

Fertility trends and their implications for development

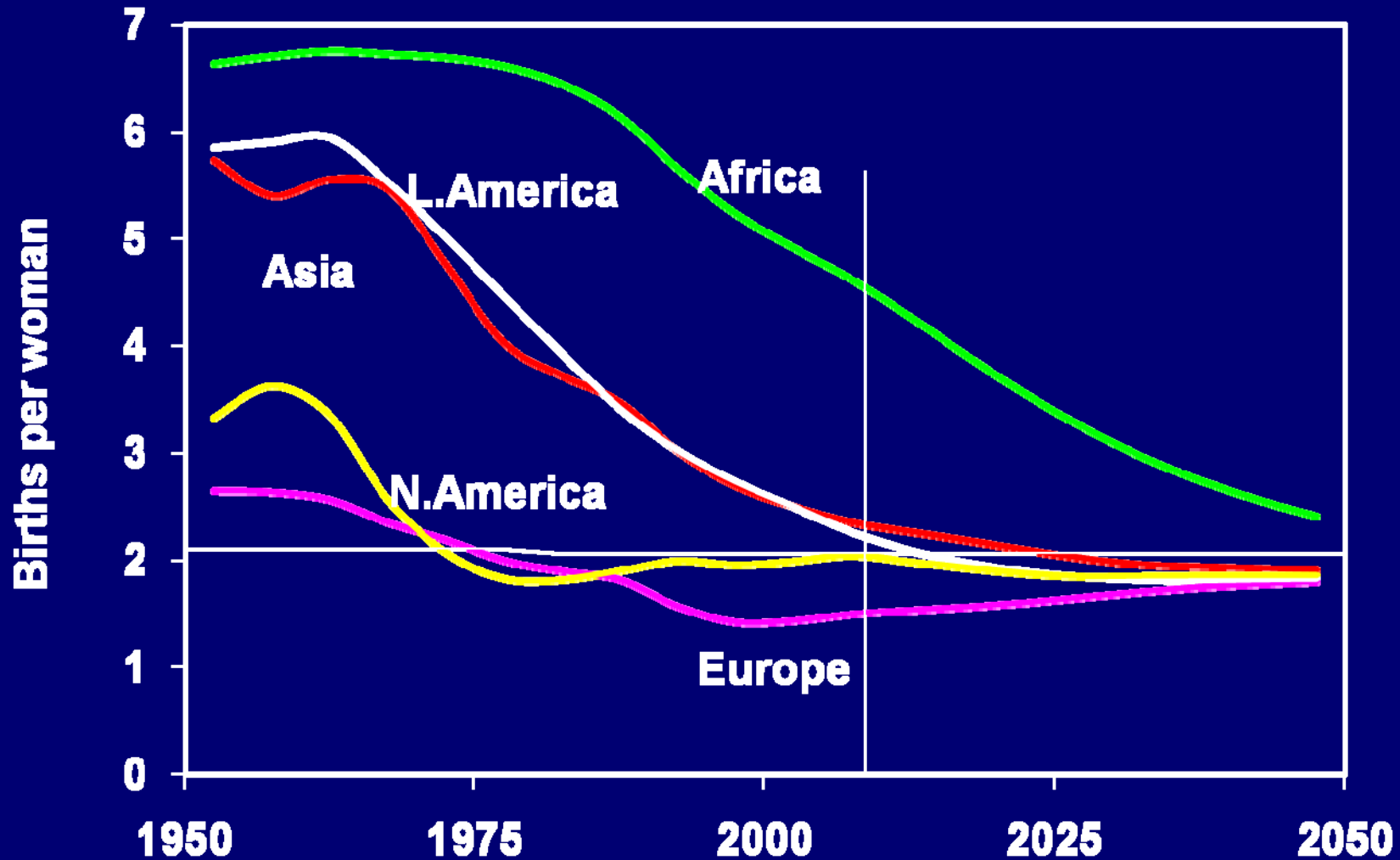
John Bongaarts

Population Council

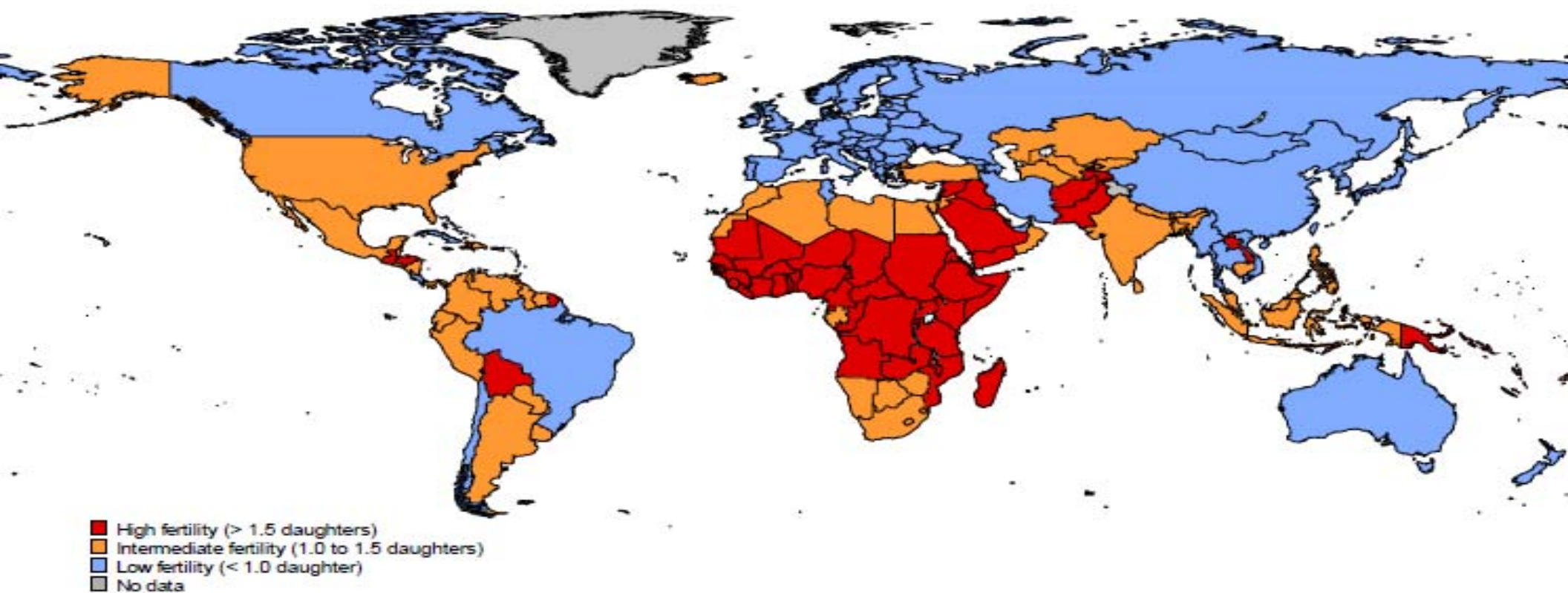
Outline

- **Background**
(fertility trends and population growth)
- **Consequences of demographic trends**
(High / intermediate / low fertility)
- **Policy options**

Fertility trends

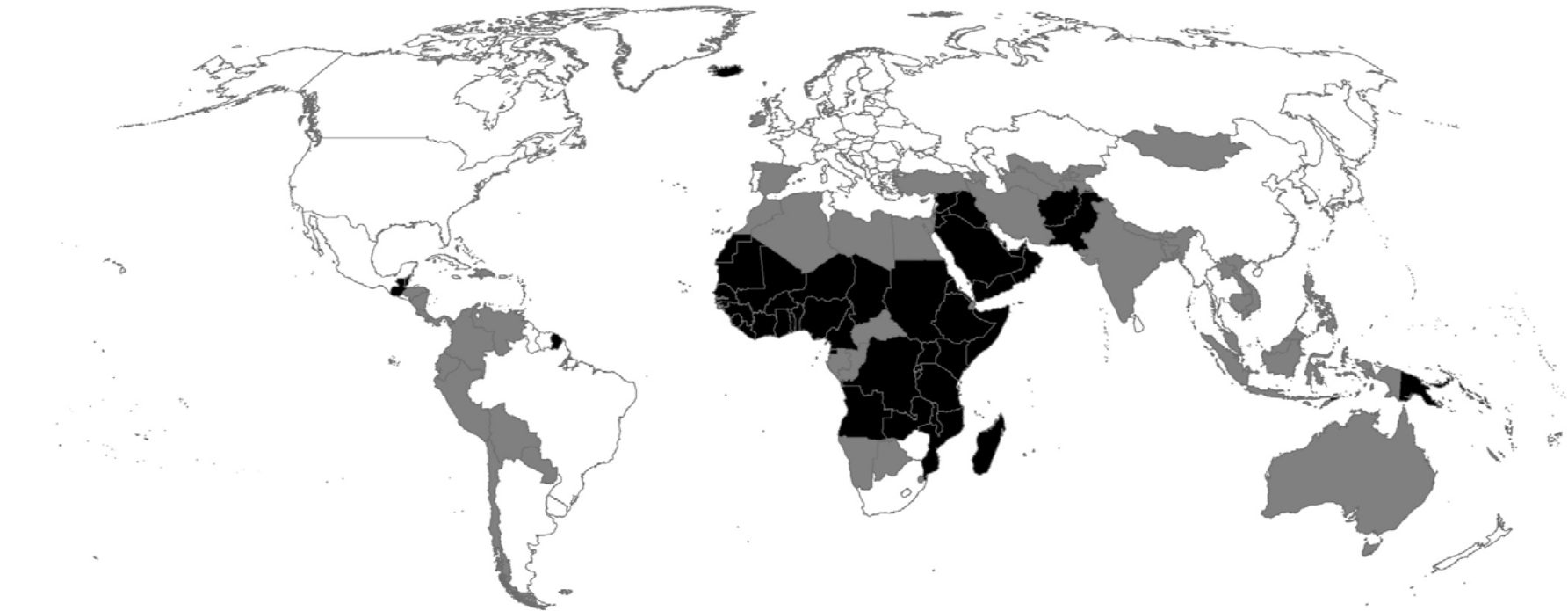


Countries according to fertility level
(number of surviving daughters per woman), 2005-2010



Note: The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

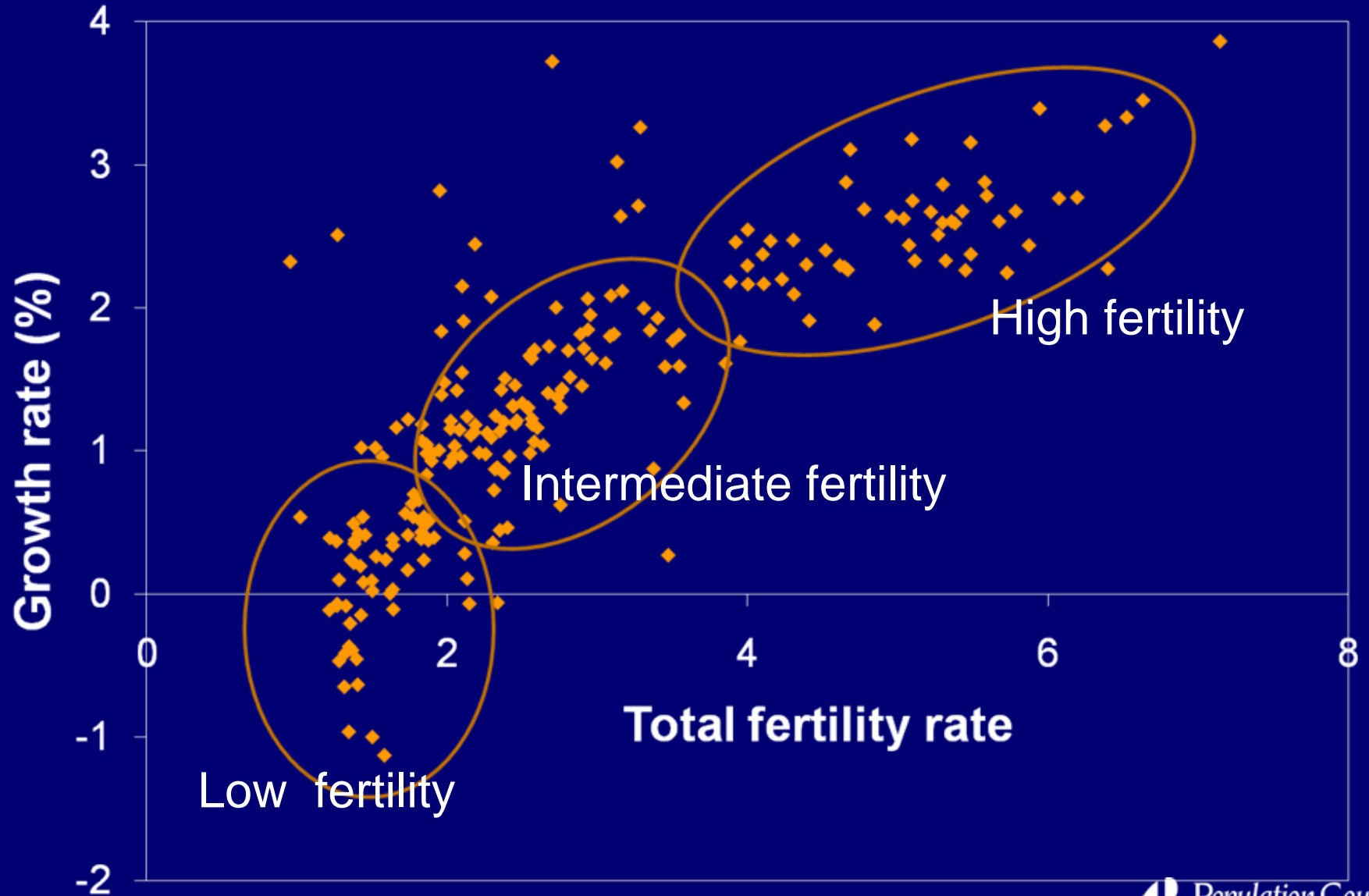
Population growth rates 2005-2010



Population Growth Rate
(% per year) 2005-2010



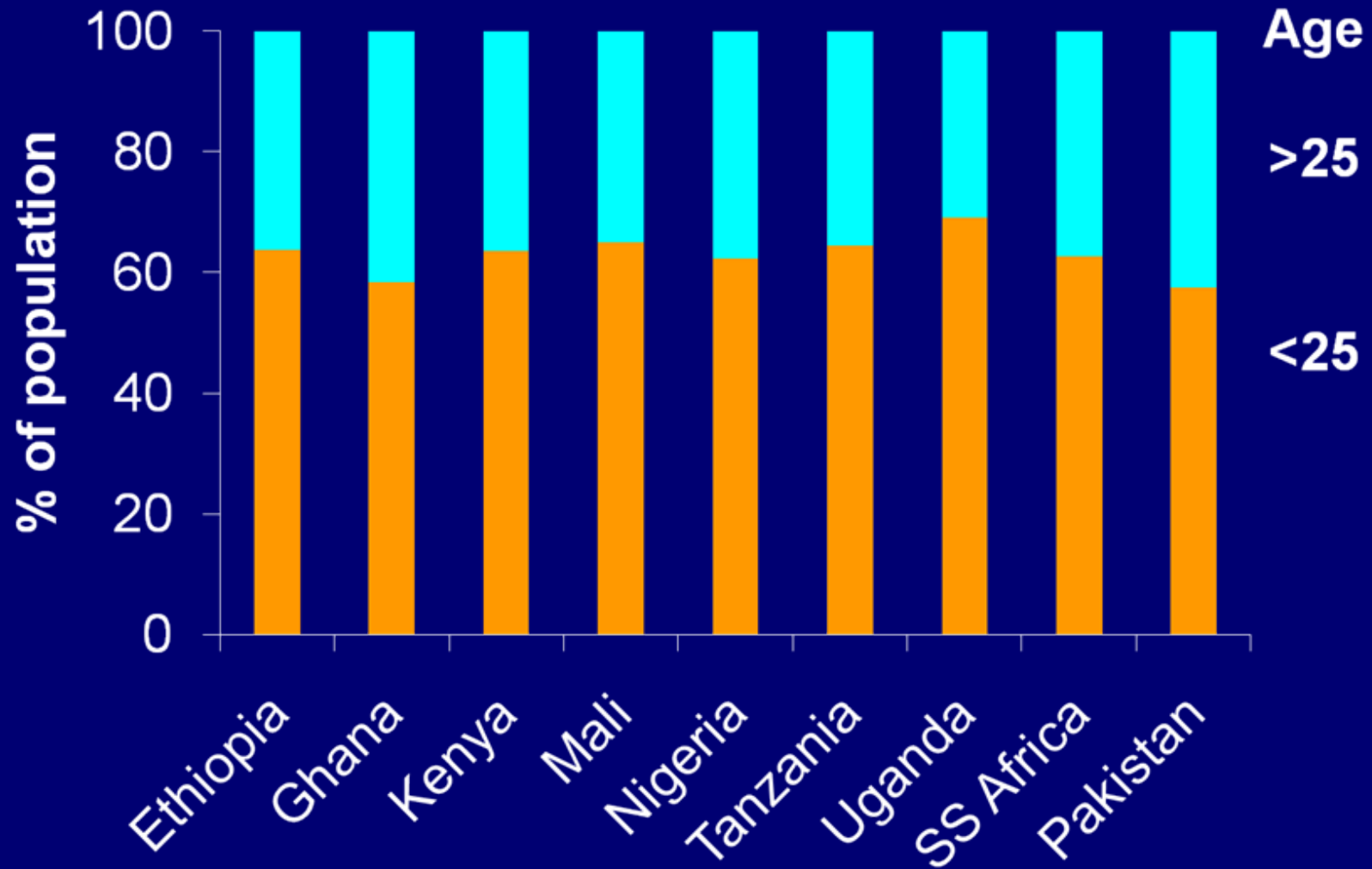
Population growth by fertility level



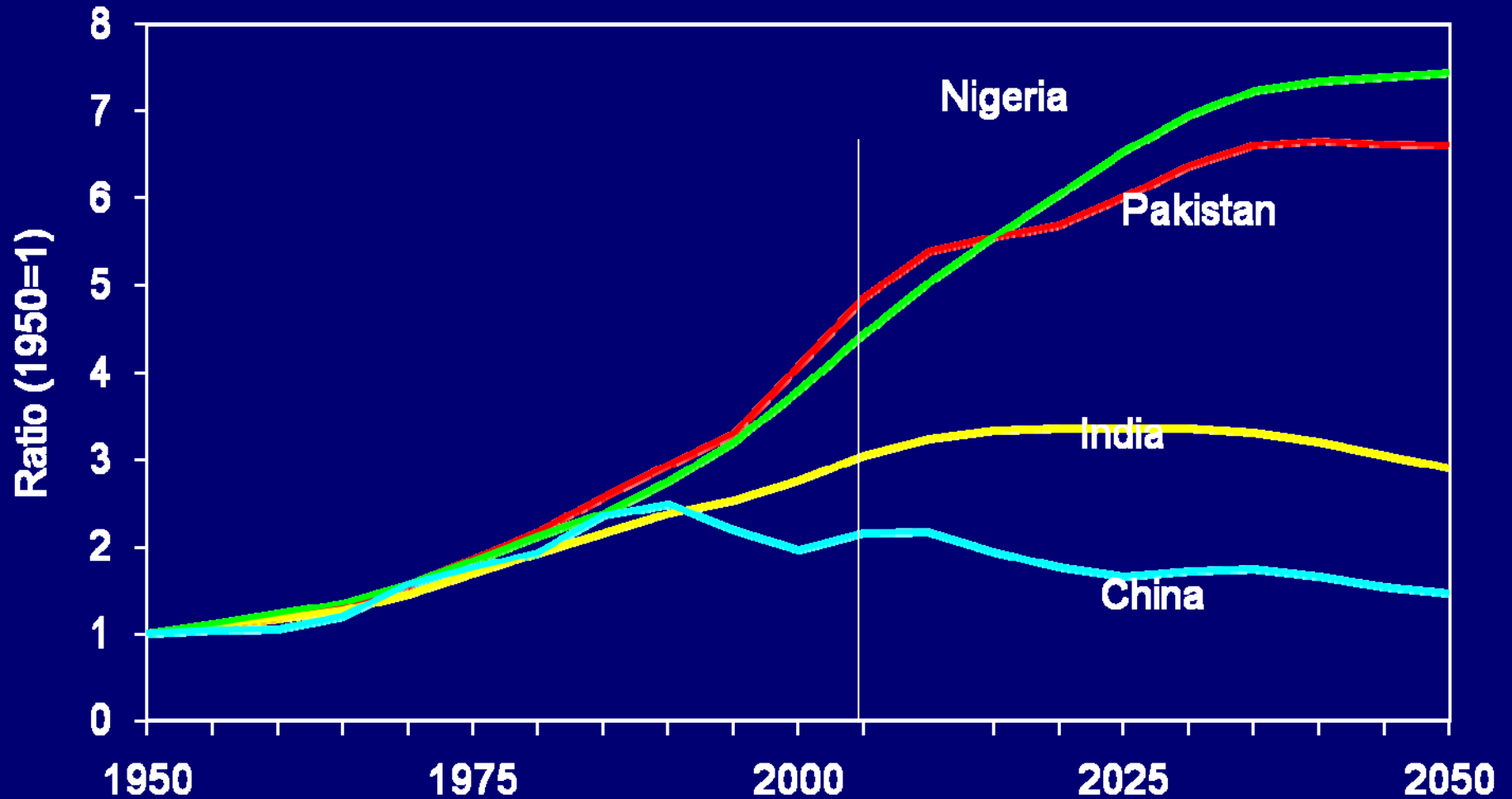
Demographic consequences of high fertility

- Rapid population growth
- Young age structure

Population by age (<25,>25)



Youth (15-24) by country (1950=1)



Source UN 2005

Development consequences of demographic trends

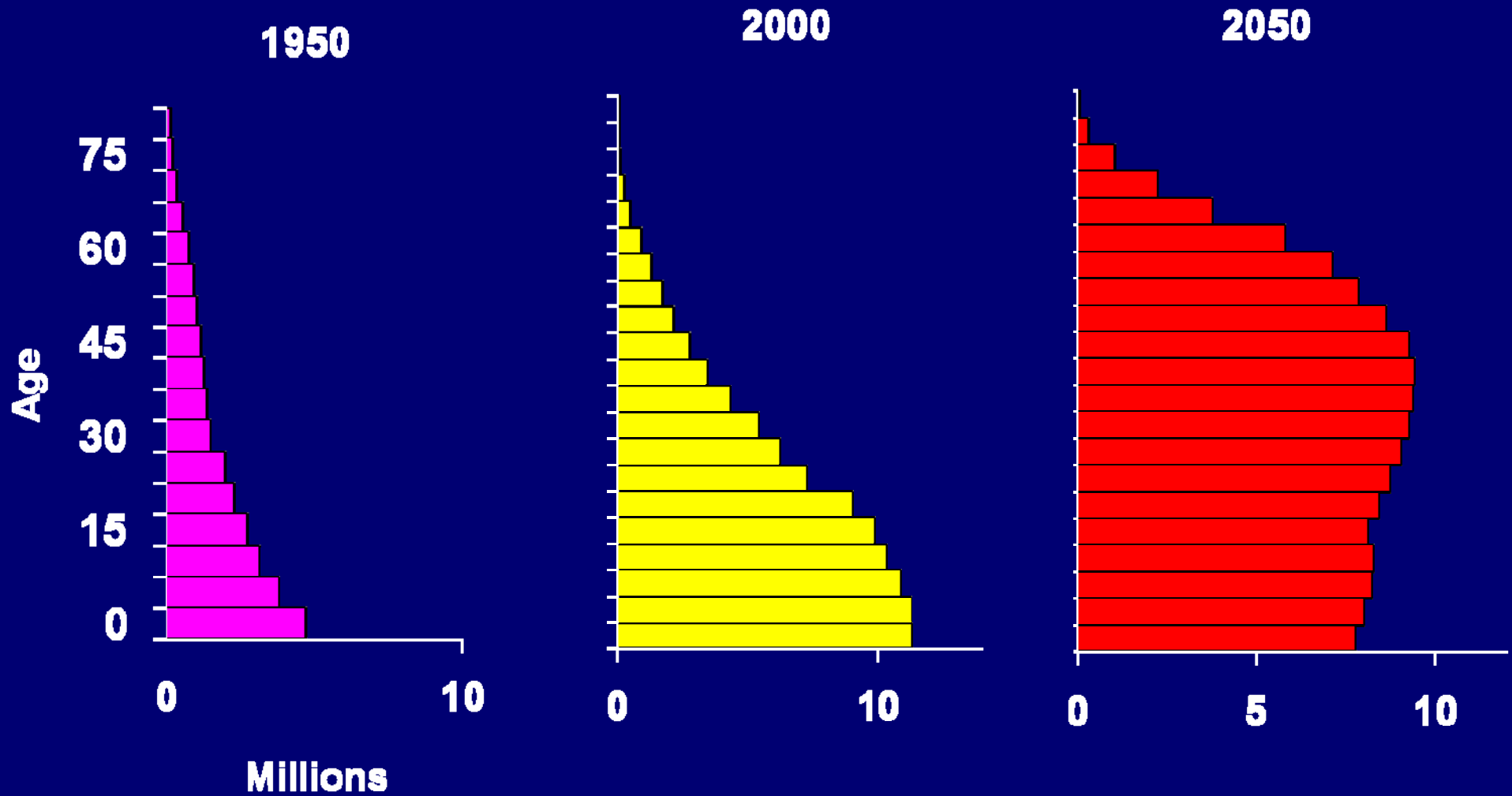
High fertility countries

- Economic: Low wages, unemployment, poverty, slow growth
- Environmental: Depletion of natural resources, pollution
- Health: High maternal and child mortality
- Governmental: Lagging investment in education, health services and infrastructure
- Political: Rising political extremism and civil strife

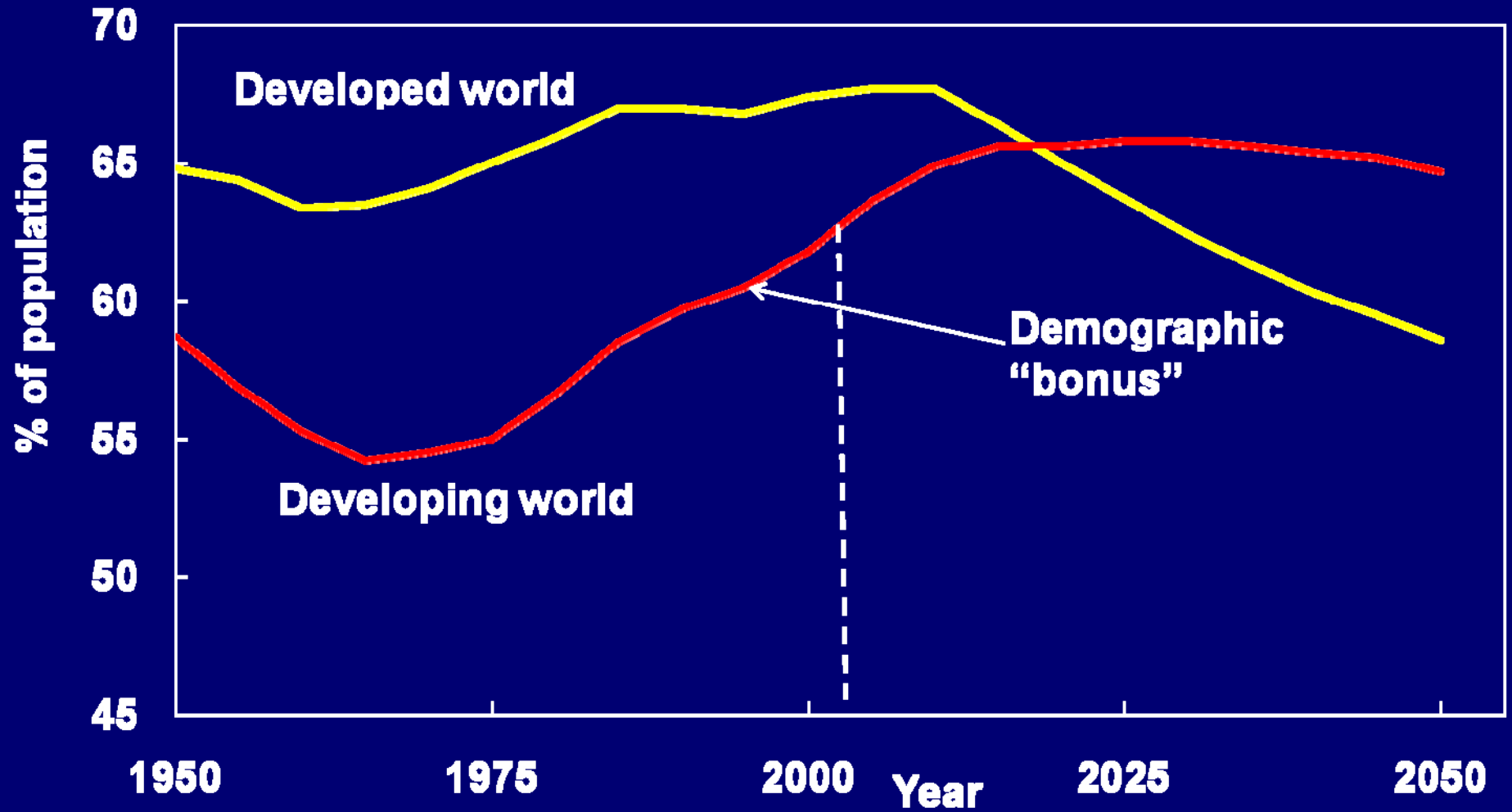
Demographic consequences of intermediate/ declining fertility

- **Declining growth rates**
- **Fewer young people, more workers**

Population by age: Mexico



Working age population (%)



Source: UN 2007

Development consequences of demographic trends

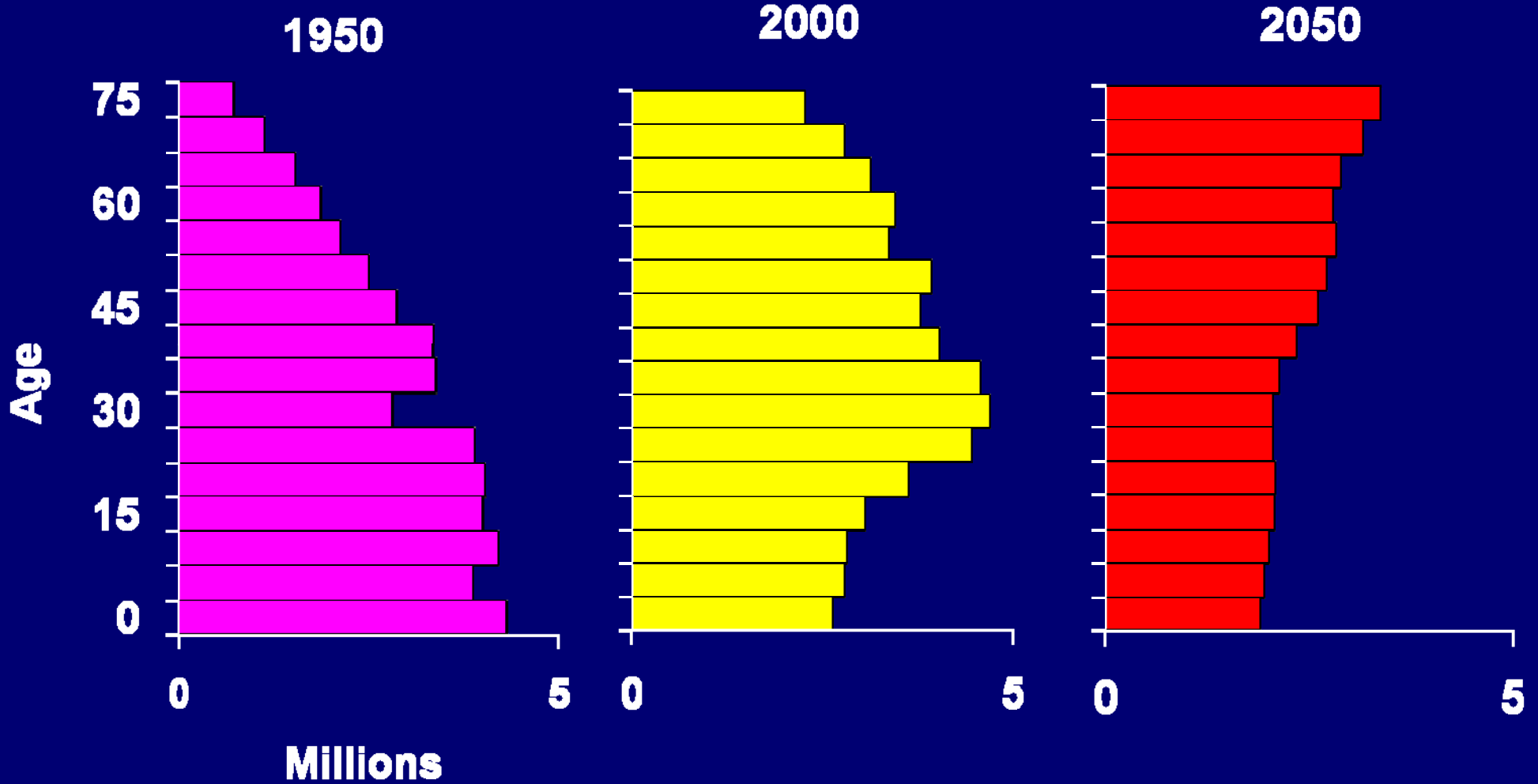
Intermediate/declining fertility

- **Economic:** Rapid growth, rising wages, high inequality. Increasing engagement of women in wage-paying work
- **Environmental:** Depletion of natural resources, air, water and soil pollution
- **Health:** Declining maternal and child mortality
- **Governmental:** Massive investments in education, health services and infrastructure
- **Political:** Inequality and disaffected voters

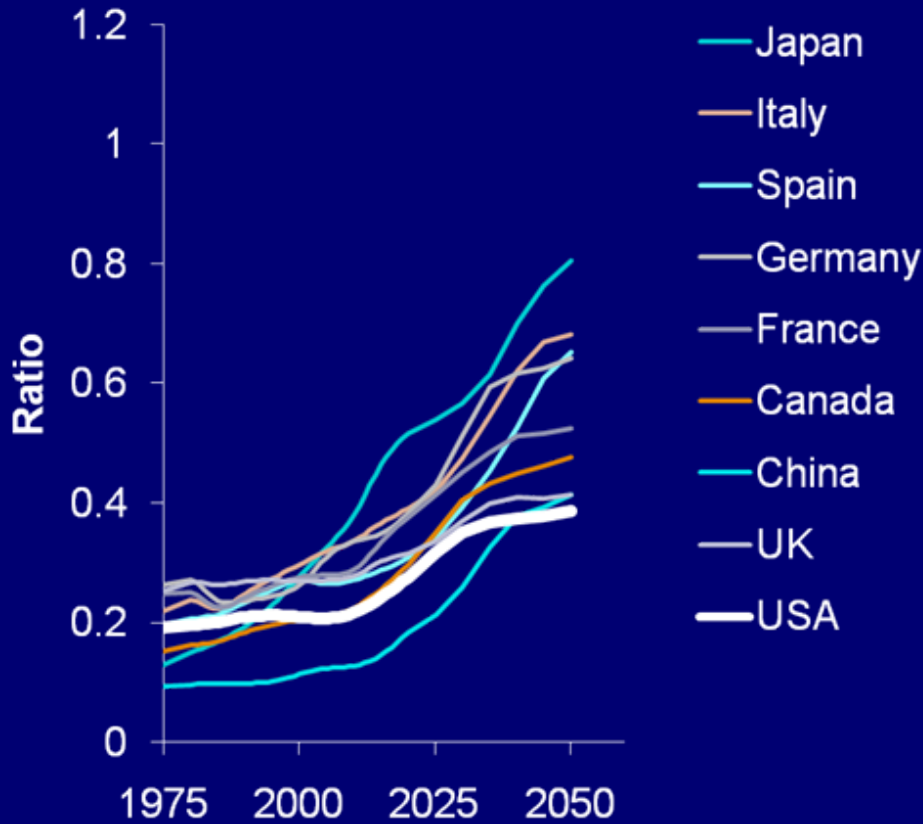
Consequences of low fertility

- Near zero or negative population growth rates
- Rapid population aging

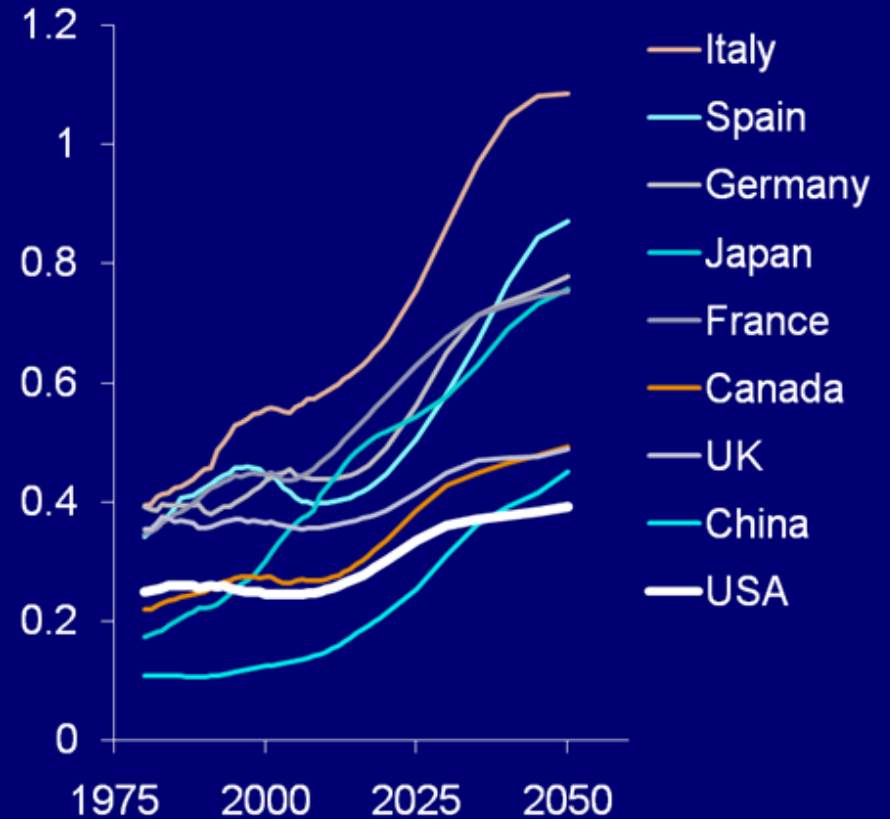
Population by age: Italy



Pop 65+/Pop 20-64



Retirees/Worker



Consequences of demographic trends Below replacement fertility

- Economic: Slower economic growth
Slower growth in standard of living
Slower growth in worker productivity (?)
- Governmental: Unsustainable health and pension costs
Rising governmental budget deficits
- Political: Rising voting power of the elderly

Policy options :

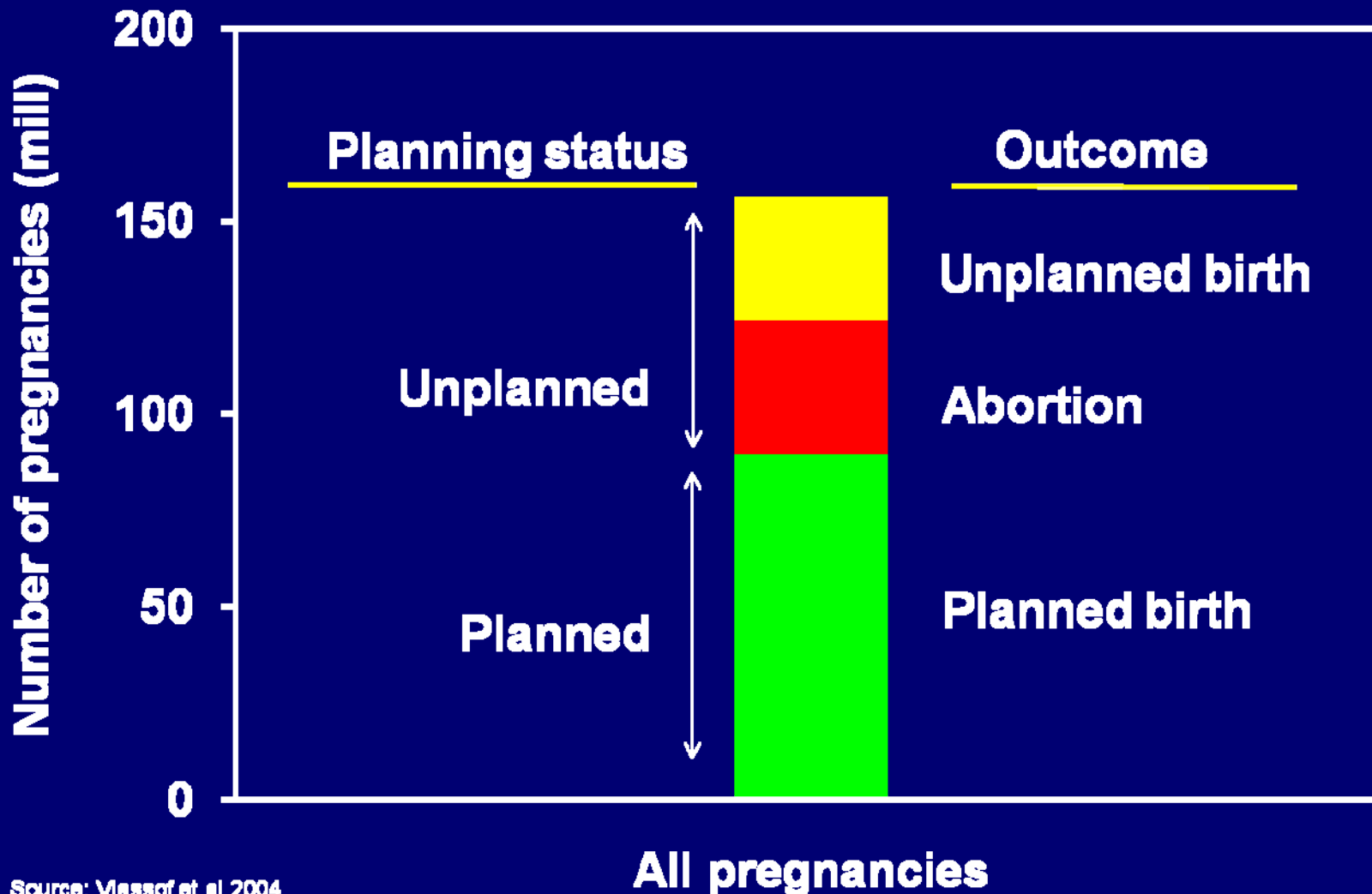
A. High fertility countries

B. Below replacement fertility countries

A. Policy options in high fertility countries:

- **Family planning programs**
- **Investments in human capital**

Many unplanned pregnancies in the developing world



Source: Vlassof et al 2004

Family planning programs contribute to:

- Improving maternal and child health
- Reducing poverty and inequality
- Achieving gender equality
- Ensuring environmental sustainability
- Combating HIV/AIDS

B. Policy options in aging societies

Pension system options:

Raise age at eligibility; encourage private savings; reduce benefits; raise taxes.

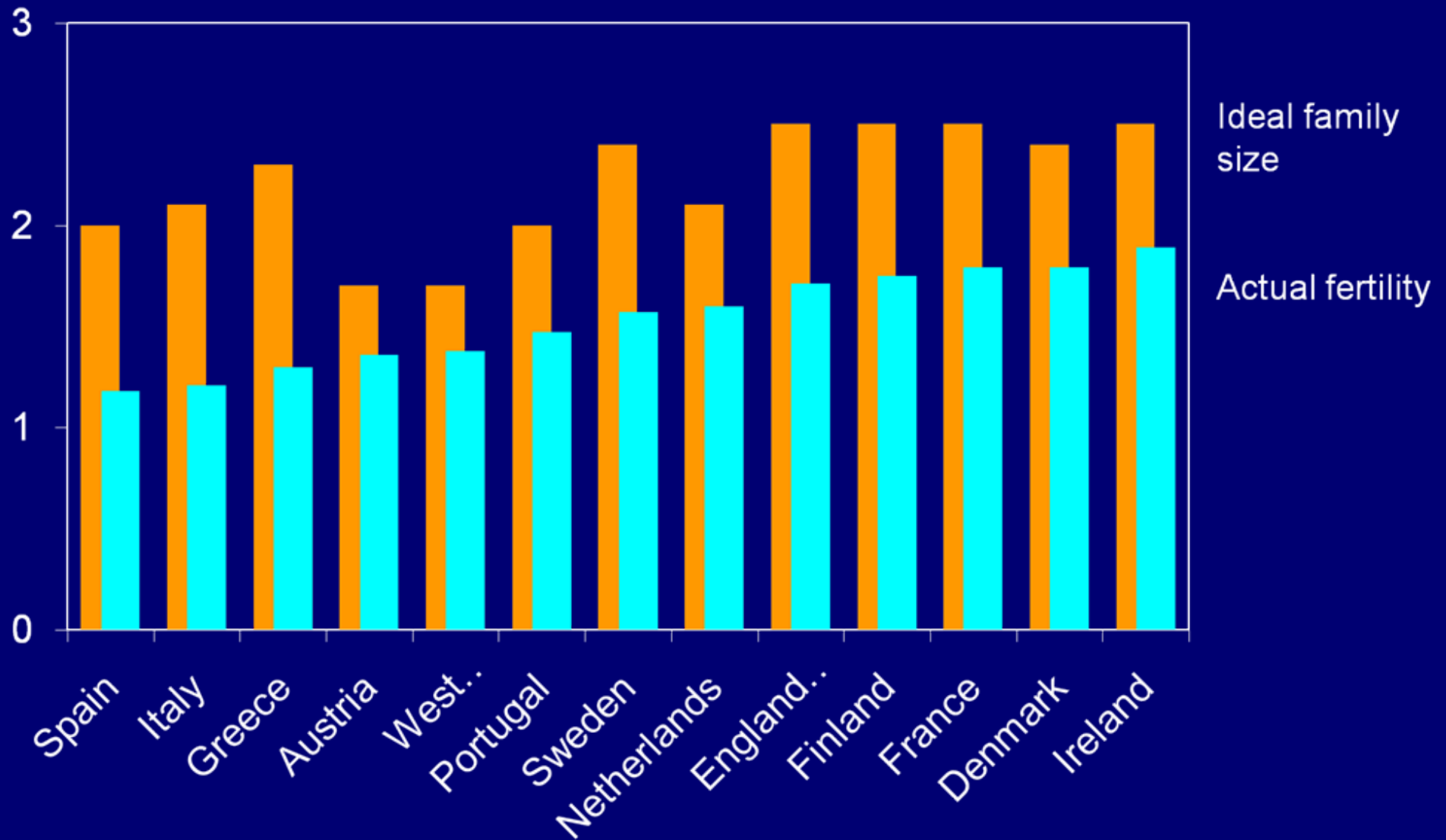
Labor force options

Encourage higher labor force participation and later age at retirement.

Demographic options

Encourage childbearing; permit more immigration.

Fertility and ideal family size for European countries



Pronatalist policy options

1) Reduce obstacles to childbearing

-Economic: childcare, maternity and paternity leave, child subsidies, etc.

-Biological: subsidize infertility treatment and development of new biotechnology

2) Eliminate or reverse tempo effect

-Encourage earlier start of childbearing and birth intervals of two or three years at most

Conclusions

- Declining high fertility brings multiple positive consequences for human welfare and the environment
- Very low fertility has net adverse effects
- Policies are available to maximize positive effects and minimize negative effects