

# School of Economics

# FOCUS PAPER

## Higher income volatility hits American families' wellbeing: Evidence from three decades to 2008

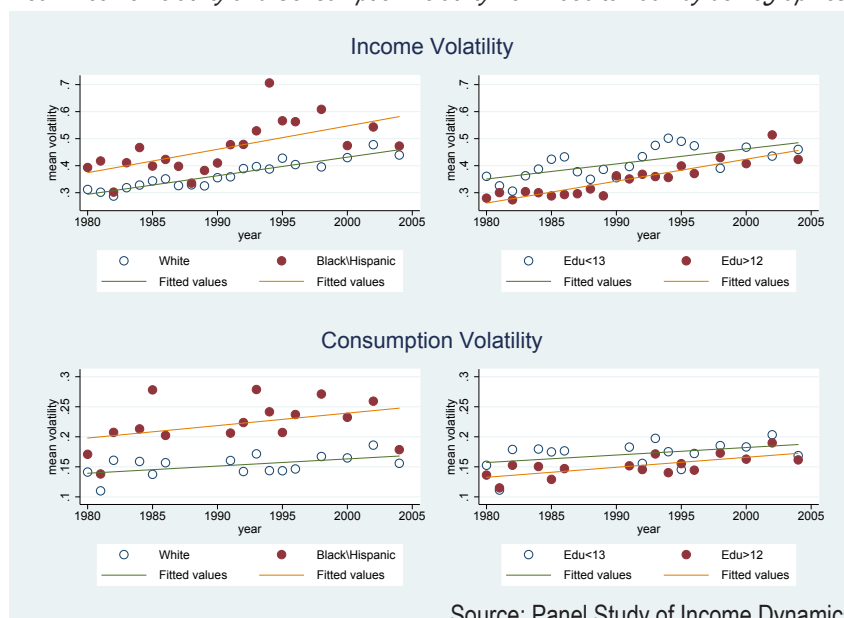
This study shows how higher income instability for many families, combined with inadequate access to credit, led to larger unplanned changes in family consumption. Households headed by black or Hispanic individuals, single parents or those with fewer than 13 years of education were particularly hard hit, which suggests that improving access to credit for disadvantaged groups (or providing them with other ways to smooth their consumer spending) could significantly improve family wellbeing.

Economists have shown that income instability – how much family incomes go up and down over time – increased substantially in the United States in the decades prior to the 2008 recession. This study asks what effect this increased uncertainty had on families' wellbeing.

Answering this question is not easy: people's wellbeing depends not on how much they earn but on what they buy. Even if a family's income becomes more unstable – increasing one year and falling the next – they might be able to keep consumption stable by using their savings or borrowing money to pay their bills when their income is low, and repaying their debts and increasing their savings when their income is high.

*Increasingly large fluctuations in many American households' incomes over the 30-year period up to the Great Recession led to a fall in overall family wellbeing. That is the central finding of research by Keshav Dogra and Olga Gorbachev, forthcoming in the Economic Journal.*

Mean Income Volatility and Consumption Volatility from 1980 to 2004 by demographics



Source: Panel Study of Income Dynamics

What's more, even if people's spending fluctuates a lot from one year to the next, that doesn't necessarily mean that they are worse off. Some changes in spending are planned – for example, when a family has another child.

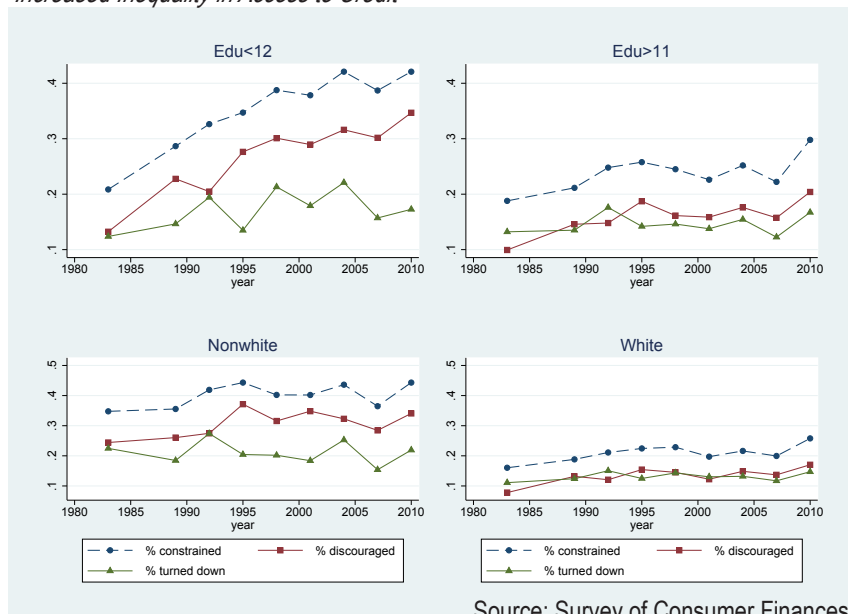
This means that to measure the effect of higher income instability on household wellbeing, it is necessary to check whether the

variability of unplanned changes in household consumption has increased over the past decades.

Economic theory indicates that expected household consumption growth should be related to interest rates, access to credit and households' impatience. For this project, the researchers use data from the Panel Study of Income Dynamics (PSID), a longitudinal study of US households that provides information on demographics,



## Increased Inequality in Access to Credit



likely to be constrained than for the quarter who were least likely to be constrained.

Households headed by black or Hispanic individuals, single parents or those with fewer than 13 years of education experienced the highest level of consumption volatility and were the most likely to be liquidity constrained.

Households' inability to borrow and smooth consumption indicates that their wellbeing was adversely affected. The researchers' calculations suggest that the costs of the increase in consumption variability were substantial: reducing volatility to 1980 levels would produce the same welfare gain as increasing average household annual consumption by 3%.

Since disadvantaged groups faced higher levels of consumption volatility, driven in part by differences in access to credit, decreasing their consumption volatility would have a clear welfare benefit. The study finds that reducing consumption volatility for the average black or Hispanic household to the level experienced by the average white household would provide the same welfare gain as increasing annual consumption by 7%.

This suggests that improving access to credit for disadvantaged groups, or providing them with other ways to smooth consumption, could significantly improve household welfare.

Notes: 'Consumption Volatility, Liquidity Constraints and Household Welfare' by Keshav Dogra and Olga Gorbachev is forthcoming in the *Economic Journal*. Dr Olga Gorbachev, previously lecturer at the School of Economics, is currently Assistant Professor of Economics at the University of Delaware. Keshav Dogra is an economist at the Federal Reserve Bank of New York, with an MSc in Economics from Edinburgh. This Focus Paper is an update of the version made available in 2009.

income, consumption, wealth and many other variables for individuals first observed in 1968 and their descendants.

The study estimates relationships between household consumption growth and other observables, and constructs a measure of expected household consumption growth given the changes in the unique characteristics of the household, such as age, education, marital status and the number and the age of children, among others.

This makes it possible to isolate the unexpected component of household consumption growth. The researchers calculate consumption volatility as the variance of the unexpected component of consumption growth, or the variance of the difference between the actual and the expected consumption growth.

To measure household access to credit, the study uses data from the US Survey of Consumer Finances (SCF). The SCF is the most widely used wealth dataset that includes detailed information on household balance sheets, income and demographics, among others. It is a representative survey that makes it possible to measure

how many households in the United States were credit (or liquidity) constrained and how these constraints evolved over time.

The researchers find that despite financial liberalisation and the near-tripling of household debt between 1983 and 2007, the proportion of constrained households slightly increased during this period: between one fifth and one quarter of US households were unable to obtain credit when they applied for it or were discouraged from applying because they thought they would be turned down (figures as per graph above).

In all years, poorer households and those headed by single parents, non-white individuals or individuals with low education were the most likely to be liquidity constrained, and this inequality in access to credit widened over time.

The study finds that consumption volatility increased by 19% between 1980 and 2004. For comparison, income volatility increased by 44% over this period. Consumption volatility was around 50% higher for the quarter of PSID households who were most