

Immigration

- The effect of immigration on the host economy
 - homogeneous labor
 - heterogeneous labor
- Empirical studies

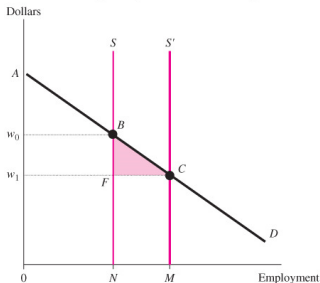
The effect of immigration on the host economy

- Question of central importance in many developed countries.
- What is the effect of immigration on native wages and employment?
 - low skill workers and high skill workers.
- Two popular views:
 - Immigrants take away native jobs!
 - Immigrants take up jobs that natives don't want!
- Not surprisingly, conclusions are more nuanced.

Homogeneous Labor

FIGURE 4-17 The Immigration Surplus

Prior to immigration, there are N native workers in the economy and national income is given by the trapezoid $ABN0$. Immigration increases the labor supply to M workers and national income is given by the trapezoid $ACM0$. Immigrants are paid a total of $FCMN$ dollars as salary. The immigration surplus gives the increase in national income that accrues to natives and is given by the area in the triangle BCF .



- Native workers lose out from immigration.
- Owners of capital gain.
- The economy as a whole gains.
- How large is the immigration surplus?

How large is the immigration surplus?

- The area of the shaded triangle relative to initial national income:

$$\begin{aligned}\frac{\Delta Q}{Q} &= \frac{1}{Q} \left(\frac{1}{2} \Delta w \times (M - N) \right) \\ &\cong \frac{1}{Q} \frac{1}{2} \left(-\frac{\partial w}{\partial L} \times (M - N) \right) (M - N) \\ &= -\frac{1}{2} \frac{1}{Q} \left(\frac{\partial w}{\partial L} \frac{L}{w} \right) \frac{w}{L} \frac{L}{L} (M - N)^2 \\ &= -\frac{1}{2} \frac{wL}{Q} \left(\frac{\partial w}{\partial L} \frac{L}{w} \right) \frac{(M - N)^2}{L^2} \\ &= -\frac{1}{2} \alpha_L \varepsilon_{LL} m^2\end{aligned}$$

- α_L is the share of national output accruing to labor ≈ 0.7
- ε_{LL} : elasticity of factor price for labor ≈ -0.3 (Hamermesh, 1993).
- m : share of immigrants in population ≈ 0.1 (roughly the number of foreign born in the US).
- Therefore:

$$\frac{\Delta Q}{Q} \cong \frac{1}{2} \times 0.7 \times (-0.3) \times 0.1^2 = 0.00105$$

- The immigration surplus is about 0.1% of GDP. Not very large.

Remarks

- The immigration surplus is directly proportional to ε_{LL} . The larger the drop in wages for native workers, the larger the gain of the economy as a whole.
- If wages don't fall at all, the native economy doesn't benefit at all from immigration.
- Results not very sensitive to the assumptions about specific parameters: the immigration surplus is always on the order of 0.1% - 0.3% of GDP.

Remarks - 2

- This very simple model illustrates a very general principle:
 - owners of factors of production that are *substitutes* to immigrant workers *lose out* from immigration.
 - owners of factors of production that are *complements* to immigrant workers *gain* from immigration.

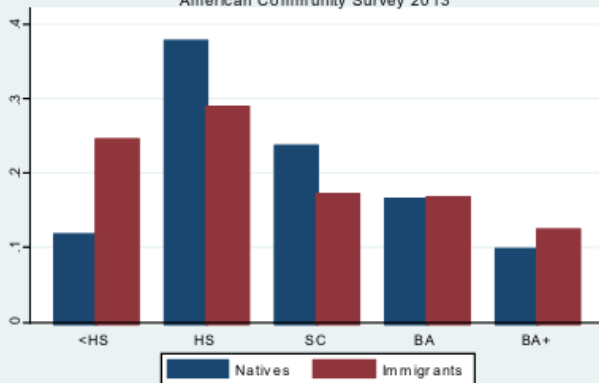
Extensions

- What happens in the long run?
- Firms will move into area with lower wages. Assuming that MP_L increases with K , demand curve will shift outward, native wages recover.
- Also, native workers will flow out to areas with higher wages. Also acts to counterbalance the initial negative effect.

Heterogeneous labor

- Two types of workers, skilled and unskilled.
- Assume that immigrants are relatively unskilled (in the extreme: all immigrants are unskilled)
 - US immigrants: high fraction of high school dropouts, but also high fraction with advanced degrees.

Educational Distribution of Natives and Immigrants in the USA
American Community Survey 2013



- lower wages for unskilled native workers.
- wages of high skill workers will rise or fall depending on whether they are gross complements or gross substitutes to unskilled workers.
- All workers also benefit from lower prices, cheap immigrant services (maids, gardeners, etc.)

Main take-home message: factors of production that are substitutes with immigrants lose out, factors of production that are complements benefit.

- Does immigration affect wages and employment outcomes of natives?
- Spatial correlation approach: exploit variation in the number of immigrants across geographic units (states, counties, metropolitan areas), and regress $\Delta \ln w_j$ on $\%Imm_j$.
- Problems:
 - immigration flows are endogenous: immigrants choose to locate in areas with good labor market conditions, many other immigrants, etc.
 - other factors of production can respond: firms move in, native workers move out.

Natural experiments

- Study episodes of large and unexpected migration flows, geographically concentrated.
- Most famous study: Card (ILRR, 1990): the effect of the Mariel boatlift on the Miami labor market.
- From May to September 1980, 125,000 Cubans arrived to Miami (by boat). Sudden and exogenous increase in the supply of immigrants.
- A 7% increase in the Miami labor force, and a 20% increase in the number of Cubans in Miami.
- Empirical approach: Diff in diffs: compare labor market outcomes in Miami with those in comparison cities (LA, Houston, Atlanta, Tampa-St. Petersburg).

- Conclusion: no effect of the Mariel Boatlift on the labor market opportunities of less-skilled natives. Why?
 - Miami industry was particularly well-suited to absorb these immigrants.
 - Outflow of natives, or smaller inflow of other immigrants. Miami population growth in 1981-1985 was slower than in other Florida cities.
 - Saiz (RESTAT, 2003). Substantial rise in rents in Miami, especially in low quality housing units. Local real wages may have fallen by more than what originally thought.
- Still, this is a bit of a puzzle.
- Also see Tabellini (2020).