



Demography and migration

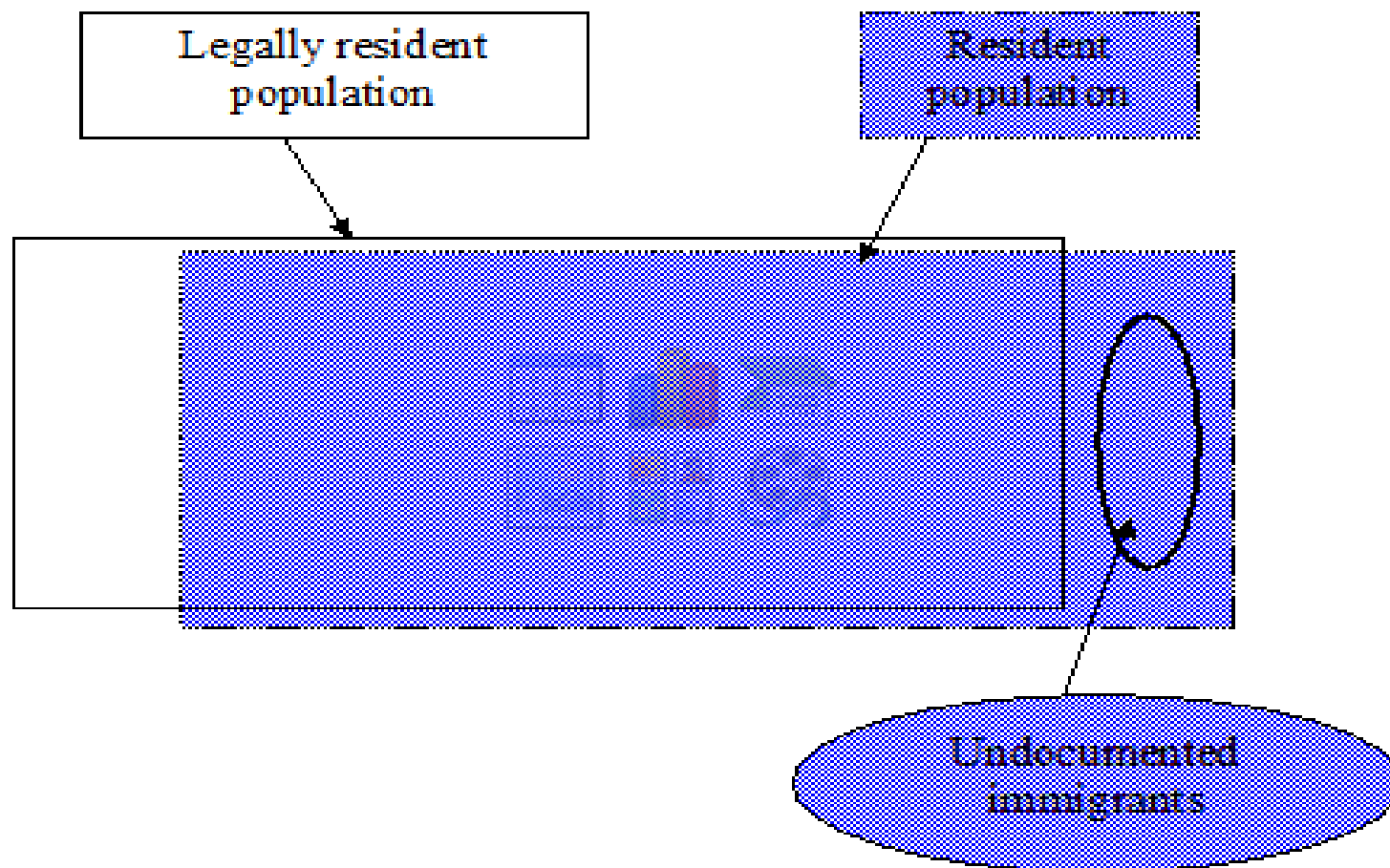
Lesson 4

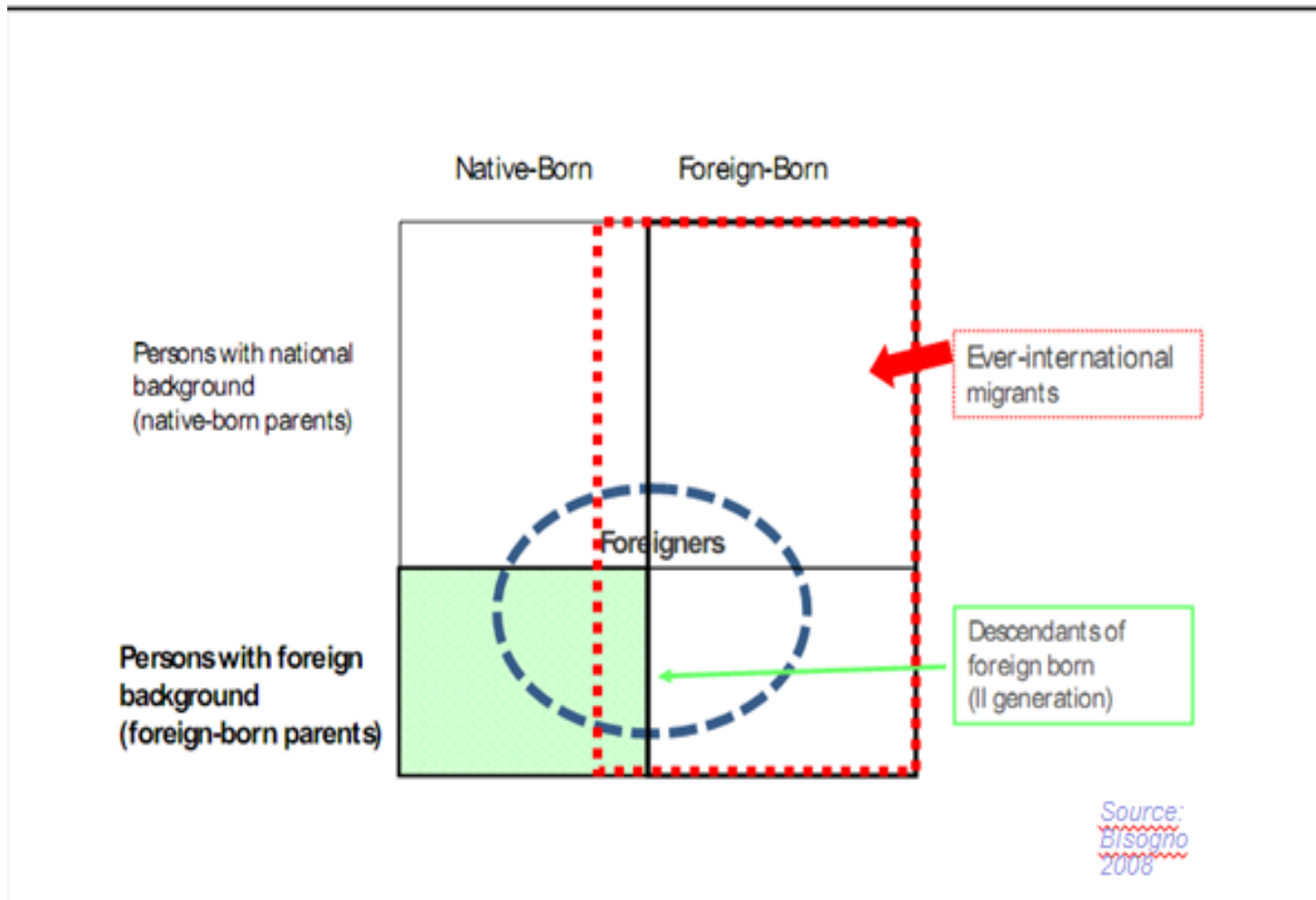


- Economic drivers
- And demographic drivers
- of migration



- The effect on the population







- What do you want to measure?
- Which question are you trying to answer?



	Births 2001**	Deaths 2001**	NATURAL CHANGE		Immigrants 2001**	Emigrants 2001**	NET MIGRATION
ITALIA	544,550	544,094	456		1,582,707	1,417,184	165,523

$$P_{31.12.2001} = P_{1.1.2001} + \mathbf{NC}_{2001} + \mathbf{NM}_{2001}$$

$$P_{31.12.2001} = 57.844.017 + \mathbf{456} + \mathbf{165.523}$$

$$P_{31.12.2001} = \mathbf{58.009.996}$$



- But net migration is not appropriate if you want to understand the outflows from a country of origin,
- The migration pressure
- Gross migration



Migration rates for total populations are usually defined as the **number of events** divided by the **mid-period population**

$$\text{Rate of inward migration} = \frac{\text{arrivals}}{\text{mid-period population}} \times 1000$$

$$\text{Rate of outward migration} = \frac{\text{departures}}{\text{mid-period population}} \times 1000$$

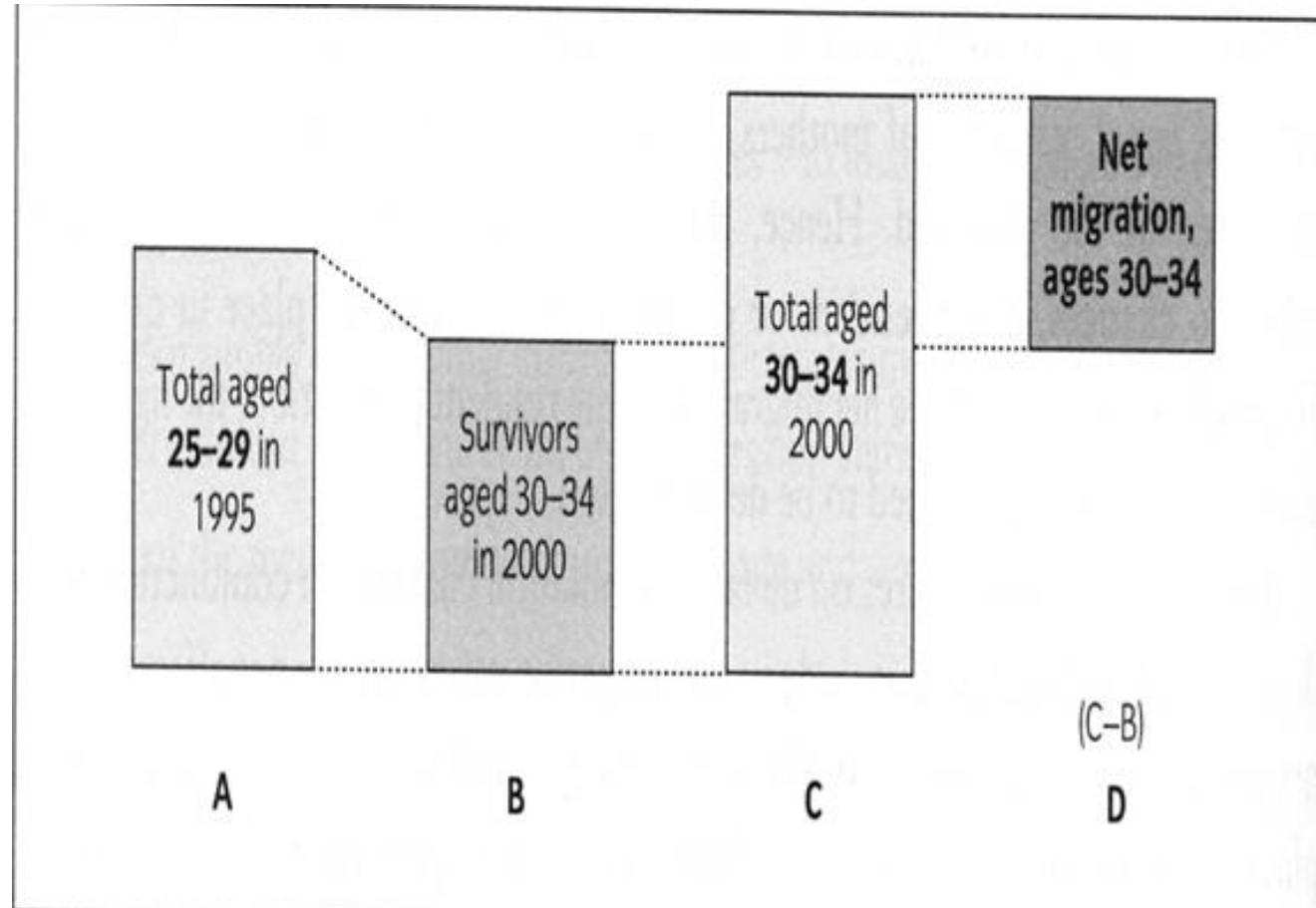
$$\text{Rate of net migration} = \frac{\text{arrivals} - \text{departures}}{\text{mid-period population}} \times 1000$$

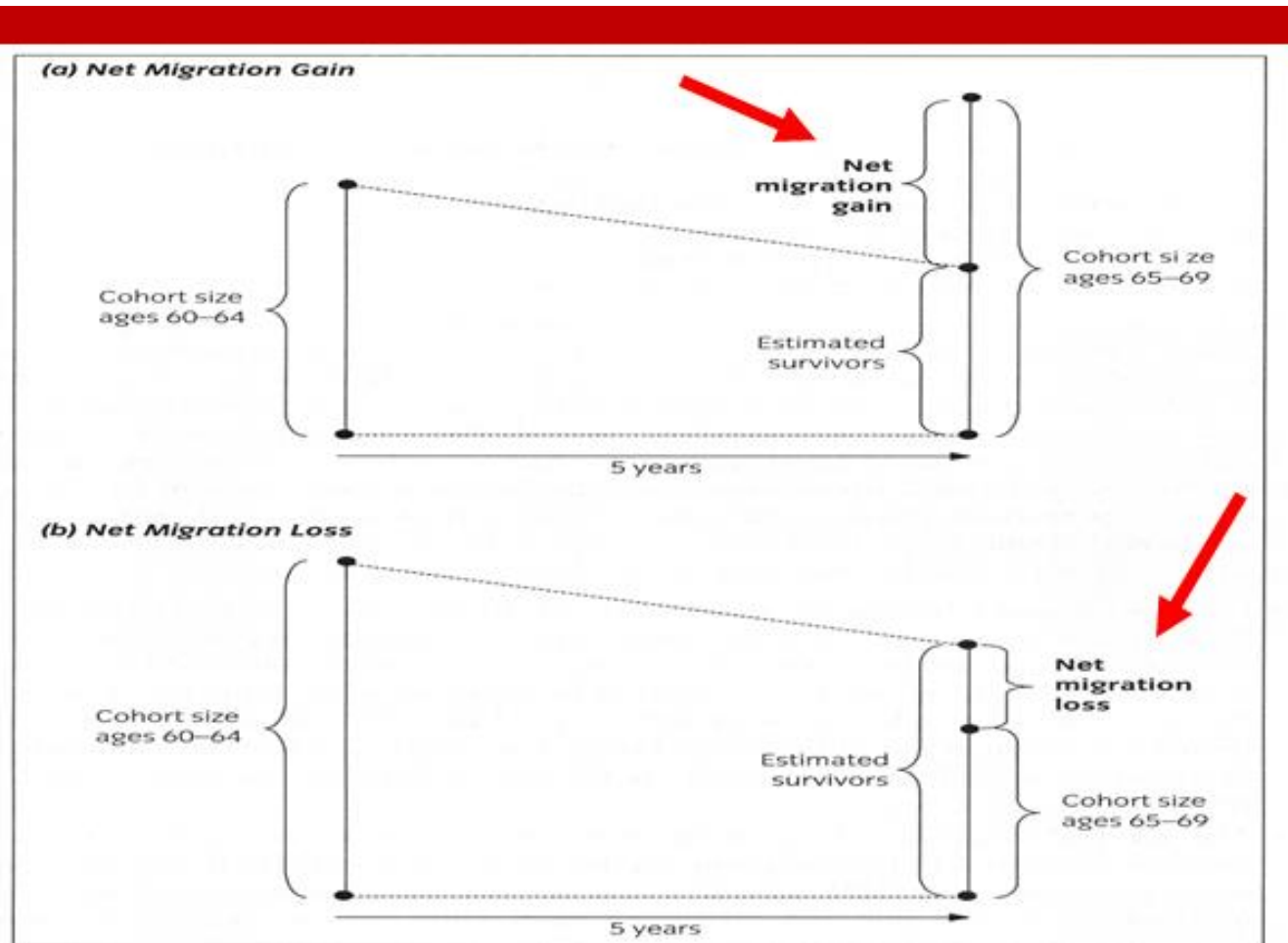
$$\text{Rate of gross migration} = \frac{\text{arrivals} + \text{departures}}{\text{mid-period population}} \times 1000$$



An example of estimating net migration (from vital statistics)

Region	Births 1995–2000	Deaths 1995–2000	Natural Increase 1995–2000 (B – C) D	Total Population Change 1995–2000 E	Net Migration 1995–2000 (E – D) F
North	252 344	126 941	125 403	265 621	140 218
South	9 440	8 317	1 123	26 211	25 088
East	37 750	19 510	18 240	26 820	8 580
West	23 059	8 682	14 377	27 520	13 143
Total	322 593	163 450	159 143	346 172	187 029







$$\text{Net } M'_{x+n} = P'_{x+n} - S \times P_x^0$$

where

Net M'_{x+n} is the estimated net migration for the end-of-period population aged $x + n$, obtained by forward survival

n is the interval in years between the two dates

P_x^0 is the initial population aged x

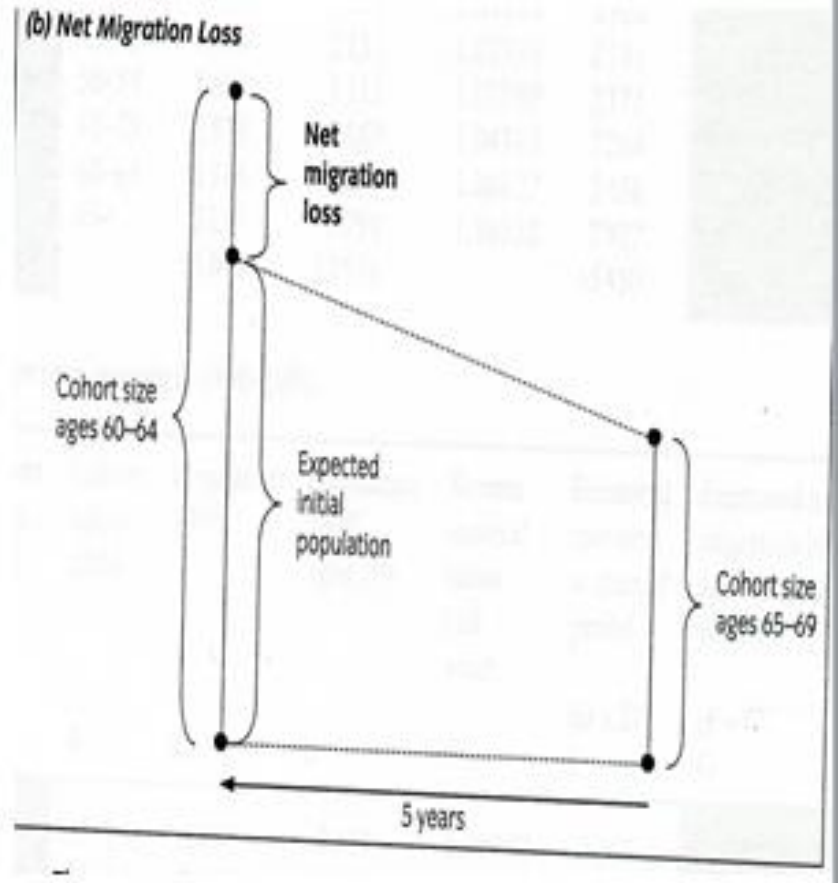
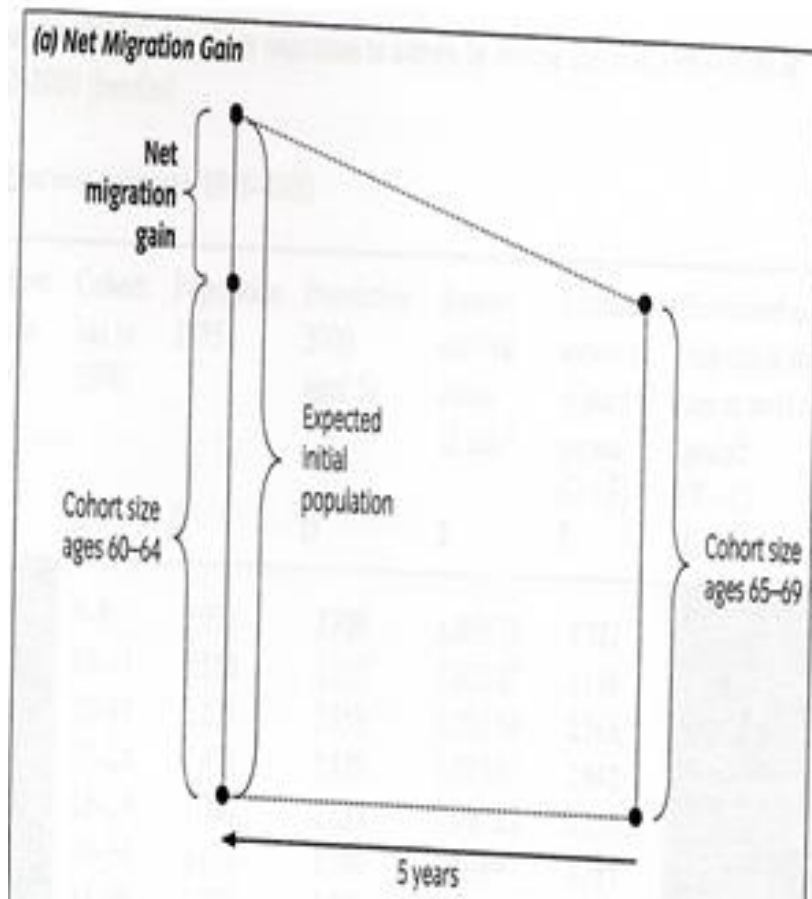
P'_{x+n} is the end-of-period population aged $x + n$

S is the survival ratio from age x to age $x + n$.

The numbers in a cohort at the start are multiplied by their survival ratio, then the resulting estimate of survivors is subtracted from the cohort's numbers at the end of the period

The outcome is the net migration estimate

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- Remember the limitation of the data that you use.

Figura 1 – Stranieri e immigrati residenti. Censimento 2001



*Census in 11
languages*



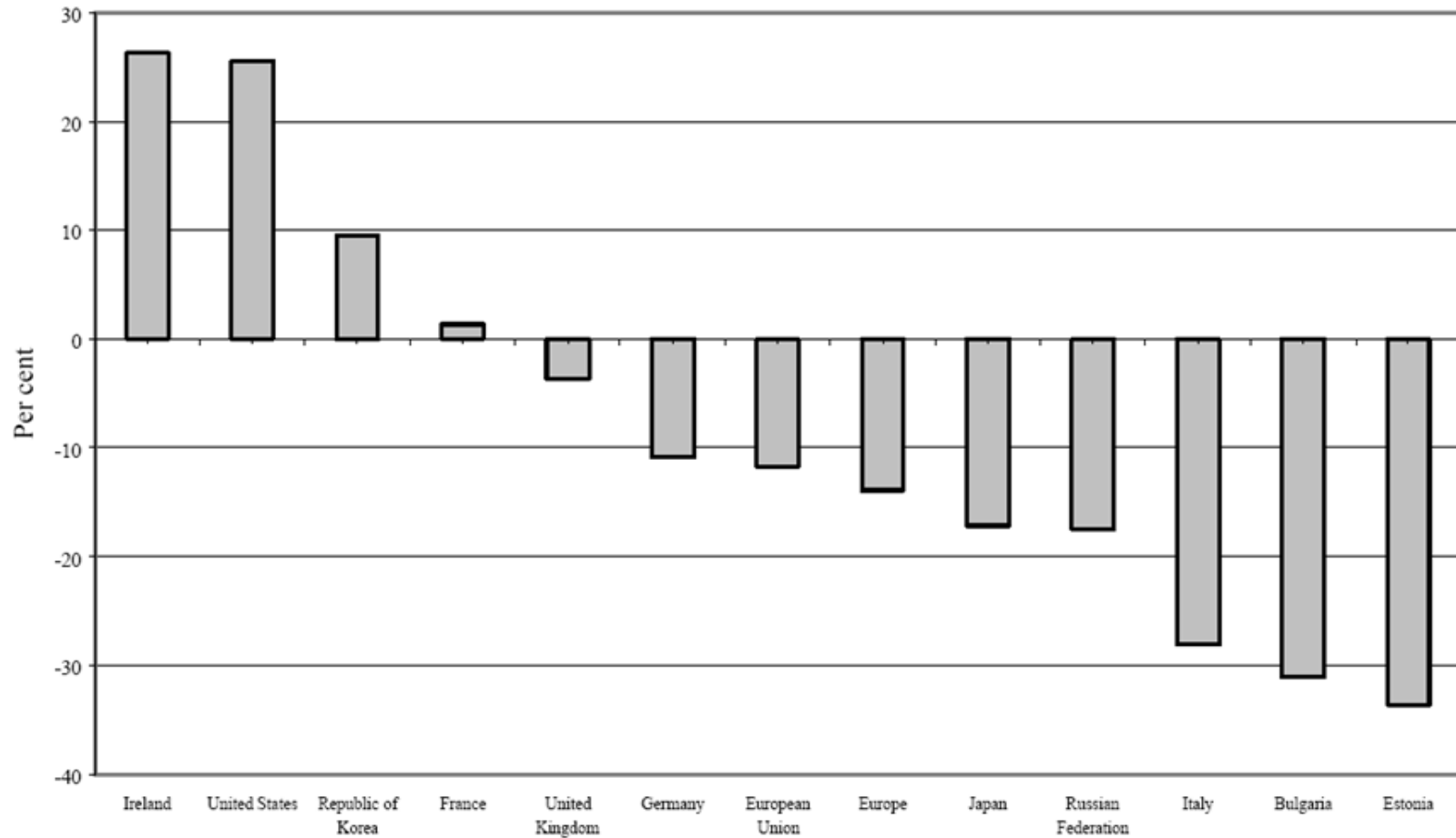
Replacement migration

Is a solution for declining population?

- Replacement migration refers to the international migration
 - that would be needed to offset declines in the **size** of a population,
 - declines in the population of **working age**
 - as well as to offset **the overall ageing** of a population



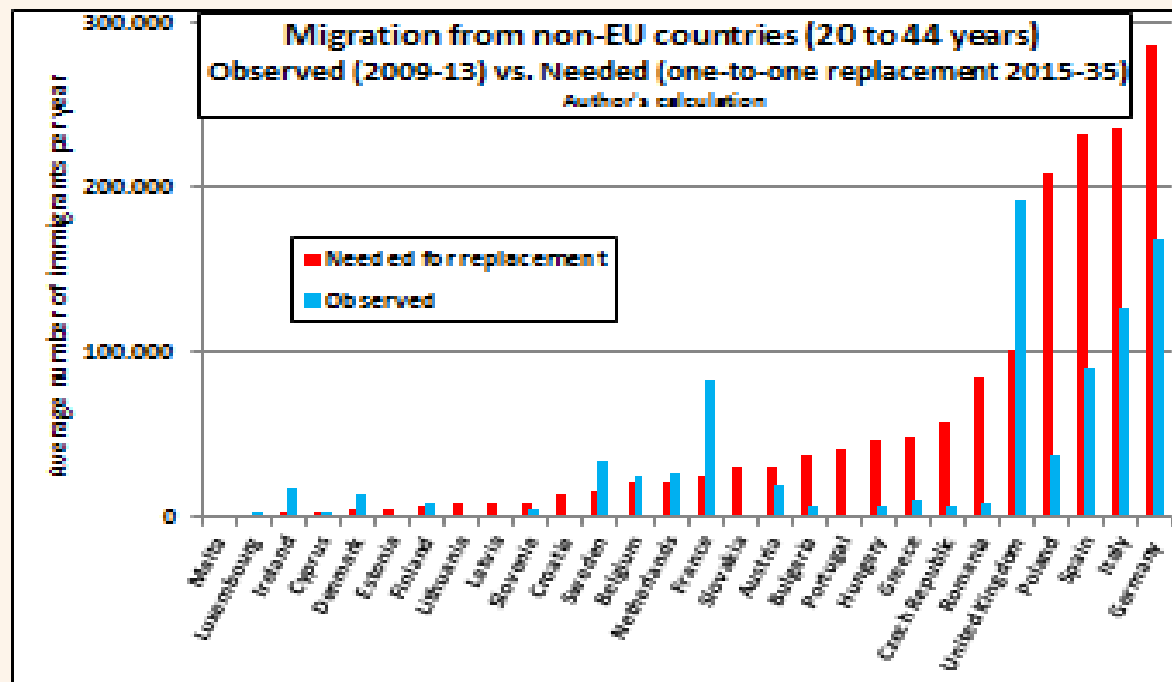
Figure I.1. Per cent change in total population for selected countries and regions, 2000-2050





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EUI 15



Dipartimento di
Economia e Statistica
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UN Report

- This comprehensive analysis, the first to be made on a common methodology on a fully international basis has attracted unusual attention and provoked much comment in the media.
- Because of this systematic approach, and because of the prestige attaching to the UN Population Division, the report has been widely read and cited.
- Its statistics will be a definitive **benchmark** for years to come.

A) Critics of too much 'optimism' on immigration as solution

B) Critics of having underestimated other positive consequences of immigration

C) Migration replacement is already here!



Against

- ❑ the almost universal *impression* conveyed to the public is that the UN has stated the following:
 - (a) that population, workforce numbers and support ratios must be kept at their present levels and therefore
 - (b) that the projected levels of immigration must be encouraged by the countries concerned.

- ✓ The idea is that *“This interpretation of the report has provoked comprehensive public misinformation”*



Demographers critique

- ❑ Alternatives (pensions, retirement and workforce reform, productivity, more substantial changes in fertility) were noted but not evaluated
- The political, social and economic costs of large-scale immigration received no mention.
- The Report's concentration on the demographic abstraction of the 'potential support ratio' without considering equally or more important non demographic components of real dependency levels in real societies, has been criticised as 'demographism' (Tarmann 2000).



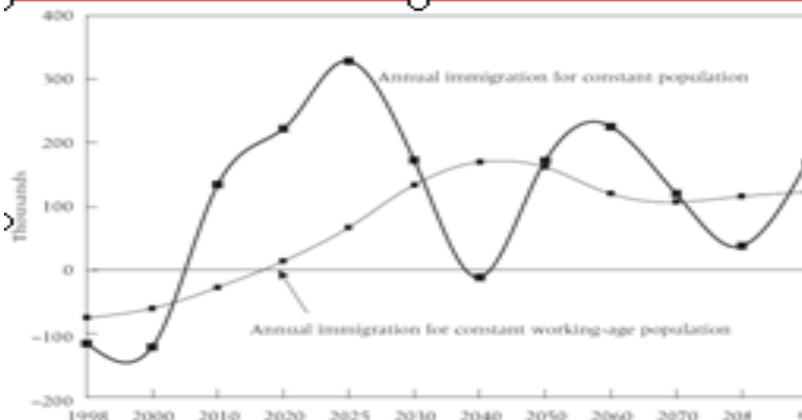
- ❑ Concentrate on the **potential support ratio**, as customarily defined to include only the older population, can be misleading.
- ❑ it ignores the fact that a large number of people in the age range 15–64 are currently not working and could be mobilized,

❑ “**real support ratio**” =

$$\frac{\text{number of persons employed}}{\text{number of persons not employed}}$$

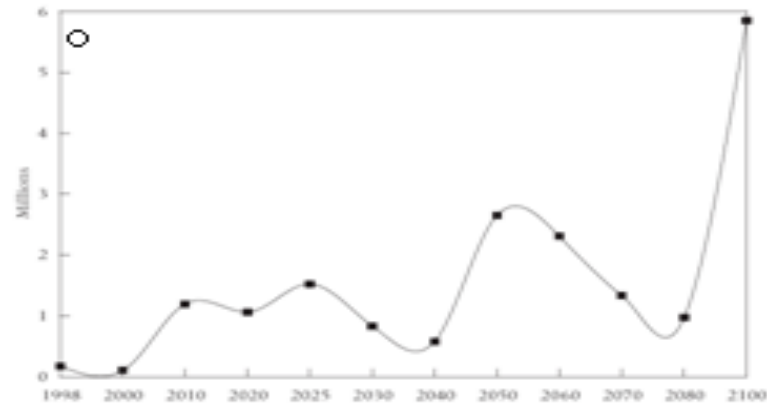


(A) Main critic: the report showed the average volumes of annual net immigration \neq Net annual immigration required



Net annual immigration required to maintain constant working age population and total population, UK 1998–2100

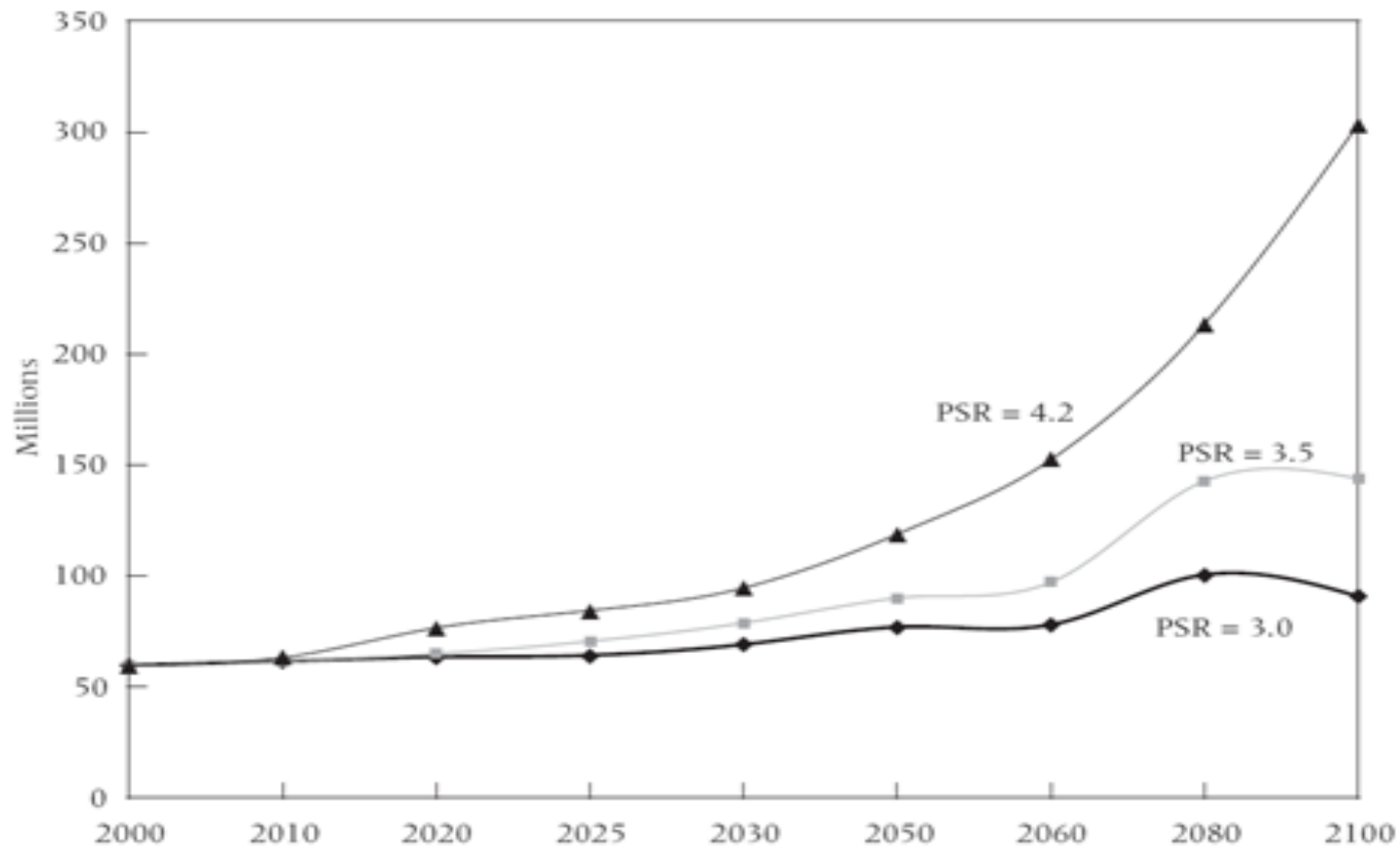
Net annual immigration required to maintain UK potential support ratio 1998–2100 (millions)



NOTE: The potential support ratio is defined as the ratio of the number of persons at age 15–64 to the number of persons 65 and older.
SOURCE: GAD unpublished, using the fertility and mortality assumptions of the 1998-based principal projection.



(A) POLEMIC: UK population size required to maintain specified potential support ratios (PSR) through migration





(A) Coleman's conclusions on UK example

□ The answers to the two questions posed in the UN Report can immigration solve problems of :

1. population decline
2. population ageing

They are respectively:

1. "yes, if you really think you want to"
2. "no, except at rates of immigration so high that they would generate economically and environmentally unsustainable population growth rates and permanently and radically change the cultural and ethnic composition of the host population: 'replacement migration', indeed"



[Incidentally about 1) Reconstructions of the population effects of past immigration]

▣ Reconstruction of **French population** history over the last century (to 1986)

- showed that the direct and indirect effects of immigration over that time had added 10.2 million people to the French population, of whom 3.9 million were immigrants born outside France
- Without it, France would have lacked one in five of its births and its 1986 population would have been 45.1 million instead of 55.3
- In particular, immigration accounted for about 40 % of population increase since the Second World War.

▣ Substantial growth in the **UK population** between 1951 and 1995

- as a result of the direct and indirect effects of migration – by 2.89 million according to the 'modified fertility' scenario
- Migration accounted for 30 percent of total population growth over the period



At EU level consensus on:

- ❑ Well-managed migration inflows could provide a positive contribution to employment and economic growth if we manage to successfully promote the integration of immigrants in our societies.
- ✓ However, **even doubling present levels of immigration flows could not offset the implications of ageing in the labour market and pensions.**
- ✓ Pension systems are not very sensitive to immigration increases. Simulations confirm that even doubling or tripling the levels of annual immigration flows provided by the baseline demographic scenario for the next 40 years could not compensate for the growth of the economic dependency ratio.
- ✓ We will still need to focus our efforts on employment policies and pensions reforms, if we are to achieve sustainable labour markets and pensions systems.
- ✓ *“immigration can contribute to filling certain specific gaps on the European labour market, but it can in no way stop or reverse the process of significant population ageing in Europe” 2002 Social Situation report*



□ The hesitancy of policy makers with regard to immigration as an answer to demographic challenges is connected to three main aspects:

- **the composition of the immigrant flows involved**

- To maximise the positive effects of immigration for pension and health care systems, the desired immigrants would be as young as possible

- **the social sustainability of large scale immigration**

- **the durability of immigration's effect on ageing**

- On this view, replacement migration is not a long-term solution to population ageing, because migrants also age.

- While increased immigration would certainly have an **immediate impact** on the working-age population, the long-term effects are less certain

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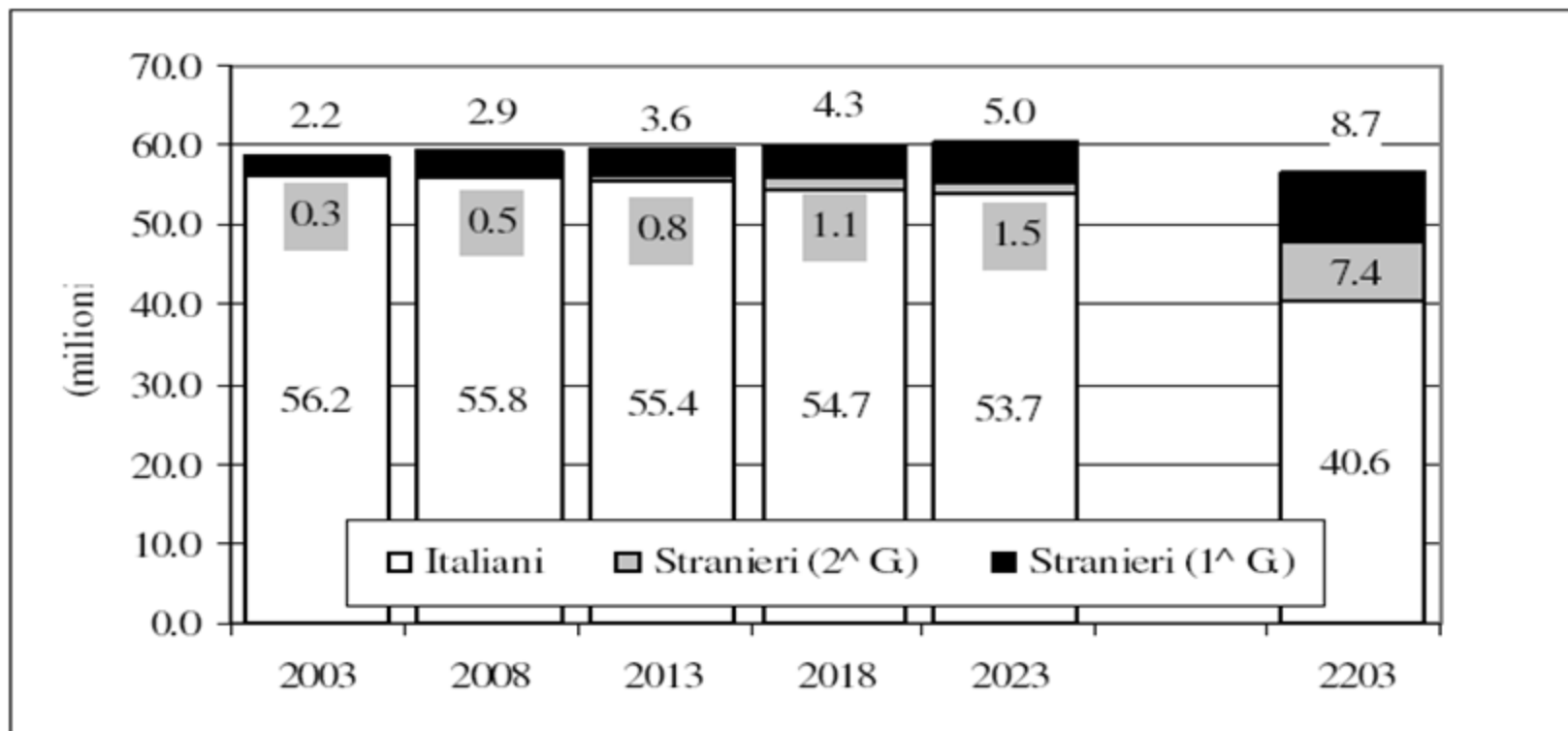


Large consensus

- ❑ Forecasting international migration is a very difficult task, due to the high level of uncertainty associated with this phenomenon.
- The results of the forecasts are in many cases uncertain, as migration is highly sensitive to two unpredictable factors:
 - migration policies
 - political developments,
- Usually: quantification of the knowledge-based scenarios, applying a methodology widely used in demographic forecasting, in order to accommodate the possible impact of economic factors and migration policies.
- not consideration the consequences of possible future political disruptions



Forecast of Letizia Mencarini



Fonte: Previsioni dell'autore su dati Istat (2003) e Caritas (2003).