



**EUPHA Pre-conference**  
**28 November 2018, Ljubljana, Slovenia**

**MEASURING THE PERFORMANCE OF  
HEALTH SYSTEMS ACROSS EUROPEAN  
AND NON-EUROPEAN COUNTRIES:  
SPECIAL CONTENT AND FEATURES OF  
OECD HEALTH DATABASE**

Gaetan Lafortune, OECD Health Division



# OECD health database allows broader comparison between European and non-European countries

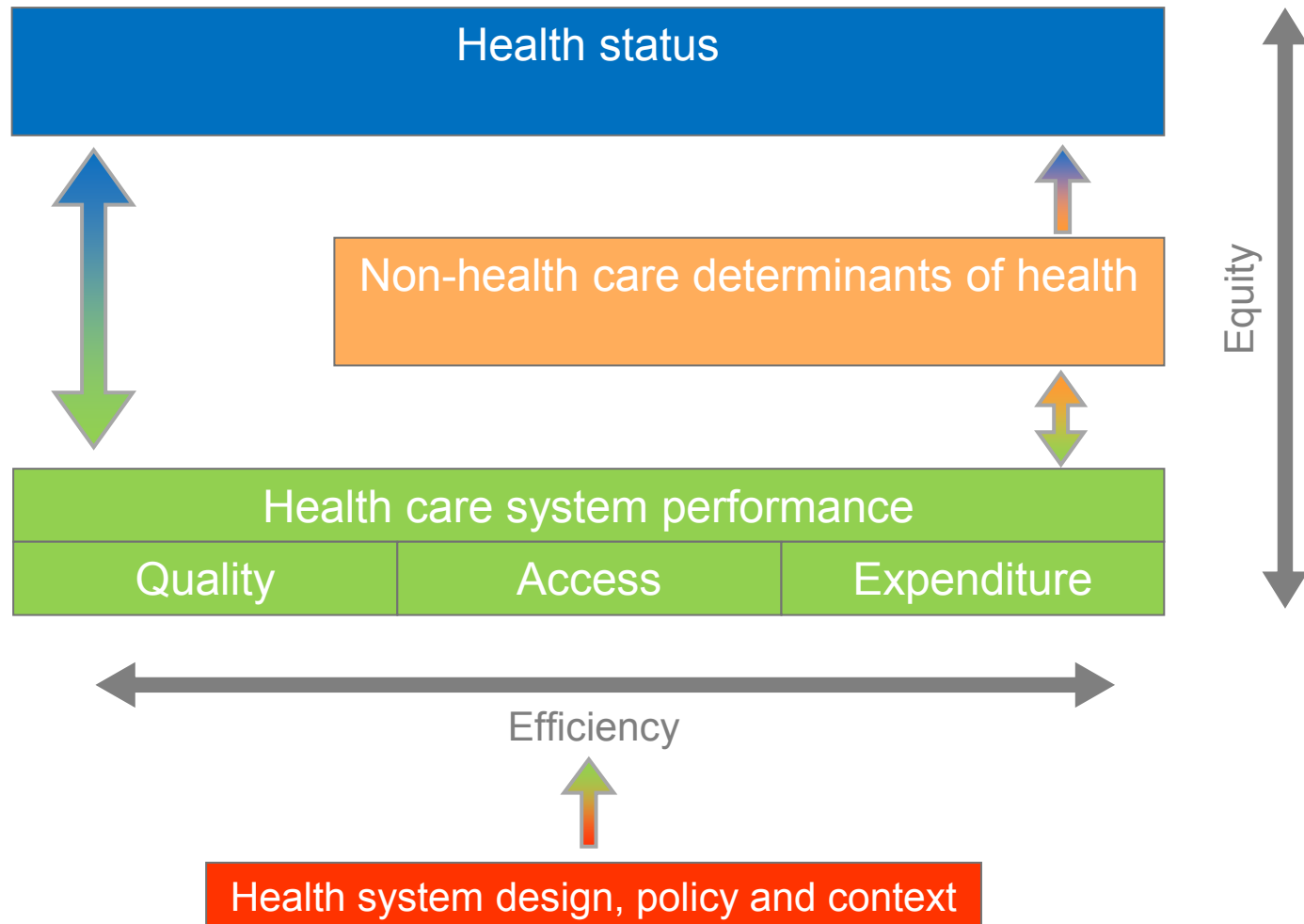
## Country coverage of OECD



A “small paradox”: Most OECD countries are in Europe (26 out of 36)... but most of the OECD population live outside Europe (over 60%)



# OECD database includes datasets on public health and health system performance assessment





# OECD database contains many of the same datasets as Eurostat and WHO-Europe databases

- Health	
+ Health expenditure and financing	
+ Health Status	
+ Non-Medical Determinants of Health	
+ Health Care Resources	
+ Health Workforce Migration	
+ Health Care Utilisation	

Joint Health Accounts  
Questionnaire



Joint Questionnaire on  
non-expenditure data



Many data come from  
Eurostat, WHO, ECDC



Some data come from  
Eurostat/EHIS, WHO





# But the OECD database also includes some unique datasets

## - Health

- + Health expenditure and financing
- + Health Status
- + Non-Medical Determinants of Health
- + Health Care Resources
- + Health Workforce Migration
- + Health Care Utilisation
- + Health Care Quality Indicators
- + Pharmaceutical Market
- + Long-Term Care Resources and Utilisation
- + Social Protection
- + Demographic References
- + Economic References

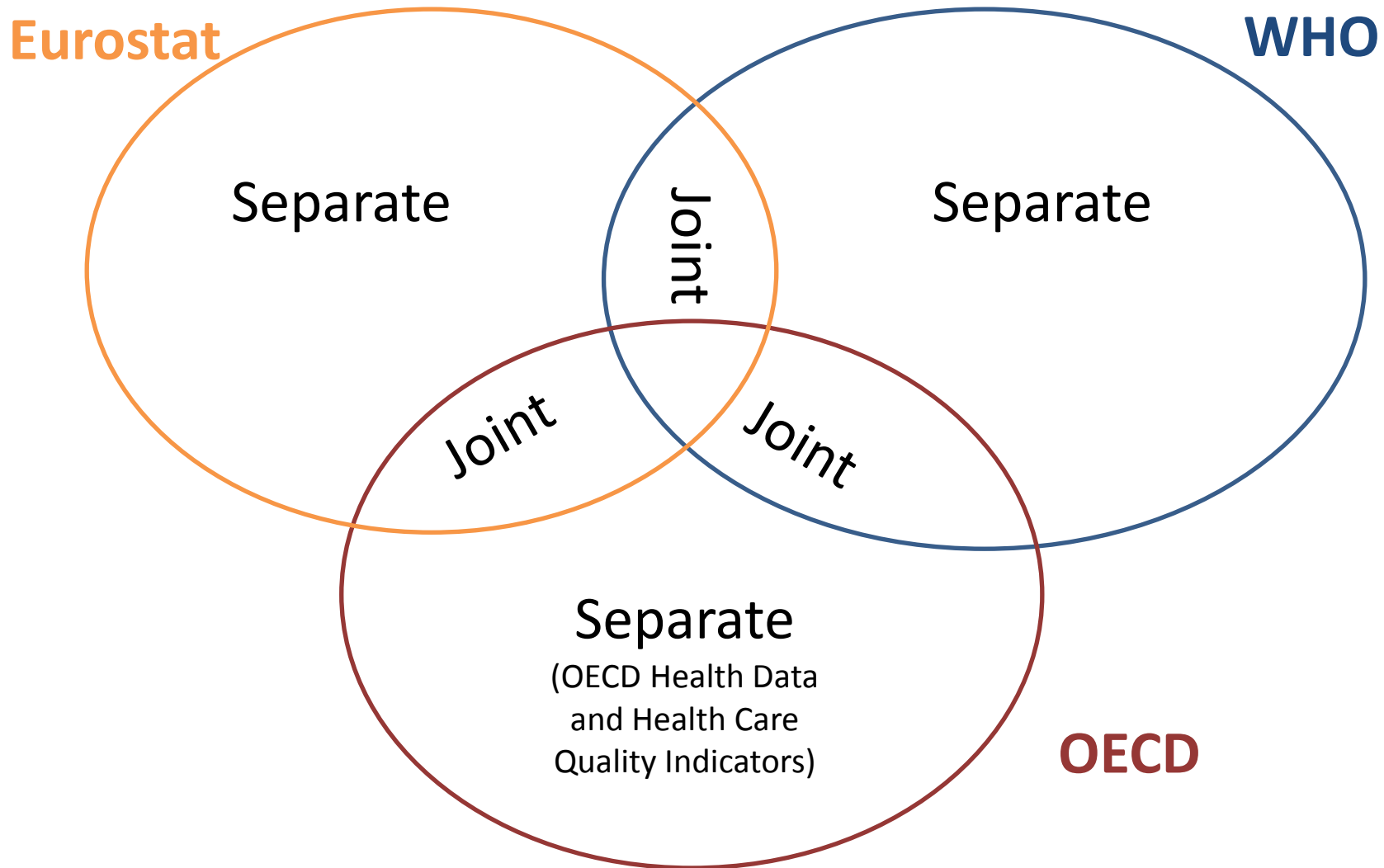
OECD HCQI  
data collection



OECD Health Data  
collection



# Overview of separate and joint data collections of OECD with Eurostat and WHO






# Why are there differences in the data across different international databases?





---



1. Data collection: When the data are collected separately by different international organisations, from different national correspondents, possibly using different sources
2. Data calculation: When the data are calculated differently:
  - i. using different population numbers to calculate crude rates
  - ii. using different population structures to calculate age-standardised rates
  - iii. using different methods to calculate averages (weighted vs unweighted)
  - iv. using different currencies to express expenditure (\$\$\$ vs €€€) or adjustments for differences in cost-of-living (PPP)
3. Data reporting -> When data updates are not reported at the same time by international organisations (timing issue)



- 

**Health Status**  **Life expectancy**

 Customise
  Export
  Draw chart
  My Queries

		Year																		
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
-- Variable	-- Measure	Country																		
Life expectancy  Females at birth	Years	Australia	82	82.4	82.6	82.6	83	83.3	83.5	83.7	83.7	83.9	84	84.2	84.3	84.3	84.4	84.5	84.6	
		Austria	81.2	81.7	81.7	81.5	82.1	82.1	82.2	82.6	83.1	83.3	83.2	83.5	83.6	83.6	83.8	84	83.7	84.1
		Belgium	81	81.2	81.2	81.1	81.9	81.9	82.3	82.6	82.6	82.6	82.8	83	83.1	83.2	83.9	83.4	84	
		Canada	81.6	81.6	81.9	82	82.2	82.3	82.6	82.7	82.9	83	83.3	83.5	83.6	83.8	83.9	83.9	-	
		Chile	80	80	80.3	80.2	80.2	80.5	80.8	80.4	81	81.1	80.9	81.4	81.3	82.4	82.5	82.7	-	
		Czech Republic	78.5	78.5	78.7	78.6	79.1	79.2	79.9	80.2	80.5	80.5	80.9	81.1	81.2	81.3	82	81.6	82.1	
		Denmark	79.2	79.3	79.4	79.8	80.2	80.5	80.7	80.6	81	81.1	81.4	81.9	82.1	82.4	82.6	82.7	82.8	
		Estonia	78.6	78.5	77.2	77.2	78	78.2	78.6	78.9	79.5	80.3	80.8	81.3	81.5	81.7	81.9	82.2	82.2	
		Finland	81.2	81.7	81.6	81.9	82.5	82.5	83.1	83.1	83.3	83.5	83.9	83.8	83.7	84.1	84.1	84.4	84.4	
		France	83	83	83	82.6	83.9	83.9	84.5	84.8	84.8	85	85.3	85.7	85.4	85.6	86	85.5	-	
Germany 		Germany	81.2	81.4	81.3	81.3	81.9	82	82.4	82.7	82.7	82.8	83	83.1	83.1	83.3	83.6	83.1	83.5	
		Greece	81.3	81.9	82	82	82.2	82.5	82.7	82.5	83	83.3	83.3	83.6	83.4	84	84.1	83.7	84	
		Hungary	76.2	76.7	76.7	76.7	77.2	77.2	77.6	77.8	78.3	78.4	78.6	78.7	(*) 78.7	79.1	79.4	79	79.7	
		Iceland	81.6	83.2	82.5	82.5	83.2	83.5	82.9	83.4	83.3	83.8	84.1	84.1	84.3	83.7	84.5	83.6	84.1	
		Ireland	79.2	79.9	80.4	80.7	81.1	81.3	81.7	82.1	82.4	82.7	83.1	83.1	83.1	83.1	83.5	83.4	83.4	

- 
- Alcohol consumption** Total, Litres/capita (aged 15 and over), 2015
- | Country                 | Alcohol consumption (Litres/capita) |
|-------------------------|-------------------------------------|
| Samoa                   | 0.2                                 |
| Vanuatu                 | 0.5                                 |
| Yemen                   | 0.8                                 |
| Guinea                  | 1.2                                 |
| Yemen Arab Rep.         | 1.5                                 |
| Yemen Arab Rep.         | 1.8                                 |
| Yemen Arab Rep.         | 2.2                                 |
| Yemen Arab Rep.         | 2.5                                 |
| Yemen Arab Rep.         | 2.8                                 |
| Yemen Arab Rep.         | 3.2                                 |
| Yemen Arab Rep.         | 3.5                                 |
| Yemen Arab Rep.         | 3.8                                 |
| Yemen Arab Rep.         | 4.2                                 |
| Yemen Arab Rep.         | 4.5                                 |
| Yemen Arab Rep.         | 4.8                                 |
| Yemen Arab Rep.         | 5.2                                 |
| Yemen Arab Rep.         | 5.5                                 |
| Yemen Arab Rep.         | 5.8                                 |
| Yemen Arab Rep.         | 6.2                                 |
| Yemen Arab Rep.         | 6.5                                 |
| Yemen Arab Rep.         | 6.8                                 |
| Yemen Arab Rep.         | 7.2                                 |
| Yemen Arab Rep.         | 7.5                                 |
| Yemen Arab Rep.         | 7.8                                 |
| Yemen Arab Rep.         | 8.2                                 |
| Yemen Arab Rep.         | 8.5                                 |
| <b>New Zealand 2015</b> | <b>8.7</b>                          |
| Yemen Arab Rep.         | 9.0                                 |
| Yemen Arab Rep.         | 9.2                                 |
| Yemen Arab Rep.         | 9.5                                 |
| Yemen Arab Rep.         | 9.8                                 |
| Yemen Arab Rep.         | 10.2                                |
| Yemen Arab Rep.         | 10.5                                |
| Yemen Arab Rep.         | 10.8                                |
| Yemen Arab Rep.         | 11.2                                |
| Yemen Arab Rep.         | 11.5                                |
| Yemen Arab Rep.         | 11.8                                |
| Yemen Arab Rep.         | 12.2                                |
| Yemen Arab Rep.         | 12.5                                |
| Yemen Arab Rep.         | 12.8                                |
| Yemen Arab Rep.         | 13.2                                |
| Yemen Arab Rep.         | 13.5                                |
| Yemen Arab Rep.         | 13.8                                |
| Yemen Arab Rep.         | 14.2                                |







# ACCESSING AND USING THE METADATA IN THE OECD DATABASE (AND OTHER DATABASES)



# How to access metadata information in the OECD Health database?

The screenshot displays the OECD Health Statistics 2018 web application. The interface includes a sidebar on the left with a tree view of themes, a main table of data, and a right-hand panel for metadata. Red arrows point to the 'Life expectancy' indicator in the sidebar, the 'Life expectancy' row in the table, and the 'Information' panel on the right.

**Health Status: Life expectancy**


Variable	Measure	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Life expectancy	Female birth	Australia	82	82.4	82.6	82.8	83	83.3	83.5	83.7	83.7	83.9	84	84.2	84.3	84.3	84.4	84.5
		Austria	81.2	81.7	81.7	81.5	82.1	82.2	82.8	83.1	83.3	83.2	83.5	83.8	83.6	83.8	84	83.7
		Belgium	81	81.2	81.2	81.1	81.9	81.9	82.3	82.6	82.6	82.8	83	(H) 83.3	83.1	83.2	83.9	83.4
		Canada	81.6	81.8	81.9	82	82.2	82.3	82.6	82.7	82.9	83	83.3	83.5	83.6	83.8	83.9	83.9
		Chile	80	80	80.3	80.2	80.2	80.5	80.8	80.4	81	81.1	80.9	81.4	81.3	82.4	82.5	82.7
		Czech Republic	78.5	78.5	78.7	78.6	79.1	79.2	79.9	80.2	80.5	80.5	80.9	81.1	81.2	81.3	82	81.6
		Denmark	79.2	79.3	79.4	79.8	80.2	80.5	80.7	80.6	81	81.1	81.4	81.9	82.1	82.4	82.8	82.7
		Estonia	76.4	76.5	77.2	77.2	78	78.2	78.6	78.9	79.5	80.3	80.8	81.3	81.5	81.7	81.9	82.2
		Finland	81.2	81.7	81.6	81.9	82.5	82.5	83.1	83.1	83.3	83.5	83.5	83.8	83.7	84.1	84.1	84.4
		France	83	83	83	82.8	83.9	83.9	84.5	84.8	84.8	85	85.3	85.7	85.4	85.6	86	85.5
		Germany	81.2	81.4	81.3	81.3	81.9	82	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1
		Greece	81.3	81.9	82	82	82.2	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5
		Hungary	76.2	76.7	76.7	76.7	77.2	77.2	77.2	77.2	77.2	77.2	77.2	77.2	77.2	77.2	77.2	77.2
		Iceland	81.6	83.2	82.5	82.5	83.2	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5
		Ireland	79.2	79.9	80.4	80.7	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1
		Israel	80.9	81.2	81.5	81.8	82.4	82.4	82.4	82.4	82.4	82.4	82.4	82.4	82.4	82.4	82.4	82.4
		Italy	82.8	83.2	83.2	82.8	83.7	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6	83.6
		Japan	84.6	84.9	85.2	85.3	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6	85.6
		Korea	79.7	80.1	80.3	80.8	81.2	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4
		Latvia	...	...	75.8	75.7	76	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3	76.3
		Lithuania	77.4	77.4	77.4	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7	77.7

**Information**

Health Status

- Source
- Contact person/organisation
- health.contact@oecd.org
- Date last input received
- Last updated on November 8, 2018.
- Data source(s) used

**Definitions, Sources and Methods per country**

Click on the  icon to access the related metadata information (*Definitions, Sources and Methods*) for each indicator

**OECD Health Statistics 2018**  
**Definitions, Sources and Methods**

**Life expectancy at birth and at various ages (40, 60, 65, and 80 years old)**

Life expectancy at birth and at ages 40, 60, 65 and 80 years old is the average number of years that a person at that age can be expected to live, assuming that age-specific mortality levels remain constant.

**Sources and Methods**

The Eurostat database (dataset Life expectancy by age and sex [demo\_mlexpec] accessed in May 2018) is the main data source for all European countries, except Turkey. Time series are also completed with national data for selected years, see details below.

**Note:** Life expectancy at birth for the total population is estimated by the OECD Secretariat for all countries, using the unweighted average of life expectancy of men and women.

**Australia**

Source: Australian Bureau of Statistics. Life Tables, States, Territories and Australia. ABS Cat. No. 3302.0.55.001. Canberra: ABS.

Methodology: From 1995 onwards, data represent 3-year averages, e.g. 1995 is actually 1993-95. Farr's method has been used to calculate life expectancies.

Further information: <http://www.abs.gov.au/>.

**Austria**

Sources:

From 1970: Eurostat database. Data extracted on May 29, 2018.

Until 1969: Statistics Austria.

Further information: [http://ec.europa.eu/eurostat/data/database?node\\_code=demo\\_mlexpec](http://ec.europa.eu/eurostat/data/database?node_code=demo_mlexpec).

**Belgium**

Source: Eurostat database. Data extracted on May 29, 2018.

Break in time series in 2011 due to a methodological change in the process of measuring population and demographic events.

Further information: [http://ec.europa.eu/eurostat/data/database?node\\_code=demo\\_mlexpec](http://ec.europa.eu/eurostat/data/database?node_code=demo_mlexpec).



# Flagging comparability and other data issues in the OECD Health database

- The database includes control codes to flag important issues related to data consistency and comparability:

B	Break in series
D	Deviation from the definition
E	Estimate/preliminary data
P	Provisional value (to be used only for t-1 data, i.e. 2017)

## Non-Medical Determinants of Health <sup>i</sup> : Body weight

Customise Export Draw chart My Queries

				2010	2011	2012	2013	2014	2015	2016	2017
→ Year				▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼	▲ ▼
→ Variable	→ Measure	→ Country									
Body weight <sup>i</sup>	Overweight population, self-reported <sup>i</sup>	% of total population	Austria	..	..	..	..	32.4	..	..	..
			Belgium	..	..	..	34.4	..	..	..	..
			Canada	33.2	32.8	33.2	33.9	32.9	(B) 33.1	33.4	..
			Chile	..	..	..	..	..	38.2	..	..
			Czech Republic	..	..	..	..	36.7	..	..	..
			Denmark	33.3	..	..	33.3	..	..	..	..
			Estonia	31.7	..	29.9	..	32.5	..	..	..
			Finland	34.1	34.1	33.5	34.2	33.8	(B) 37.3	..	..
			France	29.9	..	29.9	..	30.8	..	..	..

### Methodology:

#### Break in time series in 2015:

2015 onwards: A random sample of 38000 of the population aged 20 years or older. The average response rate is 54%.

#### 1978-2014:

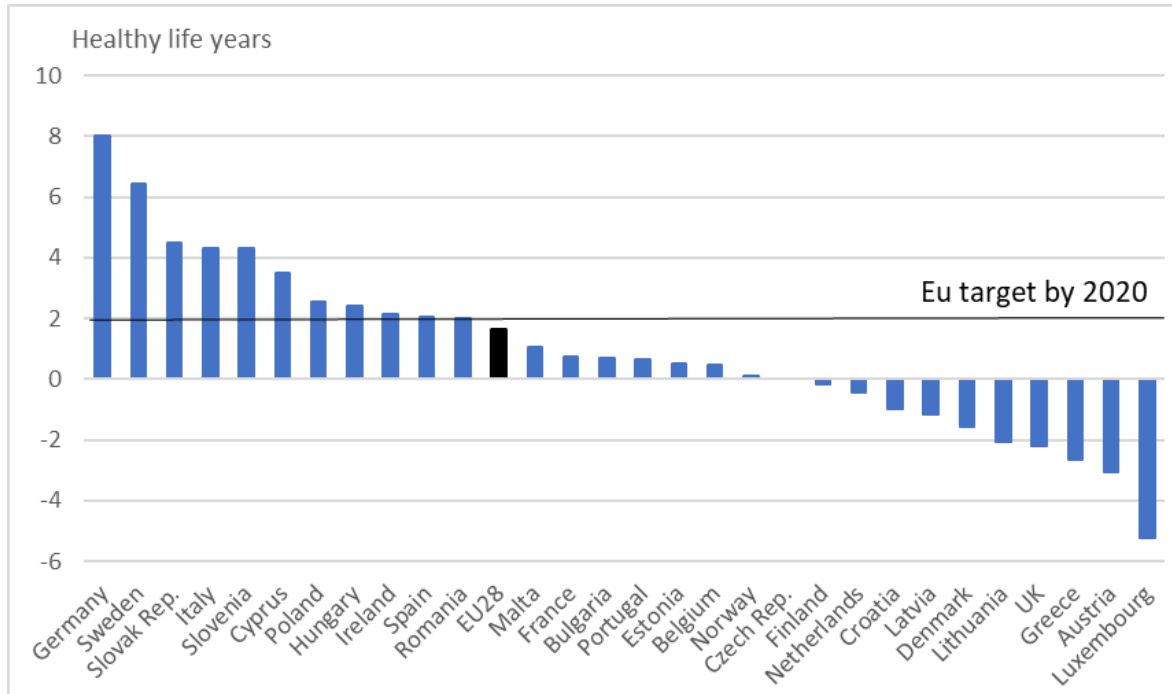
- Annual postal survey for a random sample of the population of Finnish adults aged 15-64 years old.
- The sample size is 5000. The average response rate was 72%.

- Legend:
- B Break
  - D Difference in methodology
  - E Estimated value



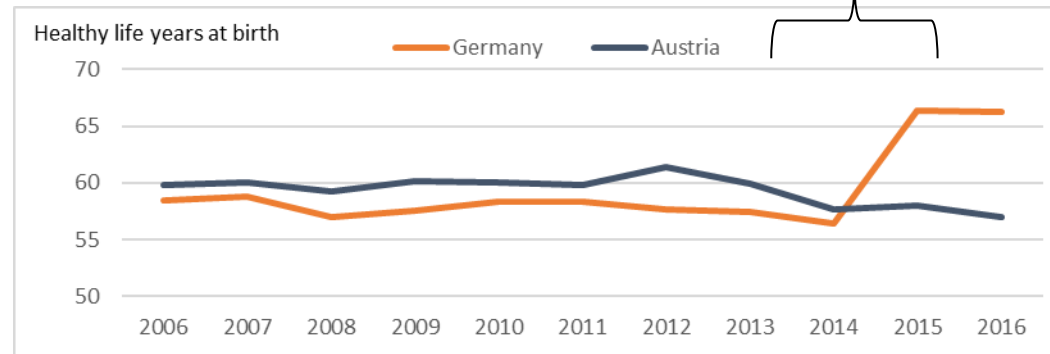
# A striking example of the need to use the metadata: Healthy life years indicator in Eurostat database

## Changes in healthy life years between 2010 and 2016



In Germany, a 10-year increase in healthy life years between 2014 and 2015... because of change in question in EU-SILC

Note: The Eurostat database indicates that there are breaks in the series in Germany (2015), Sweden (2014), Italy (2016), Luxembourg (2016), ...  
Source: Eurostat Database.





# For more information

---



Email us

[Gaetan.Lafortune@oecd.org](mailto:Gaetan.Lafortune@oecd.org)



Follow us on Twitter

[@OECD\\_social](https://twitter.com/OECD_social)



Visit our website

[www.oecd.org/health](http://www.oecd.org/health)