NATIONAL ACCOUNTS AND
THE MEASUREMENT OF
WELL-BEING

Trier-Pisa Summer School on Measurement of Welfare and Social Progress
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Peter van de Ven
Head of National Accounts
OECD
Overview

• General aspects regarding the measurement of well-being
• Stiglitz-Sen-Fitoussi Report
• Focus on households
  – Economic growth and disposable income
  – Distributional aspects
  – Measurement of non-market activities
GDP/NNI and welfare/well-being

- GDP/NNI = Indicator for production and income
- GDP/NNI ≠ Welfare/well-being (also well recognised by National Accountants)
- Well-being is multi-dimensional
  - Environmental issues
  - Unpaid activities
  - (Un)employment
  - Distributional aspects (income, wealth, etc.)
  - Health
  - Security
  - Freedom
  - Etc.
Measurement of welfare/well-being

Three basic approaches:

• Monetisation and adjustment of GDP/NNI or saving (e.g. Genuine Saving by World Bank)

• Composite index by weighting together different dimensions of welfare (e.g. Human Development Index by United Nations)

• Vector of indicators for different dimensions of welfare/well-being

• Note: Measurement of perceived welfare (Happiness)
Problems to arrive at one indicator?

• No direct observation of prices
• Inadequate information base
• Normative elements when defining and valuing “sustainability”
• Normative elements when weighting different dimensions of welfare
• “What if”
• “Not everything that counts can be counted, and not everything that can be counted counts” (Einstein)

• Catch-all indicator useful?
Vector or dashboard of indicators

One or more indicators for each dimension of welfare

(1) Based on observable phenomena

(2) In a consistent framework

Possible aspects that could be addressed:

- Income and production: GDP/NNI
- Distribution: income and wealth inequality
- Environment: emissions of pollutants and (depletion of) natural resources
- Unpaid activities: number of hours spent on household activities, volunteer jobs
- Health: Number of healthy years
- Etc.
Example: environmental degradation

- Nowadays capital approach is mainstream
- Goal is to measure the (changes in the) value of capital stock of ecosystems and natural resources
- Need to know the services derived from this capital stock, and the impact of economic activities on the degradation/depletion of the capital stock
- Natural resources possible:
  - Physical information available
  - Market prices available
  - Attributable to economic actors (ownership)
  - Possible to measure capital stock of natural resources and depletion adjusted income levels
Example: environmental degradation

• Ecosystems however:
  – What exactly do we want to measure?
  – Relationship economic activities => changes in the capital stock of ecosystems => provision of services to the economy?
  – No market prices available
  – Decoupling of costs related to environmental degradation and economic activities/actors causing the degradation
  – Systems approach and what if
Example: environmental degradation

- **System of Environmental-Economic Accounting (SEEA):** combine national accounts with available environmental statistics in a systematic way
  - Analyse/model relationships between economy and environment
  - Provide possibilities to measure trade-offs between economy and environmental pressures
  - Scenario building (impact of different economic policies on environment)
  - Provide indicators on e.g. efficiency of use of energy and related CO2-emissions, footprints of environmental pressures by production and consumption

- **Experimental research into (valuation of) ecosystems:** much progress is being made
Stiglitz-Sen-Fitoussi Report

- Initiative of Sarkozy
- Presented in September 2009
- Basically an inventory and evaluation of state of the art
- Three pillars:
  - Alternative indicators from national accounts
  - Quality of life
  - Sustainability

- Note: Several other (national) initiatives, e.g. “GDP and beyond”
Alternative NA-indicators

1. When evaluating material well-being, look at income and consumption rather than production
2. Emphasize the household perspective
3. Consider income and consumption jointly with wealth
4. Give more prominence to the distribution of income, consumption and wealth
5. Broaden income measures to non-market activities
Quality of Life

6. Quality of life depends on **people’s objective conditions and capabilities**. … improve measures of people’s health, education, personal activities and environmental conditions. In particular, substantial effort should be devoted to developing and implementing robust, reliable measures of social connections, political voice, and insecurity that can be shown to predict life satisfaction.

7. Quality-of-life indicators in all the dimensions covered should assess **inequalities** in a comprehensive way.

8. Surveys should be designed to assess the links between various quality-of-life domains for each person, and this information should be used when designing policies in various fields.
9. Statistical offices should provide the information needed to aggregate across quality-of-life dimensions, allowing the construction of different indexes.

10. Measures of both objective and subjective well-being provide key information about people’s quality of life. Statistical offices should incorporate questions to capture people’s life evaluations, hedonic experiences and priorities in their own survey.
Sustainability

11. Sustainability assessment requires a well-identified dashboard of indicators. The distinctive feature of the components of this dashboard should be that they are interpretable as variations of some underlying “stocks”. A monetary index of sustainability has its place in such a dashboard but, under the current state of the art, it should remain essentially focused on economic aspects of sustainability.

12. The environmental aspects of sustainability deserve a separate follow-up based on a well-chosen set of physical indicators. In particular there is a need for a clear indicator of our proximity to dangerous levels of environmental damage (such as associated with climate change or the depletion of fishing stocks).
Focus on households!
Households in national accounts (1)

- National Accounts > Economic growth and more than $Y = C + I + E - M$
- Full overview of income, expenditures, financial transactions and balance sheets by institutional sector (households, government, corporations, rest of the world)
- Households: disposable income, final consumption, savings, wealth, etc. (including details)
- Adjusted disposable income = Disposable income + Goods and services provided free by government (e.g. health, education)
Households in national accounts (2)

- However, primary public and political attention almost entirely on economic growth!
- How to change this?
  - Put more emphasis on other indicators in communication (e.g. press release on household disposable income)
  - Show and analyse differences between economic growth and disposable income
  - Include and publish distributional information
- Prerequisite: timely availability of relevant data (at macro-level generally fine, but not when looking at inequalities)
Economic growth and household disposable income

The importance of looking at household-level measures
Gross real household disposable income and real GDP - 1999Q1=100

Source: OECD calculation
Inequalities

The importance of looking at income inequalities

- Large differences between countries
- Longer-term trend towards greater inequality
- Early evidence: small changes in income inequality in the most recent year (2009-2011) since 2007

Source: OECD Income Distribution Database, latest year available
The importance of looking at wealth distribution

Percentage of households holding debt

Debt to income ratio of indebted households

- Analysing wealth distribution is essential for analysis of vulnerabilities in the household sector

Sources: CIR, EFF2008 (Spain), IBF 2008 (Italy), SCF 2007 (US)

Sources: EFF 2002 (Spain), SCF 2001 (US), SHIW 2002 (Italy), BHPS 2000 (UK)
OECD-activities on inequalities

Why?

- Unavailability of proper framework for collecting micro-data on households (absence of proper definitional framework on wealth, inconsistencies between data for income, consumption and wealth)
- Inconsistencies between micro-data and national accounts estimates => complicates analysis of macro-economic developments including analysis of (developments in) distribution of income, consumption and wealth
- Timely availability of data on inequalities
OECD-activities on inequalities

- **OECD Expert Group on Micro statistics on Household Income, Consumption and Wealth (EG ICW)**
  - Methodological work to improve the distributional information available from micro sources in the future, in particular on wealth
  - 17 NSOs, Luxembourg Wealth Study, UNECE, individual analysts, ECB, Eurostat

- **OECD-Eurostat Expert Group to measure Disparities in a National Account framework (EG DNA)**
  - Practical exercise – feasibility study on how to introduce distributional information from existing micro sources in the national accounts
  - 25 NSOs, Luxembourg Income Study, ECB, Eurostat
EG Micro-statistics (ICW)


Two Working Papers forthcoming on:

• Comparing micro-macro sources in terms of definitions, scope and total amounts at the level of detailed components, for household income (20 countries), consumption (21) and wealth (7)

• Experimental disparity indicators across households with different characteristics, consistent with NA definitions and totals; indicators fully/partially computed by experts from 16 countries for income, consumption and as residual savings, for a given year

In addition: Report on Eurostat “a-minima” exercise
Goal is to arrive at distributional information consistent with national accounts for three types of household groupings:

- By income quintile
- By type of income (employees, self-employed, social benefits)
- By composition of household (single person <> 65, multiple persons with/without children <> 65)
EG DNA: Main results (1)

Average gap macro/micro for household income, consumption and wealth

Ranges of values - average gap indicator measured on components with similar micro information:

- Adjusted disposable income (20 countries):
  - Min: 5%
  - Max: 57%

- Actual final consumption (21 countries):
  - Min: 16%
  - Max: 62%

- Net worth (6 countries):
  - Min: 7%
  - Max: 43%
EG DNA: Main results (2)

- Relative position of each household group: Adjusted disposable income per consumption unit compared to the average, by income quintile.
EG DNA: Main results (3)

- Relative position of each household group: Actual final consumption per consumption unit compared to the average, by income quintile
Savings* as a percentage of adjusted disposable income, by income quintile
EG DNA: Main results (5)

- Ratio of richest to poorest (Q5/Q1): comparison between the EG results and the OECD micro database (IDD)

The legend indicates the extent to which the IDD and the EG results are comparable. A star indicates similar micro sources. A year is indicated in case IDD and EG relate to the same year.

Note: micro measures are based on a grouping by individuals, whereas the EG is based on households.
Inequalities: way forward

- Refine methodology on combining micro and macro, with focus on consistency income and consumption
- Compile data consistent with national accounts for a more recent year
- **Consider the possible development of a methodology to compile more timely estimates of levels and changes**
- Provides possibilities to link, model and analyse macro-economic policies and its impact on distribution of income, consumption and wealth
Non-market activities of households (1)

• Production boundary of national accounts: exclusion of unpaid services within households
• Economic growth exaggerated?
• International comparability hampered?
• Issues:
  – How to define relevant services
  – How to value
  – Relevance of national accounts for other purposes
• Valuation:
  – Replacement costs
  – Opportunity costs
Non-market activities of households (2)

Per cent of total time spent on unpaid-work and paid-work/study

![Bar chart showing the percentage of total time spent on unpaid work and paid work/study across different countries.](chart.png)

- **Unpaid work**
- **Paid work or study**
Non-market activities of households (3)

Average hours spent on unpaid household work per person per day in recent years

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Value of labour costs in household production of non-market services, % of GDP, 2008
Non-market activities of households (5)

GDP per capita with and without household consumption of non-market services: 2008 PPPs (US = 100)
## Non-market activities of households (6)

### Average annual growth in GDP including household production of non-market services 2008 prices

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Some concluding remarks

• A lot of progress has been made, still a lot of work needs to be done
• No overarching conceptual framework for the measurement of present and future well-being
• Systems approach that links different aspects of well-being, based on observable phenomena
• Democratic and political process should discuss the choices between different aspects of well-being, based on evidence based policy making
Thanks for your attention!