

GDP and beyond

Lesson 1. General introduction

International Monetary Economics, GMEP Module 2 2016-17
Part III. GDP and beyond

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Structure of lesson

- A. Introduction and general goals
- B. Limits of GDP as a welfare metric
- C. The 'economic problem' and beyond
- D. How to understand well-being?
- E. Why does well-being matter?
- F. Structure of the course

A. Introduction and general goals (1)

A broad and complex field

- The study of well-being is multidisciplinary: economists, philosophers, sociologists, psychologists, epidemiologists have all something important to contribute
- No single definition of what 'well-being' (*'what matters to people'*) is: the concept of well-being cannot be defined independently of its ingredients (*pragmatic vs representational* aspects of measurement)
- Interest in the well-being of people but also of larger communities, which depends on people's conditions and on how they are aggregated; and in the sustainability of well-being over time

A. Introduction and general goals (2)

We will focus on both measures and policies

- Measures
 - History of measurement as one of gradual encroachment and extension to new fields of people's experiences: many aspects deemed to be 'un-measurable' in the past are measured today in credible ways
 - Many of the concepts that populate policy discussions (GDP) are not 'primary facts' (out there) but 'empirical constructs' defined by the conventions through which it is measured

➤ *“Unless we understand how numbers are put together and what they mean, we run the risk of seeing problems where there are none, of missing urgent and addressable needs, of being outranged by fantasies while over-looking real horrors, of recommending policies that are fundamentally misconceived” (A. Deaton 2014)*



A. Introduction and general goals (3)

- Policies

- *“what you measure affects what you do”*

J. Stiglitz (Commission on the Measurement of Economic Performance and Social Progress,

http://www.insee.fr/fr/publications-et-services/dossiers_web/stiglitz/doc-commission/RAPPORT_anglais.pdf)



- True, *“not everything that can be counted counts, not everything that counts can be counted”* (William Cameron), but

- Statistics do have real impacts on policies when they lead people to focus on new problems or to look at old problems through new lenses
- For these impacts to materialise, we need to look beyond outcomes, to understand *drivers and consequences*

B. Limits of GDP as a welfare metric (1)

➤ What is GDP?

- GDP as ‘tip’ of the SNA iceberg
 - *“One of the great inventions of the XXth century”* (Samuleson & Nordhaus (2005); Landefeld, 2000)
- What are the SNA? Set of monetary accounts for all the institutional sectors of the economy
 - Households and NPISH (incl. unincorporated enterprises)
 - Non-financial corporations
 - Financial corporations
 - General government
 - Rest of the world
- Economic operations of these institutional sectors are linked through a sequence of accounts (double entry, i.e. resources & uses) with ‘balancing item’ of one account feeding into next) ⁶

B. Limits of GDP as a welfare metric (2)

Accounts

Production account

**Generation of income
account**

Allocation on primary income account

**Secondary distribution of
income account**

**Use of disposable income
accounts**

Capital accounts

Financial accounts

Balance sheets
(integration of stocks and
flow data)

Balancing item

Value added

***Operating surplus
and mixed income***

Net national income
(net of income received/payable to)

Disposable income

Savings

Net lending or borrowing
(changes in net worth due to)

B. Limits of GDP as a welfare metric (3)

Three approaches to measuring GDP

- **Production approach**

Gross output (gross sales less change in inventories) *less*
Intermediate inputs (IOT) = Value added for each industry

- **Income approach**

Compensation of employees *plus*
Rental income *plus*
Profits and proprietors income *plus*
Taxes on production and imports *less* Subsidies *plus*
Interest & miscellaneous payments *plus*
Depreciation = Total domestic income earned

- **Demand approach**

Consumption of final goods and services by households *plus*
Investment in plant equipment and software *plus*
Government expenditure on goods and services *plus*
Net exports of goods and services = Final sales of domestic production

B. Limits of GDP as a welfare metric (4)

➤ Values & volumes

- Monetary accounts for a single year
- To analyse *changes*, it is critical to distinguish between price and volume changes, which requires price indexes to deflate values
 - Deflators require information on ‘weights’ which, in the case of consumption expenditures, requires regular *Household Budget Surveys*
 - Outdated information on weights typically lead to overestimate inflation and underestimate GDP growth
 - Only 19 South Saharan African countries currently use weights that are less than 10-years old

B. Limits of GDP as a welfare metric (5)

➤ History of National Accounts

- XVIIth century: W. Petty measures income, population and assets in 1665 to assess England's resources to fight/finance 2nd Dutch-English war (introduces double-entry bookkeeping)
- 1920s-1930s: Theoretical discussions on 'social income'
 - Hicks' social income (production-based): "maximum amount that can be consumed while leaving capital intact"
 - Fisher's (utility-based) income: "flow of consumption that could be harvested from a nation's capital stock"
 - *In Fisher's approach, investment would not count as income in the year when it is made, but only through the future benefits generated*

B. Limits of GDP as a welfare metric (6)

➤ History of National Accounts

- Modern times: C. Clark estimates of national income & expenditures for UK in 1920s-1930s (price/volume split and sectoral breakdown)
- Industrial phase: President Roosevelt asks NBER to apply Clark's methodology to US, first US estimates in 1942; first set of modern national accounts in UK by R. Stone and J. Meade in 1941
- Different theoretical perspectives: 'production' (M. Gilbert) and 'welfare' focus (S. Kuznets). In the end, focus was on needs of war and reconstruction; links to Keynesian macro-economics
 - *"GDP is often taken as a measure of welfare, but SNA makes no claim this is so and .. several conventions in the SNA argue against the welfare interpretation of the accounts "* (# 1.75, SNA, 2008)

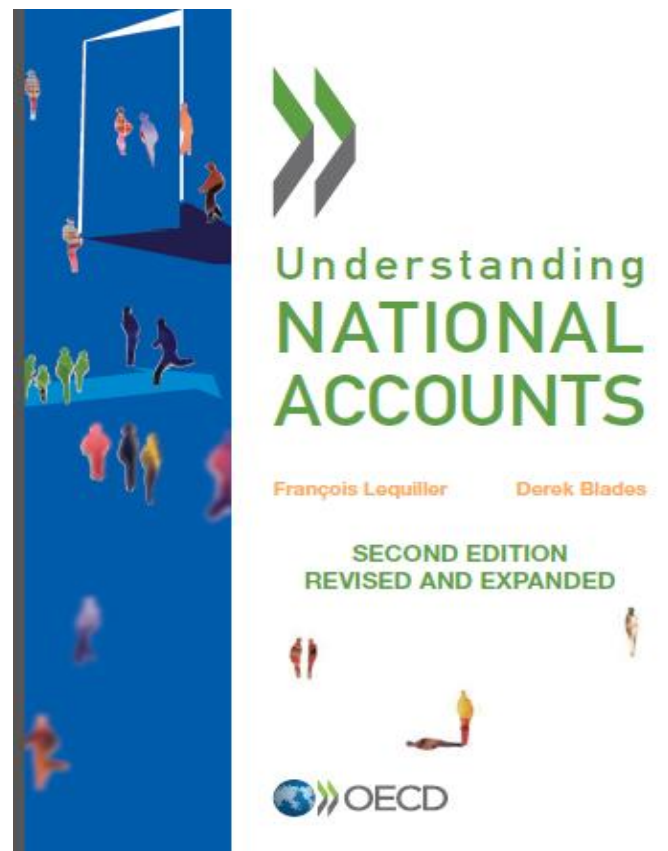


B. Limits of GDP as welfare metric (7)

➤ Why GSP is not a welfare metric?

1. Economic arguments:

- GDP measures 'market production' (plus public production based on market inputs) rather than people's well-being (neither 'economic' nor 'broader' wb)
 - Gross Domestic Production vs. Net National Income
 - Total / per capita vs distribution
 - Market & non-market production (third party cr.)
 - Disamentities, def. expenditures, restoring stocks
 - Marginal benefits vs consumer surplus
 - Current production vs sustainability



B. Limits of GDP as welfare metric (8)

➤ Why GSP is not a welfare metric?

2. Broader arguments:

- Disconnect between what's happening to the economy and people's perceptions of their conditions, leading people to lose trust in governments and institutions: *".. fossé entre l'expert et le citoyen qui est très dangereux pour la démocratie.. car le citoyen croit qu'on le trompe"* (Sarkozy 2009)
- Need for metrics that overcome the shortcomings of GDP, i.e.
 - cover aspects of quality of life that matter to people, beyond income;
 - take into account distribution across population groups;
 - Address sustainability of well-being (i.e. 'later') and impacts 'elsewhere' (footprints)

➤ *GDP is a means to an end, not the ultimate goal of policy: by-product of policies whose goals were lower poverty & inequality, reduction of economic insecurity, rather than a goal in itself*

B. Limits of GDP as welfare metric (9)

➤ What are the problems in measuring GDP?

- Many ‘technical problems’ continue to keep busy the national accounts community
 - How to value government services (education, health) that are not exchanged through markets? (e.g. what about productivity gains?)
 - How to account for increase in the quality of the products brought to the market? (e.g. are we understating productivity gains?)
 - How to value new (immaterial) products?
 - What is the value added of financial corporations (is ‘betting’ a production activity?)

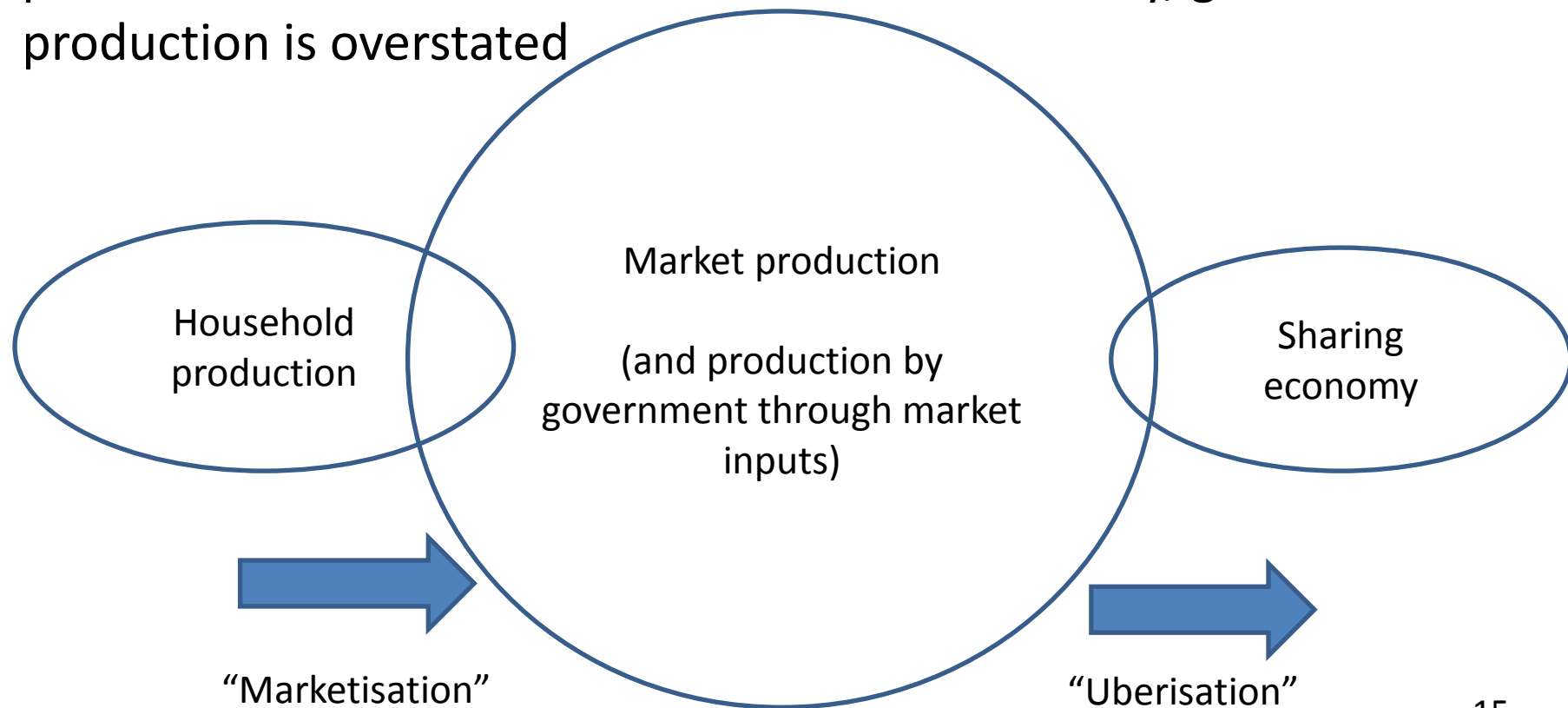
... and more

- Fundamental issue: what is counted as ‘production’?

B. Limits of GDP as welfare metric (10)

➤ Conceptual problems

- Measuring GDP requires choosing what to include and exclude in economic production, i.e. setting the ‘production boundary’: when production moves from outside to inside boundary, growth in production is overstated



B. Limits of GDP as welfare metric (11)

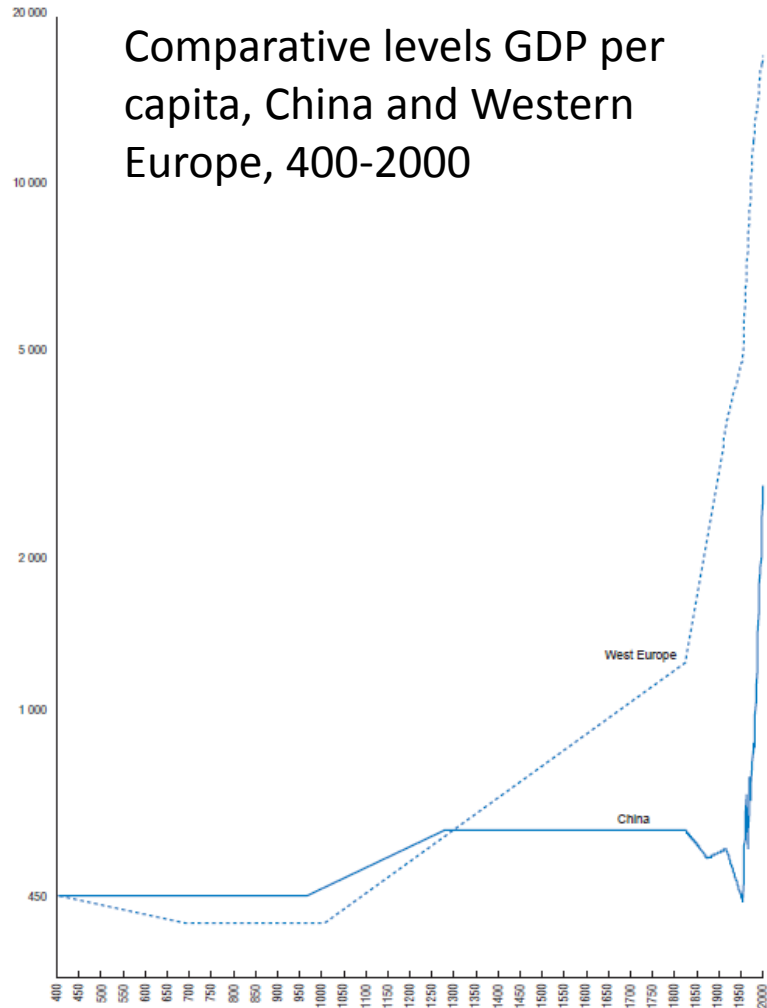
➤ Can we measure non-market production? Yes

- Different methodologies exist: most common is *input method* (e.g. hours of work provided, *replacement-cost* valuation).
- Dealt through *Satellite Accounts*

How large is non-market production? Big

- *Household production of services for own use* (e.g. caring, cooking) accounts for up to 1/3 of total GDP, larger one in countries where 'marketisation' is less advanced
- *Economic production by volunteers*: around 2% of GDP across OECD, close to 5% in Australia and New Zealand

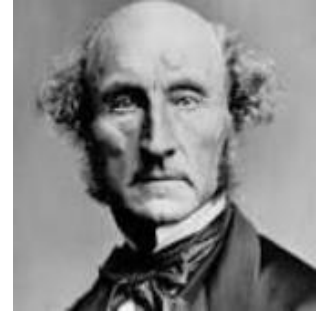
C. The 'economic problem' and beyond (1)



- The importance of the 'economic problem' in human development
- GDP growth in western world since 1800s as one the defining moment in human history, which accounts for much of our own experience of 'modernisation'
- What determines the level (and distribution) of output produced is the fundamental problems of 'classical' political economy
- But this does not imply that concerns about broader notion of well-being have been absent from political economy

C. The 'economic problem' and beyond (2)

➤ The importance of looking beyond



Example 1. J. Stuart Mill, "The stationary state" (1848)

- Context: industrial revolution, golden-age of economic progress
- *"The increase of wealth is not boundless .. at the end of progressive state lies the stationary state ... all progress in wealth is but a postponement of this"*
- *"I am not charmed with the idea;.. That the trampling, crushing, elbowing treading on each other's heels are the most desirable lot of human kind"*
- *"the best state of human nature is that in which, while no one is poor, no one desires to be richer, nor fear to be pushed back by efforts of others to push themselves forward"*

C. The 'economic problem' and beyond (3)

➤ The importance of looking beyond



Example 2. J.M. Keynes, “Economic Possibilities of our Grand Children” (1935)

- Context of world depression, ‘*bad attack of economic pessimism*’
- Beyond “*temporary maladjustment.. in long run mankind is solving its economic problem*”; 100 from now standard of living will be 4 and 8 times as high as today (very close to realisation!!)
- Conclusion: “*economic problems is not the permanent problem of human race*”, which is rather “*how to use its freedom from pressing economic cares, how to occupy leisure, how to live wisely, agreeably and well*”; upon reaching this state, “*We shall once more value ends above means and prefer the good to the useful*”
- [Second prediction wide off the mark: working week of 15 hours, i.e. 3 hour per day. Why was it wrong?

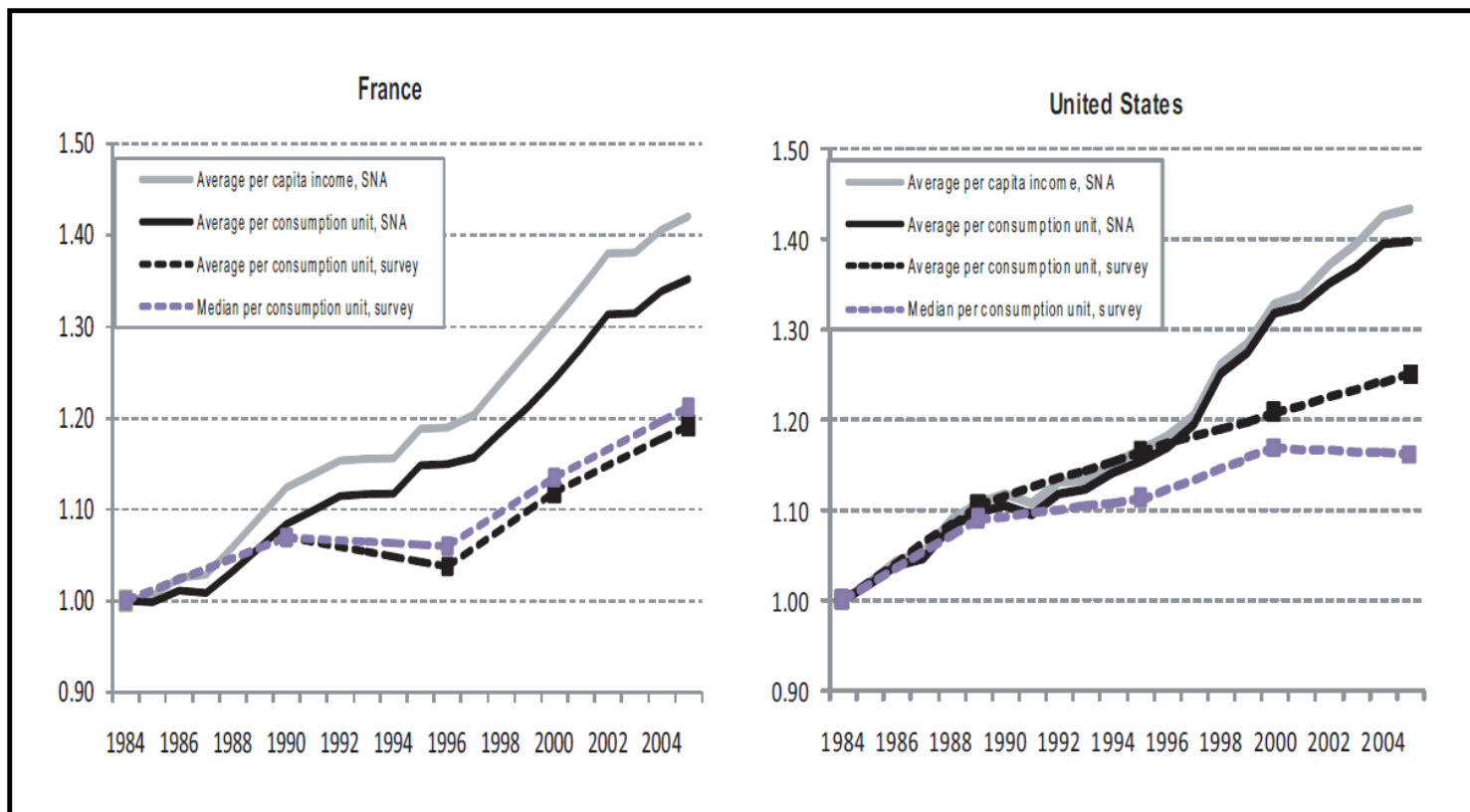
D. How to understand well-being? (1)

- What does it mean to use a ‘well-being’ lens?
 1. *‘It is all about **people!**’*: SSF’s call for reorienting statistical system towards people and households, rather than focusing on economic system or GDP
 2. Focus of **outcomes** (e.g. health conditions) rather than inputs (e.g. health-care spending) and outputs (e.g. nr. of surgical operations): different combinations of inputs and outputs can be equally effective in achieving good outcomes
 3. Focus on people’s **material conditions** (i.e. economic well-being) and their **quality of life** (their ‘doings and beings’), with no hierarchy between them
 4. For all relevant outcomes, look at both **averages** and **inequalities**: the average person is not the typical person (that in the middle of the distribution), and the well-being outcomes for the typical person can differ systematically from average

D. How to understand well-being? (2)

Example: Economic well-being -- US average and median household

Trends in different measures of household disposable income



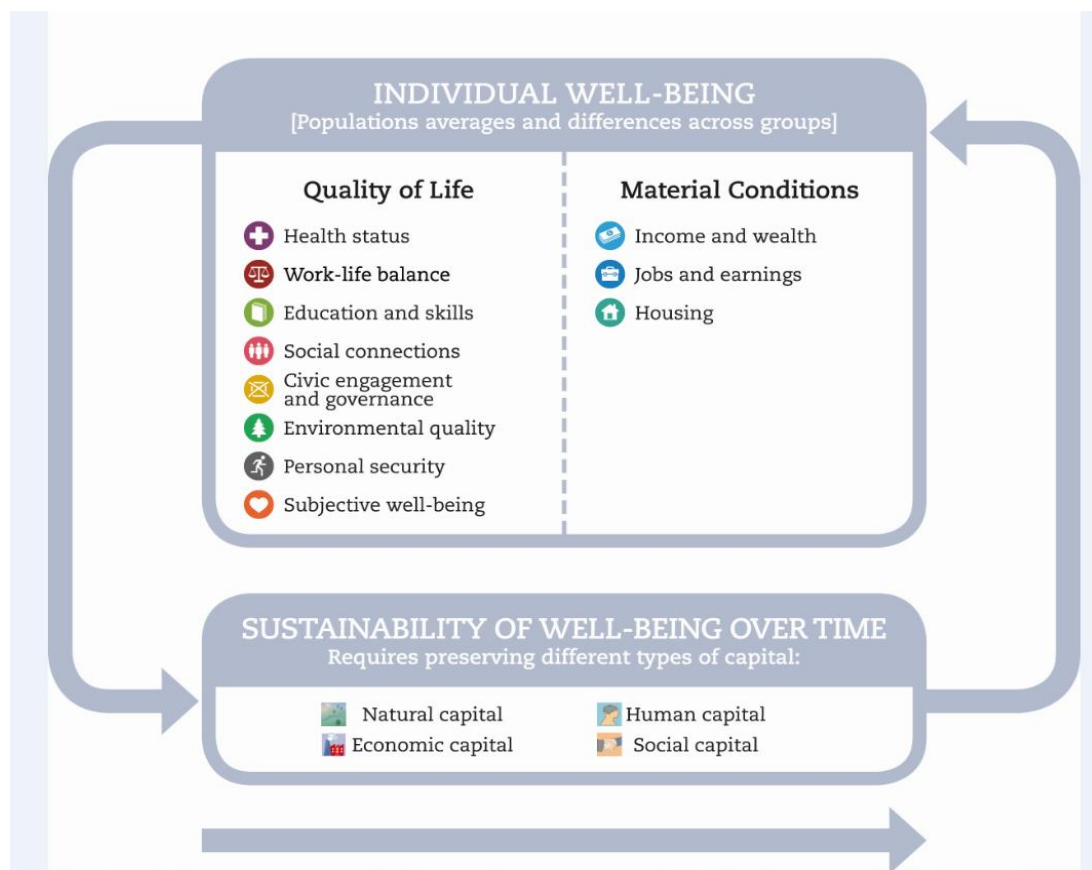
Source: Computations based on OECD SNA and income distribution data.

D. How to understand well-being? (3)

- What does it mean to use a ‘well-being’ lens?
- 5. Consider both **objective** and **subjective** aspects of people’s life, i.e. those observed by others but also those where only the person can report on them. Subjective aspects go beyond people’s self-reports of their own objective conditions (e.g. income)
- 6. Consider well-being outcomes both **today** and **tomorrow**. Policies that could boost people’s well-being today may do so in ways that will weight negatively on well-being in the future

D. How to understand well-being? (4)

➤ The OECD well-being framework



➤ *We will refer to elements of this framework throughout the course*



Source: OECD (2011) How's Life? Measuring Well-Being, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264121164-en>

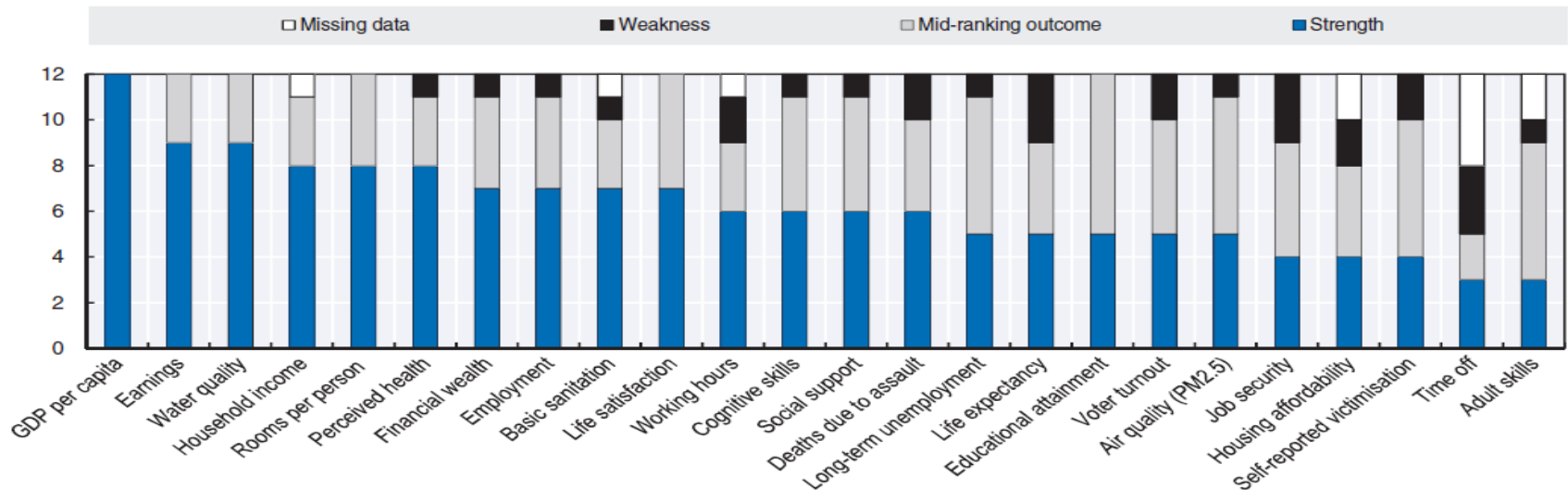
E. Why does well-being matter? (1)

➤ *At any point in time, no country has it all!*

Example. 1 High GDP per capita does not imply high performance in well-being other dimensions

Well-being strengths and weaknesses in OECD countries with the highest GDP per capita

Number of countries with strengths, weaknesses and mid-ranking outcomes, latest available year



Note: The countries with the highest levels of GDP per capita (in USD) in 2013 are those whose GDP per capita is ranked in the top third of the OECD area (i.e., Luxembourg, Norway, Switzerland, the United States, the Netherlands, Ireland, Austria, Australia, Sweden, Denmark, Germany and Canada). For the well-being indicators shown along the x-axis, “strengths” refer to outcomes ranked in the top third of the OECD area as a whole (34 countries); “weaknesses” refer to outcomes ranked in the bottom third of the OECD area as a whole.

D. Why does well-being matter? (2)

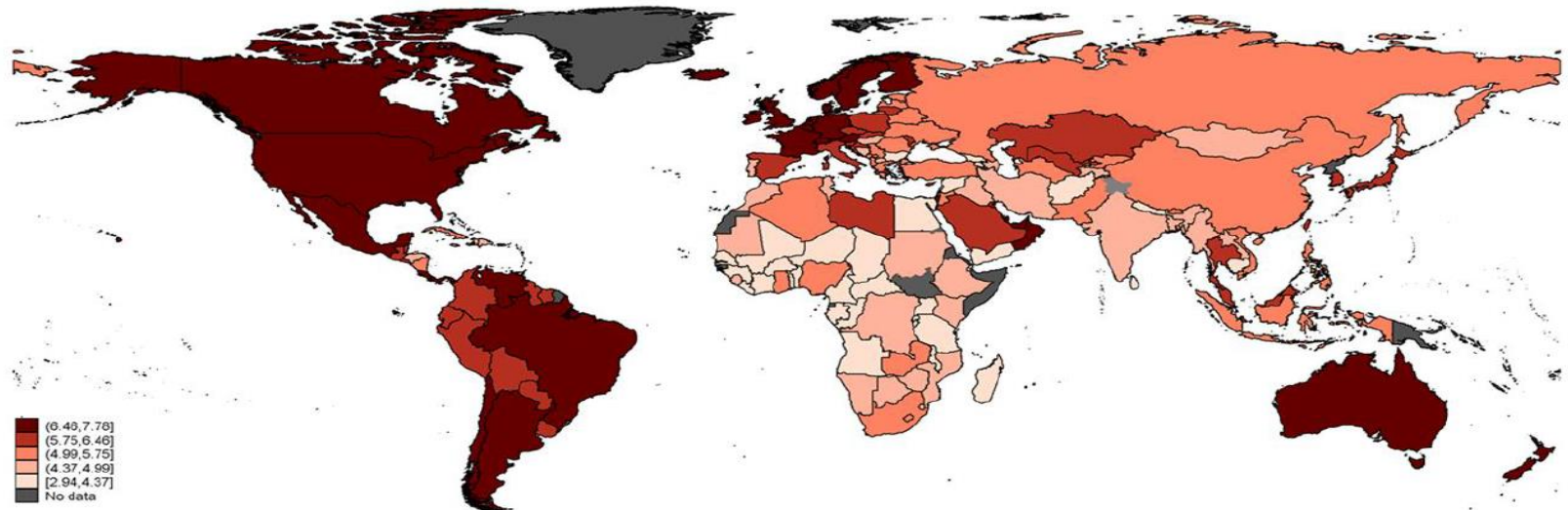
➤ *At any point in time, no country has it all!*

Example 2. Countries where people give a high evaluations of their life..

Figure 1: Life evaluations: a global picture

(2012 or closest year)

Ladder of Life



Average Ladder of Life [0-10] experienced the day before; Countries classified in quintiles; Year: 2012 or closest

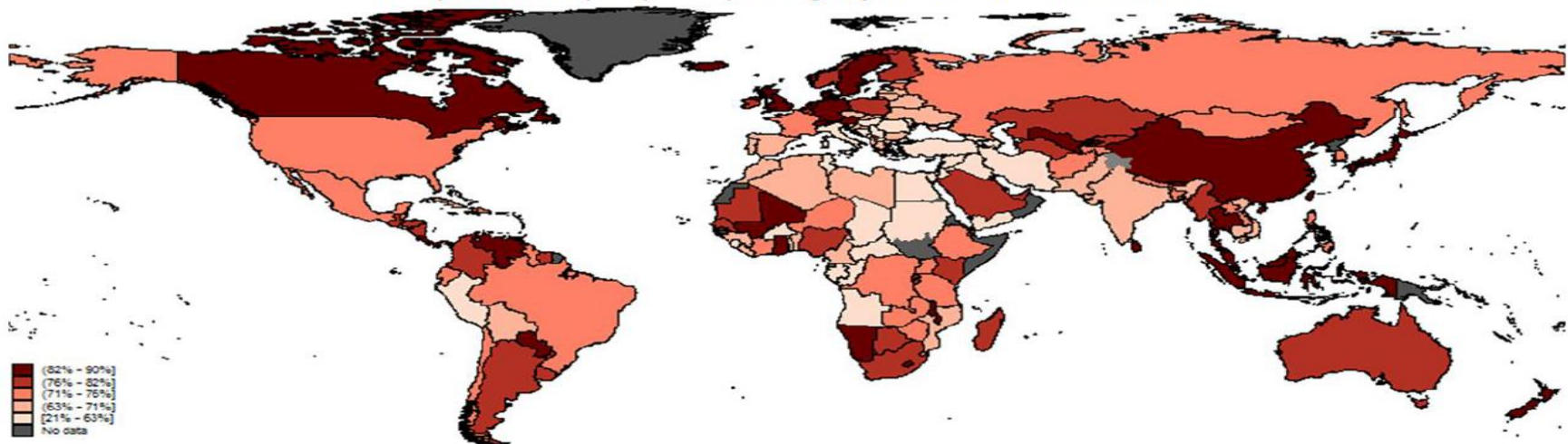
D. Why does well-being matter? (3)

➤ *At any point in time, no country has it all!*

.. Are not the same as those where people have high positive (net) feeling (e.g. joy, stress) on a typical day

Figure 2: Affect balance yesterday
(2012 or closest year)

Proportion of people reporting a positive affect balance



% of people with strictly more positive affects yesterday than negative affects; Countries classified in quintiles; Year: 2012 or closest

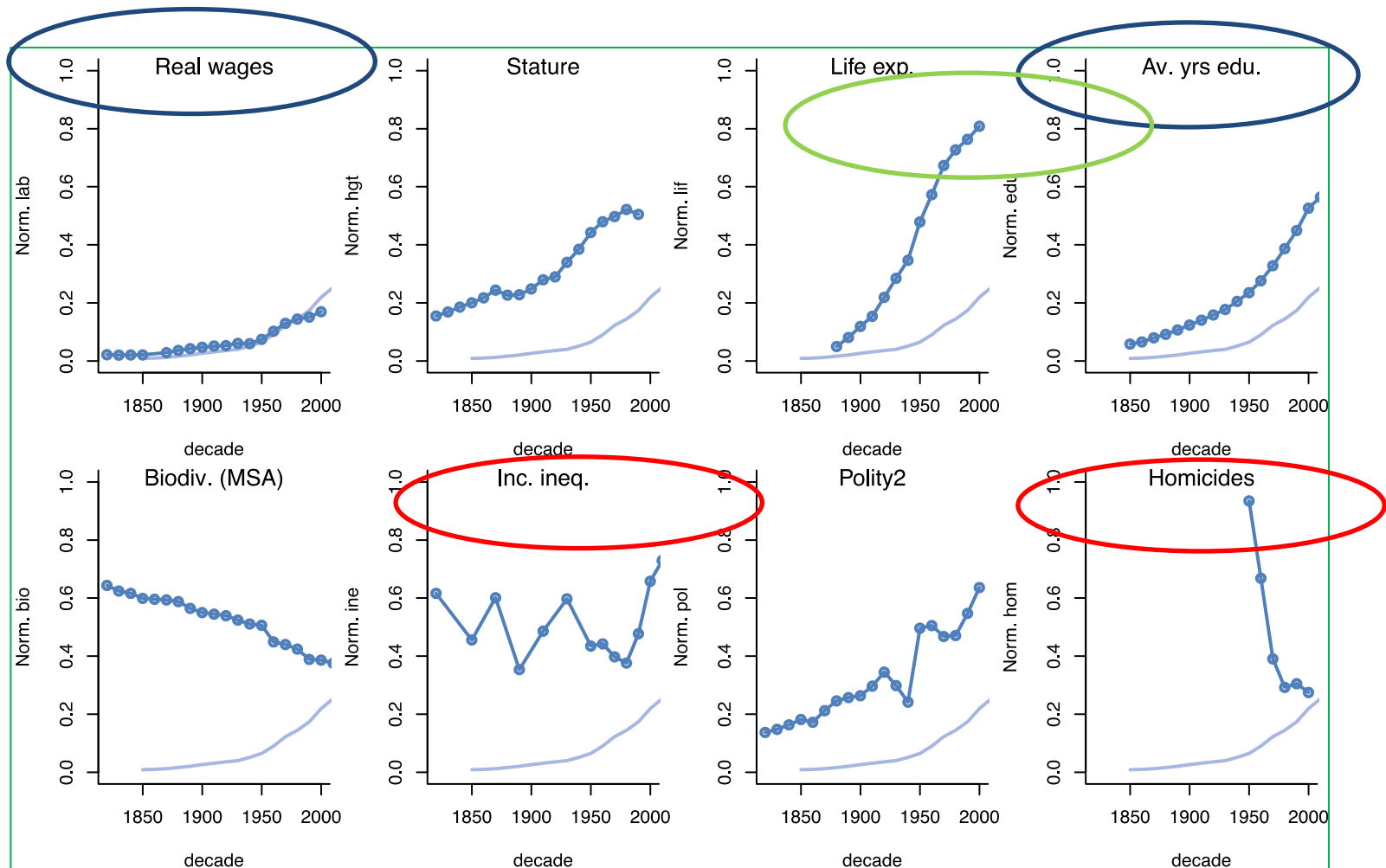
D. Why does well-being matter? (4)

- *Over historical periods, trends in GDP per capita can differ from those in other life dimensions*
- ‘Modernisation theories’ (Marx, Durkheim, Weber) linked social and political development to industrialisation process (e.g. European experience)
- But in many cases ‘development’ happened independently of economic processes
 - Prussia rather than England led mass schooling in the 19th century (P. Lindert)
 - Modern state system developed first in imperial China rather than modern Europe (F. Fukuyama)



D. Why does well-being matter? (5)

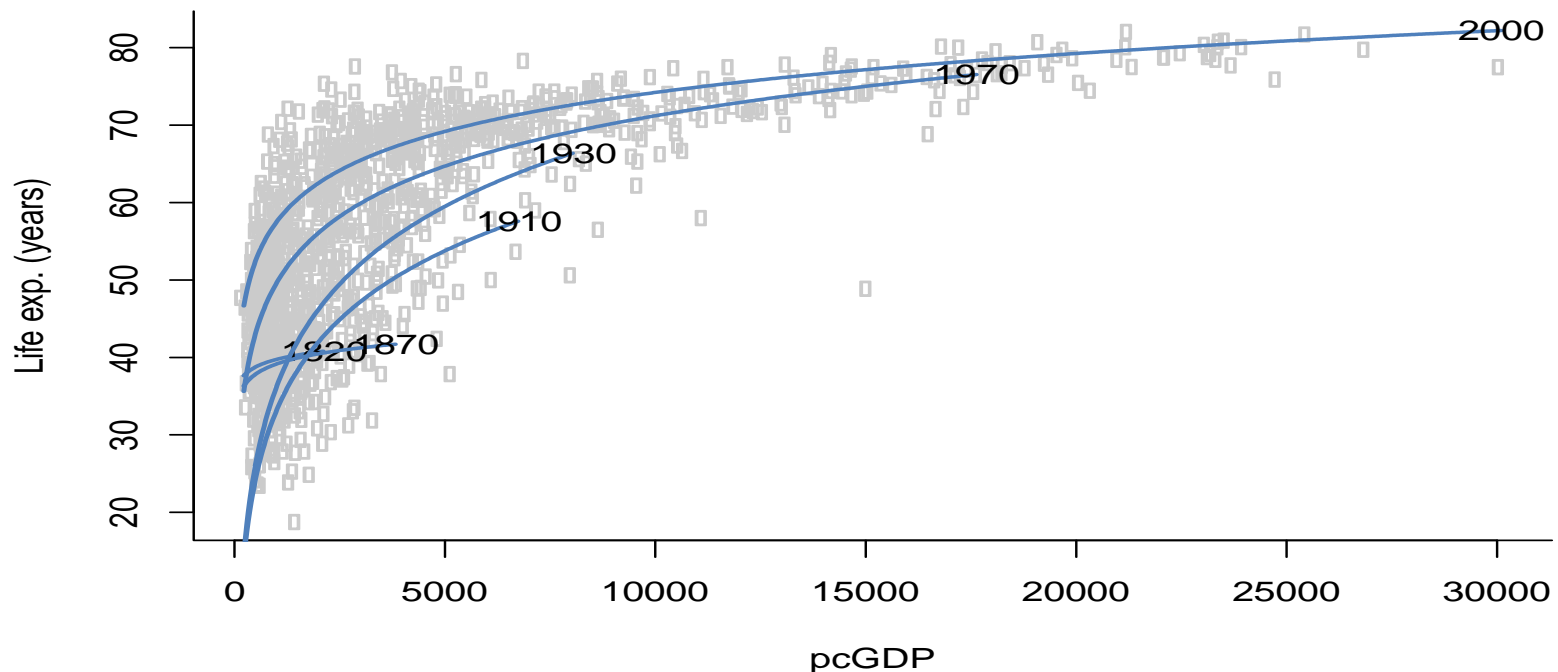
Example: changes in (normalised) scores of various well-being outcomes and GDP pc, world average



D. Why does well-being matter? (6)

- *In the case of life-expectancy, countries move along 'Preston curve' (with higher income) but the curve also shifts over time..*

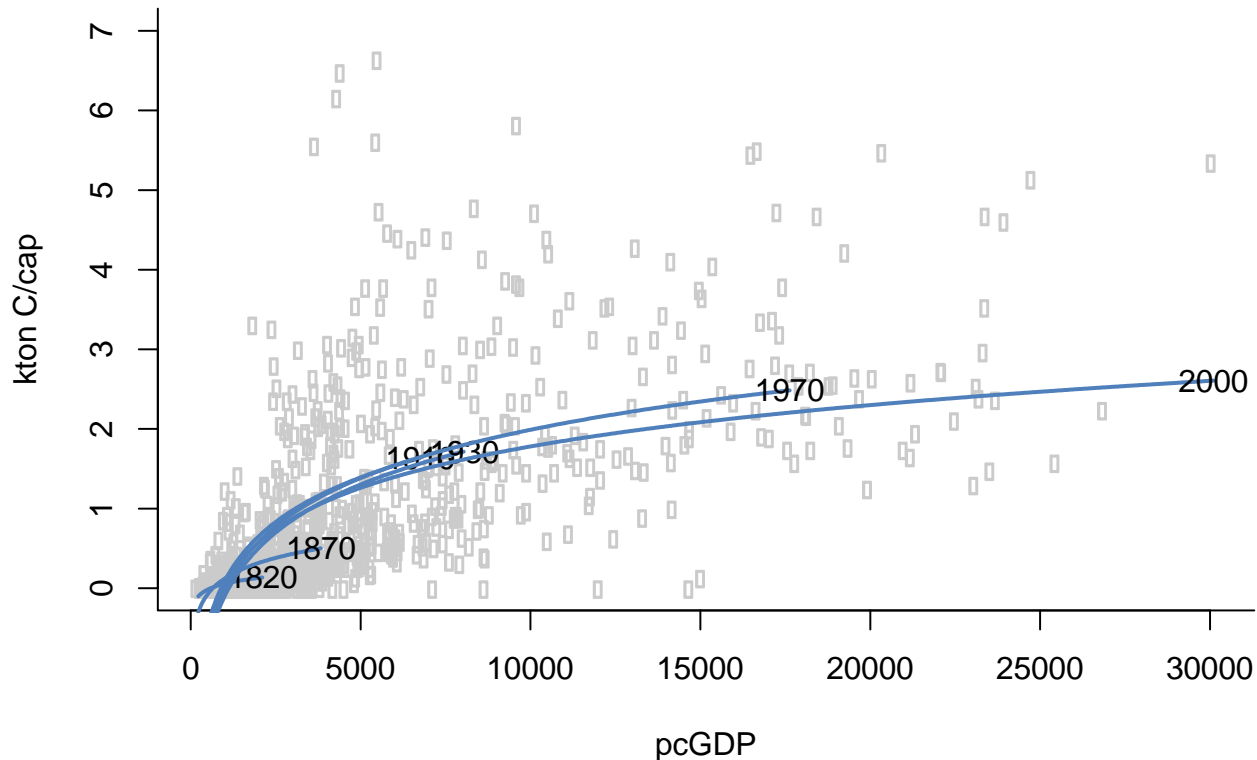
Life Expectancy and GDP per capita



D. Why does well-being matter? (7)

- *In the case of CO₂ emissions shifts of the curve are minor: no 'decoupling' of environmental degradation from GDP growth*

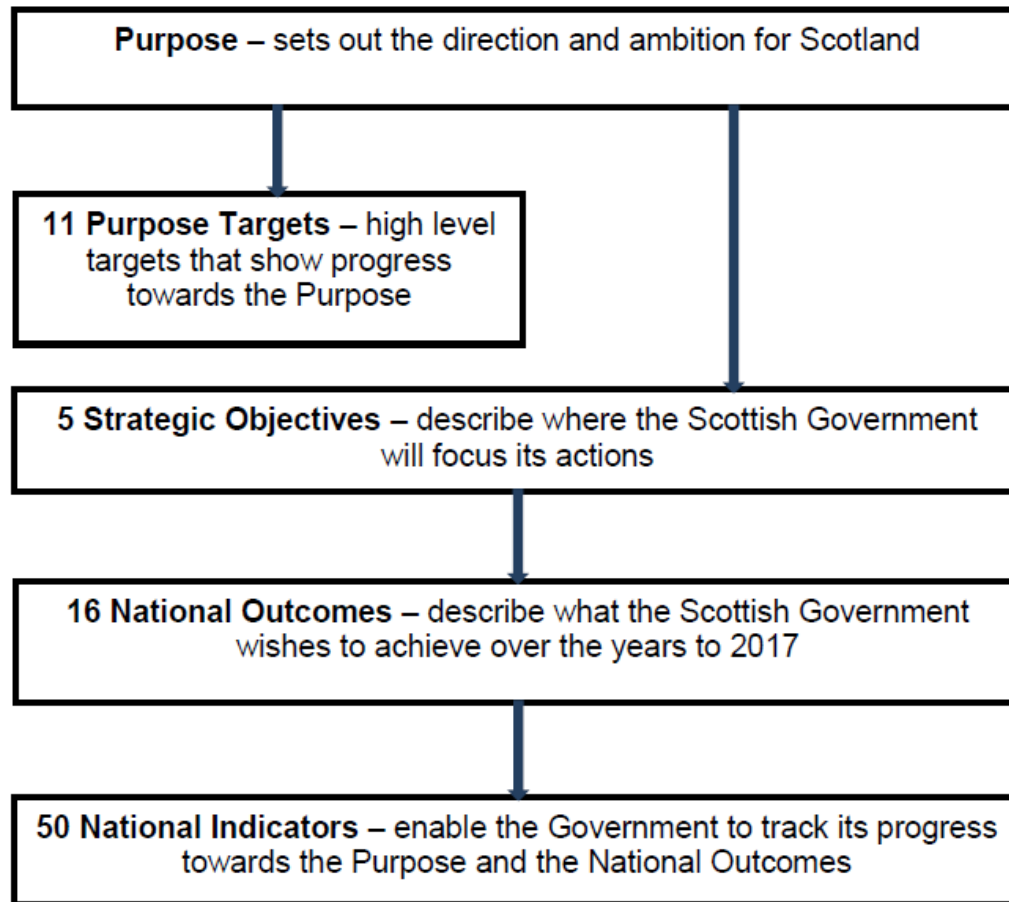
CO₂ emissions per capita and GDP per capita



D. Why does well-being matter? (8)

➤ *Well-being matters for the policy process*

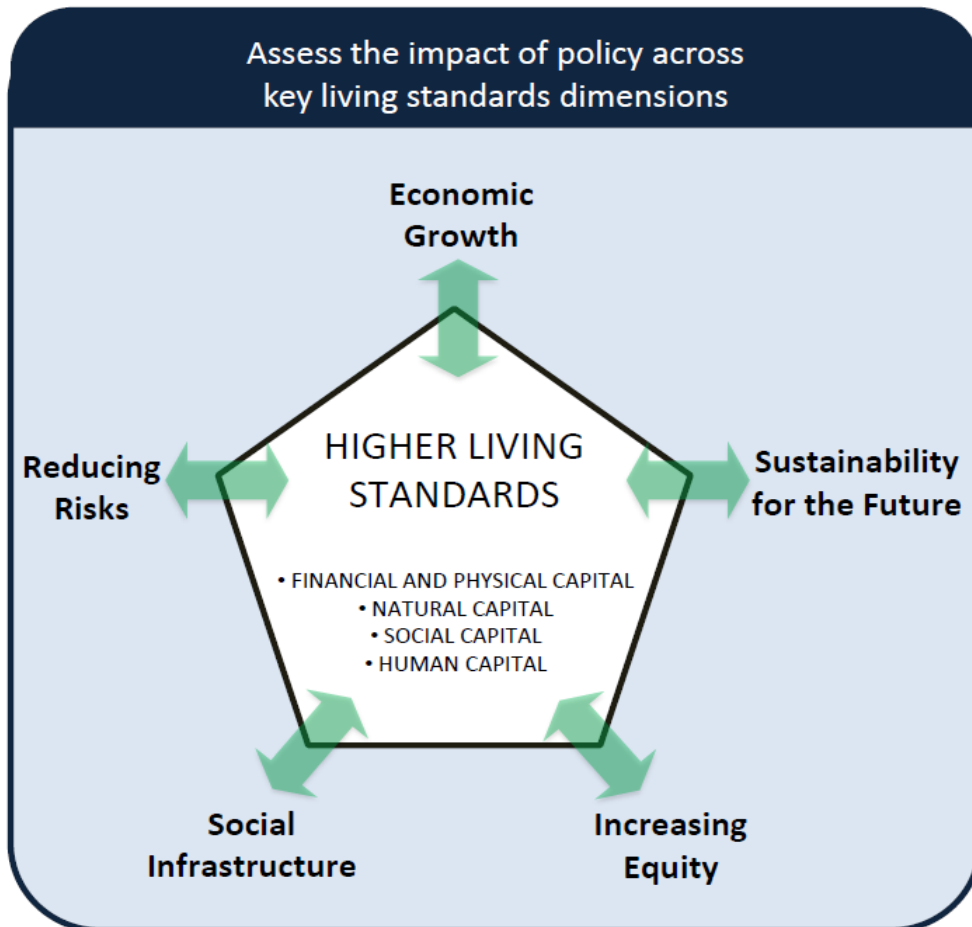
Example 1: Alignment of policy goals across government departments and agencies, ***Scotland Performs***



D. Why does well-being matter? (9)

➤ *Well-being matter for the policy process*

Example 2: New Zealand Treasury *Living Standard Framework*



- Policy tool developed for front-line policy analysts
- A “**manageable list** of the key issues that **make the most difference**”
- Embed the concept of living standards more **systematically** and more **visibly** in policy advice to Ministers

E. Plan of the course (1)

4 lessons

- Lesson 1. *General introduction to themes addressed in Part III, 24 November*
- Lesson 2. *How to understand individual well-being, 25 November*
- Lesson 3. *From individual well-being to social welfare: inequalities, 2 December*
- Lesson 4. *Social welfare over time: sustainability (+ wrap-up), 5 December*

F. Plan of the course (4)

Core reading:

- Stiglitz, Sen and Fitoussi (2009), *Mismeasuring Our Life*, New Press
- D. Coyle (2014), *GDP: A Brief but Affectionate History*, Princeton
- OECD (2015), *Understanding National Accounts*, chapter 15

Additional Reading

- *Report by Commission on the Measurement of Economic Performance and Social Progress*