UCLA Institute for Research on Labor and Employment

Research & Policy Brief

Number 17– May 2014

Why Income Inequality Matters for Growth

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Introduction

In the fall of 2013, the US economy had not fully recovered from the damaging effects of the Great Recession. These effects are no better in evidence than in the net job loss since this recession began. As of November 2013, six years after the US economy fell into recession and four years after the recovery officially began, there were 1.3 million fewer jobs in the US economy than there were prior to the recession.[2] This at a time when the nation's population has grown by around 7 million people.[3]

The anemic recovery has exacerbated two of the most disturbing trends of the US economy over the past forty years: stagnant earnings and rising income inequality. During the recession, the demand for jobs has outstripped the supply, contributing to stagnant wages in the US and continuing a decades-long trend.

This paper is divided into six parts, inclusive of this introduction. Part two outlines the rise in income inequality, stagnant wages, and household indebtedness as factors contributing to the Great Recession. Next, we provide empirical evidence which ties income inequality to the recession. Part three explores the mainstream economic theory of consumption and identifies the need for a new theory of consumption, and in part four we show that the run-up to the Great Recession bears striking similarities to the run-up to the Great Depression. Finally, part six concludes.

Income Inequality, Stagnant Wages, the Rise of Household Debt, and the Great Recession

Since 1974, income inequality has steadily grown in the US, a trend that has been in evidence—although to a lesser extent—in other western economies. In 1974, 43.5% of all income went to the highest earning quintile of households in the U.S; this compares with 51.0% in 2012 (U.S. Census Bureau, 2013). The poorest 40% of all U.S. households in 1974 earned 14.9%, compared with only 11.5% in 2012. The average income of the top quintile in real dollars rose from almost $120,000 in 1974 to almost $182,000 in 2012, while that of the bottom quintile actually

[1] Brief by Taner Osman of the book *Why Income Inequality Matters, and Why Most Economists Haven't Noticed,* by Matthew P. Drennan , forthcoming, Yale University Press.
[2] http://money.cnn.com/2013/12/06/news/economy/november-jobs-report/
[3] http://www.census.gov/popclock/

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dropped from $11,685 to $11,490. Income inequality has been accompanied by stagnant real wages. Real wages for female year-round workers rose less than 1% annually from 1974-2007, while for males there was virtually no rise over that long period. With the onset of the Great Recession and its aftermath, both male and female real wages dropped.

At the same time that real wages have stagnated, household debt has increased. This increase in debt was especially strong from 2004 to 2007. For the bottom 95% of the income distribution, the ratio of household debt to income increased from about 80% in 2004 to 140% in 2007 (Kumhof and Ranciere 2010).

In the face of stagnant income, is it possible that, to maintain their levels of consumption of critical goods and services, households have accrued greater and greater levels of debt? If so, is it possible that stagnant wages and increasing levels of income inequality in the US helped fuel the Great Recession? A growing band of economists, including Paul Krugman and Joseph Stiglitz, have identified a role for income inequality as an important factor contributing to the Great Recession. This is significant, given that mainstream economic theory does not identify income inequality as a potential menace to economic growth. The consequence of this debate is far reaching, since if we cannot determine the major causes for the Great Recession, we are not well-placed to take steps to ensure that similar recessions do not occur again.

How can we explain the emergence of the Great Recession? An interesting perspective is offered by vanTreek (2012).

> "There is substantial evidence that the rising inter-household inequality in the United States has importantly contributed to the fall in the personal saving rate and the rise in personal debt (and a higher labour supply). Aided by the easy availability of credit, lower and middle income households attempted to keep up with the higher consumption levels of top income households. This has contributed to the emergence of a credit bubble which eventually burst and triggered the Great Recession." (vanTreeck 2012, p. 24)

A number of causes have been advanced to explain the Great Recession. These causes include:

1. Stagnant incomes for most households, related to the long-term rise in income inequality.
2. Unusually low interest rates following the year 2000
3. Legal and institutional changes, which relaxed the borrowing standards of lenders, increased the availability of cheap credit, and made housing a more liquid asset
4. The housing price bubble

Yet of these causes, increased levels of income inequality in the US has received less attention. This can be explained by a deficiency of mainstream economic theory. That theory makes certain assumptions about the consumption and saving patterns of individuals which do not account for the fact that, in the face of stagnant wages, consumers incur debt to sustain their levels of consumption of critical goods and services such as health care, education and housing.

A growing number of prominent economists, such as Paul Krugman and Joseph Stiglitz, as noted above, have broken rank with such views, identifying a prominent role for increased levels of income inequality in increased household indebtedness. According to this view, as wages in the

United States have stagnated over a number of decades, households have acquired unsustainable levels of debt in order to preserve their consumption of a number of goods and services, including health care, housing and education. Inflation-adjusted wages have remained constant over the past three decades for the majority of Americans. However, the price levels for some goods and services, such as healthcare, housing and education, have increased faster than the rate of inflation. Stagnant wages, therefore, mean that consumers have been less able to consume these goods at the levels to which they had become accustomed. The period 1995-2005 represents a perfect firestorm of household indebtedness. Cheap credit (through historically low interest rates), the increased availability of credit (through relaxed lending standards), and increased levels of equity (through increased home prices) created an environment in which consumers were able to sustain their levels of consumption through debt.

The financial crisis of 2007 was ultimately rooted in unprecedented levels of household debt. Subprime mortgages, a term for mortgage originations which are made to consumers with relatively low credit ratings, rose at exponential levels during the years following the start of the new millennium. By 2005, subprime mortgages accounted for 19% of all mortgages issued in the US. Consider that in 1999, 400,000 subprime mortgages were made, compared to 2005, when over 2 million were made (2005 was the peak year of subprime loans) (Mayer and Pence, 2008). The term "mortgage origination" covers both mortgages which are issued for home purchases, as well as those covering the refinance of existing homes.

For each year over the period 1999-2006, 60-75% of all subprime mortgage originations were made for refinancing (ibid). This means that in the great majority of the cases over this period, subprime mortgages were issued for some reason other than the purchase of a home. When a homeowner refinances their mortgage, they do so against the value of their house. The housing price boom helped to fuel the level of indebtedness. Such increases in the subprime mortgage market are indicative of the lax lending practices that had become common at this time.

Interestingly, when we consider subprime mortgages as a share of the total mortgage originations, we see great variation across states and metropolitan regions. Nevada had the highest share of subprime mortgages (25%), while Virginia had the lowest share (8%). Of the total number of mortgages issued, 35% of them were subprime in the cities of Memphis, Tennessee and Bakersfield, California. Madison, Wisconsin, by contrast, had the lowest share at 9% (ibid).

Over the period 1995-2007, the median family mortgage debt in the nation increased from $125,000 to $225,000 (when adjusted for inflation) representing an increase of 73%. Over this same period, median income increased by only 8% (Survey of Consumer Finances 2012).

The large increase in household debt for 95% of households cannot be simply attributed to lax borrowing standards and low interest rates. The rapid increase in house prices stimulated demand for housing partly because continuing price gains were anticipated. Over the period 1999-2007, real median household income increased by less than 1%; this at a time when per capita debt nationwide increased by 69% (Federal Reserve Bank of New York). There had been a long decline in income inequality from the 1930s to the 1970s. This decline ended in 1974; since then, income inequality has grown steadily, as noted above

Empirical Support for the Link Between Income Inequality and Household Debt

The central argument of this paper is that the huge run-up in household debt that was one of the major causes of the financial crisis and the Great Recession was itself, in part, a manifestation of the long rise of income inequality. While a number of scholars have asserted this link, there are few instances where this has been demonstrated statistically. To explore the possible link between rising income inequality and rising household debt, three methods have been used: 1) econometric analysis, 2) analysis of household consumption and debt data from the Consumer Expenditure Survey of the Bureau of Labor Statistics, and 3) historical analysis of the period leading up to the Great Depression.

The econometric analysis used data from the New York Federal Reserve Bank on household debt (by state) from 1999 to 2010 to estimate panel regression equations. The dependent variable was per capita household debt by year and state. The key independent variable was the income share of quintiles one through four, i.e. the bottom 80% of the income distribution by state and year. The estimated elasticity (percent change in household debt per one percent change of income share of the bottom 80%) is -0.2. That means a *fall* of 1% in income share (i.e., a rise of income inequality) leads to a 0.2% *rise* in household per capita debt, other things being equal. The estimated elasticity is statistically significant at the 0.001 level.

The consumption expenditure analysis revealed that across all income quintiles, spending on housing, health care, and education have been growing as a share of all expenditures, yet household income has been stagnant. In 1984, consumers spent around 40.6% of their income on food, apparel and transportation. By 2007, consumers spent roughly 33.8% of their income on these goods and services. Households began to spend a greater share of their income on shelter, healthcare and education over this period. Prices of those categories increased at a rate much faster than the rate of inflation. Consider that over the period 1984-2007, the consumer price index increased by 107 percent, a doubling of the cost of living in about 25 years. The shelter index rose even more–140 percent–and the healthcare index jumped over 250 percent. Largest of all are the increases in the major components of the education price index—tuition, fees and childcare—up almost 400 percent, and books and supplies, up 320 percent.

These categories—shelter, healthcare, and education—are taking a much bigger bite out of households' spending than in the past, and they are not expenditures that can be postponed such as replacing the car or taking a vacation trip. The immediacy of such demands, combined with decades of stagnant household incomes for most, seems to have made the easy availability of credit to be an almost irresistible solution to the problem of households' squeezed budgets. Mian and Sufi (2009b) note:

> "We find little evidence that borrowing in response to increased house prices is used to purchase new homes or investment properties. We also find no evidence that home equity-based borrowing is used to pay down credit card balances...We find that a total of $1.45 trillion of the rise in household debt from 2002 to 2006 is attributable to existing homeowners borrowing against the increased value of their homes. That translates to 2.8% of GDP per year." (Mian and Sufi 2009b, p. 4).

Wolff (2010) asks if debt was increased in order to support normal consumption or to expand consumption. Analyzing the Consumer Expenditure Survey data over that period, Wolff concludes: “Thus the CEX data, like the NIPA data, show no acceleration in consumer spending during the debt splurge of the 2000s. As a result it can be concluded that the debt build-up of the 2000s went for normal consumption, not enhanced consumption.” (Wolff 2010, p 22)

The historical analysis of the period leading up to the Great Depression reveals remarkable similarities between the period prior to our financial crisis and Great Recession and the period 1920 -1929. Specifically, income inequality was rising rapidly in the 1920s, household debt was soaring, and a housing price bubble first flattened in 1925-1927 and collapsed thereafter.

Shortcomings of the Mainstream Theory of Consumption

The concept of Pareto efficiency is central to the neoclassical theory of consumption. Pareto efficiency means that any change which leaves at least one person better off, and no person worse off, is an improvement. Applying the Pareto efficiency principle to the distribution of income, any change which raises the income of some while leaving the income of others unchanged is an improvement. Thus an income increase that all goes to the top one percent of the income distribution (or the bottom one percent) is Pareto efficient. The historical distribution of income in industrialized nations mostly shows all groups with absolute gains. Such changes are Pareto efficient, and the distribution of gains is not an issue for positive economics. Hence economic theory has nothing to say about the distribution of income.

Another key tenet of neoclassical economics relates to assumptions made about individual consumption. As income rises, do individuals spend a smaller or a greater share of their income? Neoclassical economics makes predictions about individual consumption contingent on their level of income. John Maynard Keynes believed that as income increases, the proportion of income that individuals spend, what economists refer to as the average propensity to consume (APC), decreases. However, data on consumption patterns seem to suggest that the share of income spent by consumers has been either stable or has increased over time. Milton Friedman, who established the mainstream theory of consumption, argued that the APC, and therefore the saving rate (1- APC), was stable over time. He also argued that the distribution of income did not matter for consumption. But his argument depends on assumptions that fly in the face of what other social sciences have demonstrated: assumptions that individual preferences are independent, i.e., they do not depend on the preferences of peers, and that utility or happiness or satisfaction depend on absolute income and absolute consumption, not income and consumption relative to peers or higher income people. Friedman argued that household income had two components: permanent income and transitory income. Permanent consumption would always be based upon permanent income. Thus it would not be positively affected by large windfalls or negatively affected by unexpected losses. Debt would be utilized to smooth over short periods when actual income fell below permanent income. But such occurrences he argued were always short-run, and so the APC and the saving rate would be stable over long periods. However, since about 1984 the APC has been rising and the saving rate, (1-APC), falling. No one could call 30 years short-run, but mainstream economists mostly still cling to Friedman’s theory of consumption.

The existing mainstream accounts do not allow for the possibility that, in the face of stagnant income levels and rising income inequality, consumers will incur debt to sustain their consumption patterns in the long-run.

The neoclassical theory of consumption is not germane to understanding the financial crisis and the Great Recession. Jettisoning that theory in favor of one that gives central place to the distribution of income, relative income and consumption, as well as household debt is necessary for devising public policies to shorten the Great Recession by dealing with the huge overhang of household debt.

Lessons from the Great Depression and the Great Recession

In the years preceding the Great Depression, income inequality rose at an alarming rate; an increase not seen again until the years preceding the Great Recession. Estimates of the income distribution in the US in the years prior to the onset of the Great Depression differ slightly, but demonstrate a consistent trend. For example, the work of Piketty & Saez shows that the share of income going to the bottom 95% of the income distribution decreased from 72.5% in 1920, to 65.2% in 1928, while the work of Kuznets shows that the share fell from 77.9 to 73.2 over the same period. Not only did income inequality increase in the years prior to the Great Depression, but we also observed an increase in household debt over this period. Household debt as a share of GDP doubled over the period 1920-1932. It increased at a similar rate over the period 1983-2007. Over both the periods, we also saw a great increase in mortgage debt. In the ten years from 1910 to 1920 mortgage debt doubled, and in the next ten years, 1920 to 1930, it more than tripled. 1930 was the peak year for mortgage debt, reaching 30.2 billion. It was not until 1947 that the 1930 peak was surpassed. Non-mortgage consumer debt increased by a factor of two in the 1920s. The similarities in the trends over the two periods have been succinctly summarized by Kumhof and Ranciere:

> "In both periods income inequality experienced a sharp increase of similar magnitude: the share of total income (excluding capital gains) commanded by the top 5% of the income distribution increased from 24% in 1920 to 34% in 1928, and from 22% in 1983 to 34% in 2007. During the same two periods, the ratio of household debt to GNP or GDP increased dramatically. It almost doubled between 1920 and 1932, and also between 1983 and 2007, when it reached much higher levels than in 1932. In short the joint evolution of income inequality across high and low income groups on the one hand, and of household debt-to-income ratios on the other hand, displays a remarkably similar pattern in both pre-crisis eras" (Kumhof and Ranciere 2010, p. 4).

Paul Krugman (2012), has also made the claim that increased inequality was at the heart of the Great Depression and the Great Recession:

> "...a return to pre-Depression levels of inequality was followed by a return to depression economics could be just a coincidence. Or it could reflect common causes of both phenomena. ….A better case can be made for the opposite proposition—that rising inequality has led to too much consumption rather than too little and, more specifically, that the widening gaps in income have caused those left behind to take on too much debt." (pp. 83-84)

Conclusion

In this paper, it has been shown that despite strong levels of economic growth that occurred in the US since the 1970s, income inequality over this time period has also increased. As the income generated over this period has been distributed upwards to the wealthiest quintiles of the population, wages for the majority of American's have remained stagnant. We normally think of the word "stagnation" as referring to something that is constant, however stagnant wages have not enabled consumers to preserve their consumption patterns of critical goods and services whose prices have increased at levels far beyond the rate of inflation, notably education, healthcare and shelter. In the face of stagnant wages, households have incurred levels of debt not witnessed since the Great Depression. The majority of this debt was used to preserve, rather than to increase, consumption patterns. It is the key contention of this paper that mainstream economic theories do not allow for the possibility that, in the face of stagnant wages and income inequality, individuals and households will increase their levels of debt to preserve the consumption of critical goods and services. This deficiency of economic theory must be addressed for us to better understand the causes of—and the best responses to—major recessions.

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