Topic 3 - Immigration

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Economics 471

Immigration

- Immigration policy has been a hotly debated topic in Canada for some time

Some of the issues discussed are non-economic:

- The challenges of an increasingly culturally diverse population
  - Assimilation and willingness to adjust and accept

Many of the issues are economic:

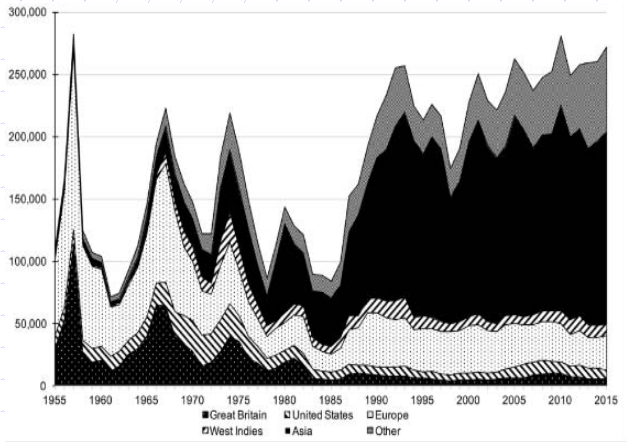
- Impact on the labour market of native-born workers
  - Some concern that immigration may be leading to higher unemployment and growing wage polarization
- Perception that immigrants are a burden on social programs that are already in trouble
- Labour market performance of immigrants
  - Wages tend to be lower than native born upon arrival

Some Facts About Immigration

- The importance of immigration in policy debates is not surprising given the flow of immigration to Canada and the increasing diversity
- Since the late 1980's Canada has admitted over 200,000 immigrants per year
  - similar numbers at other points in time
  - actually slightly lower on a per capita basis

What has changed dramatically is the source countries of new immigrants

Some Facts About Immigration



1960's: Main source countries were the UK, US and Western Europe

2015: Main source countries are Philippines, India, China, Iran and Pakistan

- US and UK ranked 7th and 9th, respectively

Some Facts About Immigration

- By 2011 20.7 percent of all Canadian residents were immigrants (born outside of Canada)
- Immigrant concentrations are highest in Toronto (46%) and Vancouver (40%)
- Most new immigrants also reside in these cities
- 2011 over half of new immigrants lived in Toronto and Vancouver
- Thus, "the impact" of immigration is likely to vary substantially by region in Canada

Canadian Immigration Policy

- In order to have effective immigration policy, policy makers must answer two questions
- First, what are the impacts of immigration
- Second, what "tools" are available to set appropriate policy in response to the first question
- Let's start by answering the second question and we will return the first later
- Policy makers really have two mechanisms for controlling immigration

1) The number of immigrants admitted to Canada
2) The composition of those who are admitted to Canada

Canadian Immigration Policy

- Prior to 1967 in Canada the focus was on the first of the two mechanisms (the number)
- For the most part, immigrants were not "screened"
- Regulation was based primarily on country of origin (with preference given to North Europeans and Americans)
- Prospective immigrants from other countries met a stiffer series of requirements for admission (Immigrants from China were not permitted)
- Only the very sick, destitute and criminals were disallowed

Canadian Immigration Policy

- By the early 1960's the influx of unskilled Europeans (particularly from the south) led to a shift in policy

The Point System:

- In 1967 the point system was introduced
- Potential immigrants to Canada are categorized based on motivation for immigration

Non-assessed: are individuals whose motivation for immigration is primarily family reunification

- May also be for humanitarian reasons (escape political persecution or poverty)

- Non-assessed are assigned the highest priority

Canadian Immigration Policy

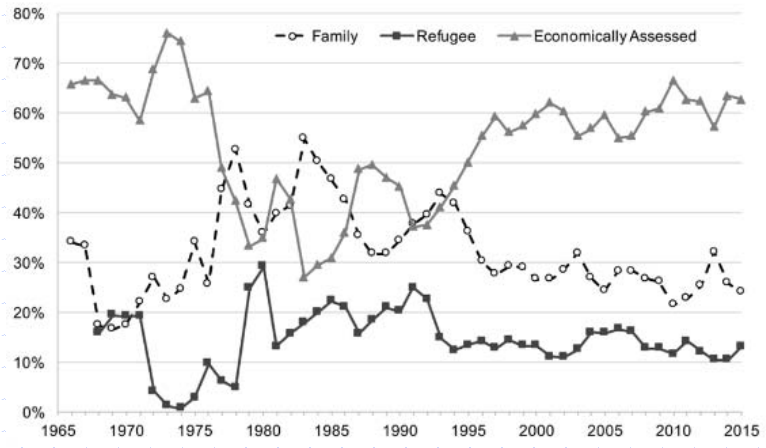
Assessed: are individuals without family ties wishing to enter Canada

- Such individuals are evaluated based on their likely success in the labour market
- The Point System assigns points for characteristics believed to be good predictors of success

e.g. youth, education, occupation, arranged employment, language etc.

- A growing number of immigrants are assessed

Immigration to Canada by Class of Immigrant, 1966 to 2015



The Immigration Decision

- How well immigrants perform in Canada depends, in part, on whether it is the most skilled or least skilled workers from other countries who migrate
- To look at how potential immigrants make such a decision let's work through the "Roy Model"

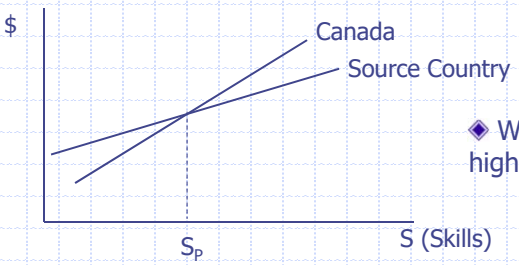
Roy Model:

- For simplicity consider two countries
  - Source country – country of origin
  - Host country – Canada
- Assume that earnings in both countries depend on a single factor – skills
- Also assume that skills are transferable across countries

The Roy Model

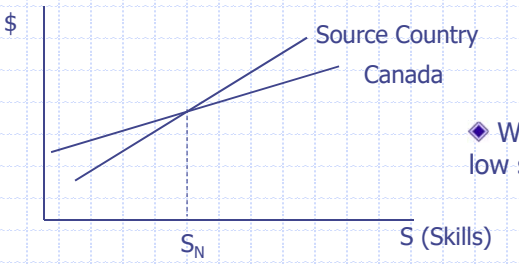
- Let s denote the number of efficiency units (skills) embodied in a worker
- The frequency distribution of skills may look much like the standard normal distribution
- Assume, for now, that there are no costs to migration
- Thus, each worker makes his/her migration decision by comparing earnings across the two countries
- There are a number of possible outcomes to this model – two of which we will illustrate

Case 1: Positive Selection



- Workers with relatively high skill levels immigrate
- The wage-skill lines give the payoff to skills in Canada and the source country
  - In this case the payoff to human capital is higher in Canada
- With no costs to migration a worker will migrate to Canada whenever Canadian earnings exceed the source country
  - Workers with more than S_P efficiency units will migrate
  - Those with less than S_P earn more in the source country

Case 2: Negative Selection

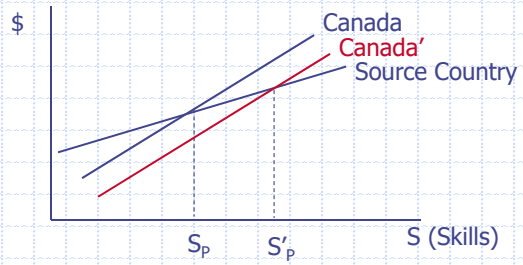


- Workers with relatively low skill levels immigrate
- Here the payoff to skills in the source country exceeds the payoff in Canada (slope is steeper in source country)
- Workers with Fewer than S_N efficiency units earn more in Canada and want to move
- Workers with more than S_N efficiency units will remain in the source country

Implications of the Roy Model

- The key implication of the Roy Model is that:
  "The relative payoff for skills across countries determines the skill composition of the immigrant flow"
- Workers flow to markets where they can get the highest price
- Notice that the "base level" of income in Canada or the source country does not determine the type of selection
- Changes in the base income levels do, however, affect the size of the flow
- To see this consider the following example

Example: Change Income with Positive Selection



- Suppose there is a decrease in the base income in Canada relative to the source country
- Notice that we still get positive selection
  - Highest skilled workers from the source country immigrate to Canada
- However, the decrease in income reduces the size of the flow
  - Now only those with skills greater than S'_P immigrate

Adding in Migration Costs

- The previous result allows us to relax the assumption that there are no costs to migration
- Suppose it costs $20,000 to migrate to Canada from a given source country
- And that these costs are the same regardless of the worker's skills
- These costs reduce the net income the worker can expect to receive in Canada
  - i.e. shift down the wage-skill line in Canada
- This is equivalent to a reduction in income in Canada
- Thus, an increase in migration costs reduces the number of immigrants but does not alter the type of selection of the immigrant flow

Evidence

- The available data seems to suggest that income is more unequally distributed in Third-World Countries (e.g. India, Mexico, etc.)
- This is inconsistent with positive selection
- It also underscores the importance of the changing composition of immigrants to Canada

The "Brain Drain"

- Canada has a relatively egalitarian income distribution compared to the US
  - Partly as a result of the tax and social system
- Relative to the US we tax able workers and insure the unskilled against poor labour market outcomes
- The Roy Model suggest that we should expect to see highly skilled workers leaving for the US

The Brain Drain

- Not surprisingly, this topic has received a great deal of media attention
- However, data limitations have meant that very little research has been done on this topic
- The work that has been done examines:

i) The size of the brain drain
ii) The impact of the brain drain

Size of the brain drain:

- It is difficult to estimate because the Canadian government does not collect data on those leaving Canada
- There are, however, a number of indirect sources of data

Indirect Sources of Data

"Reverse Record Check": Statistics Canada double checks the coverage of the Census

- Establishes whether or not people have moved to the US
- Gives no further information on immigrants

Tax Records: Can identify if tax-filers switch from Canadian to US addresses

- Again little demographic information

The Decennial US Census: Collects information on country of birth

- This is only collected every 10 years

US Current Population Survey: contains lots of demographic information

- The sample sizes tend to be small

US INS Administrative Data: Visa data

The Brain Drain

- Using these data sets Zhao, Drew and Murray (2000) estimate that 22,000 to 35,000 Canadians move to the US every year
- Most alarming is that these migrants are disproportionately highly educated
  - Doctors, nurses, natural scientists and university professors

Impact of the Brain Drain:

- It is unlikely that an annual outflow of 25,000 workers will have much of an impact on the overall Canadian labour market
- However, in more narrowly defined markets emigration may matter
  - e.g. shortage of doctors and nurses may increase and raise wages of those who stay in Canada

Impact of The Brain Drain

- Some have measured the impact by calculating the loss of goods and services produced by Canadians in the US
- e.g. there are approximately 60,000 highly skilled Canadians living in the US (NAFTA Visas)
- If they earn $150,000 in the US this is a loss of $9 billion of GDP and $3 billion in tax revenue each year
- Of course, with this type of calculation it is easy to "cook the books"

Final Analysis:

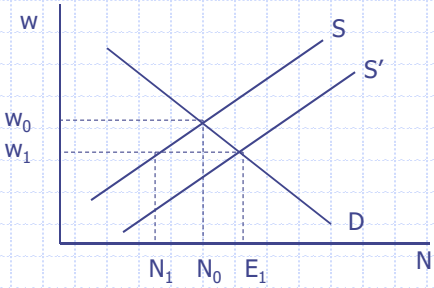
- Zhao, Drew and Murray also show that for every university educated worker we lose to the US we receive four from other sources
- We don't seem to lose any sleep over this!

The Impact of Immigrants

- As we have already noted, effective policy requires information about the impact of immigrants
- Of course, we will focus on the labour market impacts although there are certainly others
- Let's start by looking at what simple theory suggests and then move on to the evidence
- Theory
- The "simple" model assumes that immigrant and native workers are **perfect substitutes** in production
- i.e. that immigrants and natives have the same types of skills and are competing for the same jobs

Impact When Workers are Substitutes

This case can be illustrated as follows:



- As immigrants enter the labour market the labour supply curve shifts out

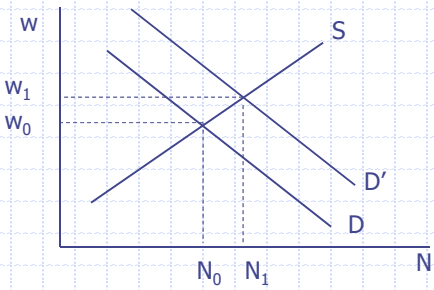
- Wages fall from w_0 to w_1
- Total employment increases from N_0 to E_1
- Fewer native workers are willing to work at this lower wage so native employment falls from N_0 to N_1
- Immigrants "take jobs away" from natives

Impact When Workers are Compliments

- However, if immigrants and natives are complements, they do not compete in the same labour market
- For example, immigrants may be more adept at certain tasks than natives
- Immigration frees up the native workforce to perform tasks that they are better suited for
- Thus, the presence of immigrants increases the productivity of native workers

Impact When Workers are Compliments

This case can be illustrated by looking at the market for native workers:



- An increase in immigration raises the marginal product of natives
- Thus, the demand curve for native workers shifts up

- Native wages rise from w_0 to w_1
- Native workers who previously did not find it profitable to work now see higher wages and enter the labour market (N_0 to N_1)

Other Considerations

1) Immigrants are often selected based on skills that are in short supply
   - If the market is in temporary disequilibrium, immigration may relieve the shortage without adverse effects
2) Immigrants also consume goods and services
   - This will help to increase the derived demand for labour
3) Importing labour may be a substitute for importing the goods produced by that labour in the country of origin
4) Immigrants may disproportionately invest in Canadian firms, creating employment
   - Thus, the answer to the question "What is the impact of immigration?" is ambiguous and left to empirical studies

Empirical Studies on Impacts

Estimating the impact of immigration turns out to be quite difficult

Problems:

1. What is the relevant labour market?
   - Canada or Vancouver? High or low skill?
   - In any case, there are likely linkages
2. Result depends on whether immigrants are compliments or substitutes etc.
3. Immigrants do not arrive randomly to a market
   - Usually attracted by good prospects
   - This confounds the overall impact

Nevertheless there are a large number of studies that attempt to estimate the impacts

Empirical Studies on Impacts

Most studies find that immigration has little impact on the labour market outcomes of natives

Approaches:

1. Exploit cross-city variation in immigration

Example: compare Toronto to Montreal

- Expect higher unemployment and lower wages in Toronto if immigration has an adverse effect
- This has been done using US data and the results suggest that there is little impact

Clearly there are some problems with this approach

- Other things vary across cities (industry mix etc.)
  - Can net these out by looking at changes
- There is still the endogeneity problem – immigrants are likely to move to cities that have improving labour markets

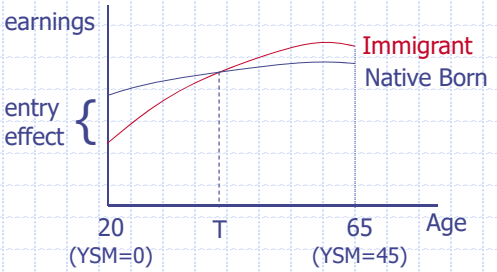
Empirical Studies on Impacts

2. "Natural experiments" to avoid endogeneity

- To get an exogenous change in immigration David Card looks at the impacts of the Mariel Boatlift on the Miami labour market
- Between May and September of 1980, 125 thousand Cubans were permitted to leave Mariel Cuba for the US.
- Many settled in Miami
- Again, however, there was little evidence of an adverse effect
- May be explained by migration out by similar workers or investment because of low wage workers
- Another "branch" of immigration research examines the labour market performance of immigrants

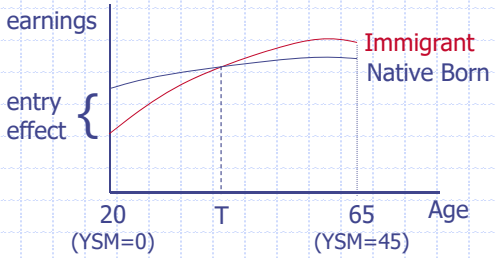
Immigrant Assimilation

- There is a general concern that immigrants do not succeed in the labour market and become a burden
- This research examines whether or not these concerns are founded
- We might expect the earnings profile of an immigrant and native worker to look as follows:



- Controlling for hours worked
- The workers are similar in every aspect except origin
- Assume the immigrant arrives at age 20 and retires at age 65
- YSM = years since migration

Immigrant Assimilation



- Initially the immigrants earnings may be below a similar native-born worker. Why?
- Lack of Canada-specific skills like language, other skills particular to Canadian jobs

- With age (experience) both workers' earnings will rise
- Might expect the earnings of immigrants to "catch up" as immigrants obtain Canada-specific skills – "Assimilation"
- In this case wages catch up at age T but this age could exceed 65
- If there is "positive selection" the earnings of immigrants may overtake those of comparable native born workers
- Immigrants may be the most motivated and able workers from the source country

Empirical Findings

- Need panel data to sort between cohort effects and assimilation

Men:

- The entry effect is bigger with successive cohorts
  - i.e. more recent immigrants do worse upon entry

Reitz (2001)

- 11% decline between 76-80 and 86-90 cohorts
- Further 10% decline for the 91-95 cohort

Women:

- Little evidence of a negative entry effect

Empirical Findings

- Earnings assimilation rates for men are quite modest

Bloom, Grenier and Gunderson (1995)

- Estimate it to be 0.25% per year mid 80s
- This implies 137 years to catch up

- Causes?

Ferrer and Riddell (2003)

- Suggest it is not due to recognition of credentials
- Foreign credentials continue to receive large and significant returns

Green and Worswick (2003)

- Entry conditions - reductions in the earnings of all labour market entrants

Empirical Findings

Aydemir and Skuterud (2005)

- Find the return to foreign labour market experience declined
- Using 1981-2001 Census data they show that these declines explain 2/3 of the increase in the gap for men
- Other 1/3 is due to language and region of birth