



UNSW
A U S T R A L I A

ECONOMIC PERSPECTIVES

MACROECONOMICS 2019/20

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TOPIC I: METHODOLOGY

ECON1401, UNSW

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BEYOND GDP

- ▶ GDP was a great measurement advancement in the 1930s as it allowed to measure production see [video]
- ▶ Indeed supply-side economists' interest lied primarily on that (see how Weber was right?)
- ▶ GDP growth is used as measure of economic growth
- ▶ GDP per capita is used as welfare measure
- ▶ What about leisure, life expectancy, disparity and the natural environment?

STIGLITZ, SEN & FITOUSSI (2010) MISMEASURING OUR LIVES

- ▶ Independent commission appointed in 2008 by FR Pres. Sarkozy to study measures of econ performance (GDP) and their appropriateness for estimating well-being and social and environmental sustainability
- ▶ Has sparked new interest in welfare measurement (income, consumption, wealth)
- ▶ pc-GDP might increase even as the income of the majority of the population declines
- ▶ We see the world through the lenses of our metrics (“the data”, think about the etymology)
- ▶ Bad measures \Rightarrow Bad statistical inference \Rightarrow Bad policy-making

STIGLITZ, SEN & FITOUSSI (2010) MISMEASURING OUR LIVES

- ▶ Is the environment-vs-growth trade-off a a false problem, generated by the way we measure growth?
- ▶ A politician does care about output, but first and foremost about the well-being of her citizens
- ▶ The latter brings more approval than output alone
- ▶ Some problems might become more relevant as things change
- ▶ E.g. average values are informative only in certain distributions (Normal)
- ▶ Measuring government and the impact of benefits is pressing if expenditure is high
- ▶ Measuring services in advanced economies (and “intangibles”) as they become crucial

STIGLITZ, SEN & FITOUSSI (2010) MISMEASURING OUR LIVES

- ▶ Their goal is to supplement GDP (measure of market activity) with measures of:
 - ▶ median income
 - ▶ poverty
 - ▶ environmental sustainability
 - ▶ debt
- ▶ And to identify the weak spots of GDP in measuring production
 - ▶ In developed economies, quality changes might be worth more than quantity changes
 - ▶ Government services are increasingly important but poorly measured (often “free”/subsidised and collective)

STIGLITZ, SEN & FITOUSSI (2010): RECOMMENDATIONS

1. For capturing material well-being, look at income and consumption, not production
 - ▶ Closer link to living standards
 - ▶ Sometimes of opposite sign wrt production
2. Look at households rather than aggregates or individuals
 - ▶ Harder than per capita measures, but much more realistic
 - ▶ When proper, it includes in-kind services by governments
3. Add wealth to the analysis of income and consumption
 - ▶ Wealth is important and consuming it away for current consumption may not be a good idea
 - ▶ Australians value a lot home ownership (around 65%, 2016) and so do Italians (72.4%, 2017)
 - ▶ Wealth is stable and tells important info on sustainability
 - ▶ We need balance sheets (assets/liabilities) for households, sector and states

STIGLITZ, SEN & FITOUSSI (2010): RECOMMENDATIONS

4. Less averages, more distributions

- ▶ A median is already better than an average at giving info on the *typical* individual
- ▶ The “tails” of the distribution are also important
- ▶ Income and wealth info should be linked → a poor person owning a house might be better off than one with a higher income but rent to pay

5. Non-market activities to be included into income measures

- ▶ Otherwise we risk valuing things only when they have a price (granma cared at home .vs pro caregiving)
- ▶ Non-market to market shift not necessarily welfare-improving (I love cooking seafood!)
- ▶ Very important in developing countries
- ▶ Having info on households' time use would be a good start
- ▶ Leisure is a tough one but important

STIGLITZ, SEN & FITOUSSI (2010): RECOMMENDATIONS

Key Dimensions of Well-Being

(i) Material living standards; (ii) Health; (iii) Education; (iv) Personal activities, work included; (v) Political voice and governance; (vi) Social connections and relationships; (vii) Environment; (viii) Insecurity (economic % physical)

6. Integrates measures of the above. Particularly (v), (vi) & (viii) predict life satisfaction well
 - ▶ Objective measures of quality of life are important to improve life satisfaction
7. Quality-of-life (QoL) indicators should capture inequalities
8. Study interaction between QoL factors

STIGLITZ, SEN & FITOUSSI (2010): RECOMMENDATIONS

Sustainability

Sustainability is about maintaining well-being for future generations

9. We need a dashboard of indicators measuring *stocks* of natural resources, human, social and physical capital
 - ▶ Don't try to build a single indicator of both current and future well-being
 - ▶ It's about tracking stocks of factors influencing future well-being
10. We need a separate set of indicators of environmental sustainability, especially a threshold of environmental damage

FRANCE VS USA

MEASURES in 2005

USA

France

▶ pc-GDP	100%	67%
▶ pc-consumption	100%	60%
▶ Life expectancy	77 y.o.	80 y.o.
▶ Leisure	877 hours pp	535 hours pp
▶ Inequality*	0.54	0.42

★: *S.d. log(consumption)*

WHAT NEXT?

SNA

“The System of National Accounts (SNA) is the internationally agreed standard set of recommendations on how to compile measures of economic activity.” (UNstats website ([link](#)))

- ▶ We might want to know how to pragmatically move forward
- ▶ Jorgenson & Slesnick (2014) and Jorgenson & Schreyer (2017) show want that
- ▶ They show how to immediately improve well-being measures based on available information (2008 SNA framework)

JORGENSEN & SCHREYER (2017)

Household [HH] consumption [C] is at the center \equiv individuals living together, sharing a budget

1. Issue of defining the consumption unit
2. Issue of non-proportionality of consumption as HH size grows
 - ▶ HH equivalence scales \rightarrow from no. of individuals to multi-D
 - ▶ a large household requires less than N-fold C to get same Welfare as an individual

JORGENSEN & SCHREYER (2017)

They provide both:

a. a measure of **individual welfare**

- ▶ relies on HH utility maximisation, scaled by a measure of HH size

b. a measure of **social welfare** → *standard of living* measure

- ▶ no optimisation, depends “on normative assumptions and value judgements”
- ▶ decomposition in equity and efficiency component
- ▶ utilitarian case: “the social welfare function reduces to an average of welfare levels over all consuming units”
- ▶ egalitarian case: the biggest feasible weight is given to a flat distribution of welfare

JORGENSEN & SCHREYER (2017)

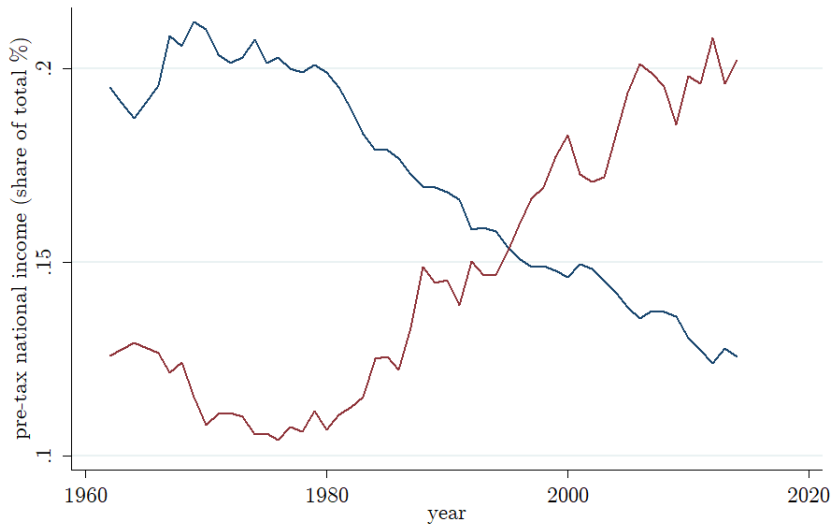
TABLE 5
CONTRIBUTIONS TO GROWTH OF THE STANDARD OF LIVING, U.S.

	Average annual growth rates					
	1948–2010	1948–1973	1973–1995	1995–2000	2000–2005	2005–2010
			Egalitarian*			
Standard of living (social welfare)	2.34	3.45	1.87	1.96	1.82	−0.27
Efficiency (Personal consumption expenditure per household equivalent member, 2005 \$)	2.16	2.67	1.97	2.65	2.03	0.11
Equity	0.17	0.78	−0.11	−0.68	−0.21	−0.37
			Utilitarian*			
Standard of living (social welfare)	2.24	3.09	1.90	2.20	1.93	−0.12
Efficiency (Personal consumption expenditure per household equivalent member, 2005 \$)	2.16	2.67	1.97	2.65	2.03	0.11
Equity	0.08	0.42	−0.07	−0.44	−0.10	−0.23

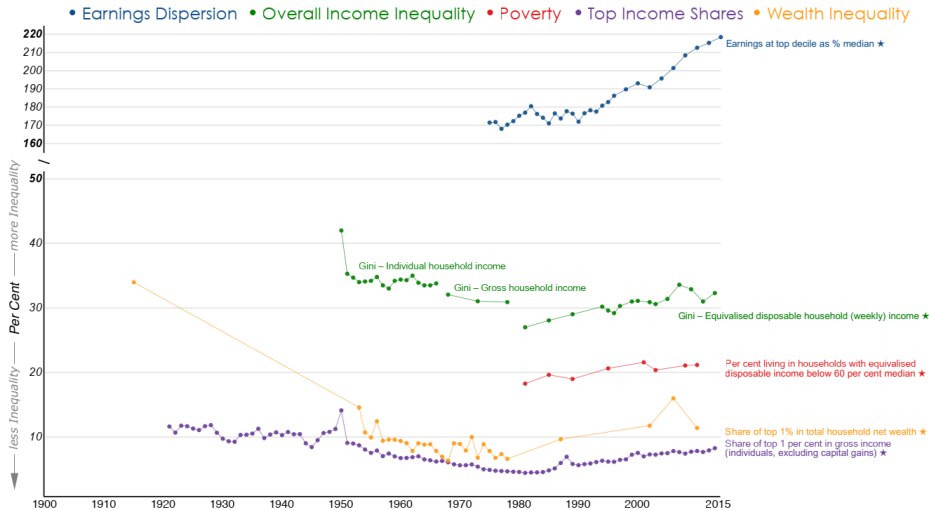
*see Annex for definitions.

Source: Jorgenson and Slesnick (2014), Table 3.7.

INEQUALITY IN THE USA



INEQUALITY IN AUSTRALIA

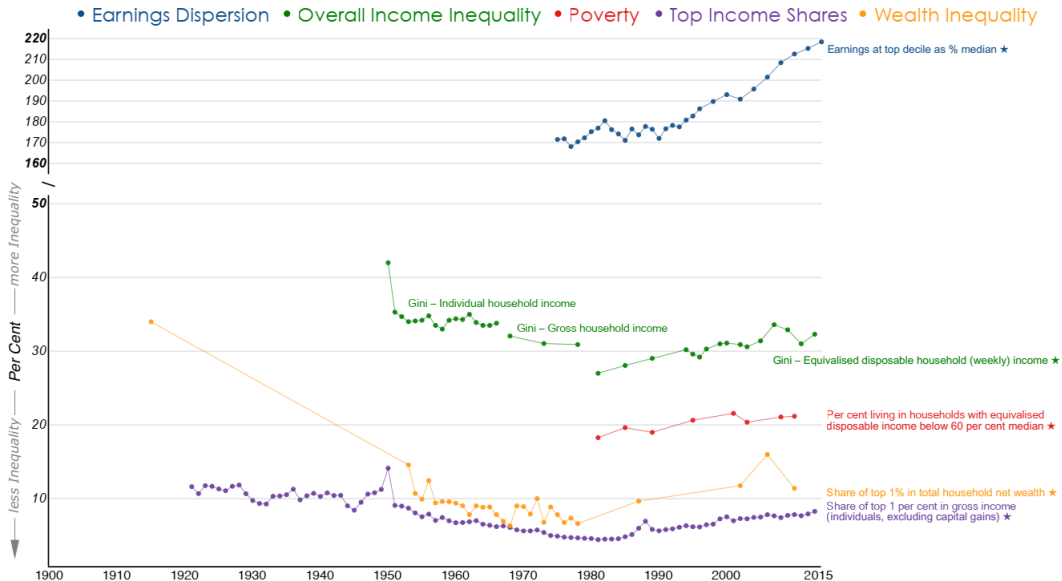


A. B. Atkinson, J. Hasell, S. Morelli and M. Roser (2017) – 'The Chartbook of Economic Inequality' at www.ChartbookOfEconomicInequality.com

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JORGENSEN & SCHREYER (2017): CONCLUSIONS

- ▶ Should pass from head-count measures of HH consumption to equivalent HH members
- ▶ Price indices should be group-specific
- ▶ Equity considerations to be introduced and made explicit

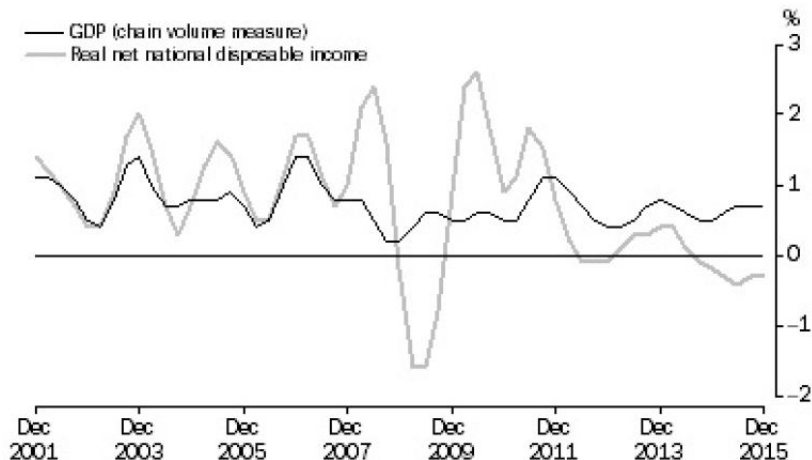


REAL NET NATIONAL DISPOSABLE INCOME FROM ABS WEBSITE

“Compared with the chain volume measure of GDP, RNNDI takes account of:

- ▶ the impact of changes in prices of our exports relative to changes in prices of our imports (the terms of trade effect);
- ▶ the real impact of income flows (both primary and secondary) between Australia and the rest of the world;
- ▶ the consumption of fixed capital, which is the depreciation of machinery, buildings and other produced capital.”

TERRIBLE CHART BY ABS



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Jorgenson, Dale W., and Paul Schreyer. (2017) *Measuring Individual Well-Being and Social Welfare within the Framework of the System of National Accounts*. Review of Income and Wealth 63, no. Supplement 2 (2017): S460-S477.

Jorgenson, D.W. and D.T. Slesnick (2014), *Measuring social welfare in the U.S. national accounts*, in D.W. Jorgenson, S. Landefeld and P. Schreyer (eds.), *Measuring Economic Sustainability and Progress: CRIW and NBER Studies in Income and Wealth*, Vol. 72; pp. 43-88.

Stiglitz, Joseph E., Amartya Sen, and Jean- Paul Fitoussi. (2010). *Mis-measuring Our Lives: Why GDP Doesn't Add Up*. New York: The New Press.