

*AMBIENTE LAVORO - Bologna , 22-24 Ottobre 2014*

*CIIP - INVECCHIAMENTO E LAVORO, AGGIORNAMENTI 2014*



*Lavoro ed invecchiamento in buona salute: aspetti demografici, fisiopatologici ed operativi*

*Giovanni Costa*

*Dipartimento di Scienze Cliniche e di Comunità, Università di Milano e IRCC Fondazione Ca' Granda Ospedale Maggiore Policlinico*

**D. Lgs. 81/2008**  
**Titolo I - Capo III - Sezione II**  
**VALUTAZIONE DEI RISCHI**  
**Articolo 28: Oggetto della valutazione dei rischi**

*1. La valutazione dei rischi di cui all'articolo 17, comma 1, lettera a), anche nella scelta delle attrezzature di lavoro e delle sostanze e dei preparati chimici impiegati, nonchè nella sistemazione dei luoghi di lavoro, deve riguardare tutti i rischi per la sicurezza e la salute dei lavoratori, ivi compresi quelli riguardanti gruppi di lavoratori esposti a rischi particolari, tra cui quelli collegati allo stress lavoro-correlato, secondo i contenuti dell'accordo europeo dell'8 Ottobre 2004 e quelli riguardanti le lavoratrici in stato di gravidanza [...] nonchè quelli connessi con le differenze di genere, all'età, alla provenienza da altri paesi, e quelli connessi alla specifica tipologia contrattuale attraverso cui viene resa la prestazione di lavoro.*

*La*

*piramide*

*invertita*

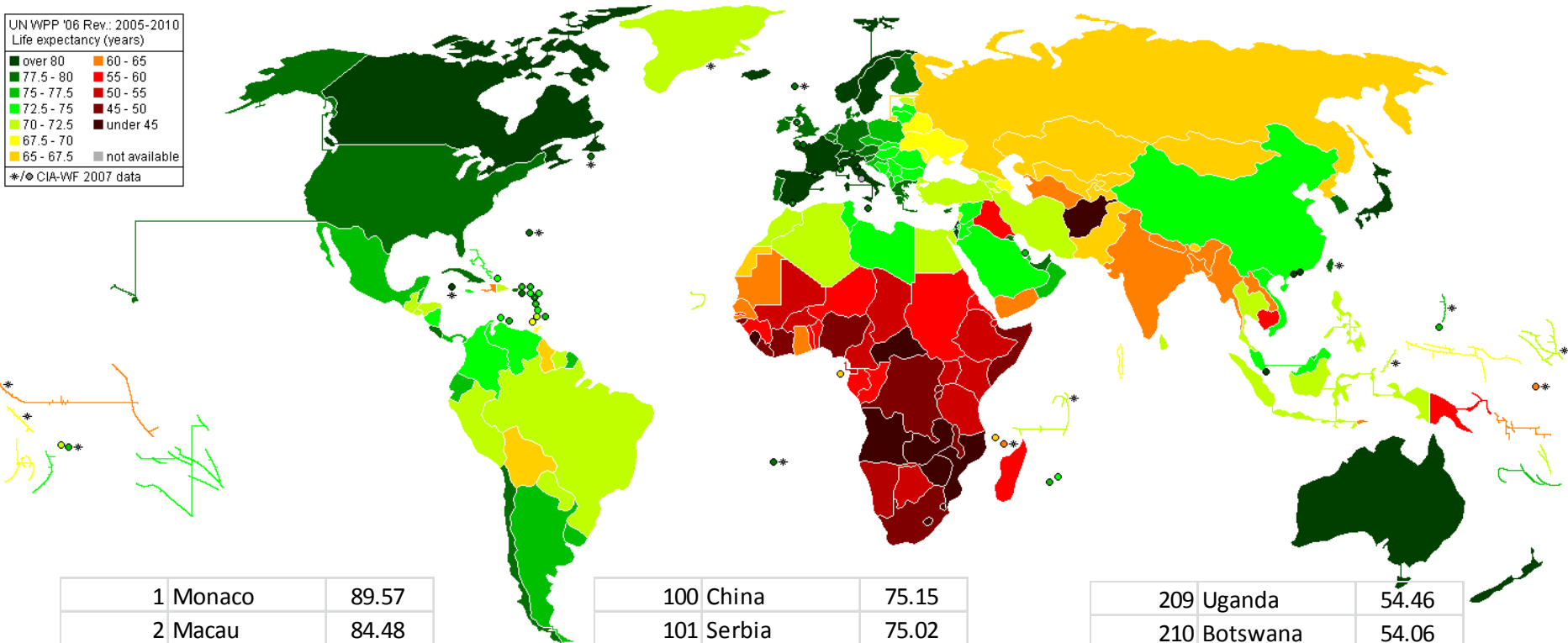


# Aspettativa di vita alla nascita 2012 (WHO)

UN WPP '06 Rev.: 2005-2010  
Life expectancy (years)

over 80	60 - 65
77.5 - 80	55 - 60
75 - 77.5	50 - 55
72.5 - 75	45 - 50
70 - 72.5	under 45
67.5 - 70	
65 - 67.5	not available

\* / ● CIA-WF 2007 data

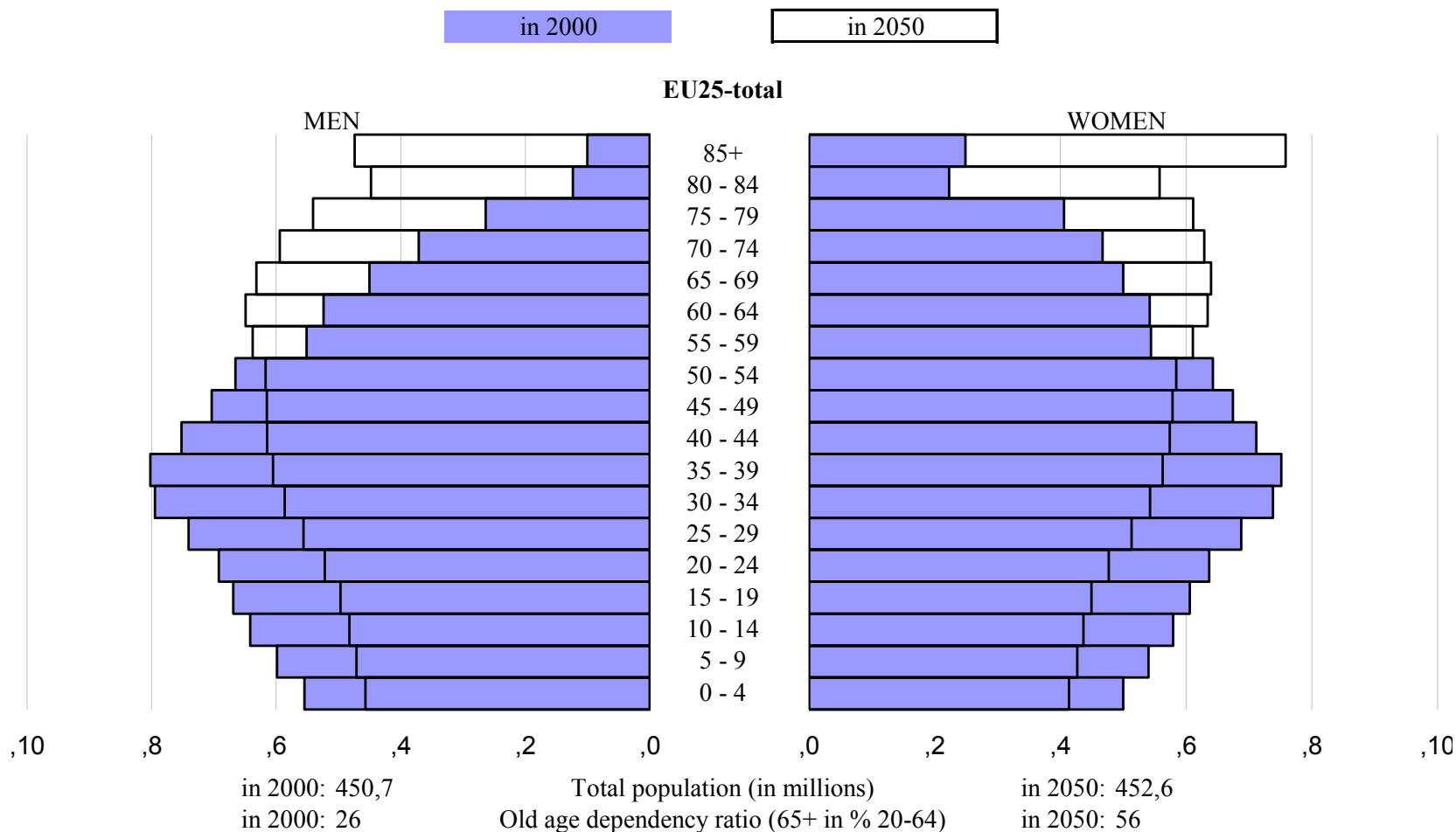


1	Monaco	89.57
2	Macau	84.48
3	Japan	84.46
4	Singapore	84.38
5	San Marino	83.18
6	Hong Kong	82.78
7	Andorra	82.65
8	Switzerland	82.39
9	Guernsey	82.39
10	Australia	82.07
11	Italy	82.03
12	Sweden	81.89
13	Liechtenstein	81.68
14	Canada	81.67
15	France	81.66

100	China	75.15
101	Serbia	75.02
102	Barbados	74.99
103	Oman	74.97
104	American Samoa	74.91
105	Solomon Islands	74.89
106	Saint Vincent and the Grenadines	74.86
107	Saudi Arabia	74.82
108	Romania	74.69
109	Gaza Strip	74.64
110	Malaysia	74.52
111	Venezuela	74.39
112	Bulgaria	74.33
113	Seychelles	74.25
114	Thailand	74.18

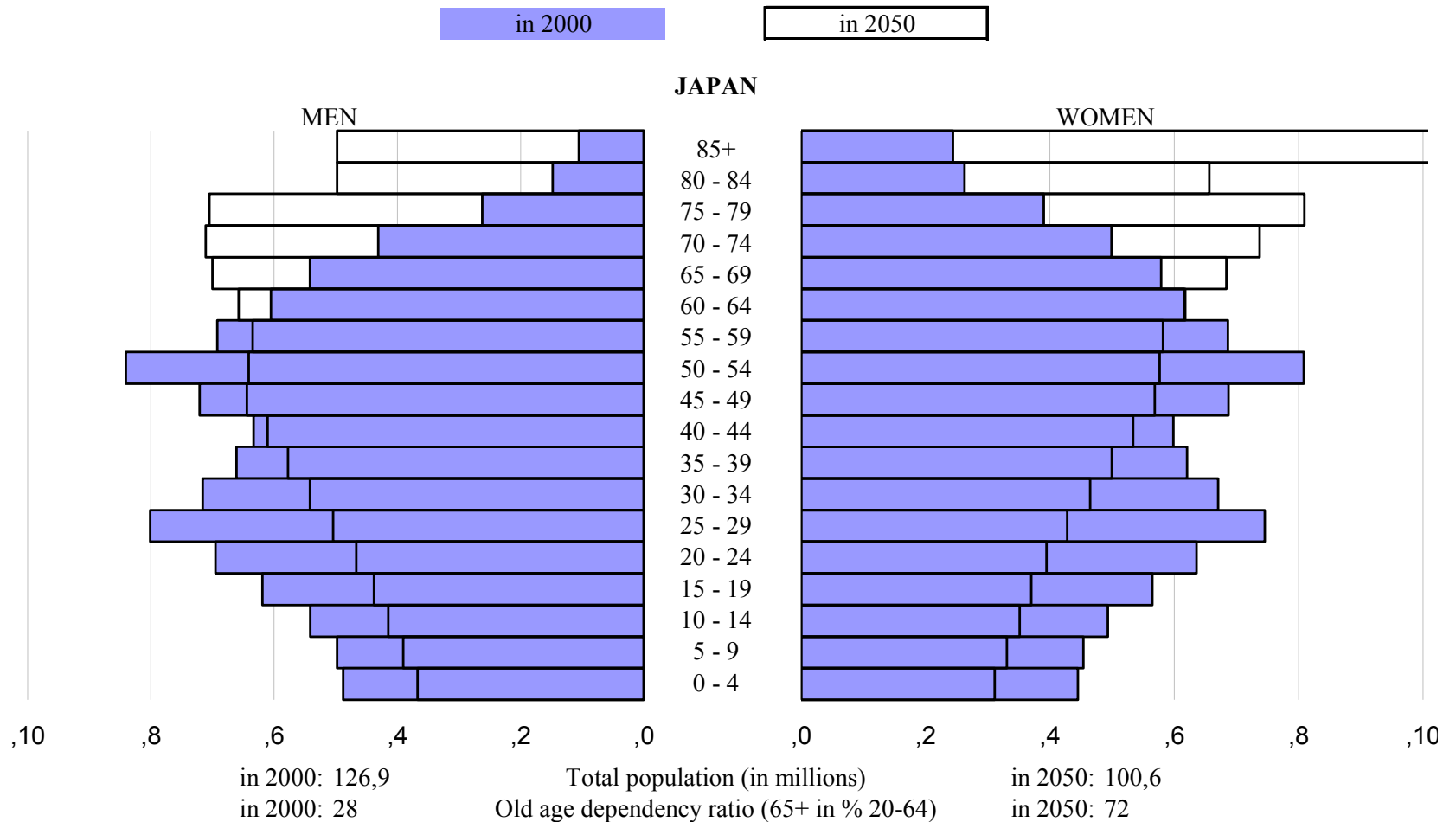
209	Uganda	54.46
210	Botswana	54.06
211	Lesotho	52.65
212	Nigeria	52.62
213	Mozambique	52.60
214	Gabon	52.06
215	Namibia	51.85
216	Zambia	51.83
217	Somalia	51.58
218	Central African Republic	51.35
219	Swaziland	50.54
220	Afghanistan	50.49
221	Guinea-Bissau	49.87
222	South Africa	49.56
223	Chad	49.44

# Population by age group, gender, in 2000 and 2050, in percentage of total population in each age group, in **EUROPE**



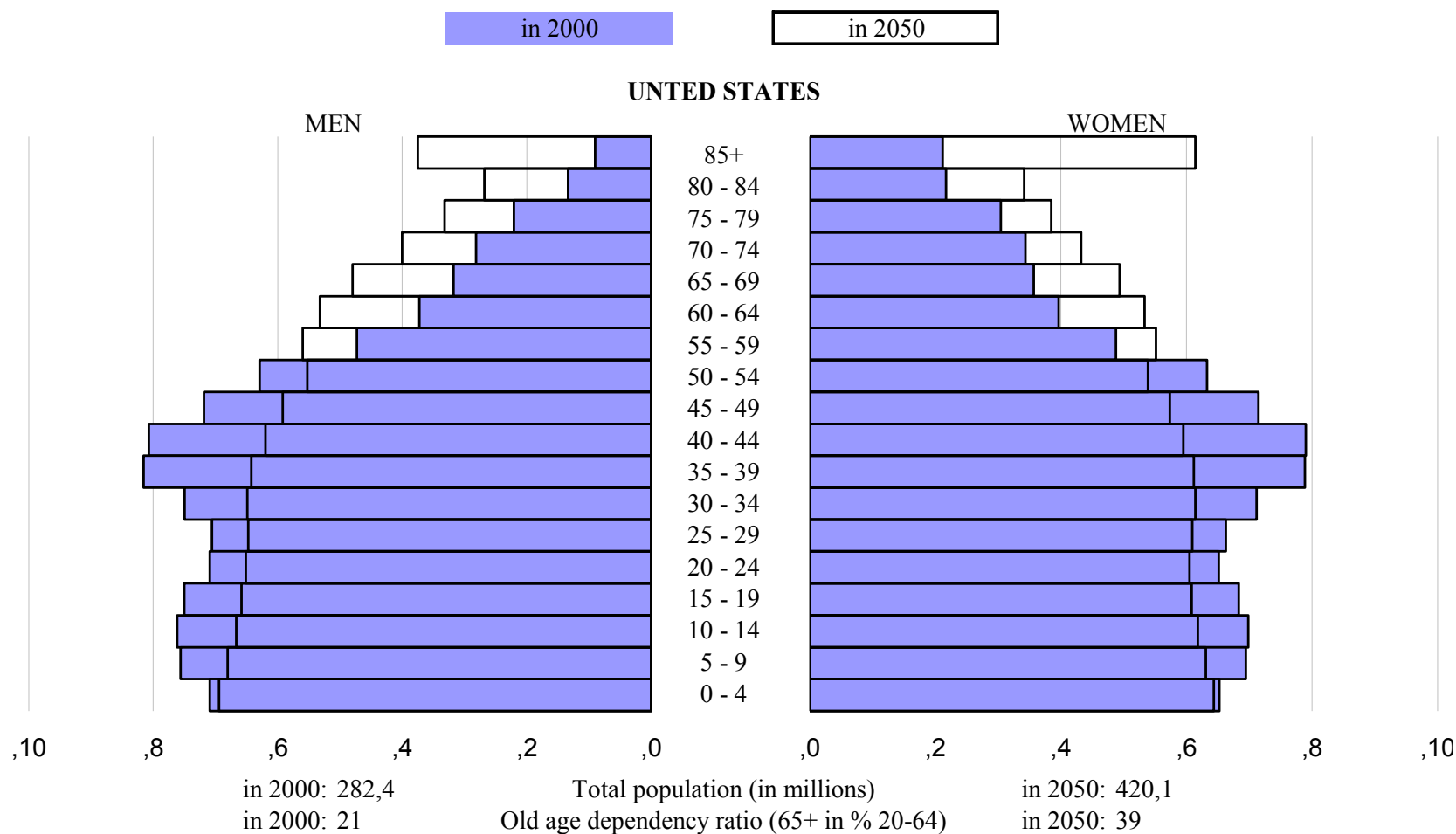
•Source: OECD Demographic and Labour Force database, used in OECD(2007), Society at a Glance: OECD Social Indicators 2006

# Population by age group, gender, in 2000 and 2050, in percentage of total population in each group, in JAPAN



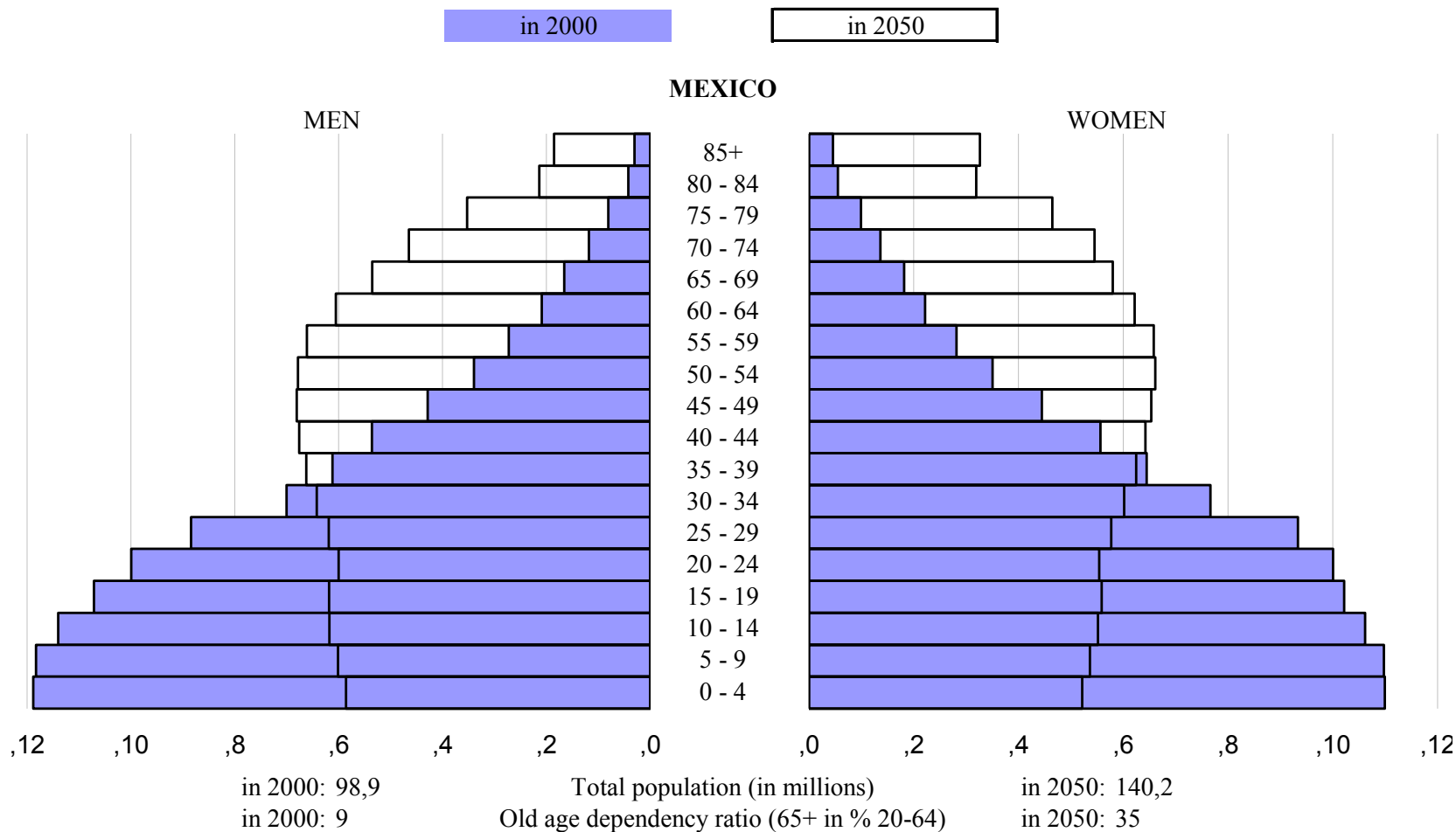
•Source: OECD Demographic and Labour Force database, used in OECD(2007), Society at a Glance:  
•OECD Social Indicators 2006

# Population by age group, gender, in 2000 and 2050, in percentage of total population in each age group, in USA



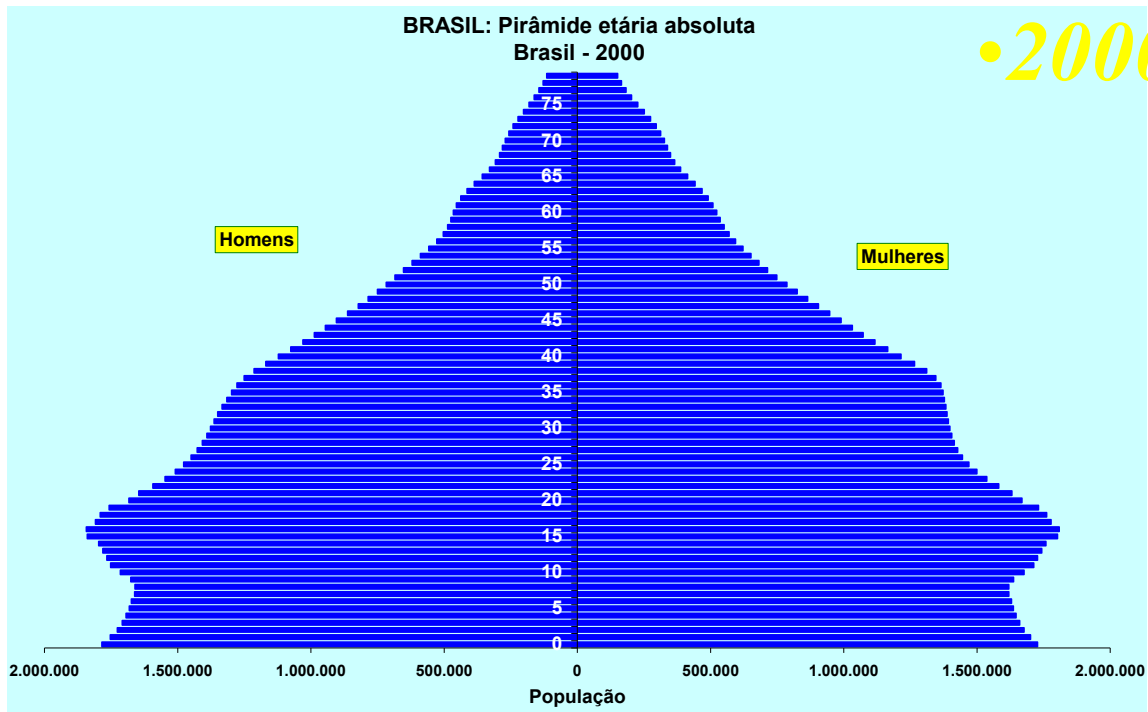
•Source: OECD Demographic and Labour Force database, used in OECD(2007), Society at a Glance:  
•OECD Social Indicators 2006

# Population by age group, gender, in 2000 and 2050, in percentage of total population in each age group, in MEXICO

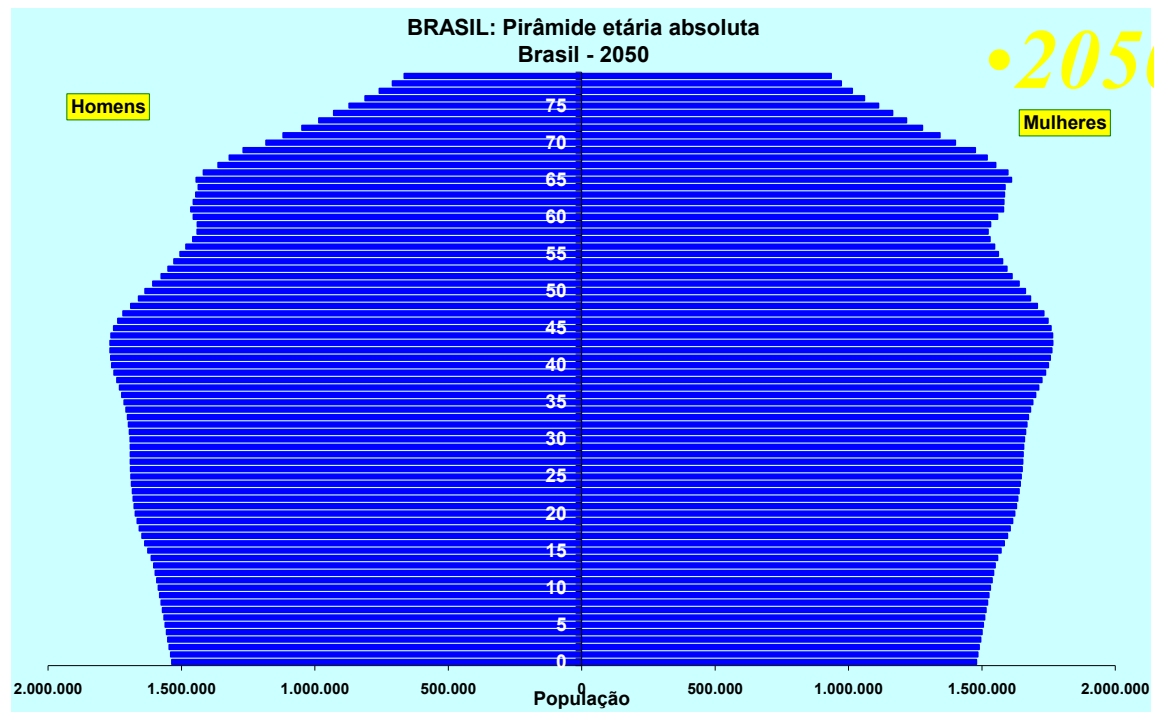


•Source: OECD Demographic and Labour Force database, used in OECD(2007), Society at a Glance:  
 •OECD Social Indicators 2006

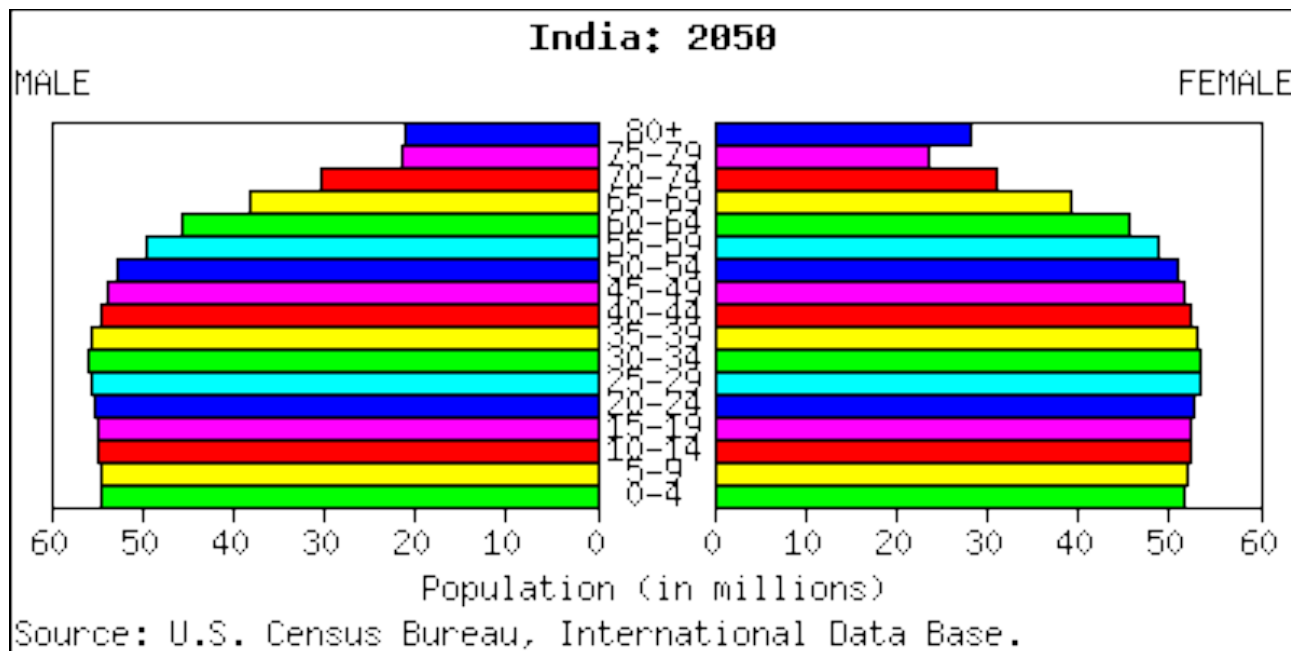
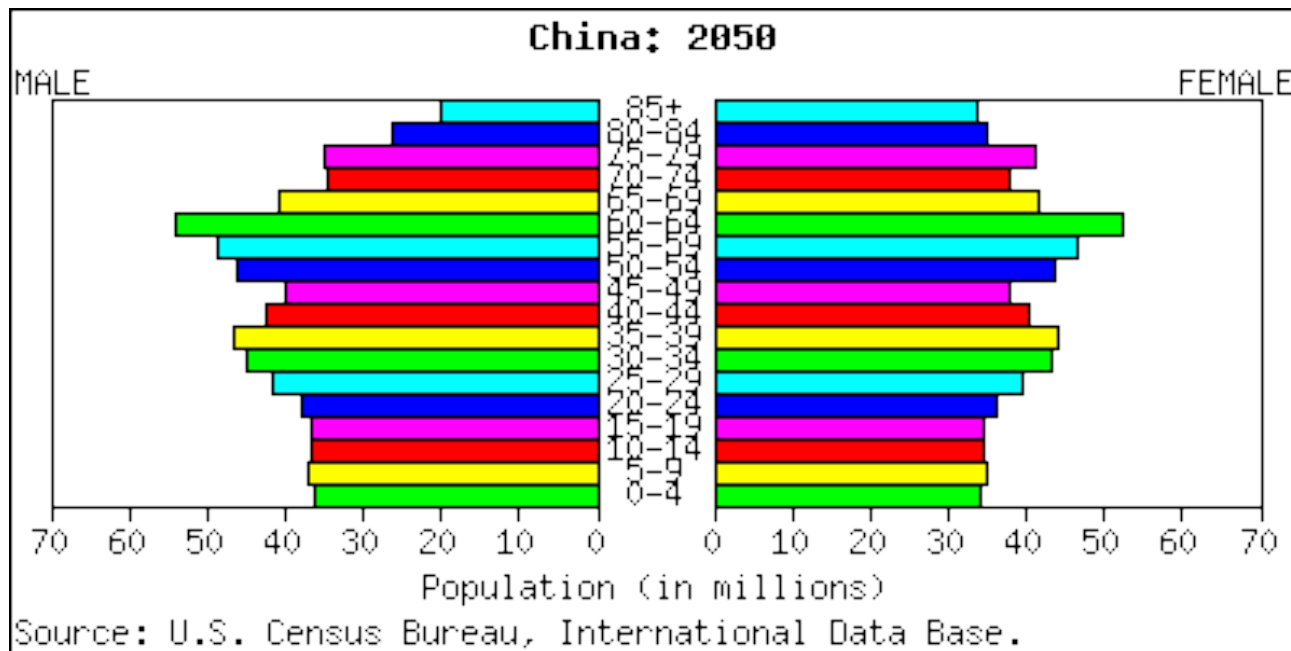


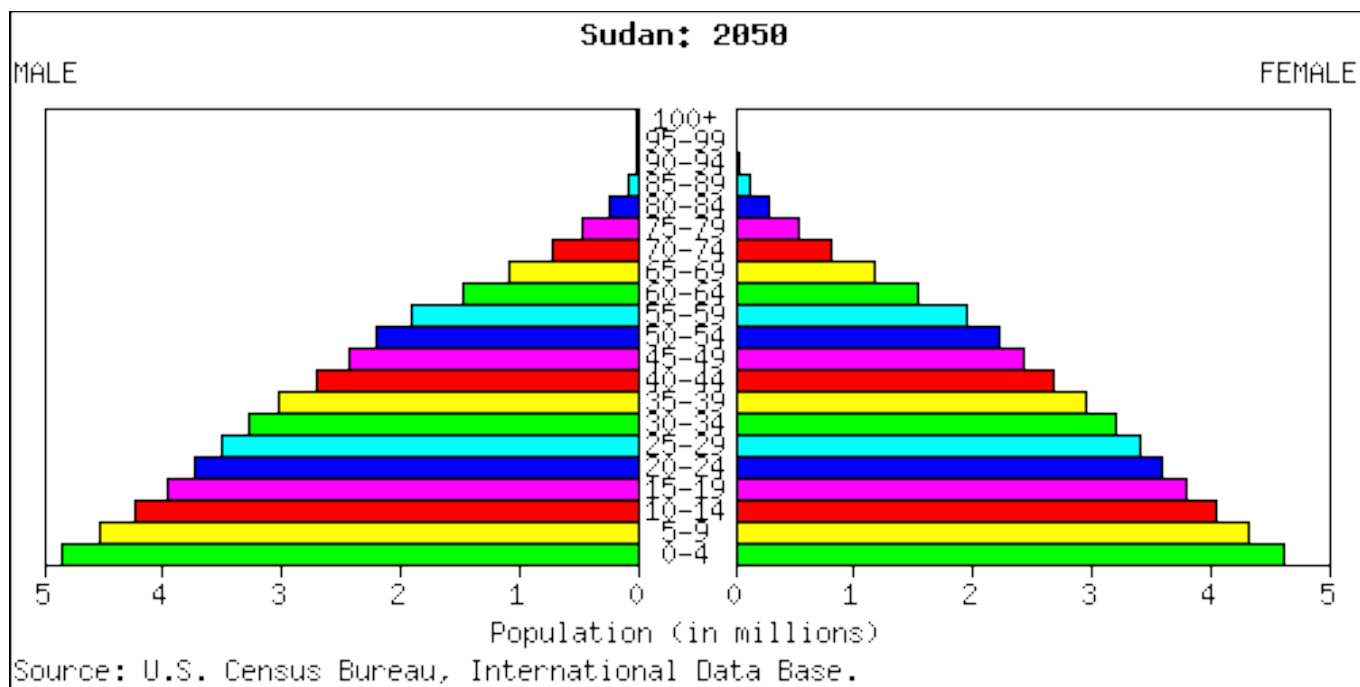
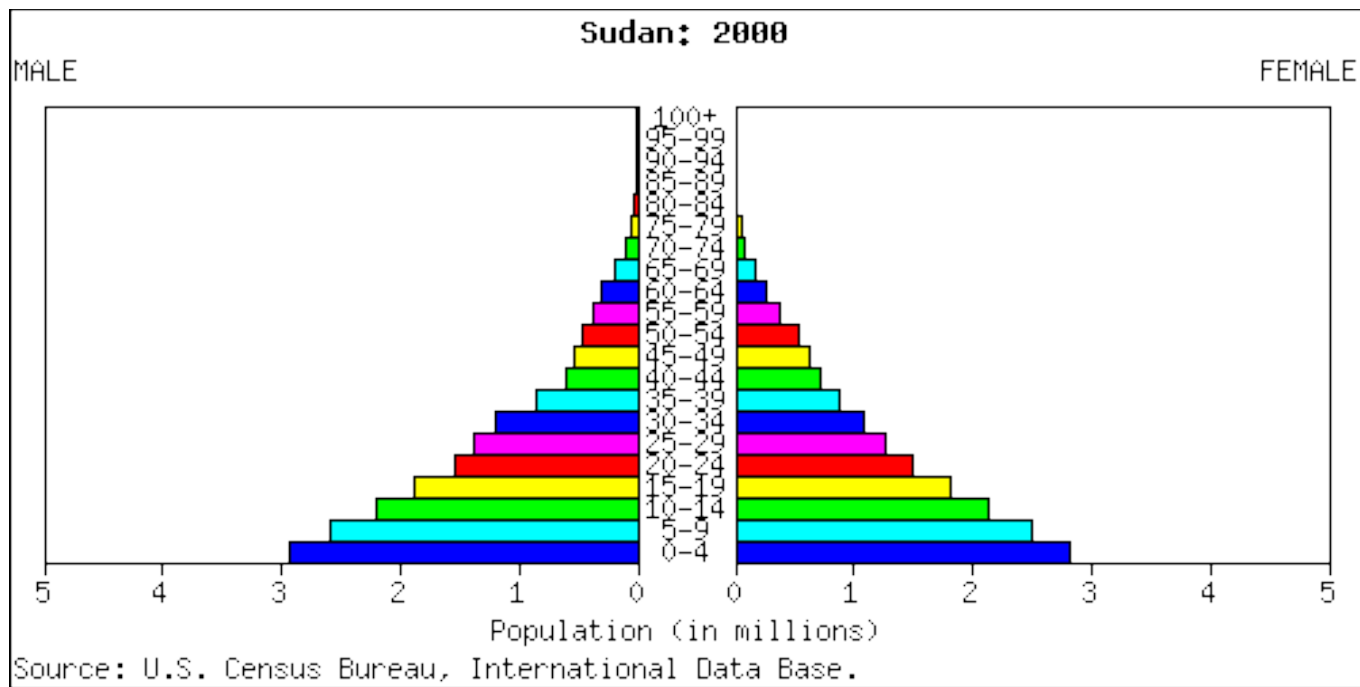


•Brazil



•Source:  
•Diretoria de Pesquisas - DPE  
•Coordenação de População  
•e Indicadores Sociais – COPIS 2004

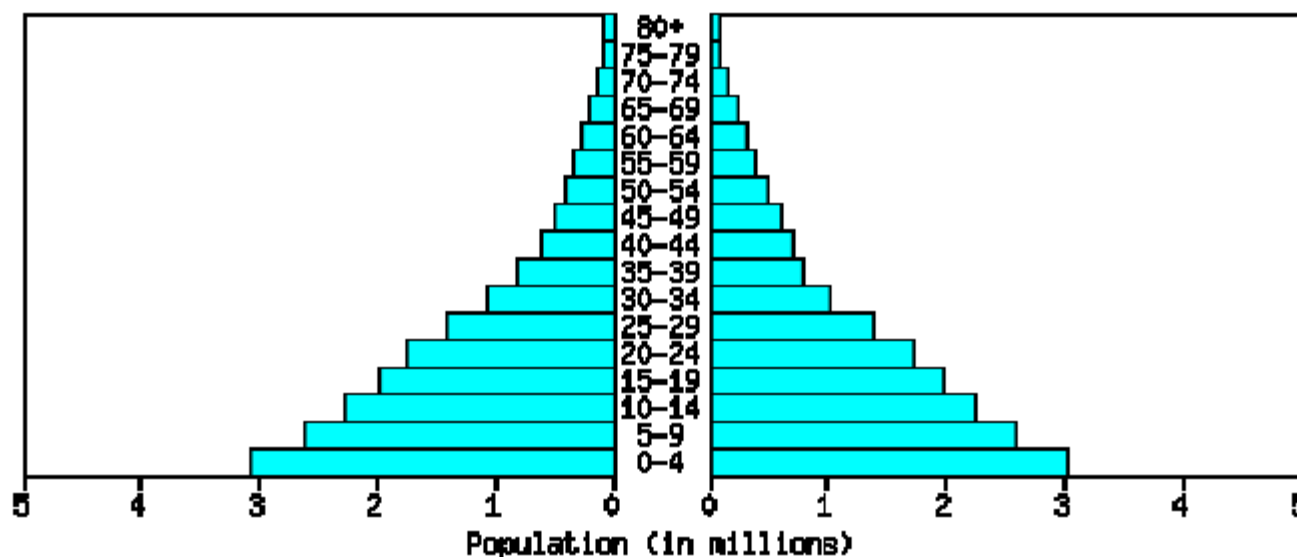




### Tanzania: 2008

MALE

FEMALE

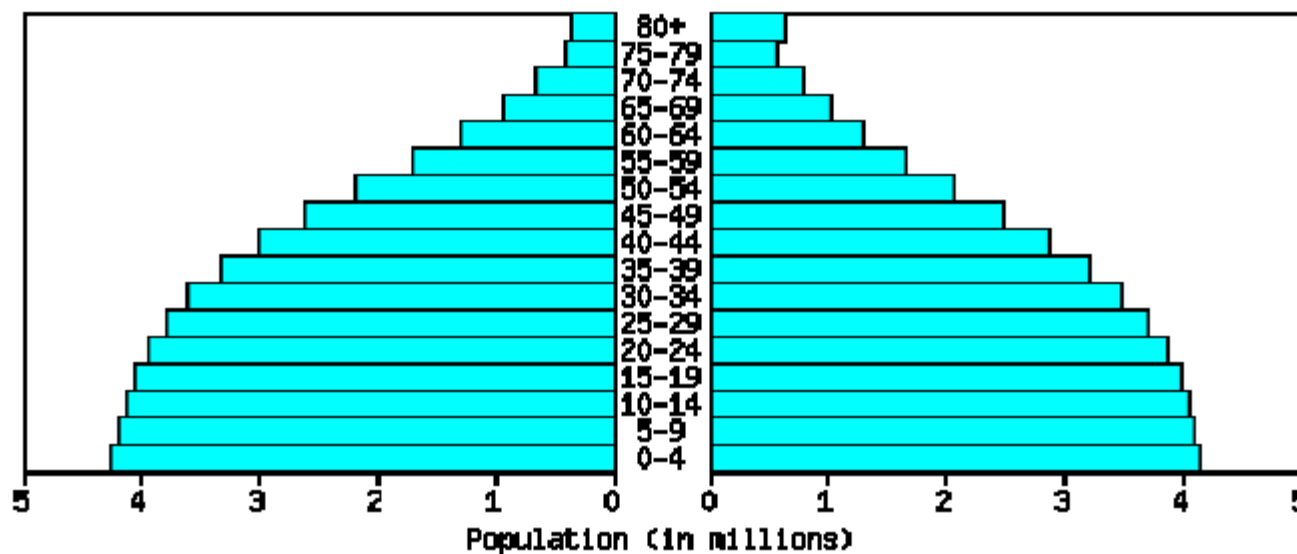


Source: U.S. Census Bureau, International Data Base.

### Tanzania: 2050

MALE

FEMALE



Source: U.S. Census Bureau, International Data Base.

**• *PROPORTION OF POPULATION 60+***

**• *1950 8%***

**• *2000 10%***

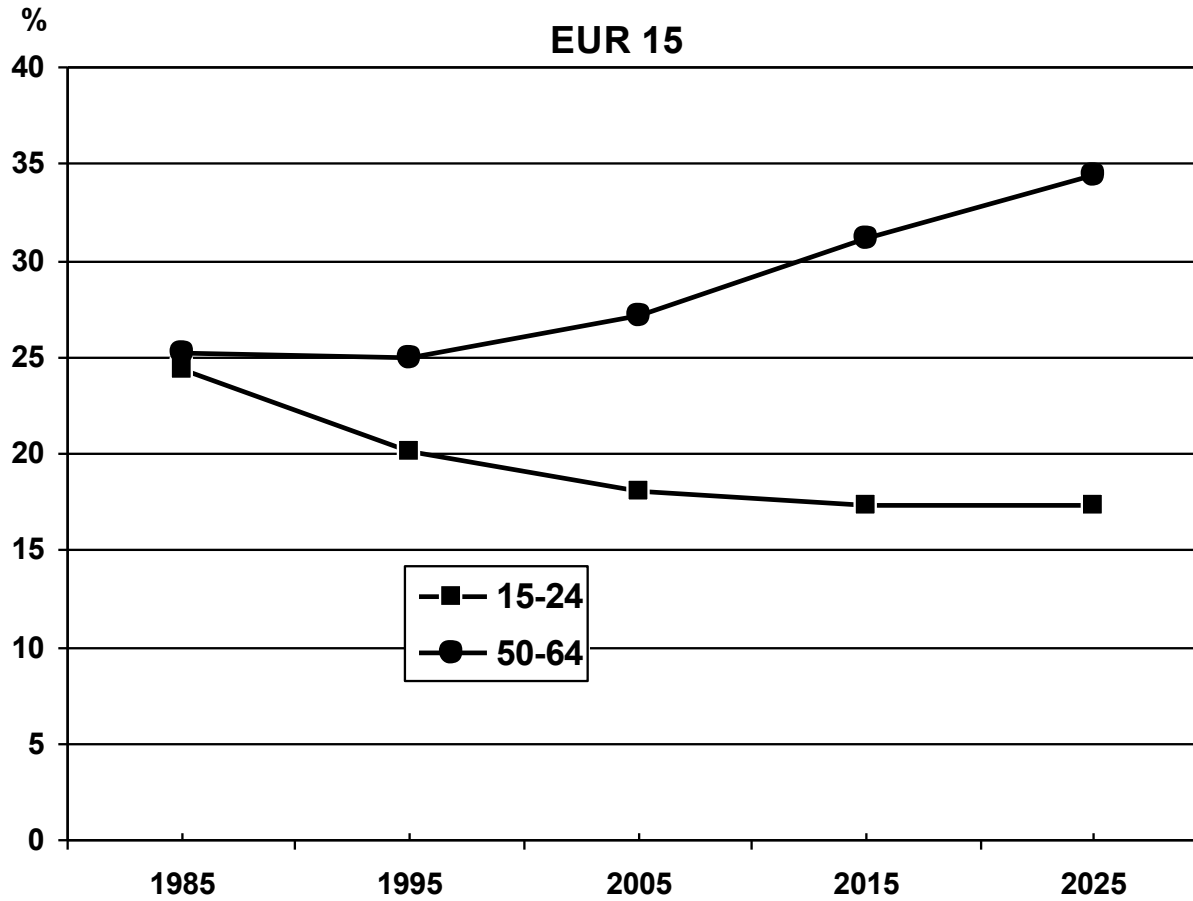
**• *2050 21%***

---

**• *2000 600 Million***

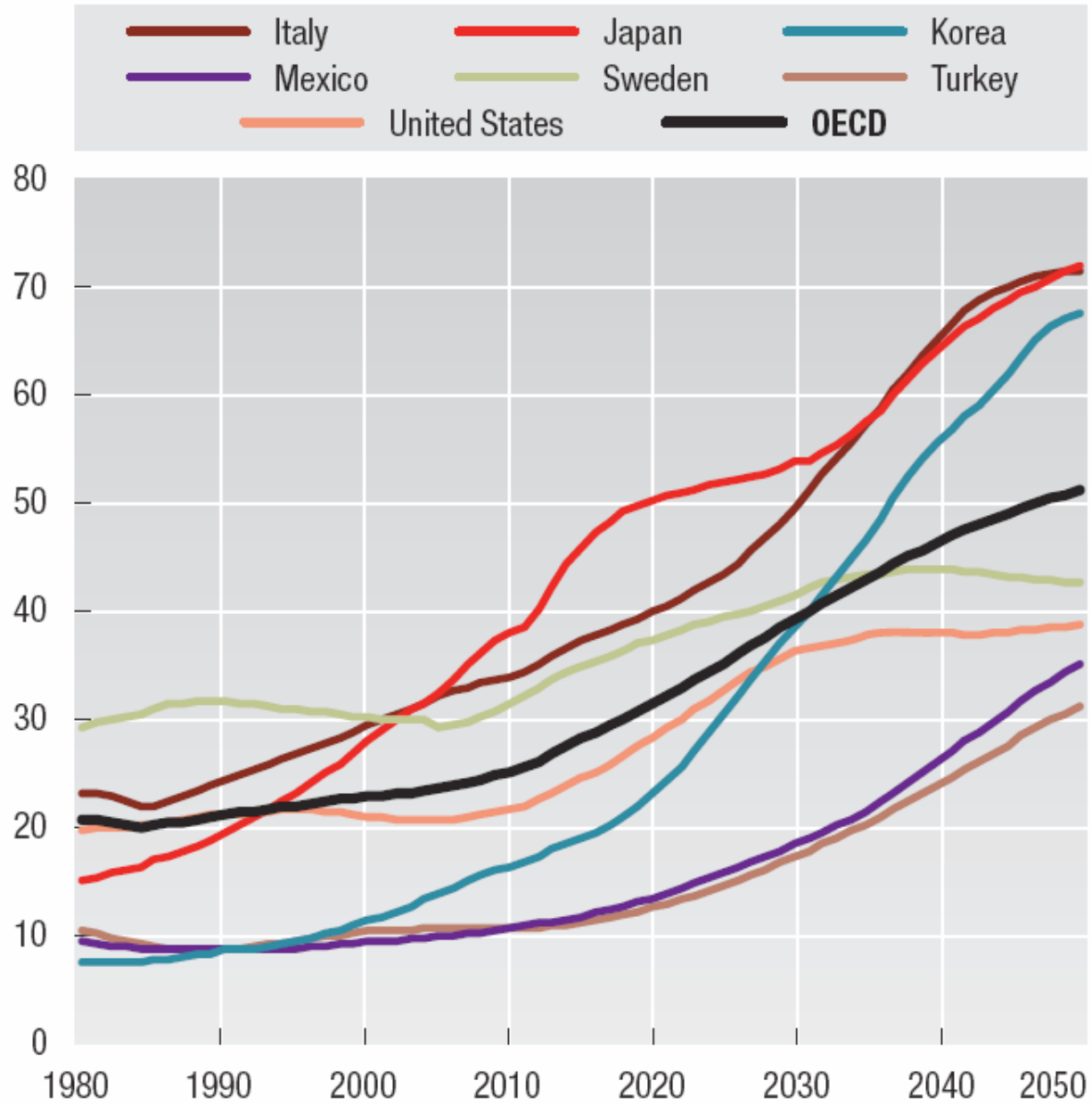
**• *2050 2,000 Million***

Share of different age groups in 1985, 1995, 2005, 2015, 2025  
15-24 and 50-64% of the 15-64 year age group in the European Union



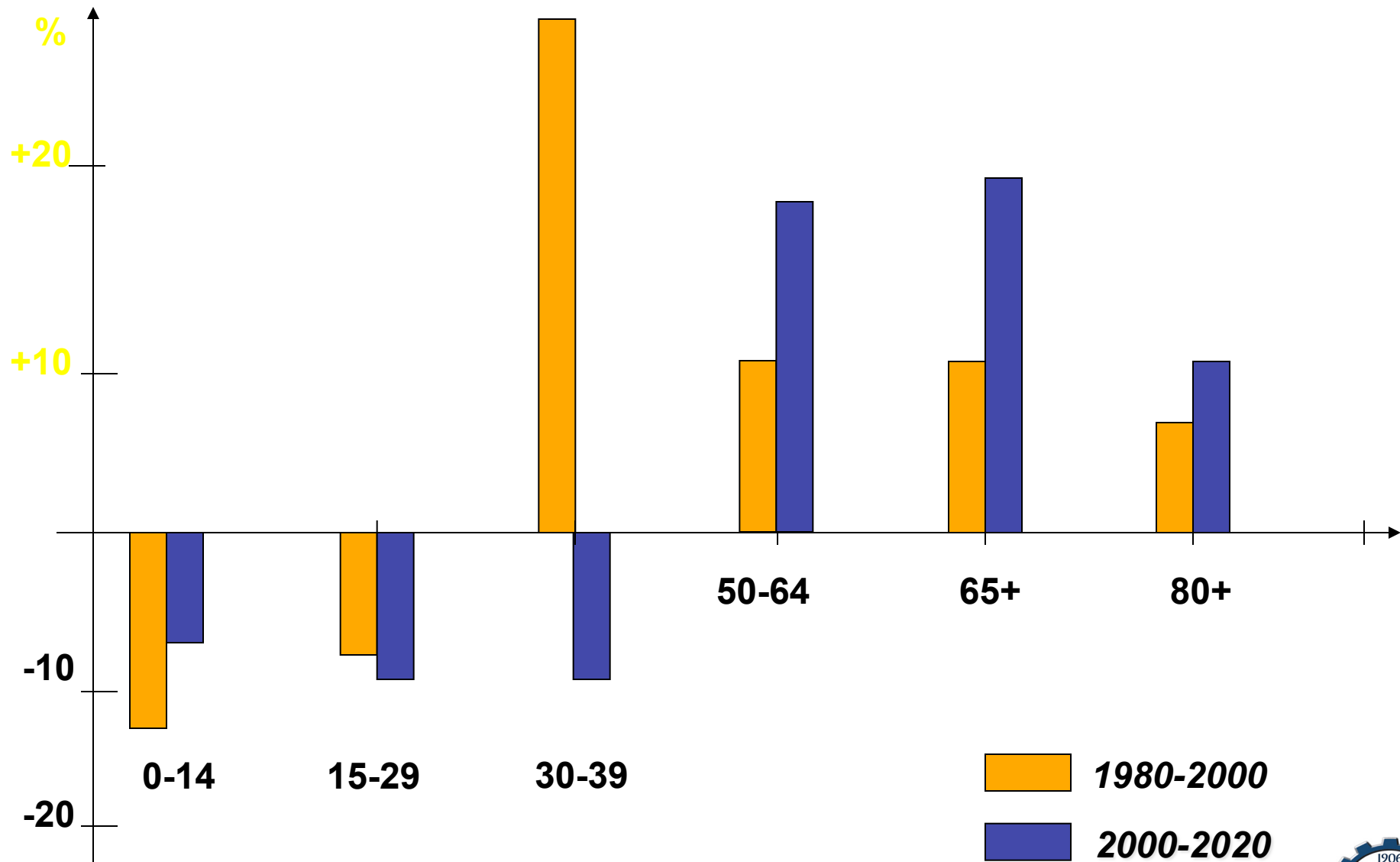
Source: Eurostat, New Cronos 1998 (CD-ROM)

### A. Population aged 65 and over as a percentage of the population aged 20-64



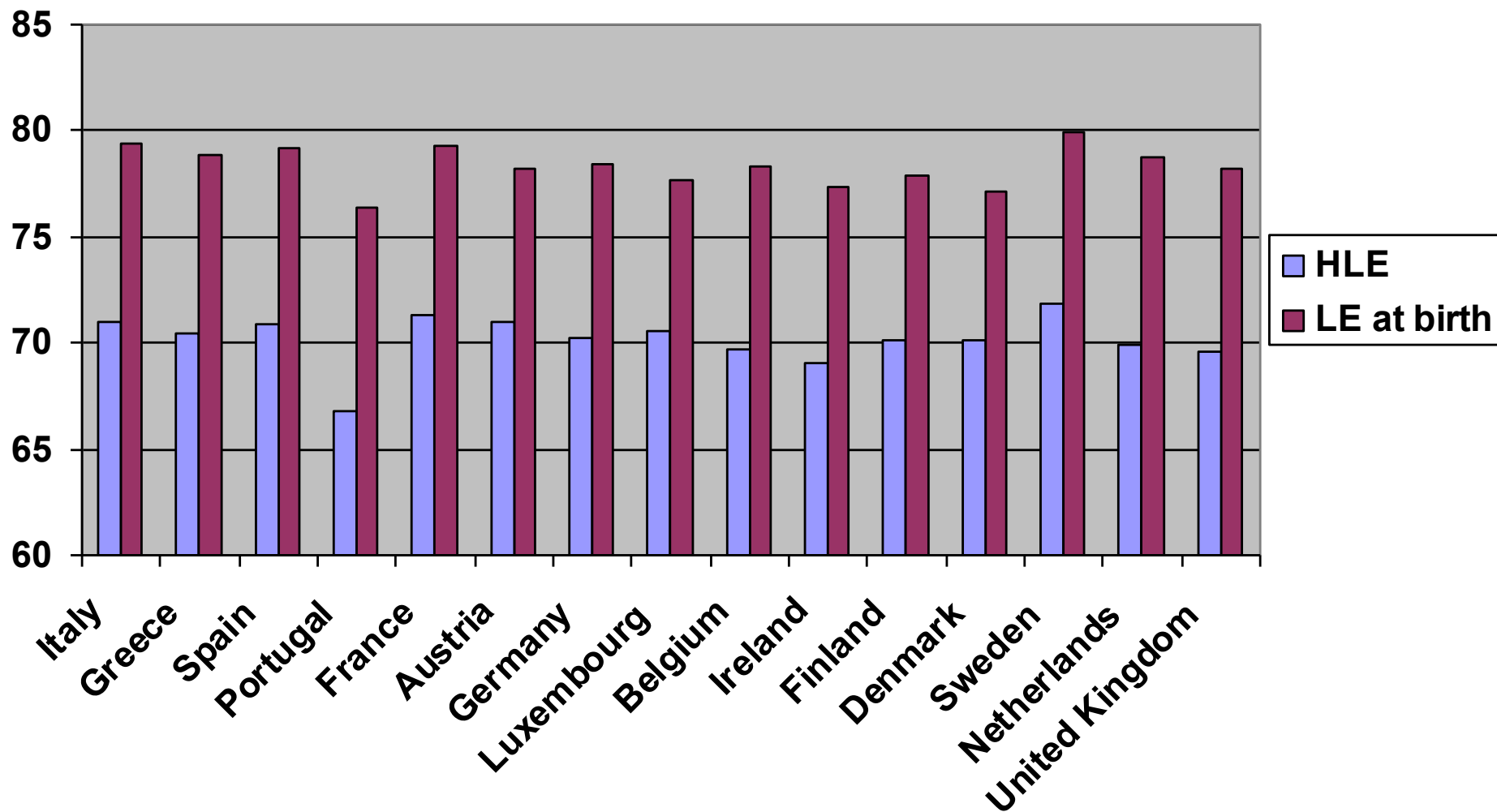
Source: OECD Demographic and Labour Force Database.

# Demographic trends by age groups EU, 1980-2020





# Health Life Expectancy (HLE) and Life Expectancy at birth



• Sources: OECD 2003 and CIA World Factbook, 2005



# *HLE - Aspettativa di vita in buona salute - UOMINI*

*1990*

*2010*

Rank (95% uncertainty intervals)	
<b>Highest male healthy life expectancy</b>	
Japan	1 (1-2)
Andorra	2 (1-10)
Kuwait	3 (2-13)
Cyprus	4 (2-15)
Israel	5 (3-16)
Greece	6 (3-17)
Switzerland	7 (4-17)
Malta	8 (3-19)
Sweden	9 (4-17)
Spain	10 (5-15)
<b>Lowest male healthy life expectancy</b>	
Burundi	178 (156-187)
Mozambique	179 (174-184)
Liberia	180 (172-185)
Malawi	181 (176-185)
Equatorial Guinea	182 (159-187)
Sierra Leone	183 (177-187)
Ethiopia	184 (179-187)
Central African Republic	185 (178-187)
Niger	186 (181-187)
Angola	187 (167-187)

Rank (95% uncertainty intervals)	
<b>Highest male healthy life expectancy</b>	
Japan	1 (1-2)
Singapore	2 (1-6)
Switzerland	3 (2-9)
Spain	4 (3-8)
Australia	5 (3-13)
Italy	6 (4-14)
Andorra	7 (2-26)
Canada	8 (3-16)
Israel	9 (3-16)
Sweden	10 (5-19)
<b>Lowest male healthy life expectancy</b>	
Côte d'Ivoire	178 (164-183)
Chad	179 (163-184)
Democratic Republic of the Congo	180 (170-183)
Malawi	181 (175-183)
Zimbabwe	182 (173-184)
Mozambique	183 (176-184)
Swaziland	184 (180-186)
Lesotho	185 (183-186)
Central African Republic	186 (182-186)
Haiti	187 (186-187)

# *HLE - Aspettativa di vita in buona salute - DONNE*

**1990**

**2010**

## Highest female healthy life expectancy

Japan	1 (1-2)
Andorra	2 (1-11)
Spain	3 (2-5)
Switzerland	4 (2-9)
France	5 (3-10)
Canada	6 (3-13)
Italy	7 (4-13)
Australia	8 (6-15)
Sweden	9 (5-19)
Cyprus	10 (4-28)

## Lowest female healthy life expectancy

Angola	178 (156-187)
Central African Republic	179 (171-185)
Rwanda	180 (172-184)
Liberia	181 (171-185)
Burundi	182 (158-187)
Malawi	183 (175-186)
Ethiopia	184 (177-186)
Mali	185 (179-186)
Afghanistan	186 (172-187)
Niger	187 (182-187)

Table 3: Country rankings for healthy life expectancy at birth in 1990

## Highest female healthy life expectancy

Japan	1 (1-1)
Spain	2 (2-6)
South Korea	3 (2-10)
Singapore	4 (2-14)
Switzerland	5 (2-14)
Andorra	6 (2-25)
Taiwan	7 (3-16)
France	8 (4-16)
Italy	9 (5-14)
Australia	10 (5-14)

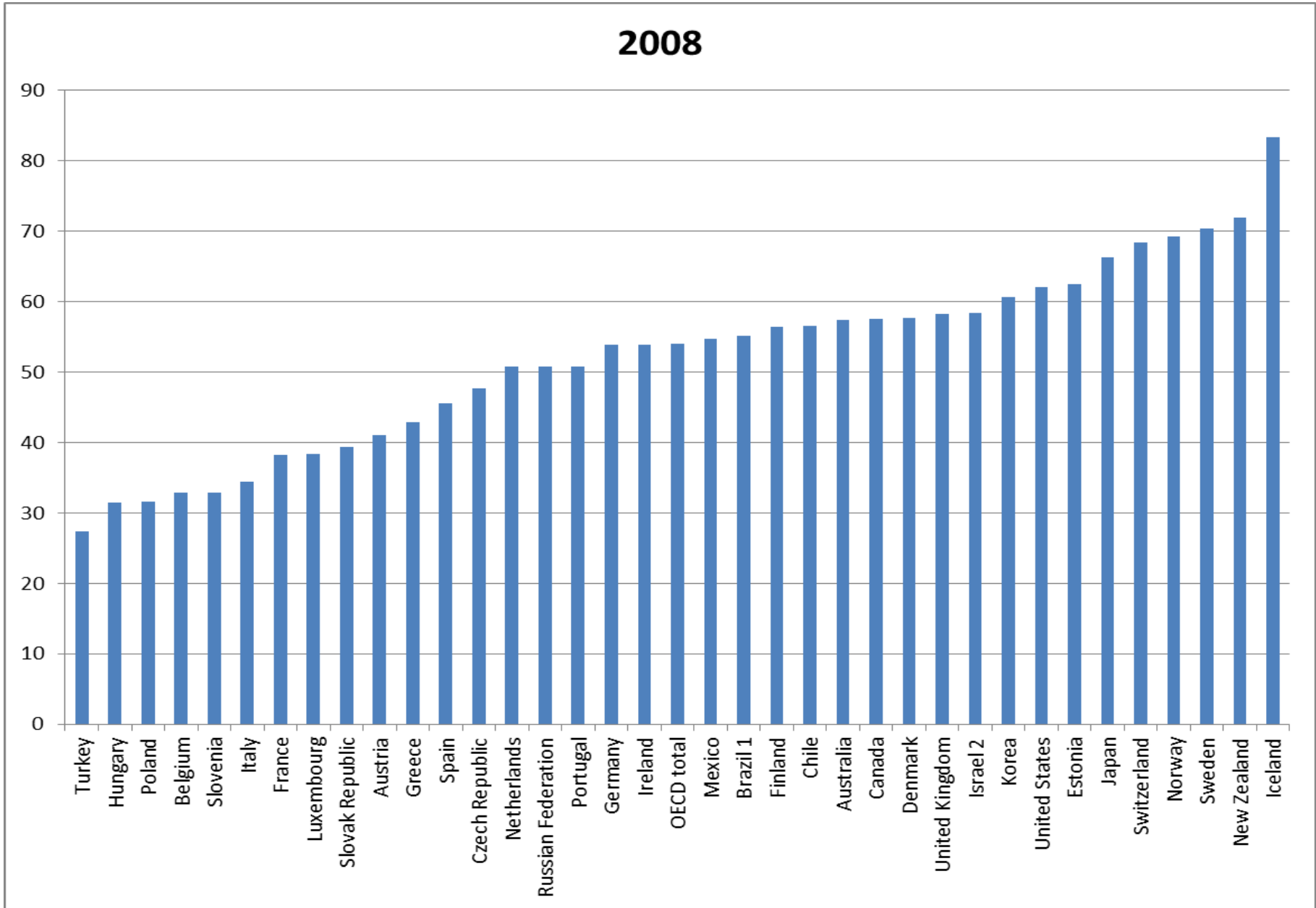
## Lowest female healthy life expectancy

Liberia	178 (168-181)
Burundi	179 (152-186)
Malawi	180 (174-183)
Afghanistan	181 (170-185)
Mozambique	182 (173-184)
Zimbabwe	183 (171-185)
Swaziland	184 (180-186)
Lesotho	185 (181-187)
Central African Republic	186 (181-187)
Haiti	187 (184-187)

Table 4: Country rankings for healthy life expectancy at birth in 2010

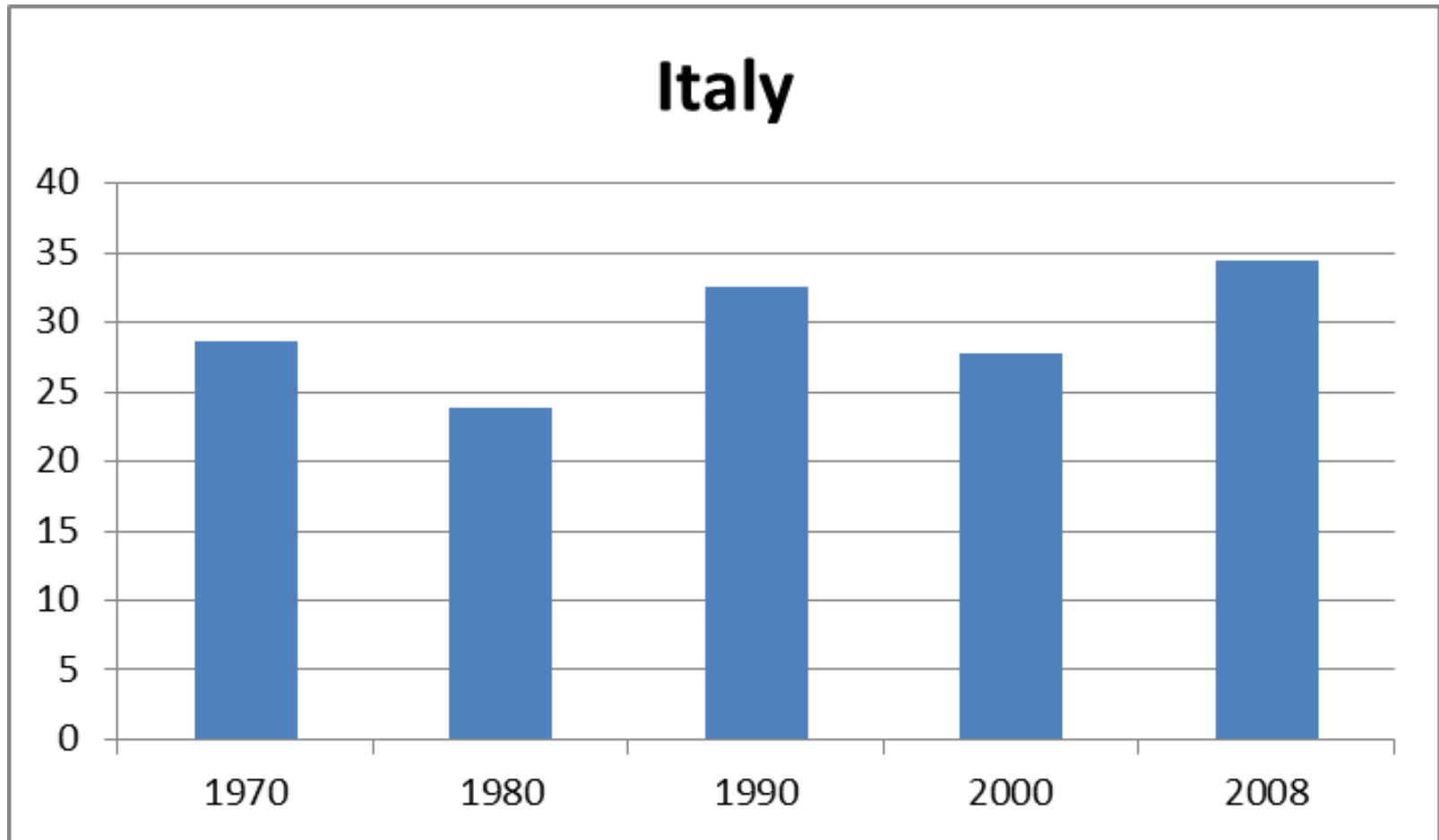
# OECD (2010) - Employment Rates by Age Group - 55-64

in *OECD Factbook 2010: Economic, Environmental and Social Statistics*



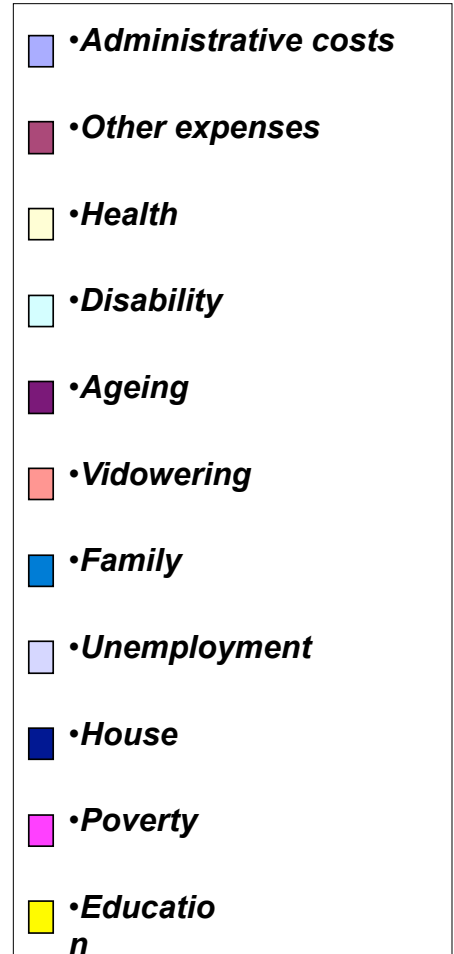
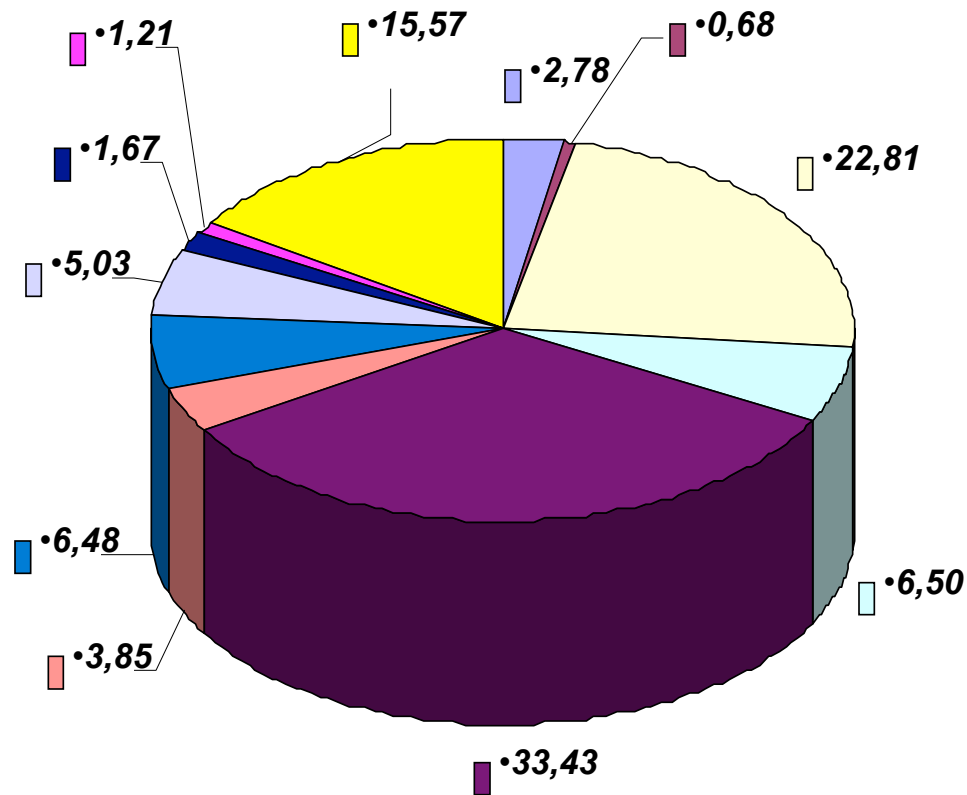
# OECD (2010) - Employment Rates by Age Group - 55-64

in *OECD Factbook 2010: Economic, Environmental and Social Statistics*



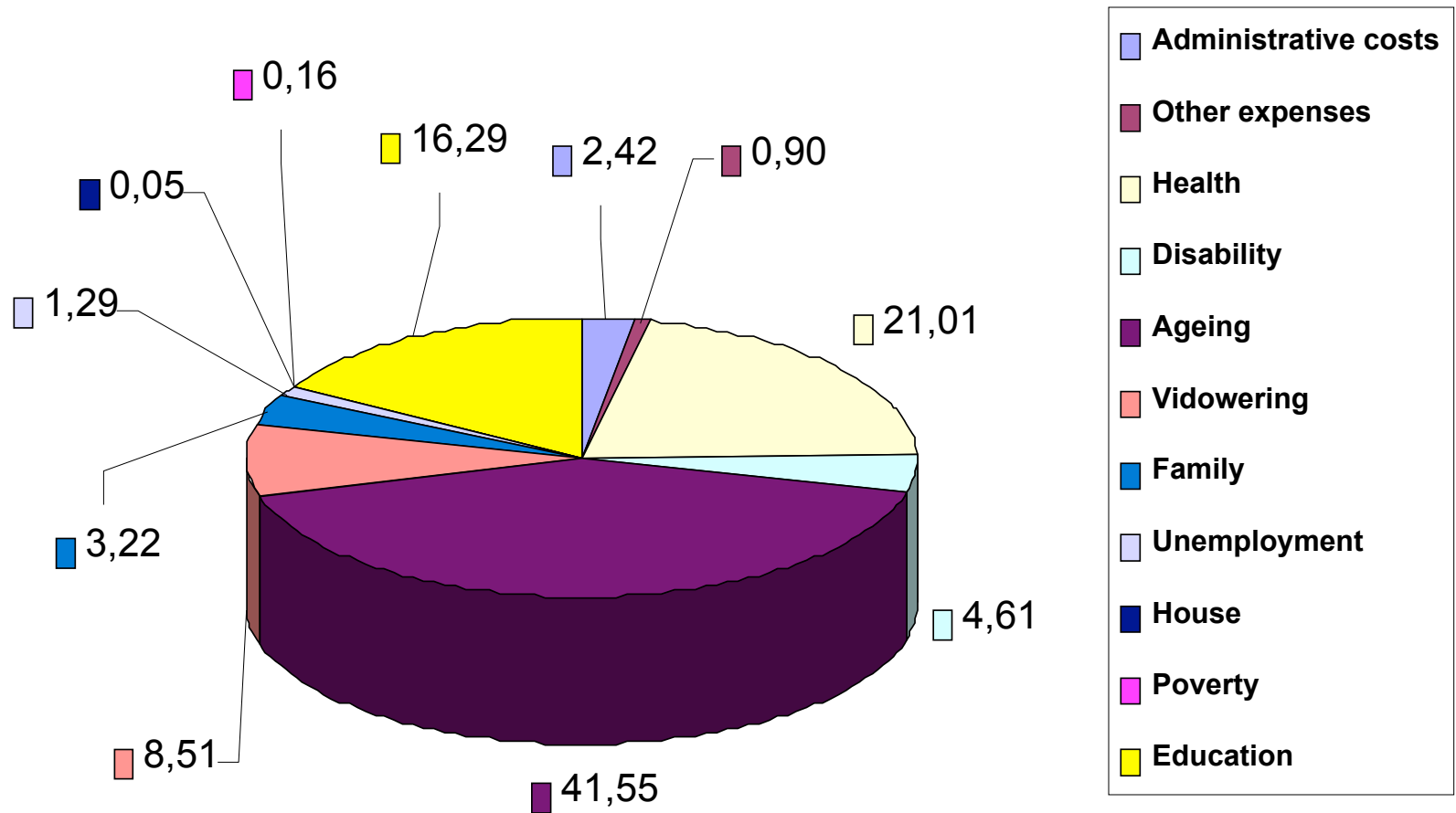
# •Expenses for social protection

•EU-15 2001



# Expenses for social protection

ITALIA 2001



# Previsioni

***Rapporto pensionati/occupati (CNEL 2000)***

***Anno 2000: 1 pensionato / 3 occupati***

***Anno 2050: 1 pensionato / 1 occupato***

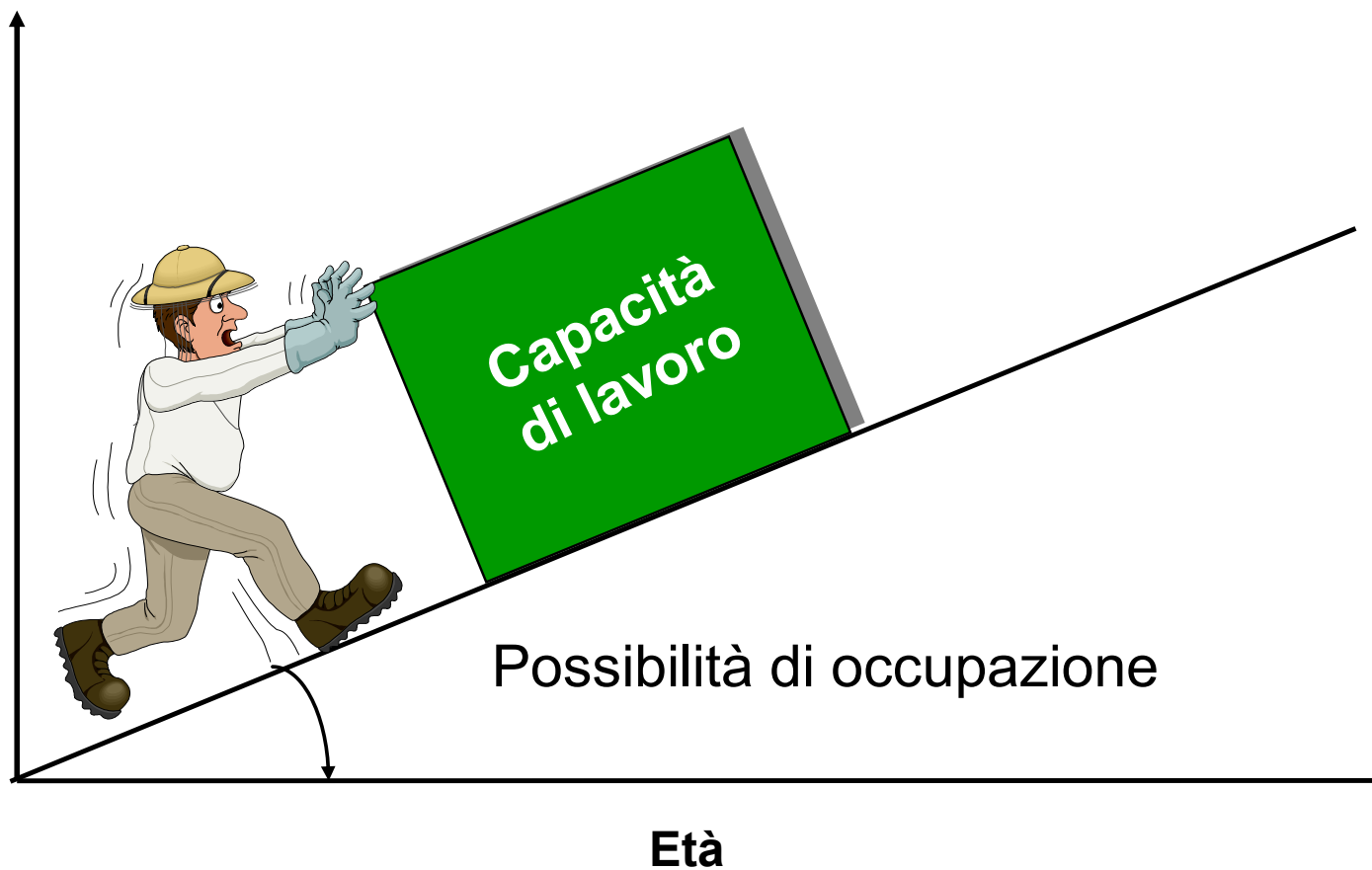
***Rapporto: >65 anni / 20-64 anni***

***Anno 2030: 39.1% (CNEL-ONU)***

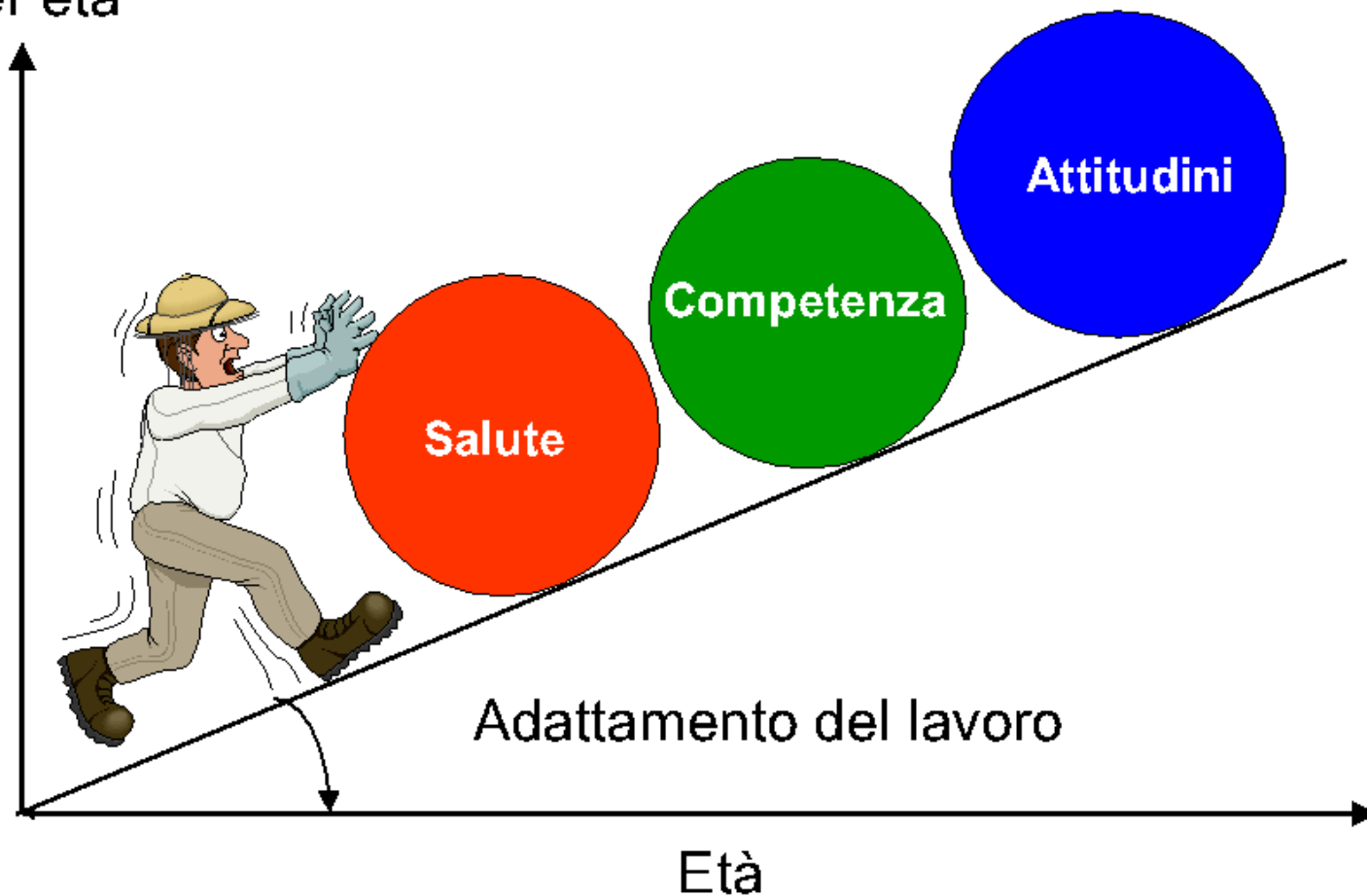
***Anno 2050: 69.7% (UE)***



Discriminazione  
per età



Discriminazione  
per età



**- RISORSE UMANE**

**CAPACITÀ DI LAVORO**

**- CONDIZIONI DI LAVORO**

**- POLITICHE DI OCCUPAZIONE**

**- POLITICHE DI PENSIONAMENTO**

**POSSIBILITÀ' DI IMPIEGO**

**- SERVIZI SOCIO-SANITARI**

**- PREVENZIONE DELLA DISCRIMINAZIONE**

**O  
C  
C  
U  
P  
A  
Z  
I  
O  
N  
E**