Inequality in 3-D: Income, Consumption, and Wealth

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Abstract

Studies of economic inequality examine income inequality, consumption inequality, and wealth inequality, but the findings are almost always limited to one variable. Even those that use more than one measure of inequality do so one measure at a time, answering how has income inequality changed, and separately how has wealth inequality increased? Studying these measures separately misses the important synergy between the three measures explicit in the life-cycle budget constraint. An increase in income held by the top of the distribution means that consumption and/or wealth of the top also increases. Studying these measures in isolation also misses important life-cycle effects. For example retirees are under-represented in the bottom of the income distribution but greatly over-represented in the top of the consumption distribution *and* the wealth distribution (Fisher et al, 2015).

We are the first to study inequality in three dimensions, focusing on the conjoint distributions of income, consumption, and wealth for the same individuals. We impute consumption to the 1989-2013 Survey of Consumer Finances (SCF) using the Consumer Expenditure (CE) Survey from the same years. This represents the first time consumption is imputed to the SCF to study overall inequality. We first measure the level and trend in inequality in income, consumption, and net worth, comparing our results to existing research. Then we examine the pairwise distributions of our measures and how these have changed over time, and relate it to the life-cycle budget constraint of income less consumption equaling the change in net worth.

For the joint distribution of income and consumption, we see the twin peaks phenomenon seen in the relative mobility literature. In our context, it means that those in the bottom (top) of the income distribution are more likely to also be in the bottom (top) of the consumption distribution. There is less of a correlation between income and wealth in the bottom of the distribution, but there is a strong correlation between wealth and income at the top of the distributions. Similar results are seen when we look at the correlation of income and consumption by wealth quintile. The correlation between income and consumption is lower in the bottom wealth quintile than in the top wealth quintile.

We also show results in line with the research that focuses on the shares. We show the share of income held by top 5% of income, and we show the share of consumption and wealth by those in top 5% of income distribution. We conduct similar exercises showing using the top 5% of the wealth distribution. This

relationship allows us to quantify the way that wealth and income inequality affect consumption in the aggregate.

We also use the Panel Study of Income Dynamics (PSID) because it contains income and wealth since the mid-1980s, and consumption was added in 1999. We also use recent imputations to obtain consumption back to the 1980s (see Attanasio and Pistaferri, 2014). The PSID allows for longitudinal analysis and intra- and inter-generational mobility issues not feasible with the SCF, albeit without the top end wealth and income inequality found in the SCF.

Examining inequality in three dimensions demonstrates that only using one dimension missing important interactions. Those in the top of the income distribution are also disproportionately at the top of the consumption distribution and wealth distribution.

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Education

Ph.D., Economics, University of Minnesota, 1990.
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Experience

April 2014 - present	Chief Economist, Bureau of Economic Analysis. Oversee economic research and analysis related to the production and improvement of the national accounts, including a new health care satellite account; the use of commercial data; and the development of distributional measures. Represent the Bureau at academic research conferences.
March 2006 – April 2014	Division Chief, Social, Economic, and Housing Statistics Division. Managed data analysis for housing, including homeownership; income, poverty and health insurance statistics; and reports on economic well-being, including the redesign of the Survey of Income and Program Participation and developments of the Supplemental Poverty Measure. Represented the Bureau on matters relating to income and poverty measurement.
Oct 2004 – March 2006	Assistant Commissioner, Division of Consumer Prices and Price Indexes, Bureau of Labor Statistics. Managed all production, development, and dissemination activities in the Consumer Price Index (CPI) program. Represented the Bureau on matters relating to price measurement generally and the CPI in particular.
Sept 2001 – March 2004	Division Chief, Division of Price and Index Number Research, Bureau of Labor Statistics. Provided technical advice to the BLS Commissioner and Associate commissioner on price and expenditure measurement issues, including issues in the Consumer Price index and Producer Price index programs. Managed research by PhD economists on price measurement, consumer behavior, and health care.
Sept 1990 – Sept 2001	Research Economist, Division of Price and Index Number Research, Bureau of Labor Statistics. Provided technical assistance on the use and development of the Consumer Expenditure Survey. Coordinated the Bureau's participation in the Interagency Forum on Child and Family Statistics and coordinated the Forum's production of *America's Children: Key National Indicators of Well-being, 1998.* Conducted research on the allocation of resources within the family, inequality, poverty, equivalence scale estimation, and the measurement of child well-being.

Teaching Experience

1992-2004	Adjunct Faculty, Georgetown Public Policy Institute, Georgetown University. Advised master's degree students in the preparation of their theses.
1989-90	Teaching Assistant Training Coordinator, University of Minnesota. Coordinated a training program for new economics teaching assistants.
1988-89 & 1986-87	Teaching Associate, University of Minnesota. Planned and presented lectures for a Principles of Microeconomics class of 400 students.

Honors and Awards

2014	Gold Medal Award for Distinguished Service, Department of Commerce
2014	Co-investigator, Washington Center for Equitable Growth grant, "Wealth, income, and consumption: a microeconomic approach to a macroeconomic question"
2013	Co-investigator, Russell Sage Foundation grant, "Economic Well-Being in Three Dimensions: Income, Consumption and Wealth"
2011-2012	Russell Sage Foundation Visiting Scholar
2010	Gold Medal Award for Distinguished Service, Department of Commerce
1999	Hammer Award for participants in the production of *America's Children: Key National Indicators of Well-being* of the Federal Interagency Forum on Child and Family Statistics.
1998	Hammer Award from the National Partnership for Reinventing Government for participants in the Fatherhood Project of the Federal Interagency Forum on Child and Family Statistics.

Publications

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Journal of Consumer Research
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Monthly Labor Review
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Journal of the American Statistical Association
Journal of Policy Analysis and Management

Professional Service

Member, American Economic Association
Member, Population Association of America

Member, Association of Public Policy Analysis and Management
Policy Council member and Vice President (2014-2015), Association of Public Policy Analysis and Management
Member, Research Advisory Board, Washington Center for Equitable Growth
Member, Conference on Research in Income and Wealth, National Bureau of Economic Research.
Member, Panel Study of Income Dynamics External Board of Overseers
Committee member (2008-2012), American Economic Association Committee on Economic Statistics.