

Mobility

1 Introduction

- A. Lots in US for young
- B. Determinants
 - 1) Age
 - 2) Education
- C. Trends
 - 1) Rural to urban
 - 2) Blacks
 - 3) Regional
- D. Return migration
 - 1) Because of surprises
 - 2) Planned
- E. Cyclical effects on mobility
 - 1) Procyclical quits
 - 2) Bad times \Rightarrow emmigration if other areas not as hardly hit

2 US Immigration

- A. Trends
 - 1) 1840's: Irish
 - 2) 1850-1880: Swedes and Germans
 - 3) 1890-1920: Jews, Russians, Italians
 - 4) 1860-1970, 1960-: East Asians
 - 5) 1950- : Latin Americans
- B. Immigration Policy
 - 1) Loose until 1920
 - 2) Quotas after
- C. Who gains, who loses?

3 Model of Decision to Migrate

Assume there is a home country where people have different levels of education E . The wage in the home country is

$$w = e^{rE},$$

and the wage in the new country is

$$w = e^{zE+a}$$

with $z > r$. Assume that a varies over the population with distribution G and has a mean value of zero.

Who should move? Let the value of moving be

$$Y = \int_A^T e^{-\rho(t-A)} e^{zE+a} dt - \int_A^T e^{-\rho(t-A)} e^{rE} dt - C$$

$$e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} [e^{zE+a} - e^{rE}] - C.$$

One should migrate iff $Y > 0$. The probability of migrating is

$$\begin{aligned} & \Pr[Y > 0] \\ &= \Pr \left[e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} [e^{zE+a} - e^{rE}] - C > 0 \right] \\ &= \Pr \left[e^{zE+a} > e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right] \\ &= \Pr \left[a > \log \left(e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right) - zE \right] \\ &= 1 - G \left[\log \left(e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right) - zE \right] \end{aligned}$$

How does the migration decision depend up characteristics of the environment or the person?

$$\frac{\partial Y}{\partial E} = e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} [ze^{zE+a} - re^{rE}]$$

which is positive unless a is a large negative number. In particular,

$$\begin{aligned} \frac{\partial}{\partial E} \Pr[Y > 0] &= -g \left[\log \left(e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right) - zE \right] \cdot \\ & \quad \left[\frac{re^{rE}}{e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C} - z \right] \\ &= -g \left[\log \left(e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right) - zE \right] \cdot \\ & \quad \left[\frac{r}{1 + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-rE} e^{-\rho A} C} - z \right] \\ &> 0. \end{aligned}$$

Next,

$$\frac{\partial Y}{\partial A} = -e^{-\rho(T-A)} [e^{zE+a} - e^{rE}]$$

which is positive if $Y > 0$, and

$$\frac{\partial}{\partial A} \Pr[Y > 0] = g \left[\log \left(e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right) - zE \right] \left[\frac{\frac{\rho^2 e^{-\rho(T-A)}}{(1 - e^{-\rho(T-A)})^2} C}{e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C} \right] > 0.$$

Finally,

$$\frac{\partial Y}{\partial C} = -1,$$

and

$$\begin{aligned} \frac{\partial}{\partial C} \Pr[Y > 0] &= -g \left[\log \left(e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C \right) - zE \right] \\ &\quad \left[\frac{\frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A}}{e^{rE} + \frac{\rho}{e^{-\rho A} - e^{-\rho T}} e^{-\rho A} C} \right] \\ &< 0. \end{aligned}$$

Now consider someone who is indifferent between migrating and not $\Rightarrow Y = 0$. Look at the tradeoff between, for example, E and a that keeps the person indifferent.

$$\begin{aligned} \frac{\partial Y}{\partial E} &= e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} [ze^{zE+a} - re^{rE}]; \\ \frac{\partial Y}{\partial a} &= e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} e^{zE+a}. \end{aligned}$$

So

$$\begin{aligned} \frac{dE}{da} \Big|_{Y=0} &= - \frac{e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} e^{zE+a}}{e^{\rho A} \frac{e^{-\rho A} - e^{-\rho T}}{\rho} [ze^{zE+a} - re^{rE}]} \\ &= - \frac{e^{zE+a}}{ze^{zE+a} - re^{rE}} < 0. \end{aligned}$$

Now, if we looked only at stayers, what would the correlation between E and a look like? How about leavers?