

The Measurement of Wealth: Recessions, Sustainability and Missing Capital

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December 2015

Wealth as essential to Sustainability

- The Commission on the Measurement of Economic Performance and Social Progress emphasized the central role of wealth in the assessment of *sustainability*
 - While noting that there might be significant problems in the valuation of assets
 - Bubble prices

Measurement of Wealth

- But standard measures of “wealth” may not adequately reflect sustainability
- Some increases in wealth (as conventionally measured) may reflect increased economic rents, unrelated to the productive capacity of the economy
- Some decreases in wealth—associated with human, social, and natural capital—may not be captured in our wealth metrics
- Overall, recent changes in measured wealth overstate true “capital” accumulation

Helps explain anomaly

- Wealth/income ratio seems to have increased dramatically (Piketty)
- But average wages have stagnated
- And labor share of income has declined
- Standard neoclassical theory would predict a substantial increase in wages
- And, if the elasticity of substitution is less than unity, an increase in the share of labor
- But this makes sense *if* “W,” wealth, is not “K,” capital

Missing *real* capital

- Recessions destroy capital (or impede its accumulation)
- We trace out the consequences for plant and equipment
 - Revealed by investment data
 - May not do so fully: don't adequately monitor maintenance expenditures
- But we don't adequately trace out the consequences for other forms of capital

Quantifying missing capital

- Top down approach
 - GDP in US is some 15% below what it would have been in the absence of crisis—in Europe some 16% lower
 - We can measure the delta in “normal” K (what K would have been but for the recession) and actual K (i.e., the consequences of reduced investment), and normal human capital (“education”) and actual human capital. We can estimate the predicted effect of this on output.
 - The difference between this and the actual (PDV) of output is the result of missing “dark matter”—analogous to Solow’s residual
 - Even if we can’t precisely parse out the components of this dark matter—destruction of organizational capital, other components of human capital (experience)—it’s real and needs to be taken into account
 - Back of the envelope calculations suggest that the magnitude is enormous—probably in excess of \$100 trillion (depending on discount rate)

Bottom up approach

- We know that those who enter the labor force in a bad (recession) year have a significantly lower lifetime PDV of income
 - Some of these effects may be distributional (changed bargaining power of workers)
- And this is especially true of those who remain unemployed for extended periods
- We also know that those who get displaced face a significant loss in PDV of income

Parsing out the effects on Human Capital

- Education: Ambiguous effect
 - Some stay in school longer when no jobs are available
 - With a prolonged downturn, many can't afford to stay in school
 - Especially in countries where children/parents have to pay bulk of costs
 - And in places where tuition is linked to state support
 - Does increased competition for jobs lead to greater incentives for learning? Or do reduced employment opportunities reduce incentives?

Hidden losses

- Reductions in quality of education as governments cut back on funding
- Reduced access to health care and nutrition can have life-long effects

Job experience

- Most adverse effects are related to decrease in job experience (learning on the job)—major part of human capital
- Those in their 50s and early 60s forced to retire early
 - Partially offset by supply side effects on those who lose retirement assets who are forced to work
 - They still face a welfare loss, which we should try to capture in our metrics
- Especially adverse effects on young people who can't get jobs

Missing capital

- Consistent with hysteresis effects associated with extended periods of unemployment
- And helps explain why effects of downturns persist
- With strong policy implications
- Long-term consequences of not taking strong counter-cyclical policies
- Focus on government debt was short-sighted (besides being counterproductive)
- Far more important adverse effects on asset side

Another example of why metrics matter

- What you measure affects what you do
- If you focus on the liability side of the government, one may take actions that result in the liability side of private sector increasing, and asset side of the entire economy decreasing—undermining sustainability

And an important cautionary note

- In the interpretation of wealth-income ratios
- And the implication of these increases