WHO MIGRATES? SELECTIVITY IN MIGRATION

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Study Materials and Reading List

- Slides of the lectures

- All materials provided on: http://home.cerge-ei.cz/pytlikova/LaborSpring16/

Compulsory Readings:

- Borjas (1987):" Self-selection and the earnings of immigrants" American Economic Review, 77 (4), pp. 531-553.
- Chiswick(1999): Are Immigrants Favourably Self-selected? American Economic Review, pp.181-185.http://www.jstor.org/stable/117103.

Other Relevant Literature:

- McKenzie and Rapoport (2010): "Self-selection patterns in Mexico-U.S. migration: The role of migration networks". Review of Economics and Statistics 92 (4), pp. 811-821
- Chapter 4: "Who Immigrates? Theory and Evidence" In Bodvarsson, Ö. and H. van den Berg (2013): The Economics of Immigration – Theory and Policy
- Grogger and Hanson (2011): "Income maximization and the selection and sorting of international migrants" Journal of Development Economics, 95 (1), 42-57.

WHO MIGRATES? SELECTION PROCESSES IN MIGRATION

Two Approaches: **Borjas** VS **Chiswick** debate on selectivity

In line with the **"Human capital investment"** there are higher "returns to migration" for young, healthy with greater abilities/education (Chiswick, 1999, 2000).

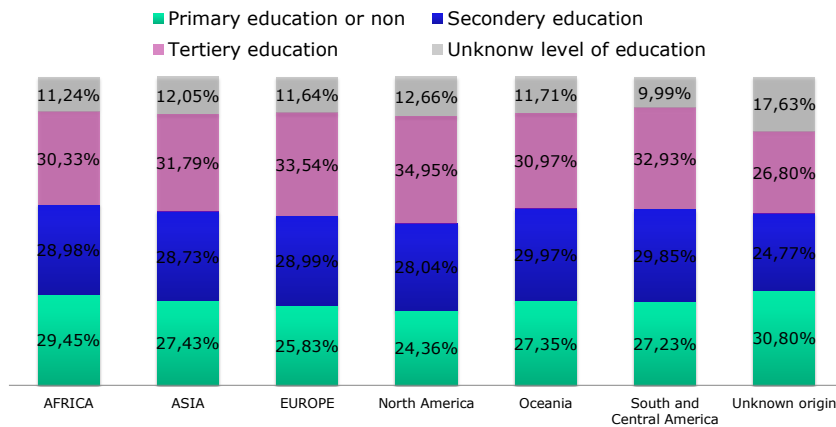Different selectivity for different types of migrants:

- Economic migrants
- Tied movers – family re-union
- Refugees
- Illegal migration
- Short-term migrants

WHO MIGRATES??

•**"self-selection model"** (Borjas, 1987) based on Roy's model - immigrants skill differentials in relation to the variance in the wage distribution.

Positive selection   Negative selection

countries with big wage dispersion   **countries with low wage dispersion**

SELF-SELECTION model (Borjas, 1987)

Distribution of income in the country of origin:

$$\ln w_0 = \mu_0 + \varepsilon_0$$

μ_0 is the mean wage and $\varepsilon_0 \sim N(0, \sigma_0^2)$

In the destination country workers face a following earnings distribution:

$$\ln w_1 = (1 - M)\mu_n + M\mu_1 + \varepsilon_1$$

Where $\varepsilon_0 \sim N(0, \sigma_0^2)$ and μ is a mean wage for natives (n) or migrants (1); M is a dummy for migrant: 1, if the worker is immigrant, 0 otherwise.

ε_0 and ε_1 have correlation coefficient $\rho = corr(\varepsilon_0, \varepsilon_1)$ which measures **skill transferability.**

Migration Decision

The workers in location 0 will migrate to location 1, only if the following index function is positive:

$$I = \ln(w_1 / (w_0 + C)) \approx (\mu_1 - \mu_0 - \pi) + (\varepsilon_1 - \varepsilon_0)$$

C ... migration costs

π ... time-equivalent" measure of emigration costs $\pi = C / w_0$

This provides an expression for the probability of migrating:

$$P = \Pr[I > 0] = \Pr\{v > -(\mu_1 - \mu_0 - \pi)\} = 1 - \Phi(z)$$

Where $v = \varepsilon_1 - \varepsilon_0$, $z = -(\mu_1 - \mu_0 - \pi) / \sigma_v$ and Φ is the standard distribution function.

This equation summarizes the economic content of the human capital theory of migration proposed by Sjaastad (1962). The increase in the emigration rate would be brought by:

• a decrease in the average wage in the origin location $[\mu_0]$

• a decrease in the moving costs

• an increase in the average wage in the destination location $[\mu_1]$

Selection Biases

Consider the conditional means below:

$$E(\ln w_0 \mid \mu_0, I > 0) = \mu_0 + \frac{\sigma_0 \sigma_1}{\sigma_v}\left(\rho - \frac{\sigma_0}{\sigma_1}\right)\lambda$$

$$E(\ln w_1 \mid \mu_1, I > 0) = \mu_1 + \frac{\sigma_0 \sigma_1}{\sigma_v}\left(\frac{\sigma_1}{\sigma_0} - \rho\right)\lambda$$

Where $\lambda = \Phi(z)/P$; and Φ is the density of the standard normal.

Lets define income differential Q:

$$Q_0 = E(\varepsilon_0 \mid \mu_0, I > 0)$$

$$Q_1 = E(\varepsilon_1 \mid \mu_1, I > 0)$$

and

$$k = \sigma_1 / \sigma_0$$

k measures the "price" of skills: The greater the rewards to skills, the larger the inequality in wages.

There are three possible combinations of migrant performance:

- *Positive Selection*
  $Q_0 > 0$ *and* $Q_1 > 0$ *, if* $k > 1$ *and* $\rho > \min(1/k, k)$
  $k > \rho > 1/k$

- *Negative Selection*
- $Q_0 < 0$ *and* $Q_1 < 0$ *, if* $k < 1$ *and* $\rho > \min(1/k, k)$

- *Refugee Sorting*
- *and* $Q_0 < 0$ *, if* $Q_1 > 0$ *, if* $\rho < \min(1/k, k)$

-

Above generates a reduced form model that describes the determinants of the relative skill composition of the immigrant flow:

$$Q_1 = g(\mu_0, \mu_1, \pi, \sigma_0, \sigma_1, \rho)$$

those which change the number of migrants leaving the origin location ("scale effects") and those which alter the skill endowment of the typical migrant ("composition effects")

By netting out the scale effect (keeping λ constant) a structural equation can clarify some of the models' predictions:

$$Q_1 = h(\sigma_0, \sigma_1, \rho)\lambda$$

This equation enables some implications about the quality of migrants to be inferred from changes in these variables. In particular:

- an increase in the earnings inequality of the origin σ_0
- decrease in the inequality of the destination σ_1 leads to a decline in the average skills of immigrant
- an improvement in the transferability of unobservable skills ρ will increase immigrant quality, under conditions of positive selection, but decrease it, when immigrants are poorly performing in both origin and destination labour markets.

Some CRITIQUE

- **migration costs** are in the form **a constant proportion of "time-equivalent" foregone earnings** across individuals in the country of origin, implying that all individuals require the same number of labor hours in order to get to destination country;
  - In reality, the **migration costs constitute huge barrier to migrate especially for the low-skilled people from poor countries characterized by unequal income distribution. Later models account for that.**
- Another assumption: skill distribution is the same in both countries. The model assumes that the average person in the country of origin has the same skills as the average person in the destination country.
  - Elimination of this assumption and allowing having **different skill distribution** in both countries would unearth some differences. If the skill distribution is more unequal in the country of origin with mean relatively lower than the skill mean of destination, there would more likely be a situation where $Q_0 > 0$ and $Q_1 < 0$, which is not really possible in Borjas model. Thus, it is important to allow for skill distribution for both countries in the model.
- The self-selection model omits immigration policy, e.g. existence of selective-immigration policy

WHO MIGRATES? Chiswick's model application to migrant selectivity

Model of why migrants can be "favourably" or "unfavorably" selected

•The rate of return in line with HC framework can be rewritten as:

$$r = \frac{W_b - W_a}{C_f + C_d}$$

•Where Cf are foregone earnings and Cd direct out of pocket money, Wb represents earnings in destination, Wa in origin.

•Migration occurs of the rate of return from the investment in migration (r) >= the interest rate for investment in HC (i)

•Suppose, two groups of workers, low and high skilled; lets assume wages are e.g. 100k percent higher for more able:

$$W_{b,h} = (1+k)W_{b,l}$$
$$W_{a,h} = (1+k)W_{a,l}$$

It is assumed that direct costs do not wary with ability, but ability raises the value of foregone earnings:

$$C_{f,h} = (1+k)C_{f,l}$$

•The the rate of return to high-ability person:

$$r_h = \frac{(1+k(W_{b,l} - (1+k)W_{a,l})}{(1+k)C_{f,l} + C_d} = \frac{W_{b,l} - W_{a,l}}{C_{f,l} + C_d/(1+k)}$$

•Thus those with higher ability have higher rate of return+> selectivity of those people to migrate.

•Chiswick (1999) adds further assumption that more able are more efficient in migration. Opportunity costs can be written as

$$C_f = tW_a$$

•The more able need less time *t* to accomplish the task, and greater efficiency gives greater returns in migration.

•If the more able may also be more efficient in utilizing out-of-pocket expenditure, then the difference in the rate of return to migration is even greater.
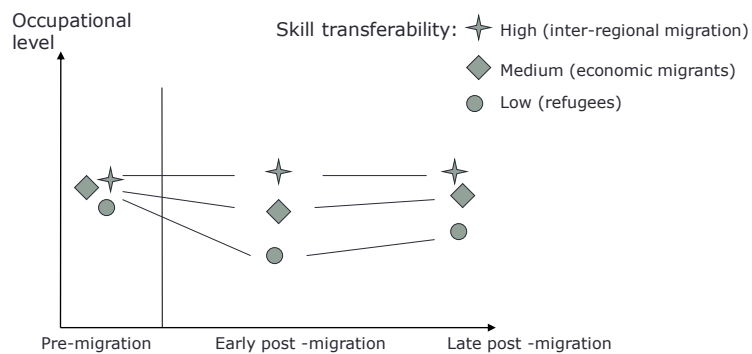
ADJUSTMENT OF IMMIGRANTS

• Earnings (used by economists)

• Occupation (used by sociologists)

Different types of immigration – impact on adjustment
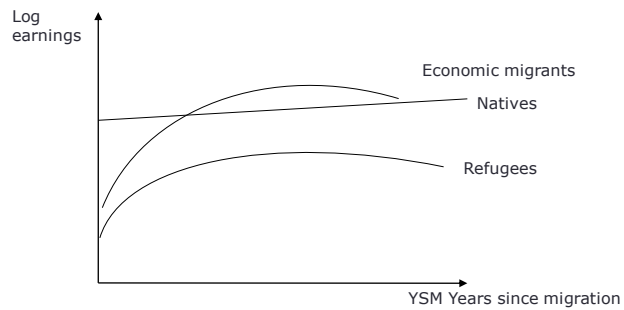
ADJUSTMENT OF IMMIGRANTS

• u-shape pattern of occupational mobility

ADJUSTMENT OF IMMIGRANTS

? Which occupations have high/low skill transferability **?**

Example

Important:

Selectivity,

Skills transferability & transferability of occupation,

Investment into post-migration training.

ADJUSTMENT OF IMMIGRANTS

- More on immigrant assimilation and integration; and performance of second generations of immigrants during the next lectures

- *Now an example of how do CEE migrants fare..*

How do CEE migrants fare? Post-enlargement evidence

- Main sending countries:
  - **UK**: Poland, Slovakia, Lithuania,
  - **Ireland**: Poland, Lithuania, Latvia
  - **Sweden**: Poland, Lithuania, Estonia
- Sectoral distribution of immigrants:
  - **UK**: hotels and restaurants, manufacturing, agriculture/construction
  - **Ireland**: construction, manufacturing, hotels and restaurants
  - **Sweden**: health care, trade, manufacturing

How do CEE migrants fare? Post-enlargement evidence

•Characteristics of post-enlargement immigrants:
- **UK**:
  - young,
  - males,
  - single,
  - rel. highly educated (with qualifications),
  - higher empl. rate than of natives and non-EU migrants.
  - Earn less than natives, later arrivals earn less than earlier arrivals.

How do CEE migrants fare? Post-enlargement evidence

• Characteristics of post-enlargement immigrants:

- **Ireland**:
    - high Labour Force Participation rate (90%),
    - higher empl. rate than of natives and non-EU migrants.
    - No earnings data for Irish vs. foreign workers

## How do CEE migrants fare? Post-enlargement evidence

Characteristics of post-enlargement immigrants:

- **Sweden**:
    - Immigration of males increased more than females (previously more females),
    - secondary and higher education,
    - lower empl. rate and hours worked than of natives, but higher than of non-EU migrants (partly explained by lags in registration of returning migrants)
    - Monthly earnings are 10% less than of natives. Later arrivals earn less than earlier arrivals
    - CEE are not overrepresented in the welfare state schemes (which was the focus of the pre-enlargement debate in Sweden)
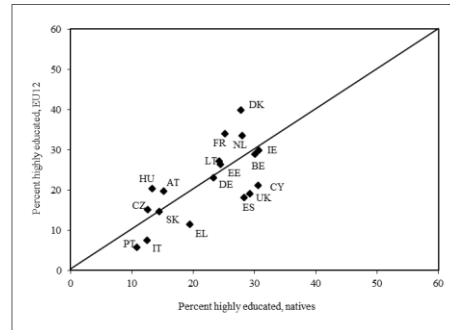
Post-enlargement migrants: education

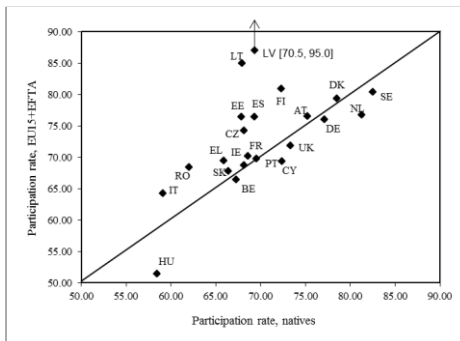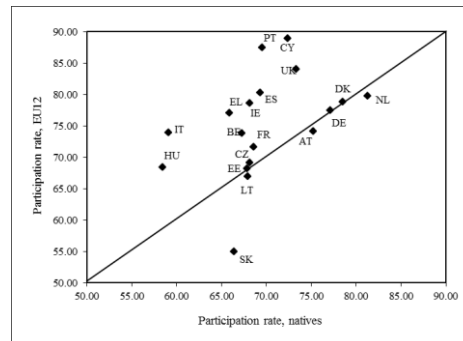• Relatively well educated:

EU15+EFTA
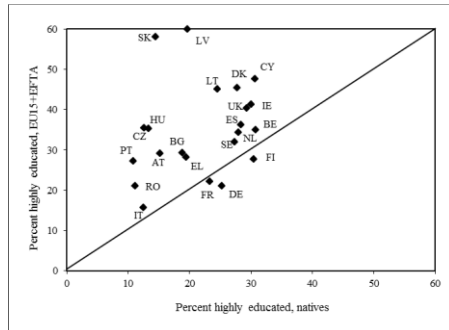
EU12

EU12 migrants relatively well educated, EU15 migrants more educated than natives (EU LFS, 2010)

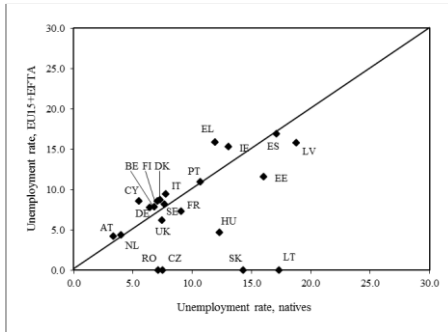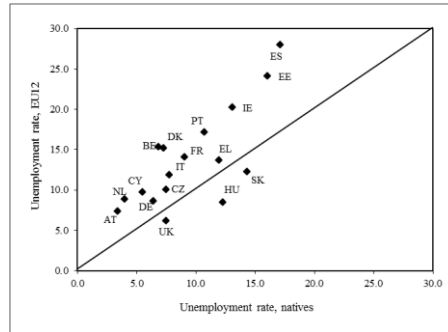# …and they come to work

EU15+EFTA

EU12

EU15 and EU12 migrants exhibit rather high activity rates, significantly higher than the natives (EU LFS, 2010)

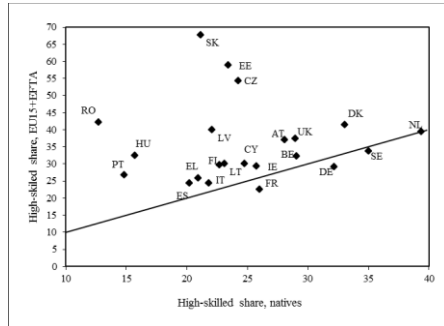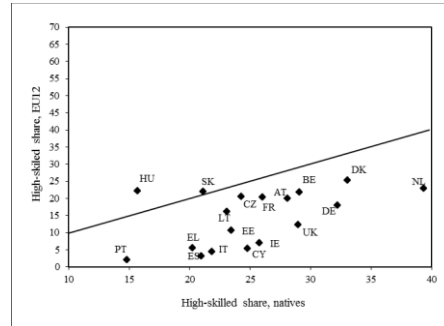# …but not always successful – unemployment

EU15+EFTA

EU12

EU12 immigrants have a higher probability of unemployment than the natives, EU15 doing well (EU LFS, 2010)

…and even if have a job – downskilling likely

EU15+EFTA

EU12

EU15 migrants doing well, but EU12 migrants downskilling

OUR NEXT LECTURE – Monday 15.2.2016, 15.00-16.30

- *Immigrant performance, assimilation and integration; the second generation*
- *Impact of immigration, Immigration policy*

THE NEXT LECTURES

- *Immigrants and innovation; International migration and globalization;*
- *Diversity - Impacts of workforce diversity on firms and economies*
- *Emigration and source countries; Brain drain and brain gain; Remittances*