



Masters Programme "Economie des  
Relations Internationales", Sciences Po, Paris

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## **Session 6: Economic Impact of Migration on Receiving Countries: Public Finance, Growth and Inequalities**

# The Economic Impact of Immigration on Receiving Countries: The Key Issues

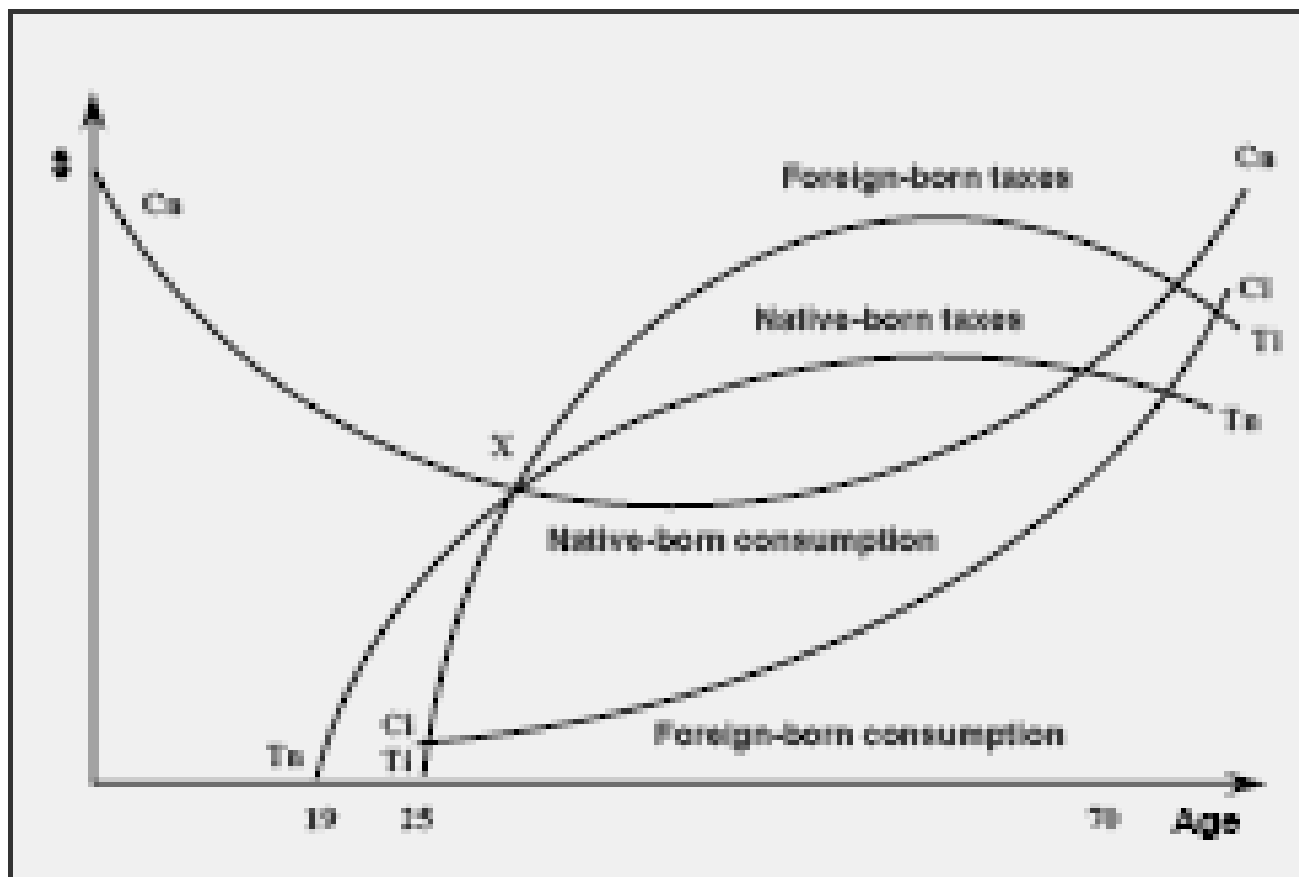
- 1. Are immigrants and their families a benefit or a burden to the public purse?
- 2. What is the impact of immigration on economic growth prospects in receiving countries?

# 1. The Impact of Immigration on the Public Finances in Receiving Countries

- Prominent topic:
  - Underlies concerns about “welfare tourism” in connection with recent and proposed EU enlargement
  - Prompted California and other U.S. states to deny welfare benefits to immigrants
- Much debated in the academic literature on the costs and benefits of immigration
- A key concept in the literature is the Simon Principle:

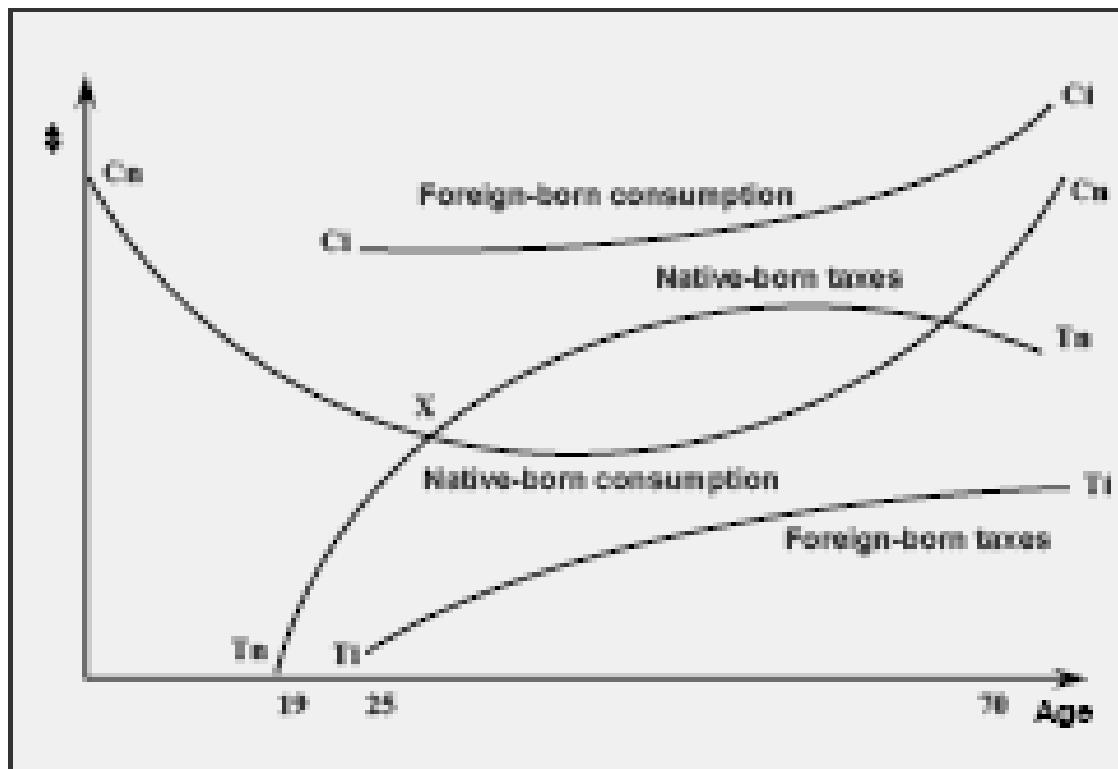
“If the marginal immigrant makes a non-negative contribution to the treasury, you continue to admit immigrants until the contribution goes to zero”. [Simon (1984)]

Figure 1: Age-Consumption-Tax Profiles by Birth Status: Optimistic Case



■ Fig 1. shows both immigrants and natives making net contributions to the public purse, but there is a net financial transfer from immigrants to natives.

Figure 2: **Age-Consumption-Tax Profiles by Birth Status: Pessimistic Case**



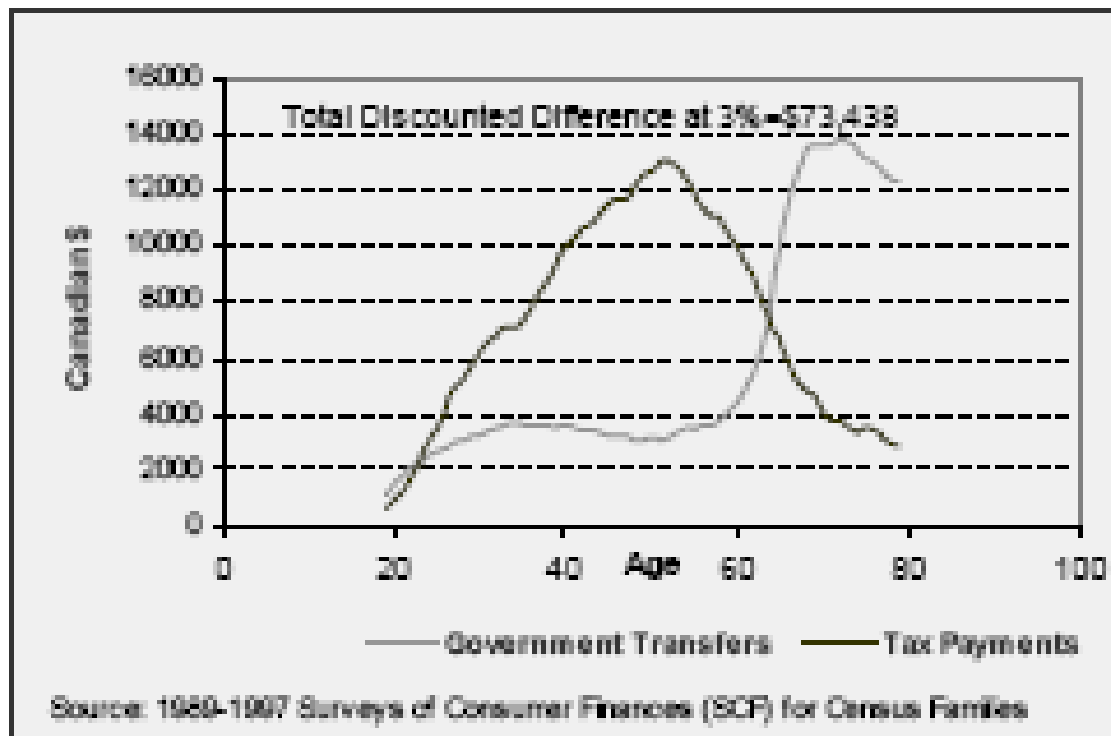
- Fig. 2 show the case where immigrants consume more than they contribute in taxes unlike natives - they are a drain on the public purse; they are subsidised by the natives.

# Some Caveats concerning Empirical Measurement of the Fiscal Impacts of Immigration

- Presentation in Figs. 1 and 2 is static (based on cross-sections of immigrants at a given point in time).
- A dynamic approach (e.g. using generational accounting) would be more appropriate
  - Future taxes and public spending over the life-cycle discounted back to the base year to give a net present value.
- But dynamic approach not easy to apply in practice
  - Requires assumptions about future fertility rates, employment, productivity, taxes and public spending
  - Choice of the right discount rate is also tricky.

# Empirical Evidence on the Simon Principle

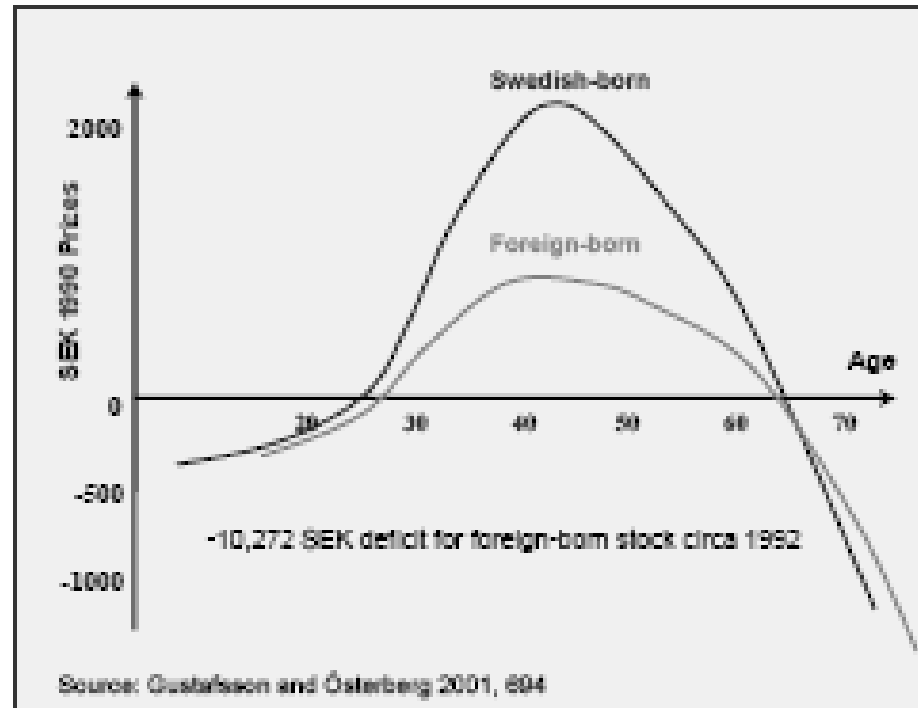
*Figure 3: Tax Payments Versus Government transfers for Foreign-born by Age, All Canada 1989-1997 (5-year moving average, 1992 dollars)*



- Picture for Canada seems to support the optimistic case.

# Empirical Evidence on the Simon Principle (cont.)

Figure 4: *Swedish Public Finance transfers by Birth Status: 1992*



- Swedish data seem to support the pessimistic case.
  - But this negative outcome is dominated by refugees and asylum-seekers who receive large transfers from Swedes and other immigrants.
  - Those with higher education and non-refugees made a large positive contribution to the public purse.



## Empirical Evidence on the Simon Principle (cont.)

- Leibfritz, O'Brien and Dumont (2003) (see the Reading List) survey estimates of the fiscal impact of immigration in Australia, Denmark, Germany, Italy and the U.S.
  - The studies use a variety of different approaches (static estimates, generational accounting models, CGE models, macroeconomic models)
  - They also use different time horizons, ranging from 1-10 years to a full life-cycle.
- The results vary across countries, some supporting the optimistic case (Australia, Denmark, Italy), while others support the pessimistic one (Germany, and some but not all the US studies).
- Coleman and Rowthorn (2004, p. 602) also survey the international evidence, and conclude:

"Estimates of the net fiscal contribution of past immigration normally lie within the range  $\pm 1$  percent of GDP".

## Empirical Evidence on the Simon Principle (cont.)

- Key determinants of the public finance outcome:
  - Personal characteristics of immigrants: younger, better educated immigrants likely to yield gains to the public purse; older, less educated immigrants may represent a net cost
  - Whether immigrants are able to bring in dependents and how many of them
  - Selection/Entry Policy: Refugee/asylum seekers more likely to incur a net cost
  - More flexible labour and product markets help promote labour market integration of immigrants, hence tend to yield net gains
  - Size and generosity of the welfare state.

## 2. Economic growth and migration

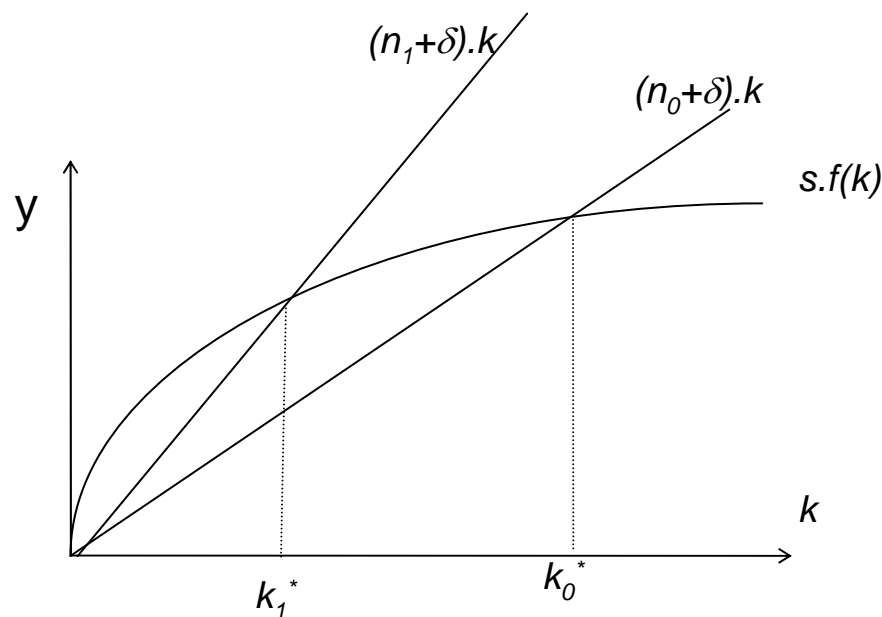
- A. Demographic impact and effect on production factor accumulation
- B. Effect on technological change and Total Factor Productivity growth
- C. Externalities

Furthermore, we need to distinguish between the impact of migration on (i) GDP growth, (ii) GDP per capita growth and (iii) productivity growth. It is also important to distinguish impact on GDP and GNI.

# The Solow-Swan (1956) growth model

- At the steady state, the per capita growth rate is nil and independent of demographic variables.
- Equilibrium levels, however, are negatively affected by the population growth rate. This is due to a *capital swallowing effect*.
- ❖ See Barro & Sala-I-Martin (1995) (chapter 9) for an adaptation with endogenous migration as a function of  $k$ . General findings are similar. Migration tend to increase convergence towards the steady state (by approx. 10%)

$$\begin{cases} y = f(k) \\ \bullet \\ \dot{k} = s \cdot y - k \cdot (n + \delta) \end{cases}$$



$$n_1 > n_0 \Rightarrow k_1^* < k_0^*$$

# Endogenous growth model with migration adapted from Uzawa-Lucas (1988)

- Under the following conditions, there is a steady path of growth which is function of the relative endowment of immigrants in human capital.
- If immigrants have more human capital on average than natives ( $\chi > 1$ ), they will contribute positively to long-term economic growth.

$$\left\{ \begin{array}{l} Y = AK^\alpha (uH)^{1-\alpha} = C + \dot{K} + \delta K \\ \dot{H} + \delta H = B(1-u)H + \chi H \\ \chi = \frac{Mh_m}{H} = m \frac{h_m}{h} \end{array} \right.$$

$$\gamma^* = \frac{1}{g} (B + \chi - \delta - \rho)$$

- ❖ See Kemnitz (2000) for a similar approach based on Romer (1986) or Lundborg and Segerstrom (2000,2002) in the context of Grossman and Helpman (1991) model

# Externalities and TFP

- Direct impact of migration on technological change :
  - Increase of the stock of human capital and R&D
  - Positive and/or negative impact on capital accumulation and the adoption of new technologies
  
- Indirect demographic impact of migration :
  - Positive externality associated to the overall population size (e.g. Simon -91)
  - Local externalities (e.g. Benabou -96)
  - Congestion effect on public goods
  
- Other types of externalities :
  - Diversity of goods (e.g. Spence -76, Grossman and Helpman -91) and cultural diversity (Walz -2001)
  - Diffusion of the national consumption model

# Empirical evidence :An historical perspective

- **Thomas (1973)** shows that during most of the period from 1844 to 1903 immigration from Europe preceded fixed capital investment in the US.
- **Neal and Uselding (1972)** estimate that the 1912 US physical capital stock would have been between 13 per cent and 42 per cent lower in absence of immigration.
- **Taylor (1997)** finds that immigration drove down real wages by around 25 per cent, increased capital stock by 12 per cent and caused a 19 per cent increase in GDP in Argentina between 1870 and 1914.
- **Wilson (2000)** shows that "up to three-quarters of the increase in the capital formation rate and the foreign capital inflow rate, and all of the increase in the domestic savings rate, in the Canadian economy over 1899-1911, can be attributed to the dramatic inflow of migrants over this period".

## Other (scarce) evidences

- **Blattner and Sheldon (1989):** foreign labour accounted for around 0.3 percentage point of annual average GDP growth rate of 2.7 % in Switzerland between 1961 and 1982.
- **Glover & al. (2001):** a 1 % increase in population through migration is associated with an increase in GDP between 1.25 and 1.5% in the United Kingdom
  - But this finding disputed by Coleman and Rowthorn (2004) and House of Lords Select Committee on Economic Affairs (2008).
- **Dolado & al. (1993)** estimate a growth model on 23 OECD countries between 1960 and 1985. They show that the human capital content of immigration to these countries is sufficiently high to halve the negative impact of population increase on growth.