pollution, unemployment, enormous infrastructure demands)
- Countries unhappy with spatial distribution, and trying to slow migration
- But, keep in mind that governments may have own interests

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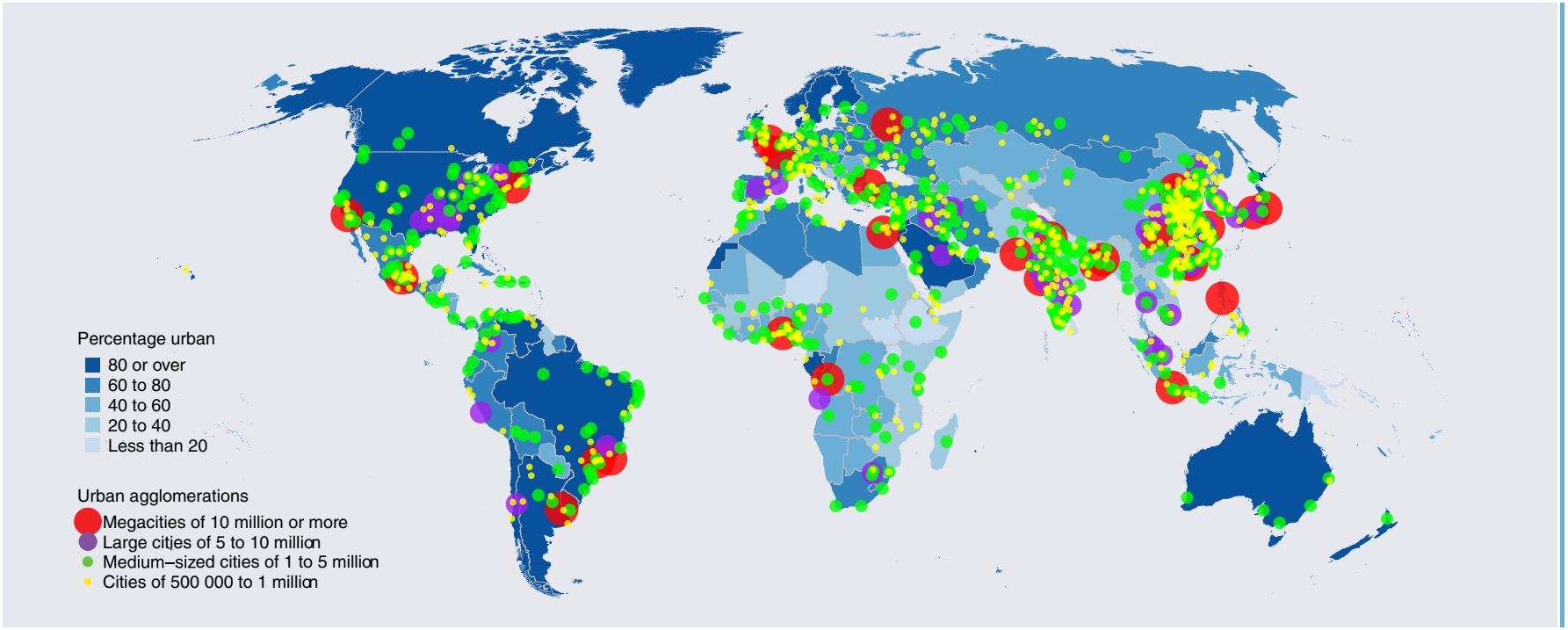
Growth of megacities: From 2 in 1950 to 28 today

Map 1.

Percentage urban and location of urban agglomerations with at least 500,000 inhabitants, 2014



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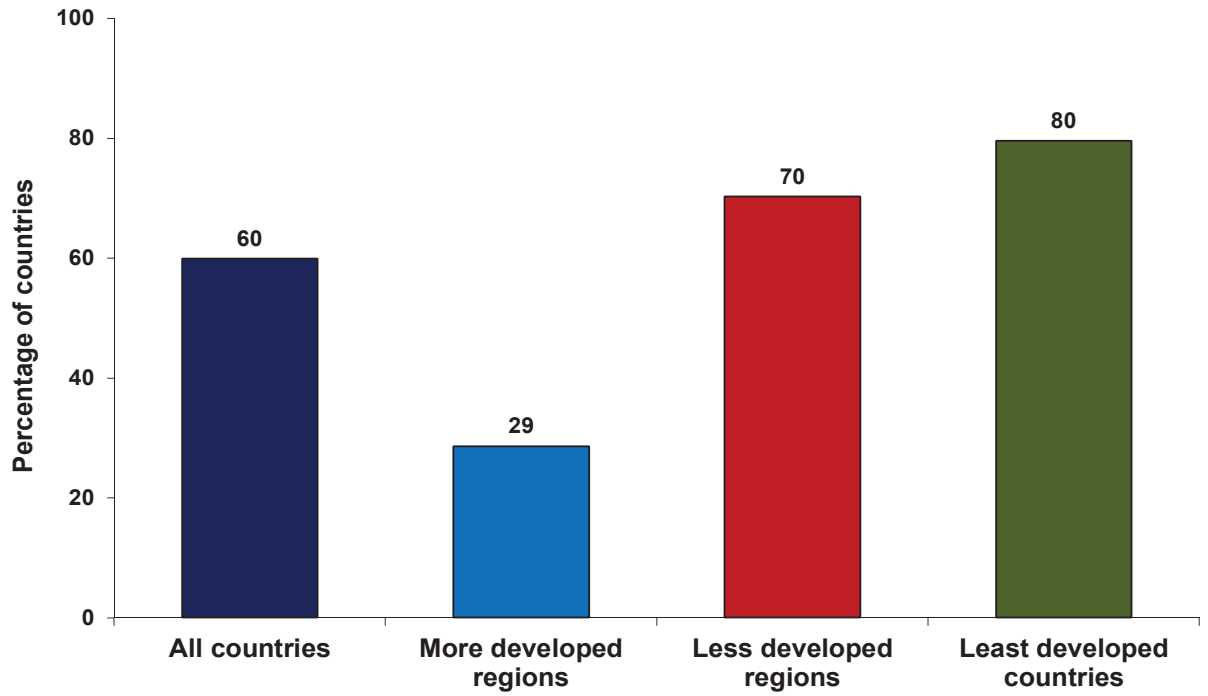
Countries unhappy with spatial distribution

Figure V.1. Governments desiring a major change in the spatial distribution of the population, by level of development, 2013



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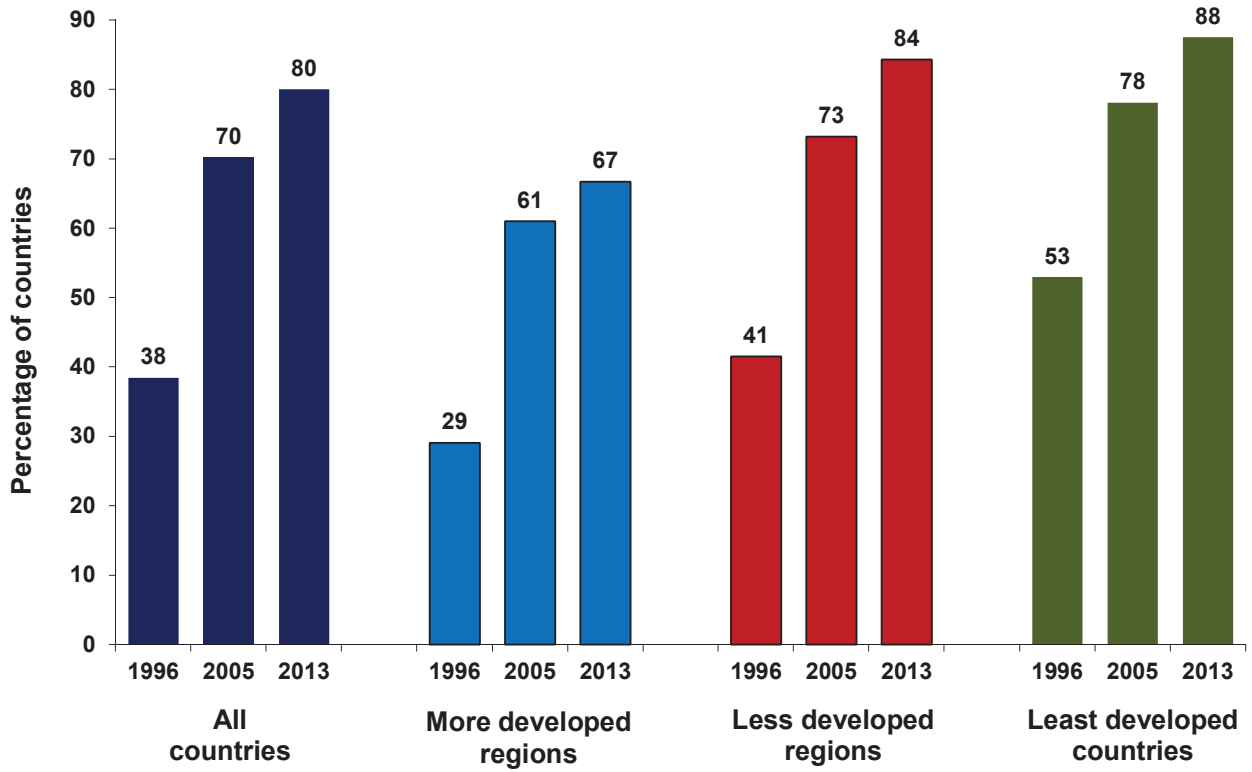
Active policies to slow migration to cities

Figure V.2. Governments with policies to lower migration from rural areas to urban areas, by level of development, 1996–2013



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Urban growth rates

- urban growth = natural increase + net migration
- net migration typically about 1%
- Growth Rates (R)

	Total Pop		*Urban Pop*	
	1975-2000	*2000-2030*	*1975-2000*	*2000-2030*
MDCs	0.8	0.1	1.5	0.5
LDCs	2.1	1.2	3.7	2.3

Economic Model of Urban Growth

- Goal is to explain Todaro's Nairobi paradox
  - lots of unemployment
  - BUT still strong rural to urban migration
- Model is about labor markets
- Key is that migration is motivated by *expected* earnings
- Something to think about – would Todaro approach work for international migration?

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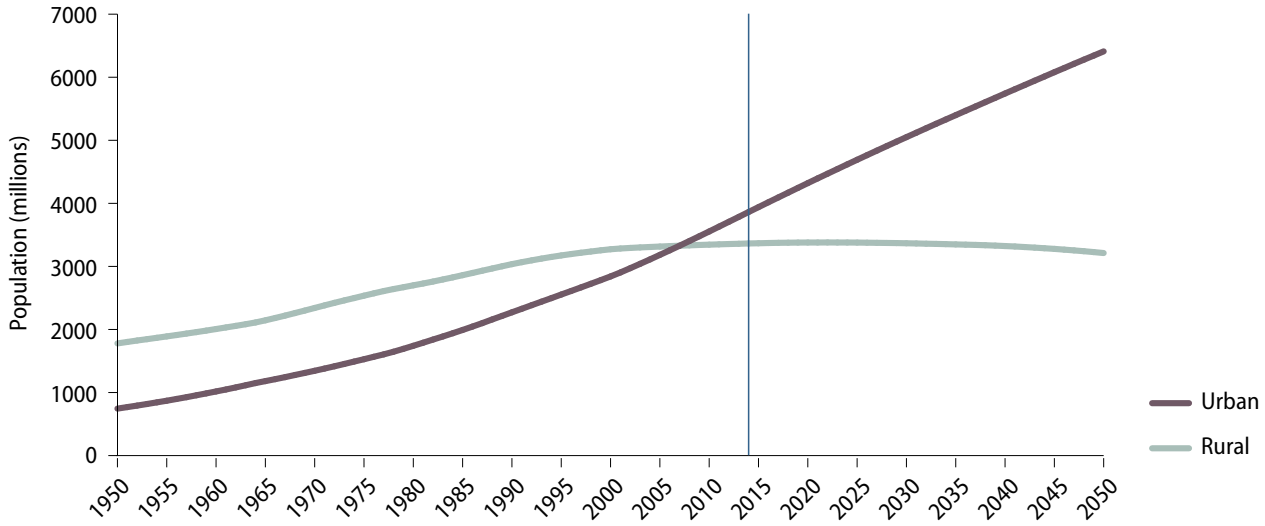
In your lifetimes, the world flipped

Figure 2.
Urban and rural population of the world, 1950–2050



A majority of the world's population lives in urban areas

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A Brief History of Theories

- In 1950s and early 1960s
  - Cities are manufacturing base, engines of economic growth
  - migration a "natural" accompaniment of economic development → a good thing
- Late 1960s to early 1980s (Todaro)
  - Urban economic growth has a negative effect on welfare
  - rural areas deserve more policy attention, an antidote to "urban bias" in subsidies and programs
- Since 1980s (Todaro – Harris)
  - "Balanced perspective"
  - Urban growth can be positive for both city and country

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Nairobi Paradox (1)

ductivity and wages, the government of Kenya instituted a "tripartite agreement" among itself, private employers, and trade unions. The avowed intention was to wipe out the considerable unemployment existing in the greater Nairobi area by having the two hiring participants agree to increase their employment immediately by 15 per cent. For their part the unions had to agree to forego any demands for general

What do you think happened?

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Nairobi Paradox (2)

to agree to forego any demands for general wage increases. In his analysis of this "agreement" Professor Harbison has observed that:

> The effort was a colossal failure. The private employers did take on additional workers and *this acted like a magnet attracting new workers into the urban labor markets;* in a few months the working forces in most of the private establishments had dropped to their former levels through attrition not offset by new hires. In the end, the volume of unemployment, as a consequence of the expansion of the modern labor force *in response to the prospect of more jobs* was probably increased rather than decreased [10, p. 183, fn**]. (Italics not in original)

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Todaro's assumptions

- Urban wages are fixed at w_U
- Rural wages are fixed at w_R (will relax later)
- Chance of getting a job in city is e
- People will move to city if

$$e\, w_U > w_R$$

- Why are urban wages fixed?
  - min. wage legislation
  - political influence of trade unions
  - government employment

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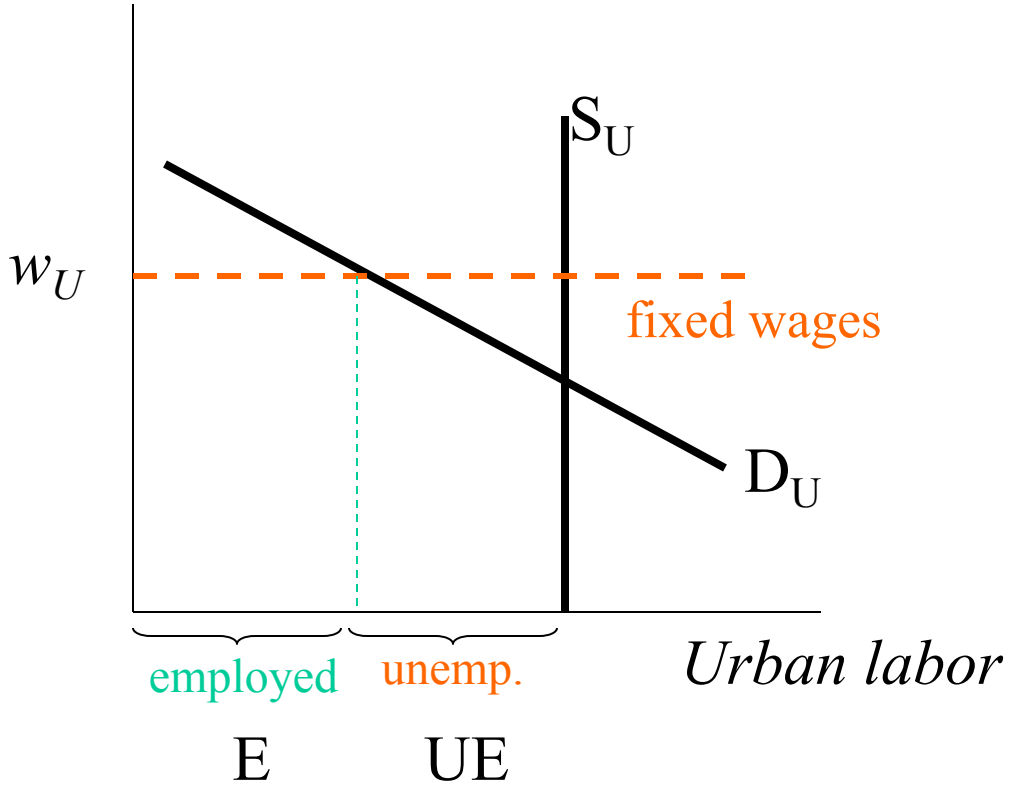
A picture of Todaro's theory



Chance of getting job:

$$e = \frac{E}{S_u} = \frac{E}{E + UE}$$

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Todaro's dismal dynamics

- Migration from rural to urban areas if

$$W_R < e\, W_U$$

- Let rural wages = $10, urban = $100 and start with no unemployment in cities. What will happen?
  - to urban wages of workers?
  - to "expected" wage of a migrant?
  - to chance of getting a job?

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Todaro's equilibrium

- Migration will stop when

$$W_R = e\, W_U$$

- Result:

$$e = W_R / W_U$$

So proportion employed in city will end up being ratio of urban to rural wages

If wage ratio is 1:10, than 90 % unemployment!

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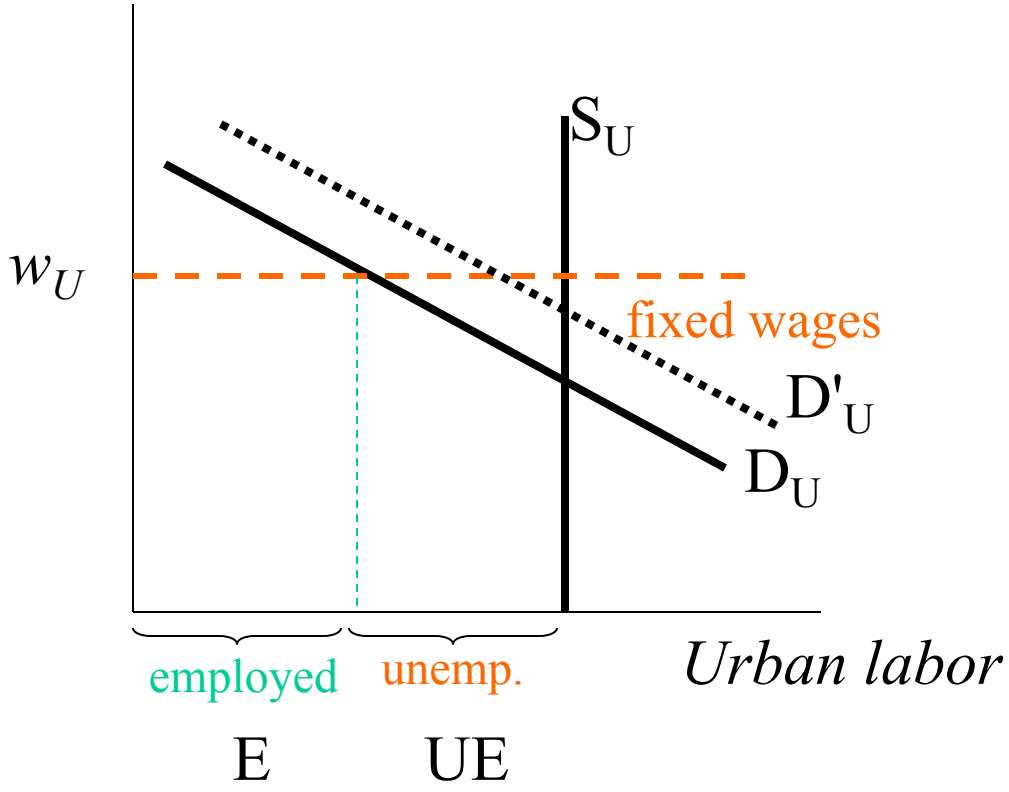
Let's sketch what happens if we create jobs in the city



What happens to ratio of UE to E?
What happens to Su'?
What happens to number unemployed?

If ratio of urban to rural wages is 10:1, the creation of 1 urban job will create 9 new urban unemployed!

Policy implication

- Does it make sense to stimulate urban labor market by creating jobs?
  - shifting urban labor demand curve to right
- Bad news: we increase employment, but also increase unemployment
- More congestion, more housing problems, pollution, etc., …

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Like Malthus

- Any improvement in city life gets erased by population growth
- Equilibrium is very stubborn (stable)
  - in Malthus, wages set by b(w*) = d(w*)
  - in Todaro, unemployment set by w(rural) / w(urban)
- Policy implications of Todaro's first theory
  1. worth trying to slow urban growth
  2. worth trying to increase rural wages
  3. worth trying to liberalize urban wages

Next time

- We make one very small change
- Allowing rural wages to respond to migration
- Different policy implications.