

Rural-urban Interaction

Lecture 2/3

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Chayanee Chawanote

Intersectoral interaction

- Development is rarely distributed evenly across sectors. It tends to be structural transformation – resources move out of one sector to fuel the growth of another.
- Lewis model: labor and resources move from a 'traditional sector' to a 'modern sector' with capital accumulation.
- The traditional sector has surplus labor (labor can be removed without loss in output, or the marginal product of labor = 0). So labor moves to the modern sector (industrial sector).
- In order to absorb labor, the modern sector needs capital accumulation to increase demand for labor, but will also induce more rural-urban migration.

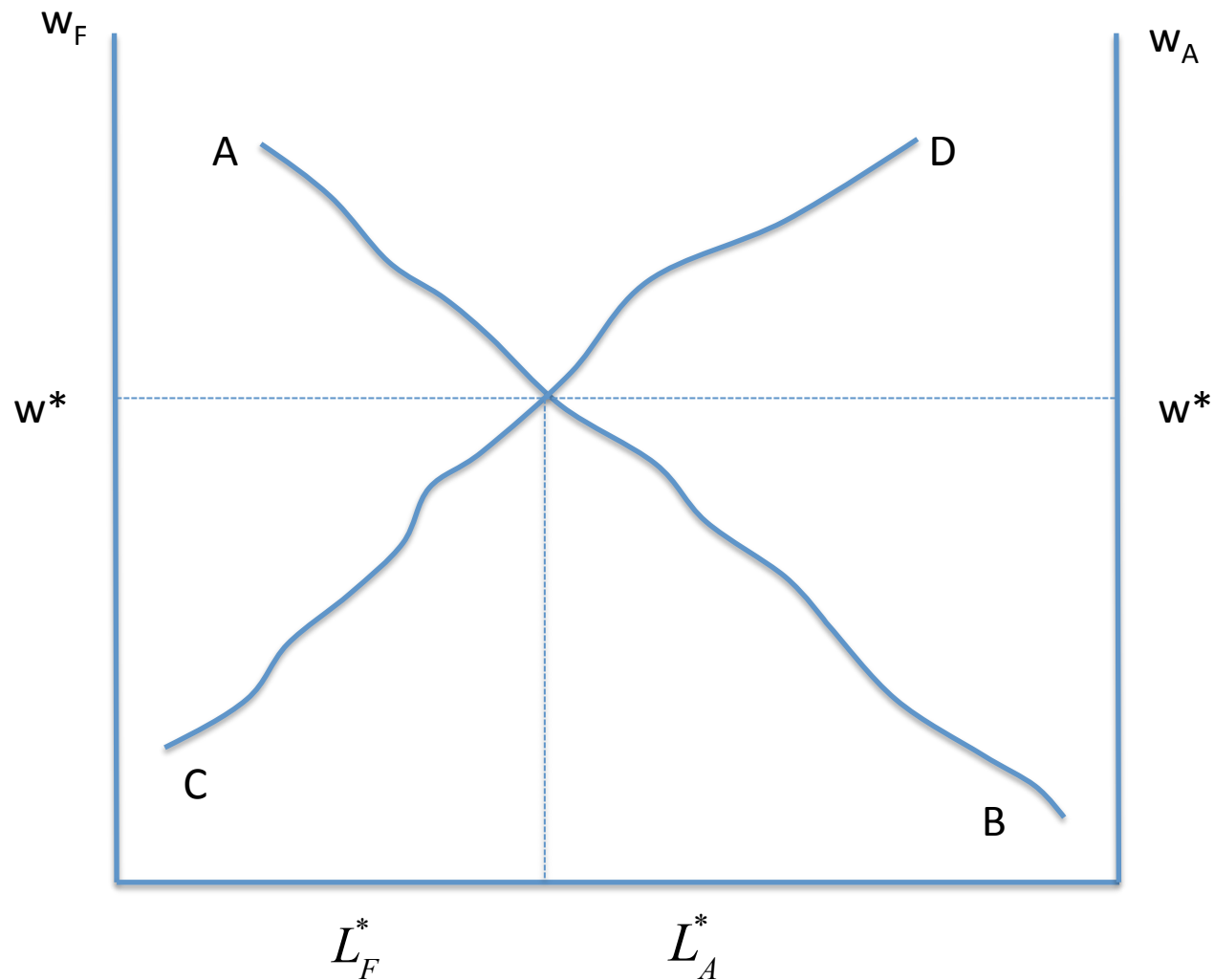
Harris-Todaro model

- Formal urban sector with high wage, but not everyone can get a job
- Informal urban sector
- Rural sector (agricultural labor or family farm)

Harris-Todaro model: The basic model

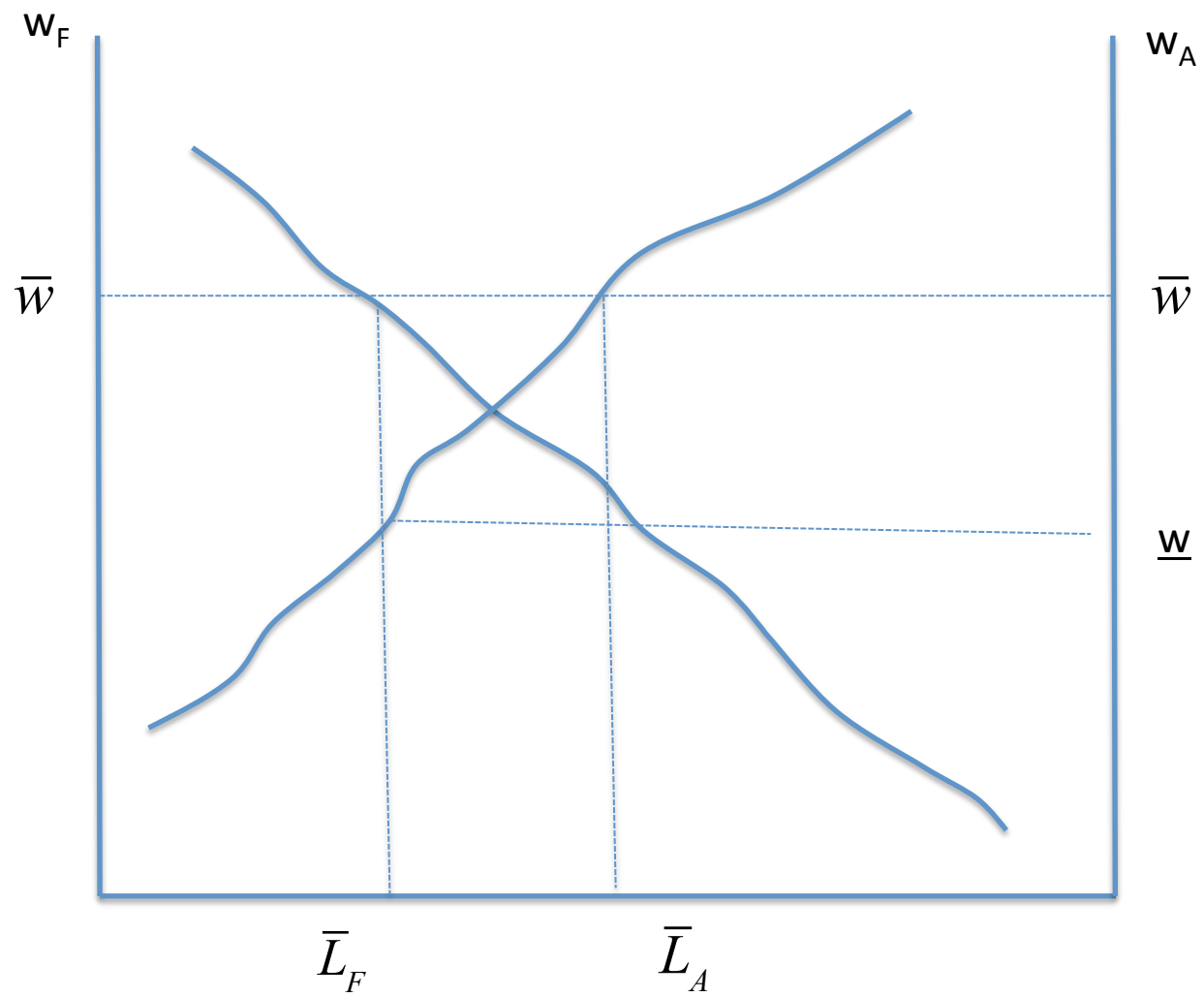
- Suppose now 2 sectors: a rural sector and a formal urban sector
- Labor force is divided between the agricultural sector (L_A), and the formal urban sector (L_F)
- AB: demand curve for labor in the formal sector
- CD: absorption of labor in agriculture
- More labor can be absorbed in any sector at a lower wage
- To alleviate persistent migration between the sectors, the wages in the two sectors must be equalized

Harris-Todaro model: The basic model



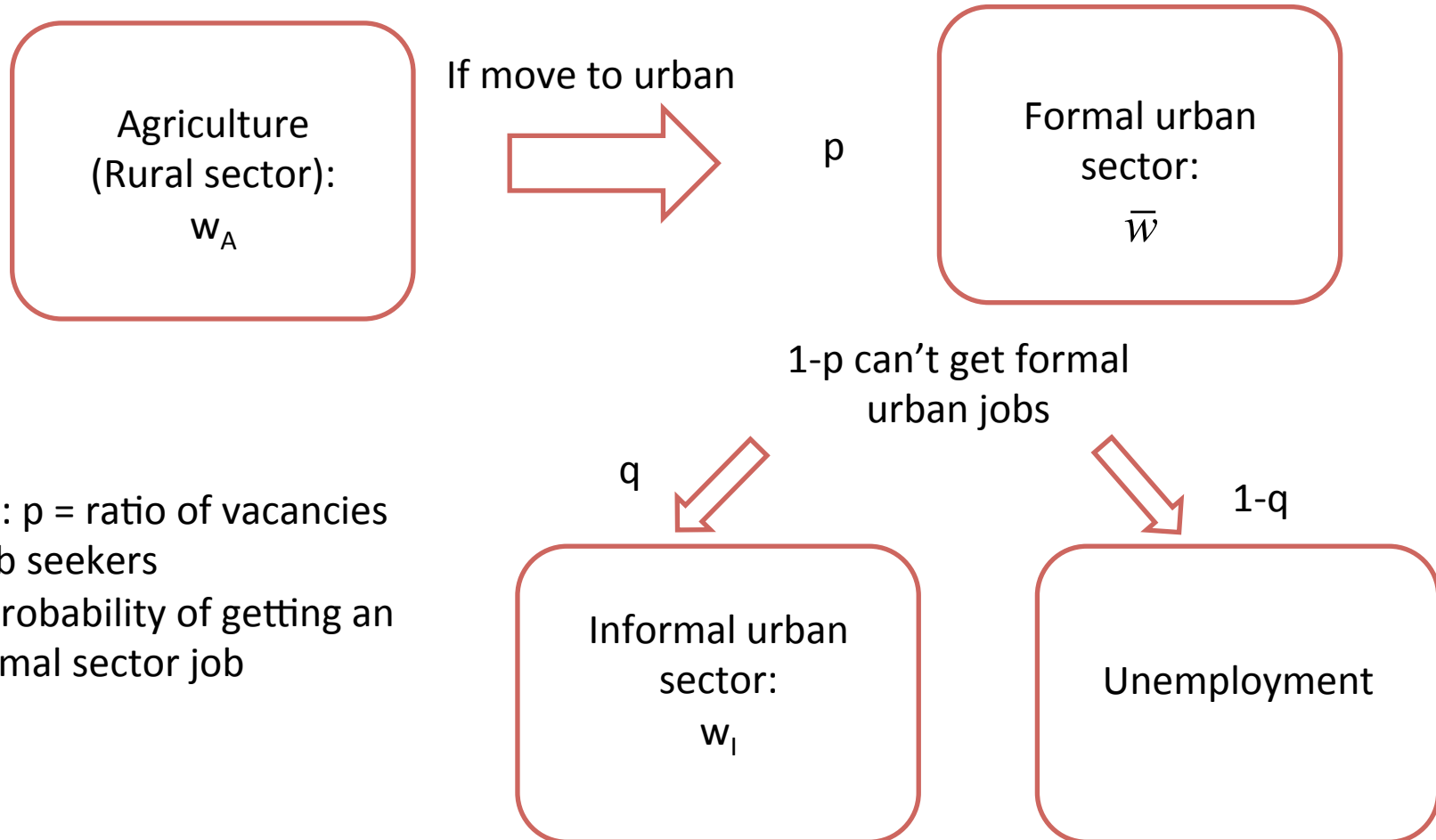
Harris-Todaro equilibrium

- Suppose the formal urban wage rate is fixed at too high level for market equilibrium w^* to occur
- Let $\bar{w}$ be the minimum formal wage. The private-sector formal firms will not hire more than amount $\bar{L}_F$ at this wage
- Where do the remainder go?
- It could be that all remainders are employed in the agricultural sector. Then, the wage in the rural sector must drop to $\underline{w}$.
- Since $\bar{w}$ and $\underline{w}$ are different, this cannot be an equilibrium state. Why?



Harris-Todaro equilibrium

- We can't impose the equality of wages across the two sectors. If so, only an amount $\bar{L}_A$ can be employed in the agricultural sector, resulting in unemployed pool, U. This can't be an equilibrium state either.
- Here is where the informal urban sector comes in.
- So now we have the rural agricultural sector, a relatively safe option; the urban formal sector, a gamble option; and the informal urban sector, an alternative if labors do not want to be unemployed.



Note: p = ratio of vacancies to job seekers
 q = probability of getting an informal sector job

Harris-Todaro equilibrium

- For simpler case (no unemployment), we have p (probability of getting a formal sector job) =

$$\frac{L_F}{L_F + L_I}$$

- We can compare expected income from migration with the actual income received in agriculture:

$$\frac{\bar{L}_F}{\bar{L}_F + L_I} \bar{w} + \frac{L_I}{\bar{L}_F + L_I} w_I = w_A$$

- It's an equilibrium where no one wishes to migrate from one sector to another: Harris-Todaro equilibrium condition