# Demography, Fertility and the Tax Structure

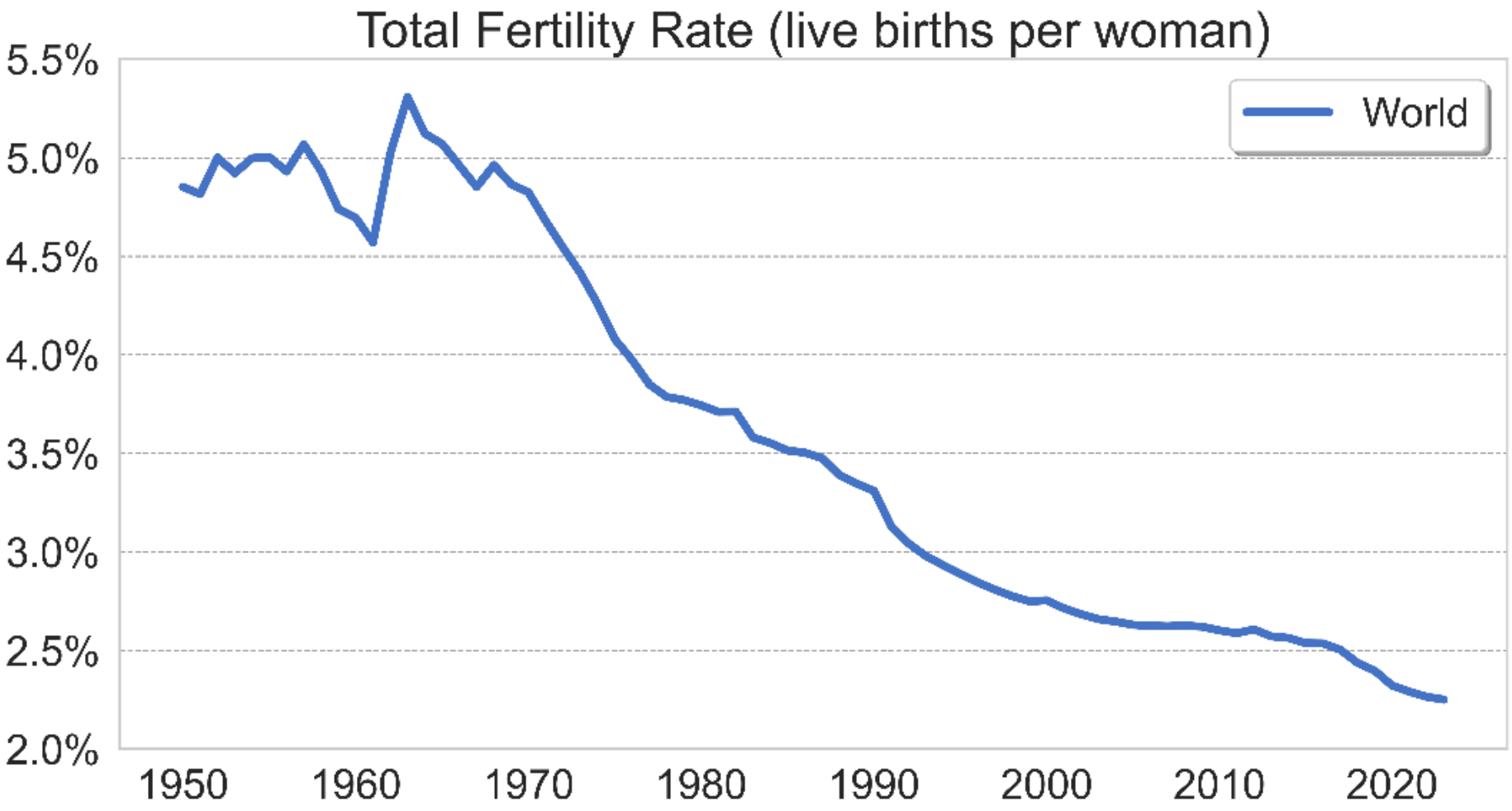
By Charles Goodhart

The fertility rate has been declining steadily ever since the baby boom in the 1950s and 1960s. It is now below the sustainable rate, of 2.1 children per woman, almost everywhere except for Africa, and even there it is expected to fall soon.

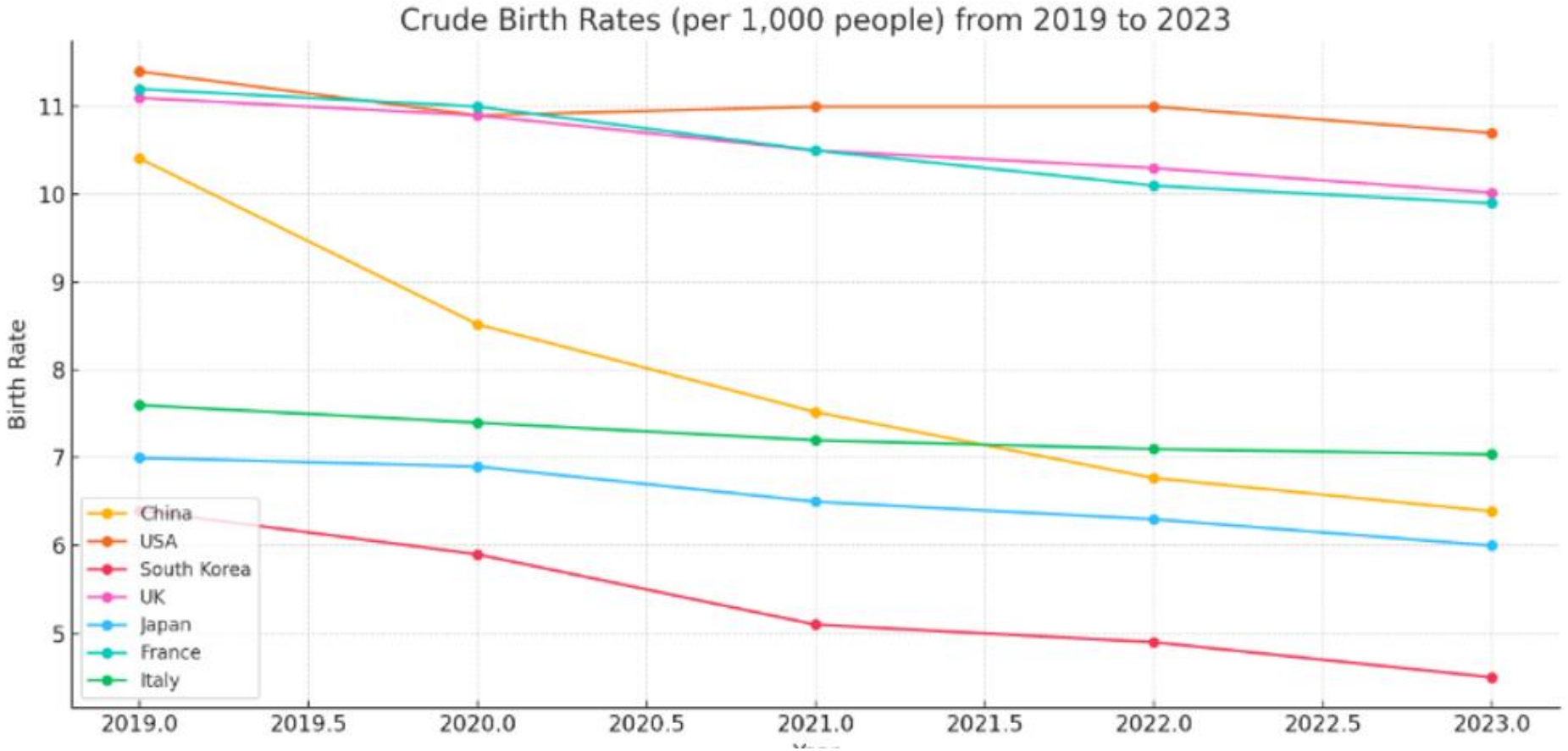
If you combine that with the continuing increase in life expectancy, the ratio of dependents, particularly the old, to those of working age is going to worsen significantly, again almost everywhere.

While having a stable lower population would be generally regarded as beneficial, e.g. for the ecology, the dynamic process of reaching that may become extremely difficult. This will be particularly problematic in Asia.

# A Continuing Decline in the Birth Rate



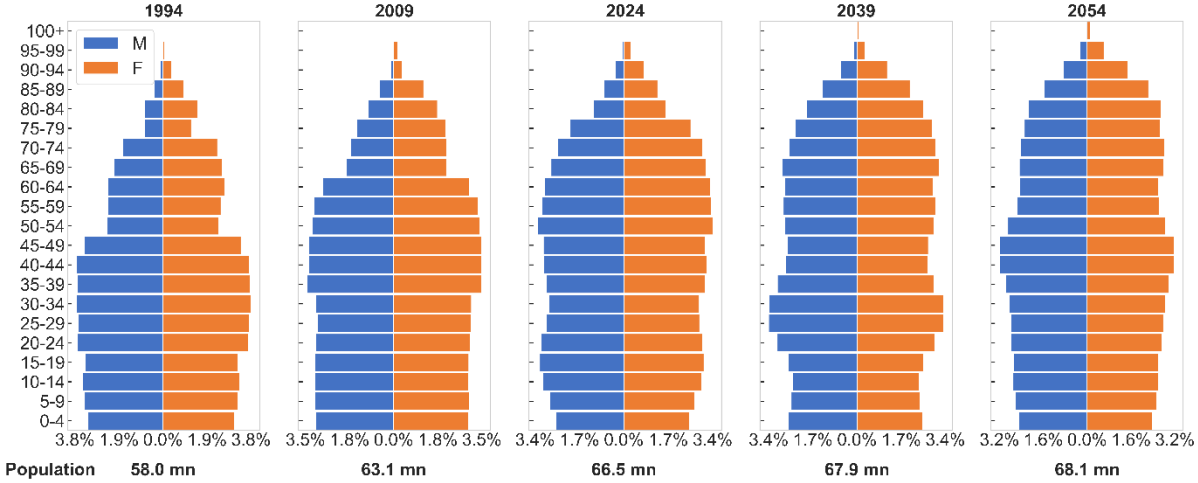

*Source*: UN Population Division – World Population Prospects 2024. Data span 1950-2023.



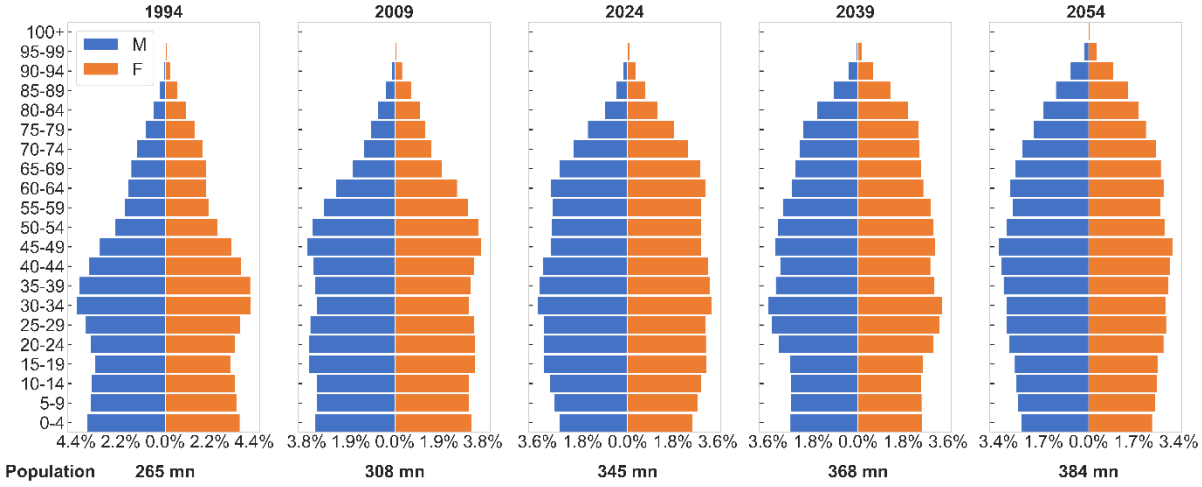

Many attempts to halt this decline. None so far succeeding in reversing this trend.

# Population Projections

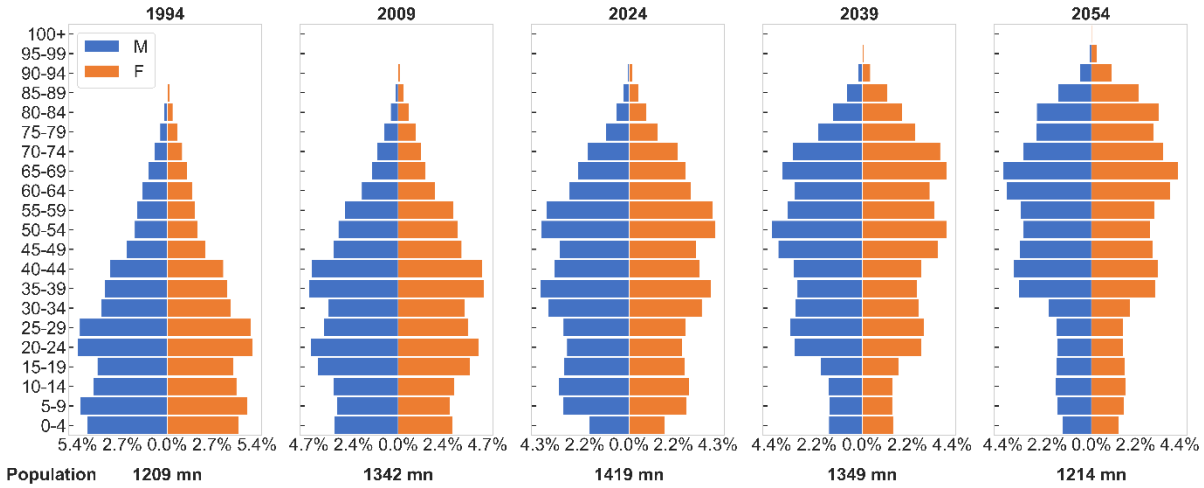
## France



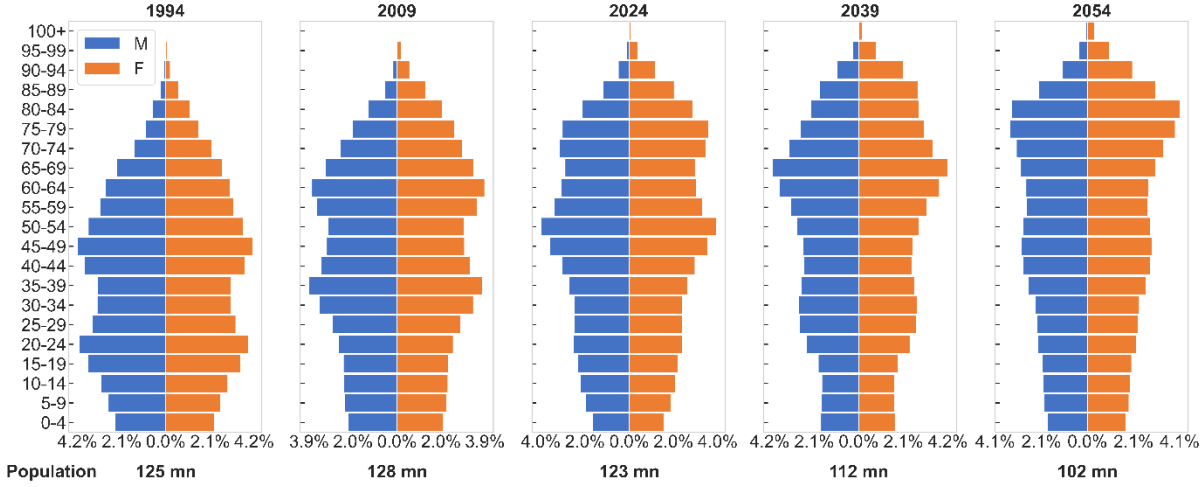

## USA



# China


1994
2009
2024
2039
2054
100+
95-99
90-94
85-89
80-84
75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
M
F
5.4% 2.7% 0.0% 2.7% 5.4%
4.7% 2.4% 0.0% 2.4% 4.7%
4.3% 2.2% 0.0% 2.2% 4.3%
4.4% 2.2% 0.0% 2.2% 4.4%
4.4% 2.2% 0.0% 2.2% 4.4%
Population
1209 mn
1342 mn
1419 mn
1349 mn
1214 mn

# Japan


1994
2009
2024
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100+
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90-94
85-89
80-84
75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
M
F
4.2% 2.1% 0.0% 2.1% 4.2%
3.9% 2.0% 0.0% 2.0% 3.9%
4.0% 2.0% 0.0% 2.0% 4.0%
4.2% 2.1% 0.0% 2.1% 4.2%
4.1% 2.1% 0.0% 2.1% 4.1%
Population
125 mn
128 mn
123 mn
112 mn
102 mn

## The Growing Ranks of the Aged

Meanwhile life expectancy has much increased.

| Country | 2010 (yrs) | 2018 (yrs) | Latest (year & value) |
|---|---|---|---|
| **Germany** | 80.5 (2010) | 81.0 (2018) | 81.1 (2023) (countryeconomy.com, kingsfund.org.uk) |
| **China** | 75.67 (2010) | 77.71 (2018) | 78.6 (2023) |
| **UK** | ~80.3 (2010 est.)* | ~81.3 (2018) | 82.06 (2025 projection)** |
| **USA** | 78.6 (2010) | 78.7 (2018) | 78.4 (2023) |

*For the UK, Wikipedia notes life expectancy stagnated around ~80–81 by 2010–2013 (en.wikipedia.org).

**Latest value is 2025 figure; 2023 was ~81.24 and 2024 ~81.92 (macrotrends.net).

# But less improved in healthy life expectancy:

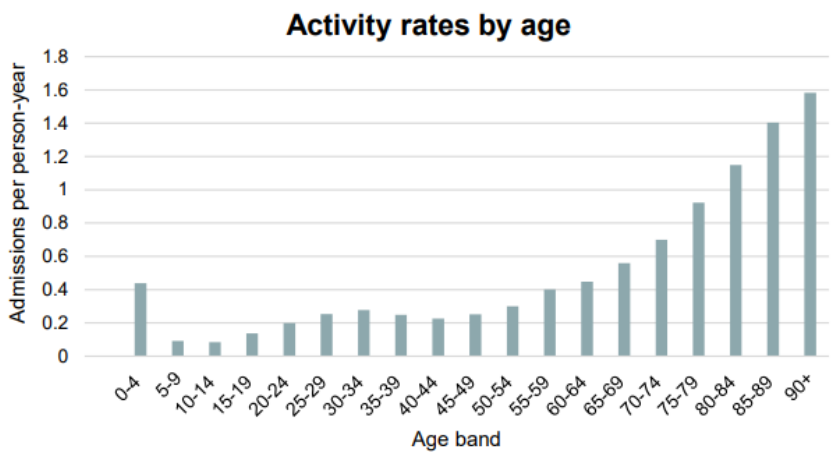
Table 2.1. Healthy life expectancy and proportion of life spent in good health, by sex, 2009-11 to 2015–17 England

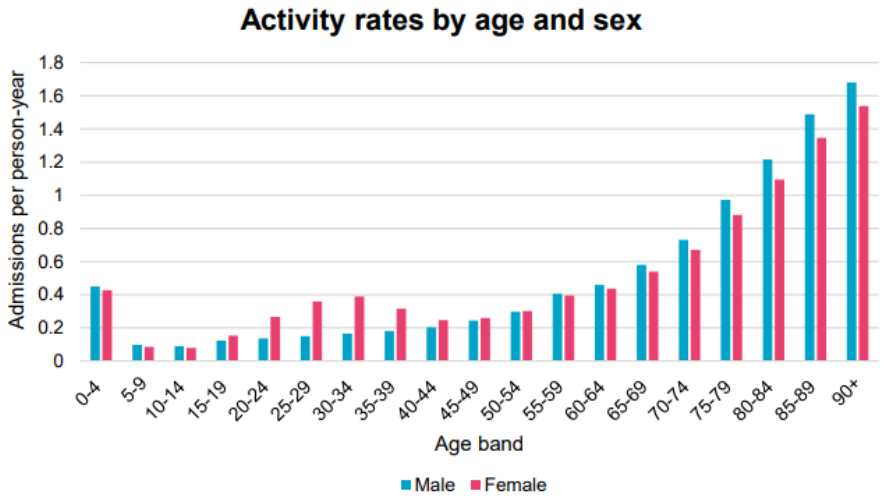
| | Healthy life expectancy (HLE) | Years in poor health | Percentage life spent in poor health | Disability-free life expectancy (DFLE) | Years with disability | Percentage life spent with disability |
|---|---|---|---|---|---|---|
| **Males** | | | | | | |
| **2009–11** | 63.0 | 15.8 | 20.0 | 63.5 | 15.3 | 19.4 |
| **2012–14** | 63.4 | 16.1 | 20.2 | 63.1 | 16.3 | 20.5 |
| **2015–17** | 63.4 | 16.2 | 20.3 | 63.1 | 16.5 | 20.7 |
| **Females** | | | | | | |
| **2009–11** | 64.0 | 18.7 | 22.6 | 63.9 | 18.8 | 22.7 |
| **2012–14** | 63.9 | 19.3 | 23.2 | 62.8 | 20.3 | 24.4 |
| **2015–17** | 63.8 | 19.4 | 23.3 | 62.2 | 21.0 | 25.2 |

**Source:** ONS (32)

# Hospital admissions rise with age:

## *Baseline inpatient activity – by age and sex*




The publicly available HES inpatient data provides a breakdown of activity by age bands; it further provides the proportion of activity in each sex group. This information is used to approximate activity by sex in each age group, taking into account the population size and relative risk of admission for each sex.

Provision of support for the old and incapacitated a growing proportion of public sector budget

There has been a clear upwards trend in healthcare expenditures and in pensions in most countries. But definitions vary and data are collected and presented in a variety of different ways. Perhaps the best and most comprehensive data that I could easily find comes from Germany.

**DE Germany**

Germany's healthcare system is primarily funded via statutory health insurance and general government funds.

- **2010**: Health expenditure was 11.6% of GDP, with ~77% publicly funded (en.wikipedia.org).
- **2017**: Total health spending (11.5% of GDP), of which **74% was public funding** (commonwealthfund.org).
- **2021**: Health expenditure rose to 13.2% of GDP; **85.5%** of that was publicly funded (oecd.org).

To convert: Germany's general government spending is ~50% of GDP. With health taking 11–13% of GDP, that translates to roughly **22–27%**—and rising—of total public spending going to healthcare.

This will be probably unsustainable because growth will be held down, and wages/inflation increased by falling working population.  N.B. *not* offset by inwards migration from Africa because of strength of right-wing populism.

Attempts to raise taxes on labour, profits or wealth self-defeating.

So potential for crises in government debt markets.  Offset by inflation?  Future of Central Bank Independence?

So what can we do?

## Possible Beneficial Measures?

### (1) Housing

Difficult to start a family without suitable housing. In most AEs, housing is too expensive for young couples.

Much of the cost of housing is in the cost of land.

Housing is inefficiently allocated because the old do not want to downsize/move.

Possible remedies:

- A land tax.
- A square meter of floor space tax per dwelling, divided by number of residents.
- *Eventually* housing may become a free good.

(2) Debt unsustainability

- A land tax. It cannot move; progressive.
- Raise retirement age.
- Reduce state pensions; and Triple Locks.

(3) Low fertility

- A no kids tax.
- Subsidise education throughout.
- Priority in Social Housing to those with children.

Could a sharply declining population reduce the likelihood of geo-political power struggles, making the future seem brighter?

Could a sharply declining population reduce the costs of energy, and AI reduce other costs sufficiently to make the benefits of children rise relative to their cost?

What might make men bear more of the burdens of child care?