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Keywords: Inequality, income and wealth distribution, new deal, Roosevelt, Great Depression

JEL codes: D31, D33, E02, E21, E25, G01, N12, N22, N32, N62

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1 Introduction

“I SEE ONE-THIRD OF A NATION ILL-HOUSED, ILL-CLAD, ILL-NOURISHED.(...) THE TEST OF OUR PROGRESS IS NOT WHETHER WE ADD MORE TO THE ABUNDANCE OF THOSE WHO HAVE MUCH; IT IS WHETHER WE PROVIDE ENOUGH FOR THOSE WHO HAVE TOO LITTLE.”(FRANKLIN D. ROOSEVELT, 1937)¹

The view that income distribution may affect aggregate demand as well as macroeconomic stability, has received renewed interest by economists (e.g. Rajan 2010, Reich 2010, Atkinson and Morelli 2011, van Treeck and Sturén 2012, and van Treeck 2014). Rajan (2010) famously argued that income inequality can be identified as one underlying cause of the current financial and economic crisis. The political response to inequality, Rajan argues, “(...) was to expand lending to households, especially low-income ones. The benefits - growing consumption and more jobs - were immediate, whereas paying the inevitable bill could be postponed into the future. Cynical as it may seem, easy credit has been used as a palliative throughout history by governments that are unable to address the deeper anxieties of the middle class directly. (...) But when easy money pushed by a deep-pocketed government comes into contact with the profit motive of a sophisticated, competitive, and amoral financial sector, a deep fault line develops.”(Rajan, 2010, p. 9).

In a similar way, Barba and Pivetti (2009) argued that household debt was used as a substitute for wages by low and middle-income households to maintain their relative consumption levels as long as possible: "Household debt (...) appears to be capable of providing the solution to the fundamental contradiction between the necessity of high and rising levels of consumption (...) and a framework of antagonistic conditions of distribution, which keeps within limits the real income of the vast majority of society." (Barba and Pivetti 2009, p. 127). Furthermore, falling personal saving rates have accompanied the trends of rising income inequality and increasing household indebtedness. Maki and Palumbo (2001) documented that the fall in the aggregate personal savings rate in the U.S. in the 1990s was due to the sharp decline of savings in the top 20 percent group of households.

Many economists have, unfortunately, neglected the macroeconomic and financial implications of rising top-end income inequality, perhaps due to relatively low levels of

¹Second inaugural address, January 1937.

top income shares between 1945 and the end of the 1970s. Some economists even argued that financial market deregulation and the subsequent surge in household debt are efficient responses such that any fluctuations in (transitory) income can be smoothed (e.g. Krueger and Perri 2004, 2006).² Dissenting economists did recognize that inequality is a potential source of financial and macroeconomic instability, at least in the context of the current financial and economic crisis (e.g. Palley 1994, Kapeller and Schütz 2014, Cynamon and Fazzari 2008, 2013, Dutt 2006, Bhaduri et al. 2006, Behringer and van Treeck 2013, or Belabed et al. 2013).

Turning to the Great Depression period, Galbraith (2009), for instance, described five fundamental weaknesses of the economic and financial system at that time and mentions the "bad distribution of income" as the first of all factors that contributed to the Great Depression. In a similar way, Marriner S. Eccles, the former chairman of the Federal Reserve Bank, wrote that "as in a poker game where the chips were concentrated in fewer and fewer hands, the other fellows could stay in the game only by borrowing. When their credit ran out, the game stopped" (Eccles, 1951, p. 76). In a similar vein, Belabed (2015), applying the relative income hypothesis of Duesenberry (1949) to the 1920s, argued that increasing top-end inequality has led households to reduce their savings and increase their demand for credit to finance additional consumption expenditures to keep up with their more affluent peers.³ The result was the appearance of "expenditure cascades" as described by Frank et al. (2014). This is clearly at odds with a traditional Keynesian approach where upward redistribution of income should lead to a rise of the aggregate savings rate and weakening

²The argument, essentially, goes back to the Permanent Income Hypothesis (Friedman 1957). Friedman argued that household consumption depends on its permanent income (i.e. the expected long-term average income in each period) instead of actual or realized (disposable) income as was argued by Keynes (1936).

³In fact, the idea that household consumption depends on consumption expenditures of other households goes back to Veblen (1899): "[T]he standard of expenditure which commonly guides our efforts is not the average, ordinary expenditure already achieved; it is an ideal of consumption that lies just beyond our reach, or to reach which requires some strain. The motive is emulation - the stimulus of an invidious comparison which prompts us to outdo those with whom we are in the habit of classing ourselves. (...) [O]ur standard of decency in expenditure (...) is set by the usage of those next above us in reputability (...)"(p. 71). In some way, Veblen even anticipated expenditure cascades when noting that "[t]he leisure class stands at the head of the social structure in point of reputability; and its manner of life and its standards of worth therefore afford the norm of reputability for the community. (...) In modern civilized communities the lines of demarcation between social classes have grown vague and transient, and wherever this happens the norm of reputability imposed by the upper class extends its coercive influence with but slight hindrance down through the social structure to the lowest strata."(p. 59).

aggregate demand.⁴ In addition, the financial sector has deliberately accommodated this increase in credit demand, and financial innovation (e.g. new forms of consumer credit and securitization) has set the stage for financial instability towards the end of the 1920s and, ultimately, the Great Depression. Brown (1997) states that "[w]idened credit availability reacts on the propensity to consume in much the same way as a (downward) redistribution of income would - that is, by raising the spending power of low- and moderate-income households." (Brown, 1997, p. 622). Furthermore, Brown argues that "[c]onsumer credit can be viewed as supplying, at a very minimum, a temporary palliative for the problem of income inequality by virtue of its countervailing effects on the aggregate demand for durable goods." (Brown, 1997, p. 622, footnote 11). The problem with this view is that status comparisons do not matter and the household's consumption function is entirely atomistic.

The focus of this paper is twofold. Firstly, it focuses on the 1930s and asks whether the problem of increasing inequality before the Great Depression was actually perceived as such by president Franklin D. Roosevelt. Secondly, if he did perceive it as a problem, has the problem of rising inequality found its way into the design of the New Deal and, thus, economic policy.⁵ To answer the first question, this paper studies important contemporary documents from Roosevelt's time in office during 1933 and 1941. To answer the second question this paper descriptively investigates the developments of income and wealth inequality as well as household consumption expenditures, saving, and debt.

As in Belabed et al. (2013) and Belabed (2015) we will discuss both dimensions of inequality, the personal and functional distribution of income.⁶ The joint discussion of personal and functional income distribution is particularly important for the analysis of the effects on aggregate demand. Theories based on the functional distribution of income, such as under-consumption theories in the tradition of Hobson (1909) and Malthus (1820), predict stagnating aggregate consumption expenditures. According to these authors, the propensity of workers to save is negligible whereas capitalists save a substantial fraction

⁴Keynes, in a clarifying comment, famously argued that "[s]ince I regard the individual propensity to consume as being (normally) such as to leave a wider gap between income and consumption as income increases, it naturally follows that the collective propensity for a community as a whole may depend (inter alia) on the distribution of income within it." (Keynes, 1939, p. 129).

⁵For surveys on the New Deal see Belabed (2011) or Rauchway (2008).

⁶See Glyn (2009) or Atkinson (2009) for a discussion of the importance of factor shares for economic analysis.

of their income. Hence, the argument is that a falling share of labor income leads to insufficient aggregate demand and over-saving.⁷ However, this is clearly at odds with empirical evidence from the 1920s when aggregate demand coincided with a stagnating wage share (see Olney 1991 and Belabed 2015). Due to limited data availability, in particular data on consumption, saving and debt by income groups, this paper investigates potential links between income inequality and aggregate demand during New Deal times descriptively. A more rigorous approach is seriously constrained by these data limitations.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature on income inequality and the New Deal. Section 3 presents stylized facts on inequality, household consumption, saving and debt as well as a brief description of broad institutional change during the 1930s. Section 4 presents evidence on President Roosevelt's take on inequality, whereas section 5 discusses the New Deal in the context of economic inequality in the 1930s. Section 6 concludes.

2 Literature

There is a large body of literature on the Great Depression and the New Deal which renders any attempt to present a representative picture an ambitious endeavor. Among the more recent attempts, some studies highlight the parallels between the Great Recession of 2007-08 and the Great Depression starting in 1929. For instance, Almunia et al. (2010) provide a comprehensive account of parallels between the two crises with particular importance given to the international scope of both crises and to the effectiveness of policy responses in the 1930s. They conclude that monetary and fiscal policy was, in general, effective during the 1930s. Using macroeconometric estimation methods (VAR), they find that fiscal multipliers were 2.5 on impact and still 1.2 after one year. Monetary policy was effective to the extent that economic recovery in the 1930s occurred sooner in those countries which abandoned the gold standard during early stages of recovery. Hence, a possible conclusion is that fiscal policy could have had a larger impact on the recovery had it been used more aggressively. Bordo and James (2009) examine three analogies between the two crises. Firstly, they discuss macroeconomic analogies with an exclusive focus on monetary policy. They conclude that monetary policy in the 1930s was tighter than necessary due

⁷For a neat and comprehensive account of under-consumption theories (and theorists) the reader is referred to Bleaney (1976).

to the sterilization policies of the FED which violated its mandate as a lender of last resort. Secondly, they mention micro-economic issues such as bank regulation and the reorganization of banking. They state that one of the key issues in the 1930s was the doctrine of "too big to fail", albeit not in the United States because banking in the U.S. was highly localized. However, as they correctly point out, the collapse of a large part of the financial system requires a process of cleaning balance sheets. This process is not necessarily constrained to "too big to fail" financial institutions. Finally, global imbalances in trade and capital flows between countries requiring economic policy cooperation. Unfortunately, they conclude, economic cooperation was neither apparent in the 1930s nor in the current crisis, except for the immediate aftermath of the collapse of Lehman Brothers. The almost parallel increase of top-end inequality in the period preceding each crisis, the evolving instability of credit and financial markets or the persistence of inequality during the crisis is, unfortunately, not discussed at all in these papers.⁸

The literature on the onset of the Great Depression discussed here will be constrained to the contributions focusing on the United States.⁹ One of the most influential contributions of that time was the "debt-deflation theory" of Fisher (1933). He argued that the downturn of a normal business cycle can turn into a depression if over-indebtedness and deflation are simultaneously involved. By 1933, efforts to liquidate debt "(...) had reduced the debts about 20 per cent, but had increased the [real value of the, CAB] dollar about 75 per cent, so that the *real* debt (...) increased about 40 per cent." (Fisher, 1933, p. 346; italics in original). Fisher's theory is a convincing explanation for how a recession can turn into a depression, but it is not an explanation for why household indebtedness increases to unprecedented levels in the first place.¹⁰ Consequently, his policy prescriptions focus predominantly on reflating the price level to avoid a debt-deflation spiral and not on preventing the build up of private credit bubbles.

Another line of argument stresses the importance of changes in household balance sheets. Mishkin (1978) argued that conventional explanations of the Great Depression do not take into account changes in the household balance sheets and are, thus, not appropriate for

⁸Piketty and Saez (2006) discuss the long-run trends of top-end income inequality, but not in conjunction with household consumption, savings and debt.

⁹As the United States are the main subject of investigation, we abstract from the literature on the international aspects of the Great Depression. The reader is referred to Temin (1989), Kindleberger (1986), Kindleberger and Aliber (2005), Bernanke and James (1990) or Eichengreen (1996, 1992).

¹⁰Fackler and Parker (2005) have recently confirmed the debt-deflation view of the Great Depression.

explaining the sharp drop in aggregate demand, especially for durable consumption goods and residential housing, after 1929. Households have built up unprecedented amounts of debt prior to the Depression to finance the purchase of durable consumption goods. The real value of household liabilities has, in the wake of the slump of 1929, increased by 20 percent from 1929 to 1930. During times of serious financial distress, households want to reduce their debt by deleveraging. However, imperfect capital markets for tangible assets renders the possibility to turn these assets into cash (to service debt) or borrow against them almost impossible unless households accept significant losses when trying to liquidize assets. In Mishkin's words, "the opportunity cost of holding tangible assets, such as consumer durables or housing, increases substantially when a consumer gets into financial trouble. Therefore, as the probability of financial distress increases for the consumer, he will lower his demand for tangible assets." (Mishkin 1978, p. 925).¹¹ Koo (2009), essentially, argues in the same way but focuses on the firm and banking sector. His analysis highlights the problem of insufficient credit demand due to a change in the firms' sector behavior from profit-maximizing to debt-minimizing. As important as these contributions are to understanding the course of the Depression from 1929 onwards, they do not explain the driving factors behind the observed balance sheet problems. In particular, no role is given to the unprecedented rise in income inequality before the Great Depression, let alone possible systematic interconnections between inequality, consumption, saving and debt, as sketched above.

Exactly this point was taken up by Kumhof et al. (2015) in an innovative contribution. In their paper financial crises arise endogenously as a result of a sharp increase in income inequality. Their formal analysis is restricted to the current financial and economic crisis, but they also provide a descriptive assessment of the Great Depression. In their models, an upward redistribution of income leads to an increased supply of credit to bottom- and middle-income households, which readily increase their indebtedness to finance consumption expenditures in periods of stagnating, or even falling, wages. Given the nature of their model, the developments in household debt are supply-side determined, which is not entirely convincing. Belabed et al. (2013) argue that inequality and macroeconomic and financial instability are linked due to a demand-side channel by employing an institutionally enriched variant of the relative income hypothesis of Duesenberry (1949) in a large-scale

¹¹Olney (1999) argued in a similar direction by pointing out that households in financial distress postpone spending on durable consumer goods in order to avoid default.

macroeconomic model. They argue that in times of rising top-end income inequality, under upward-looking status comparisons, the middle and upper-middle class faces serious problems in providing for what they perceive as basic needs (e.g. education for their children, living in decent neighborhoods). This gives rise to higher demand for credit to finance these additional expenditures. Furthermore, households may lower their savings in order to finance their additional expenditures. Similarly, the narrative developed in Belabed (2015), by applying the relative income hypothesis to the 1920s, suggests that the same mechanism was in place in the period leading to the Great Depression. Top-end income inequality increased, households' demand for credit increased and savings were reduced in order to maintain relative standards of living. Once the implications from the relative income hypothesis are seriously taken into account, the consumption boom of the 1920s in the context of rising top-end income inequality is no puzzle at all. In fact, it is also compatible with the debt-deflation theory of Fisher (1933) or the balance sheet approach of Mishkin (1978). Societal attitudes towards credit as well as changing methods of advertising, as Olney (1991) argued, may have reinforced the demand for credit to finance additional consumption expenditures.

Romer (1990) argues that the stock market crash itself is unlikely to be the main cause of the slump but generated uncertainty about future income which is sufficient to explain the drop in demand for consumer goods, in particular durable goods. The hypothesis is that uncertainty about future income causes households to postpone purchases of durable goods such that consumer spending on durable goods is a negative function of stock market variability. The quantitative results, supporting the uncertainty hypothesis, are corroborated by a qualitative analysis of professional forecasters which shows that both forecasters and consumers have been subject to rising uncertainty about economic events in 1929 and 1930. Temin (1994), on the other hand, argues that the drop in consumption is largely unexplained and discards direct effects of the Great Crash.¹² However, he agrees with Romer (1990) that the crash may have affected the real economy indirectly through reduced private wealth, increased consumers' leverage and rising uncertainty about future income. Olney (1999) argues that high consumer indebtedness at the end of the 1920s actually explains the "autonomous drop" in consumption. Indebted households cause a drop

¹²"The stock market has gone up and down many times (...) without producing a similar movement in income. (...) If the crash of 1929 was an important independent shock to the economy, then the crash of 1987 should have been equally disastrous. (...) It follows that a stock-market crash is not a big enough event on its own to initiate a depression." (Temin, 1994, p. 6f).

in future consumption expenditures when trying to repair their balance sheets in order to prevent (expensive) defaults. Indeed, households did cut their consumption expenditures, in particular for durable goods in the first years following the Great Crash.

Friedman and Schwartz (1963), in their classic book, argued that it was the FED's decision to raise interest rates (to curb stock market speculation) which sent the economy off track in the first place. Bank runs and bank failures exacerbated the downturn as they reduced the money supply in the economy which, in turn, led to a fall of income. This view was corroborated by Cecchetti (1997). He argues that monetary policy tightened shortly after the death of FED New York governor Benjamin Strong in 1928, ultimately causing the onset of the downturn in 1929. The monetarist view was quickly challenged. Temin (1976), for instance, criticized the monetarist view by empirically estimating whether the fall in the money supply caused income to decline (the monetarist view) or whether the money supply fell after income started to decline via a fall in the demand for money (the Keynesian view). The study lends support to the Keynesian view, i.e. income fell, spending and the demand for money fell and, hence, the stock of money declined. Both views were heavily criticized by Minsky (1976) and Kindleberger and Aliber (2005) for the lack of consideration of financial fragility, i.e. fragile credit markets and a fragile banking system.¹³ Bernanke (2000) attempts to add constructively to the monetarist hypothesis by arguing that there are two additional channels through which financial developments may affect the real economy. The first is through the banking system. Bank failures, he argues, increase the cost of credit intermediation through decreased quality of financial services. The second channel works through the (in)solvency of borrowers. As financial crises negatively affect asset prices such as housing or other collateral against which households may be able to borrow. Hence, credit supply is severely constrained and adds to the overall economic downturn as it impedes consumer spending or investment of the firm sector. The problem

¹³Kindleberger and Aliber (2005) write that "Temin's analysis did not provide an explanation of the depression even though it was a strong challenge to the monetarist view. (...) The debate between the monetarists and the Keynesians ignores the instability of credit and the fragility of the banking system (...)." (p. 85). Minsky, even more discarding, writes: "From the title of this little book [Temin's 1976 book] one has a right to expect an exploration of the causes of the Great Depression (...). Instead one gets a narrow academic exercise which uses data from the Great Depression to test (...) the "Money hypothesis" (...) and the "Spending hypothesis". Neither hypothesis really passes the tests (...)". Furthermore, "Temin does not use the poor performance of the two theories he tests to introduce and examine alternative theories. As a result of this limitation the volume is of little value, either as an explanation of the Great Depression, or as a guide to the understanding of our economy in our time." (p. 44).

with the monetarist hypothesis (and Bernanke's addition to it) is that it focuses exclusively on the supply-side of money and credit. There is, however, reason to believe that households have simply reduced their demand for credit in an environment characterized by radical uncertainty about future income, for instance.

Among the studies of the Real Business Cycle school on the onset of the Depression, Weder (2006, 2001) argues that demand-side shocks (i.e. a shift of preferences between consumption/labor and leisure) are the cause of business cycle fluctuations like the Great Depression. The subsequent conclusion is that unemployment, the fall of production and the whole depression is merely a deliberate response of households maximizing their utility by choosing leisure over work. In this sense, the Great Depression should be coined the Great Vacation. A paper by Cole and Ohanian (1999) attempts to explain both the initial downturn and the prolonged slump of the 1930s. They employ a variant of the neoclassical growth model to study the onset of the Great Depression from 1929 to 1933 and, not very surprisingly, conclude that technology shocks account for 40 percent of the decline in economic activity between 1929 and 1933. However, they do not provide convincing explanations or evidence for such a deep "de-technologization" of the economy after 1929. Indeed, to produce such outcomes, there must have been enormously large negative shocks to technology, which seems extremely unlikely.

Another strand of the literature attempts to estimate the impact of economic policy (the New Deal) on the recovery. Cole and Ohanian (1999), for instance, assess potential culprits for the "weak recovery" in the 1930s. They argue that the National Industrial Recovery Act (NIRA) of 1933 is responsible for the weak recovery in the 1930s by creating industry monopolies and raising wages through codes of fair competition: "We conjecture that government policies toward monopoly and the distribution of income are a good candidate for this type of shock." (Cole and Ohanian, 1999, p. 11).¹⁴ Consequently, in a follow-up paper, Cole and Ohanian (2004) quantitatively estimate the impact of the "codes of fair competition" as enacted by NIRA in 1933. Not surprisingly, economic policy as enacted by NIRA hampered economic recovery in the 1930s by raising real wages above

¹⁴In fact, the kind of theory which Cole and Ohanian (1999, 2004) or Kehoe and Prescott (2007) advocate is a short-term version of the neoclassical growth model, which states that shocks to real factors such as total factor productivity are responsible for business cycles and all cycles are equilibrium outcomes. Or, put differently, the "distinctive feature of RBC theory is its attempt to explain cyclical fluctuations of income and employment by two fundamental hypotheses: the equilibrium hypothesis and the exogenous shock hypothesis." (Pensieroso, 2007, p. 111). Temin (2008) provides an excellent critique of these models.

equilibrium levels and cartelization policies.

In two innovative contributions, Eggertsson (2008, 2012), using a standard DSGE-model with frictions, disagrees and argues that monopolies coupled with increased bargaining power of workers leads to economic expansion if two "emergency" conditions apply. Firstly, monetary policy is constrained because short-term interest rates hit the zero lower bound, and secondly, excessive deflation. According to Eggertsson (2012), both conditions apply for the Great Depression period, such that New Deal policies, in particular NIRA, have indeed been expansionary. In Eggertsson (2008), he argues that Roosevelt's policies were successful because of an expectations channel influencing demand. Demand, in this setting, depends on expected future real rates of interest and expected future income. Keynesian models miss this channel "because expectations play little or no role." (Eggertsson, 2008, p. 526). Expected real rates of interest are lowered through increased inflation expectations following a credible policy commitment by the administration. Expected future income is increased through similar expectations about future policy by the federal government. The key determinant of both is the administration's credibility with regard to reflation of the economy.

Turning to the literature on inequality and the New Deal, we admit at this point that there is, to the best of our knowledge, not much in the literature providing a comprehensive and thorough investigation of the distributional impact of the New Deal. Temin (1994) states that one aim of the New Deal was the "distribution of income to everyone in the economy" and mentions the organization of labor implemented in the NIRA and, after the NIRA was declared unconstitutional in 1935, the National Labor Relations Act 1935 and the Social Security Act 1935. Unfortunately, Temin does not provide any source for this claim or any further analysis or at least descriptive evidence. This paper will do exactly this in Section 3.1.

Weinstein (1980) does evaluate the distributive impact of the NIRA or, more precisely, the "codes of fair competition". Weinstein correctly points out that the main purpose of the NIRA was recovery and reform (not relief).¹⁵ He concludes that the code-induced

¹⁵Keynes, in an open letter to Roosevelt, criticized the NIRA in a similar fashion: "Now I am not clear, looking back over the last nine months, that the order of urgency between measures of Recovery and measures of Reform has been duly observed, or that the latter has not sometimes been mistaken for the former. In particular, I cannot detect any material aid to recovery in N.I.R.A., though its social gains have been large. The driving force which has been put behind the vast administrative task set by

inflation "was sufficient to vitiate whatever expansion would have resulted from the (...) monetary expansion that began in June 1933.", only to attenuate his statement in the next paragraph: "Unfortunately, just how much real output and unemployment would have responded to the monetary stimulus in the absence of the codes cannot, as yet, be precisely determined." (Weinstein 1980, p. 146). With respect to the distributive impact, Weinstein concludes that NIRA was successful in redistributing income towards labor. However, it is hard to argue in favor of a major impact of this legislation on the distribution of income given the persistence of top-end inequality during the 1930s. Furthermore, drawing from the experience of the 1920s, the functional distribution of income was, perhaps, not the biggest problem (see Section 3.1).

3 Some stylized facts

3.1 Inequality in the 1930s

The following section discusses evidence on both dimensions of income inequality, the personal and functional distribution of income, in the decade following the onset of the Great Depression in 1929. Figures are, however, presented for a larger period to allow the reader to assess a longer time period and the unprecedented build-up of top-end income inequality in the 1920s. In addition, the distribution of wealth in the period of interest in the United States will be discussed.¹⁶

With regard to the personal distribution of income, Figure 1 shows the evolution of top income shares (including capital gains) for the United States between 1917 and 1941. Two patterns can be identified across all top income series. Firstly, the rise of inequality in the period preceding the Great Depression which was the central issue of Belabed (2015). The share of income going to the top-1%, top-5% and top-10% rose uniformly and peaked in 1928. The second pattern is the drop of top income shares immediately after the Great Crash. The bulk of this drop is due to the capital losses following the stock market crash. After 1933, top income shares remained essentially flat until the United States

this Act has seemed to represent a wrong choice in the order of urgencies." The text is available here: <http://newdeal.feri.org/misc/keynes2.htm> (dl. 11.8.2015).

¹⁶The discussion of (dis-)advantages of various measures or dimensions of inequality are beyond the scope of this paper. The interested reader is referred to Atkinson (1975), or Salverda et al. (2011), for instance.

entered World War II in 1941. This means that during the first two terms of Roosevelt, top-end income inequality remained high compared with observed levels after 1945. These observations are consistent with earlier estimates from Kuznets and Jenks (1953).

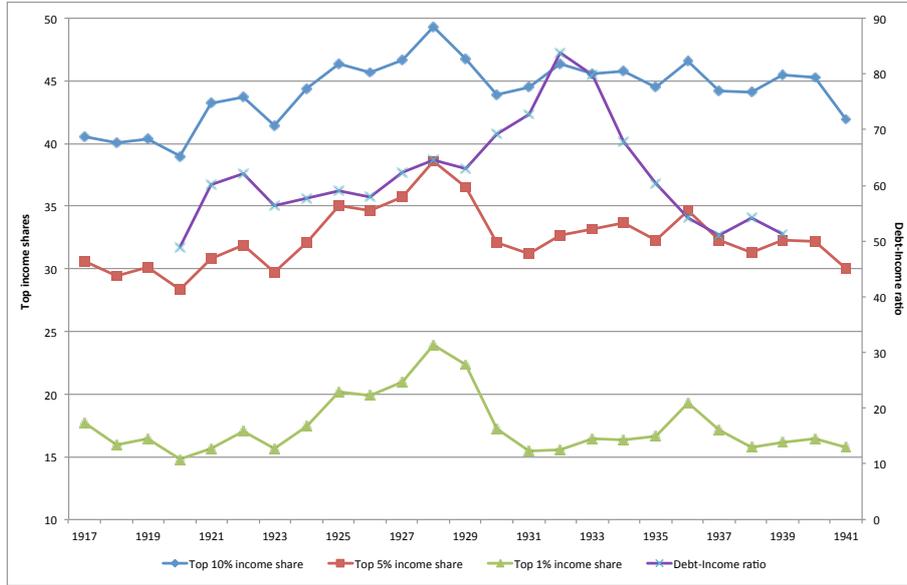


Figure 1: Top income shares (incl. capital gains) and household debt-income ratio, United States, 1917-1941.

Sources: World Top Incomes Database, IMF (2012, Fig. 3.9)

With respect to the functional distribution of income, Figure 2 depicts the evolution of disposable personal income and employee compensation (or the wage share) as a share of GDP. One feature is that disposable income declines dramatically in the 1930s after being relatively flat throughout the 1920s. The series peaks in 1931 at 82.2 percent and declines to its trough of 66.8 percent in 1943. Whatever the purpose of the New Deal may have been with respect to disposable personal income, neither was it able to revert the trend nor was it able to stabilize disposable personal income in the 1930s. The wage share on the other hand, remained remarkably flat throughout the 1930s. Between 1921 and 1941, the series oscillates between 50 and 55 percent of GDP, starting to rise only in 1942.

Turning to the intra-household distribution of wealth, measured as shares of total net household wealth, the most apparent difference to the distribution of income between households is the decline of top wealth shares (see Figure 3).

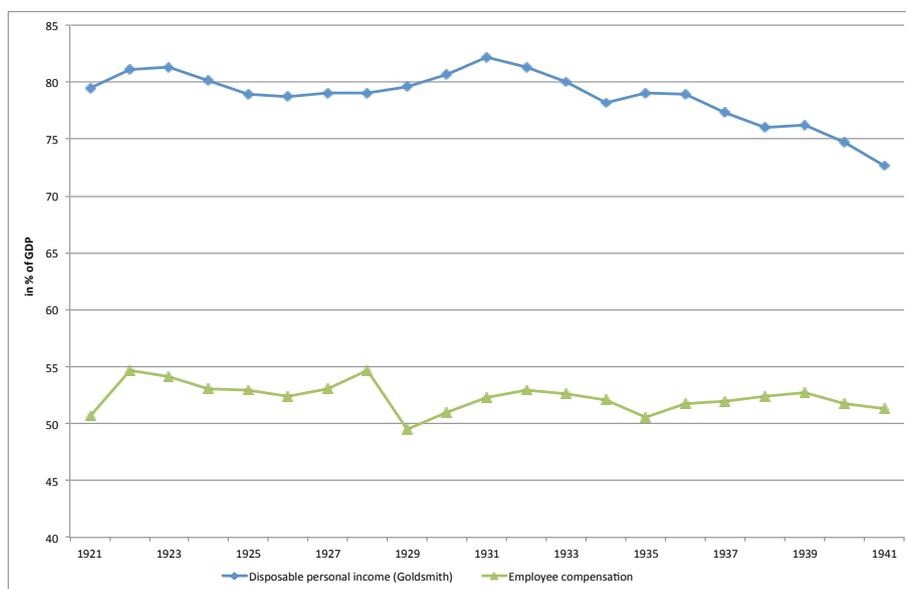


Figure 2: Disposable personal income and employee compensation in percent of GDP, United States, 1921-1941.

Sources: Disposable personal income: Goldsmith (1955, Table N-1, p.427), Employee compensation: 1920-1928 from Kuznets (1937, Table 4) and 1929-1941 from Bureau of Economic Analysis (BEA); GDP: 1920-1928 from Carter et al. (2006, Table Ca9-19) and 1929-1941 from Bureau of Economic Analysis (BEA)

Wealth shares peak around 1928-29 and decline throughout the 1930s. The decline is more pronounced among the higher wealth shares (Top-1%, Top-0.5% and Top-0.1% shares). This may be due to the fact that the distribution of various sources of wealth (in particular financial assets) is heavily skewed toward the upper tail of the distribution. For instance, the top 0.1% composition of wealth reveals that the increase in wealth of this particular group was largely due to the increase of equity. It follows that the decline of wealth among the exceptionally rich was largely driven by the decline of stock prices following the 1929 stock market crash. For the bottom 90%, the picture looks entirely different. Almost half of their wealth was held in housing wealth (net of mortgages) throughout the 1920s and 1930s. The significant decline in house prices after the burst of the real estate bubble (around 40 percentage points between 1926 and 1933) meant that these households' total wealth was most strongly affected by the decline in real estate wealth. The other half of this group's wealth was held in the form of business assets, equities as well as fixed-income

claims and pensions.¹⁷

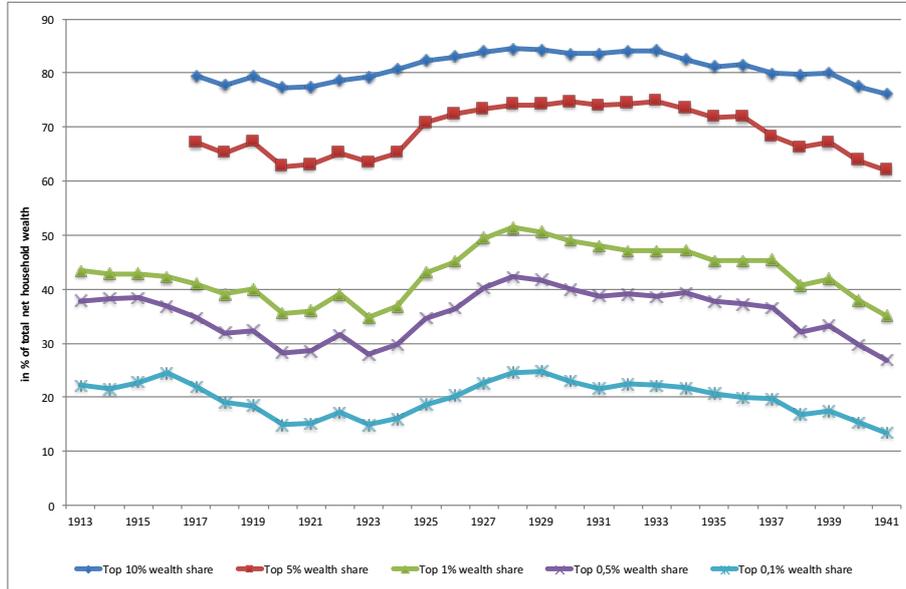


Figure 3: Top wealth shares, United States, 1913-1941.

Source: Saez and Zucman (2014)

Summarizing, the 1930s have been a period of stagnating top income shares at high levels combined with a stagnating share of labor, a falling share of disposable personal income and (slowly) decreasing top wealth shares. Whether one concludes that inequality has risen, fallen or remained stagnant is, obviously, a matter of interpretation. From the viewpoint of labor or lower-income groups, it is safe to say that their situation has hardly improved throughout the 1930s.

3.2 Household consumption, savings and debt

Increasing top-end income inequality can spark a debt-financed consumption-driven boom. Belabed (2015) argued that households' demand for credit was accompanied by an unprecedented institutional change on financial markets resulting in rising household debt

¹⁷See Saez and Zucman (2014, Fig. 8). Whether pensions or claims on pensions should be considered as a component of household wealth at all remains an interesting topic. For one thing, pension claims can not be sold on markets. In addition, pension claims cannot be transferred to the next generation, which is also an important characteristic of other forms of wealth (e.g. housing or financial wealth).

throughout the 1920s and the increasing importance of the financial sector. In the 1930s, however, top-end income inequality was not rising and demand for and supply of credit declined. For the macro-economy this means that domestic demand, in particular consumption, had to rely on actual disposable income as debt was no way out this time.

Figure 4 presents data on the components of GDP, consumption, investment, government purchases and net exports as a share of GDP. The share of GDP devoted to consumption declined from its peak at 82 percent in 1932 to less than 65 percent in 1941.¹⁸ Certainly much of the initial increase was due to rapidly falling GDP such that the subsequent fall could be attributed to rapidly increasing GDP. Nevertheless, given the relatively flat wage share, this dramatic fall in the consumption-to-GDP ratio is remarkable. Government consumption and investment, as a share of GDP, were flat throughout the 1930s whereas net exports started to become economically relevant around 1937-38. Private investment as a share of GDP, however, rose significantly during the 1930s from its trough (less than five percent of GDP in 1932) to around 15 percent of GDP in 1941.

Household consumption behavior in the 1930s was dominated by the aftermath of the Great Depression. As was discussed in Belabed (2015), household balance sheets seriously deteriorated after 1929, following a massive decline in asset prices such as housing or stocks which significantly reduced expenditures for durable goods during the 1930s. Figure 5 presents data on expenditures for various groups of consumer goods, services and the personal saving rate. Expenditures on durable goods decline from 6.7 percent to 5.3 percent towards the end of the 1930s. This can be expected given that millions of households were affected by over-indebtedness, unemployment or underemployment. Simultaneously, expenditures for minor durable goods decrease as well as expenditures for services. Even less surprisingly, the personal saving rate in percent of disposable income increased significantly to almost thirteen percent in the 1939-1948 period. Other estimates essentially show the same trend. Personal savings from the National Income and Product Accounts quadrupled from 3.3 billion dollars in 1930 to 13.3 billion dollars in 1941 and, as

¹⁸The observed decline of consumption as a share of GDP may be due to a range of alternative factors. For instance, it could reflect increased war efforts towards the end of the 1930s or beginning of the 1940s stimulating government expenditures, private investment and exports. However, through the fiscal multiplier this should have been translated into higher consumption expenditures, which obviously did not happen. An explanation for the observed decline in the consumption-GDP ratio could be a significant decline in the marginal propensity to consume due to efforts of households to deleverage in the 1930s.

a share of disposable income, increased from 4 percent in 1930 to 14 percent in 1941.¹⁹

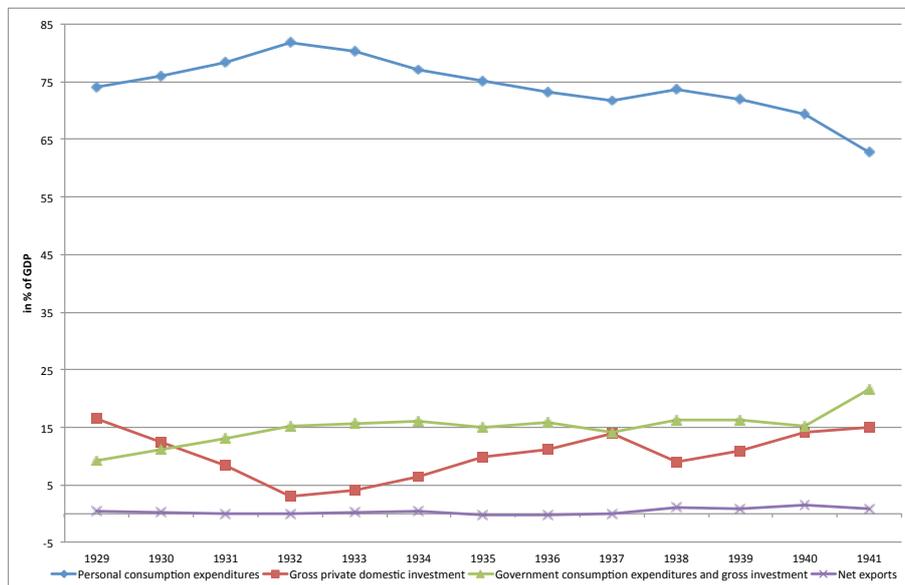


Figure 4: Components of gross domestic product in percent of GDP, United States, 1929-1941.
Source: Bureau of Economic Analysis (BEA)

To provide more insight, factory sales of cars, for instance, declined from 4.5 million in 1929 to 1.6 million in 1933. The level of 1929 was not reached until twenty years later with 5.1 million cars in 1949.²⁰ Consumption expenditures on automobiles and parts declined from its peak at 3.2 billion dollars in 1929 to less than 1.7 billion dollars in 1933, a decline of approximately 50 percent. The level of 1929 was not reached until 1947.²¹ In addition, the index of production of durable goods declined from its peak in 1929 at 119 points to 32.6 points in 1933. After a remarkable increase to 104.8 points in 1937, the index plummeted again during the recession in 1937-1938, the so called "Roosevelt recession". Households significantly reduced expenditures for durable goods such as cars, refrigerators or other electronic appliances which constituted the bulk of goods bought on installment during the expansion of the 1920s.²² Olney (1999) argues that alongside other explanations for the drop in consumer durable expenditures, high costs of defaulting on existing installment

¹⁹Bureau of Economic Analysis, NIPA Table 5.1

²⁰Carter et al. (2006, Table Df343-346). The decline in the sales of cars has widespread effects on other industries such as rubber, tires, oil and the like.

²¹Carter et al. (2006, Table Cd411-423)

²²Olney (1999) reports that the percentage of households buying a car declined from 24 percent in 1929

obligations induced households to prefer continuation of their debt-service obligations instead of default.

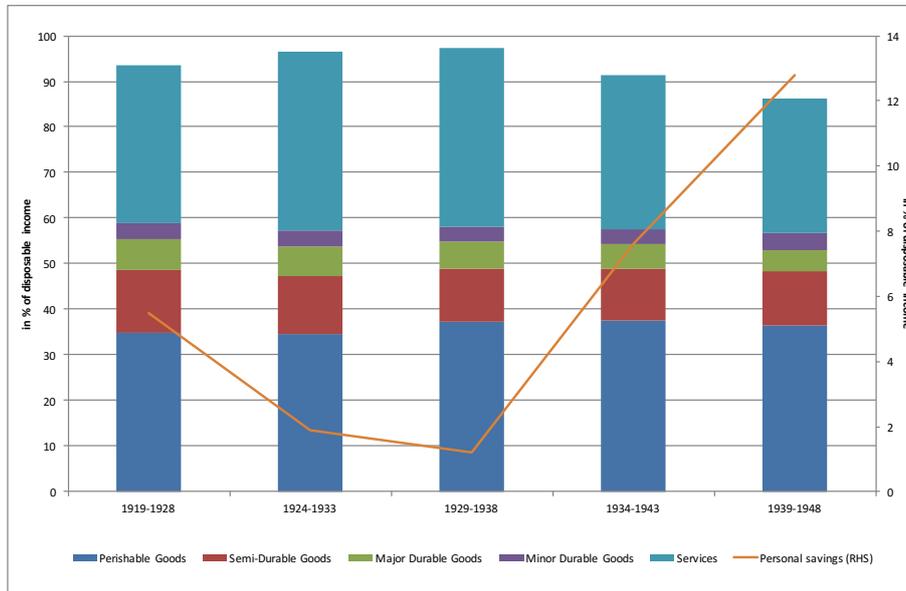


Figure 5: Expenditures on goods and services and personal saving rate (in percent of disposable income), decade averages, United States.

Source: Olney (1991, Table 2.8)

With respect to household debt, one of the major determinants of the consumption boom of the 1920s, Figure 6 shows a decline of nominal household debt from its peak in 1929 at 54 billion dollars to its trough in 1934 at 37 billion dollars and remained flat throughout the rest of the 1930s. Household debt as a share of disposable income continued to rise between 1929 and 1932 peaking at 84 percent, mainly reflecting the rapid decline in disposable income. Between 1932 and 1939 the debt-income ratio declined significantly to approximately 51 percent of disposable income. The main driver of the observed decline in household debt is mortgage debt. Total non-farm residential mortgage debt declined from its peak at 28 billion dollars to 20 billion dollars in 1938.²³ Simultaneously, the mortgage debt-wealth ratio declined from 34 percent in 1932 to 23 percent in 1941.²⁴ Total

to 7.3 percent in 1933. Until 1939, the percentage of households buying cars increased somewhat to 11.3 percent but remained well below the levels of the late 1920s.

²³Grebler et al. (1956, Table L-1)

²⁴Grebler et al. (1956, Table L-6)

short-term consumer debt outstanding declined from its peak at 7.7 billion dollars in 1929 to 3.9 billion dollars in 1933.²⁵ After that consumer debt increased further to 9.8 billion dollars in 1939 only interrupted during the 1937-38 recession.

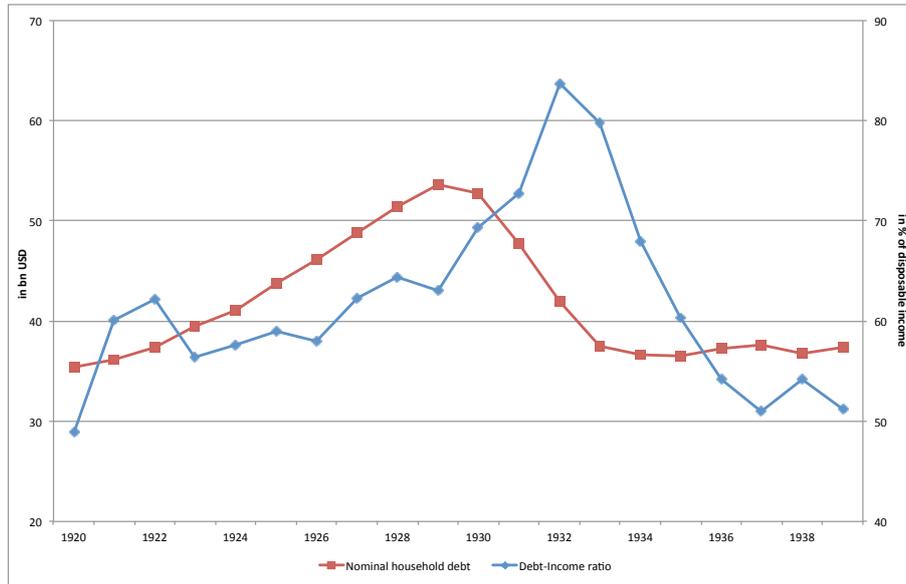


Figure 6: Nominal household debt and debt-income ratio, United States, 1919-1939.
Source: IMF (2012)

Through the lense of the relative income hypothesis, this makes perfect sense. Consider first the experience of the 1920s: Rising inequality at the top-end of the income distribution leads to increased consumption of these households. This induces the next group to increase their consumption as a response to the observed loss of status, giving rise to expenditure cascades (Frank et al. 2014). When households cannot finance their additional expenditures out of income, they have various coping mechanisms at their disposal. They can draw down savings and increase their demand for credit - both can be observed for the 1920s and both increase financial instability. But what happened in the 1930s? First, the impulse for the initial rise of expenditure cascades (i.e. rising top-end income inequality) did not happen after 1929. Top income shares remained at high levels but did not increase further. This suggests that there was at least no additional demand for consumption goods by households which compare themselves with the next higher group of households in the

²⁵Goldsmith (1955, Table D-1)

income distribution, assuming that upward looking status comparisons dominate. Secondly, and perhaps more important, financial market reform during the 1930s led to a decline in the supply of credit to low- and middle-income households (see Section 3.3). Disposable income as a share of GDP and the wage share were either declining or relatively flat, so there was no reason to expect household consumption to increase during the 1930s through a traditional Keynesian mechanism.

From a balance sheet perspective (e.g. Mishkin 1978 or Koo 2009), the decline in household consumption is not particularly surprising as well. After the decline of the economy starting in summer 1929 and the crash of stock market later that year, households were still engaged in deleveraging and repairing their balance sheets in the context of severe wealth depreciation following the bust of the housing and stock market in the second half of the 1920s. Recent research suggests that deleveraging has sizeable depressing effects on household consumption (e.g. Dynan 2012 or McCarthy and McQuinn 2015). In addition, as Olney (1999) pointed out, default was extremely expensive for households and so they chose to use remaining inflow of funds to repay their debts. The result was a further weakening of household consumption expenditures, especially on expenditures for durable goods. Furthermore, household consumption may have declined due to a wealth effect. The larger the depreciation of household wealth, the larger the dampening effect on household consumption. Obviously, these explanations are all compatible with the macroeconomic developments during the 1930s.

3.3 Institutional change in the 1930s

Whereas the 1920s have been a period of unprecedented institutional change such as financial market deregulation or financial innovation, the 1930s can be considered as the other extreme of the spectrum. In general, the New Deal meant a new approach of government towards financial markets. Comprehensive information on all laws passed with regard to financial market regulation would be beyond the scope of this paper, but an overview of new regulations will be presented in this section.

As a response to the stock market crash, for instance, laws were passed to establish supervisory authorities. The Securities Exchange Act of 1933, for instance, created the Securities and Exchange Commission (SEC) which still oversees the trading of securities such as stocks, swaps or derivatives at exchanges. Speculative bubbles have, nevertheless,

developed despite the presence of the SEC. In the 1930s, however, it meant that the public's confidence in well functioning stock markets should be restored. In addition, the Banking Act of 1933 (commonly known as Glass-Steagall Act) created the Federal Deposit Insurance Corporation which was extremely helpful in preventing future bank runs and gave tighter regulation of national banks to the FED. Additionally, the act separated commercial from investment banks and was an important safeguard for the next six decades until its repeal in 1999. Codes of fair competition established rules in favor of consumers in the credit markets and the Home Owners' Loan Corporate Act of 1933 established a governmental agency of the same name to refinance mortgages from banks to home owners to prevent foreclosure. In short, the government either engaged in the financial services industry itself or influenced heavily the future stability of the financial system, in particular the banking system for the next five decades.

Turning to developments in the securities market, two things become strikingly apparent from Figures 7 and 8. Firstly, the Dow Jones Industrial Average (DJIA) declined from its peak at 300 points in 1928 to less than 60 points in 1932 reflecting a reduction of 80 percent. Trading at the NYSE plummeted. The number of shares sold declined from 94 million shares in 1929 to 14 million in 1941. Businesses so eager to finance themselves through issuing equity instead of loans during the stock market euphoria became extremely cautious of issuing new stocks. The value of newly issued common stock declined from 4.4 billion dollars in 1929 to 78 million dollars in 1941 constituting a decline of more than 98 percent. In 1938 the value of newly issued common stock was at 18.6 million dollars, a decline of more than 99 percent. Another interesting feature of the 1930s was the decline of broker's loans. A broker's loan is a loan from a bank to a professional broker who finances margin accounts for investors who seek to buy securities or commodities with the money granted. The investor is, thus, participating in the securities or commodities market with the broker's money or leveraging his financial investment. Between 1928 and 1932, the amount of broker's loans declined from 6.4 billion to 430 million dollars, a reduction of more than 93 percent.²⁶ In short, the stock market experienced a full-fledged drought in the first years of the 1930s. Credit markets were severely constrained through reduced demand for and supply of credit as well as financial regulation.

²⁶Carter et al. (2006, Table cj866-869)

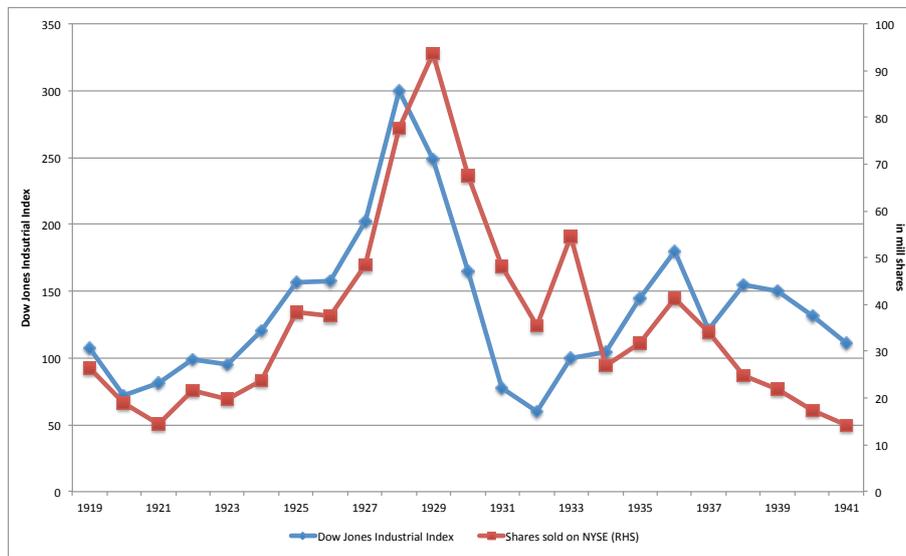


Figure 7: Shares sold on New York Stock Exchange (NYSE) and Dow Jones Industrial Index, United States, 1919-1941.

Source: Carter et al. (2006, Table Cb52-54 and Cb797-807)

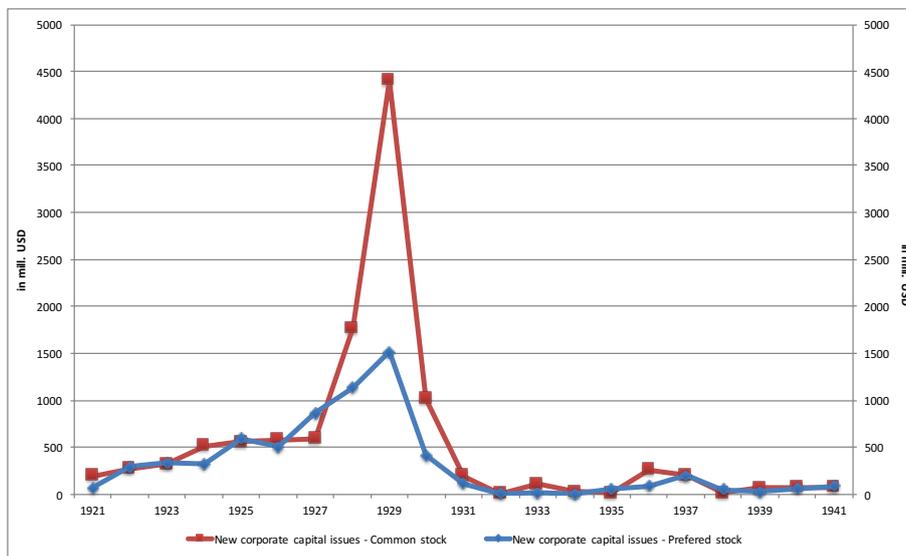


Figure 8: New corporate capital issued; Common and preferred stock, United States 1921-1941.

Source: U.S. Department of Commerce (n.d., 1930-1942)

Overall, all of these developments resulted in a significant reduction of the importance

of financial markets. Figure 9 shows various measures of the income of the financial sector and compensation of the financial sector as a share of total compensation. Which measure one prefers is of lesser importance as the trend of the decline of the financial sector is made strikingly clear. After 1932-33, the trend is universally downward and in 1941 the income shares of the financial sector have almost uniformly reached the levels of 1919. All of the aforementioned institutional changes in the 1930s mean that neither was the "palliative" (i.e. increased availability of credit) available anymore nor did households wish to increase indebtedness again as they did in the 1920s.

Summarizing, the developments in the 1930s, the background of the narrative following in the next sections, differs enormously from the developments in the 1920s. Financial markets have been re-regulated, new government authorities have been created to oversee financial market activities and many of the financial innovations of the 1920s were either not demanded or supplied anymore. The result was a decreased importance of the financial sector for the next decades.

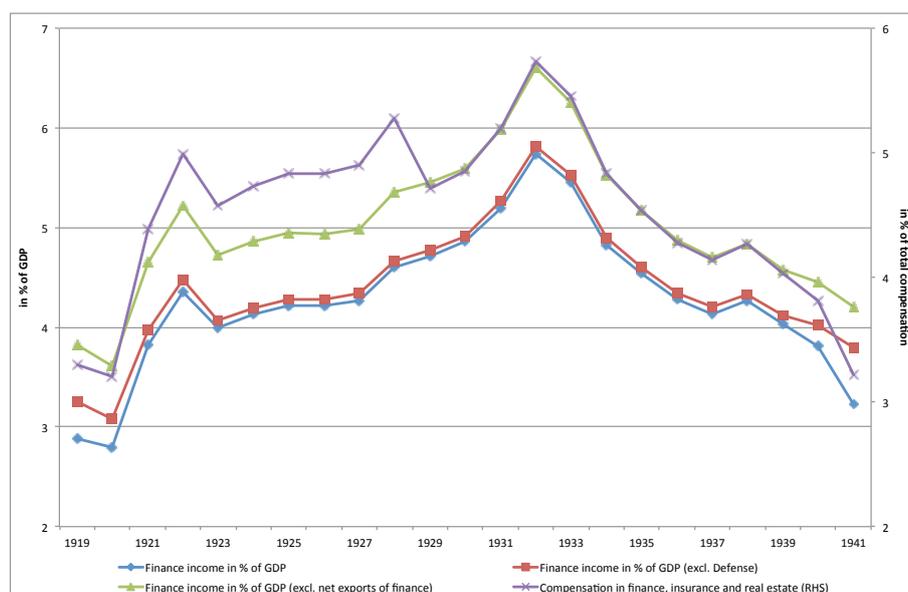


Figure 9: Finance income in percent of GDP (various measures) and compensation in finance, insurance and real estate as a share of total compensation, United States, 1919-1941.

Sources: Philippon (2013)

4 Roosevelt's take on income inequality

The first question which this paper attempts to answer is whether top-end inequality was recognized as an economic problem by the administration. Certainly, it is well beyond the limits of this paper to give a comprehensive account, so this paper focuses on Roosevelt's inaugural speeches, fireside chats and transcripts of press conferences between 1933 and 1940.²⁷

From Roosevelt's first inaugural speech, delivered on March 4th 1933, the priorities of the president are clear: "Our greatest primary task is to put people to work. This is no unsolvable problem if we face it wisely and courageously. It can be accomplished in part by direct recruiting by the Government itself, treating the task as we would treat the emergency of a war, but at the same time, through this employment, accomplishing greatly needed projects (...)". In addition, Roosevelt addressed other important issues, the supervision of the banking and credit system, the end of speculation and the provision of "adequate but sound currency."²⁸ In his second inaugural speech, Roosevelt did mention inequality as a potential problem, not just economically but also for democracy itself: "I see millions lacking the means to buy the products of farm and factory and by their poverty denying work and productiveness to many other millions. I see one-third of a nation ill-housed, ill-clad, ill-nourished." Furthermore, he adds: "The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little."²⁹ Understandably, Roosevelt's third and fourth inaugural speeches do not mention inequality at all as they are already colored by the War in Europe or elsewhere.

From the president's fireside chats, top-end income inequality also does not seem to be a major economic topic. However, there are some hints that Roosevelt at least recognized that further reductions in the wage scale should be tackled: "This alternative [the continuation of foreclosures, withholding credit and subsequent liquidation and bankruptcy; CAB] meant

²⁷All fireside chats of president Roosevelt can be found on the homepage of the American Presidency Project: <http://www.presidency.ucsb.edu/fireside.php> (dl. 3.7.2015). Inaugural addresses are available here: <http://www.presidency.ucsb.edu/inaugurals.php> (dl. 3.7.2015). All transcripts of press conferences are accessible online through the Roosevelt presidential library here: <http://www.fdrlibrary.marist.edu/archives/collections/franklin/> (dl. 10.8.2015).

²⁸First inaugural address, March 4th 1933.

²⁹Second inaugural address, 20th January 1937.

a continuation of what is loosely called 'deflation', the net result of which would have been extraordinary hardship on all property owners and, incidentally, extraordinary hardships on all persons working for wages through an increase in unemployment and a further reduction of the wage scale."³⁰ Furthermore, Roosevelt did advocate a bigger role of government in the process of reshaping the industrial environment to tackle the downward spiral of unemployment and wages: "Take the cotton goods industry. It is probably true that ninety per cent of the cotton manufacturers would agree to eliminate starvation wages, would agree to stop long hours of employment, would agree to stop child labor, would agree to prevent an overproduction that would result in unsalable surpluses. But, what good is such an agreement if the other ten per cent of cotton manufacturers pay starvation wages, require long hours, employ children in their mills and turn out burdensome surpluses? The unfair ten per cent could produce goods so cheaply that the fair ninety per cent would be compelled to meet the unfair conditions. Here is where government comes in."³¹

Seldomly is there a rule without an exception. One of the few accounts pointing to intra-household income inequality is: "Now I come to the links which will build us a more lasting prosperity. I have said that we cannot attain that in a nation half boom and half broke. If all of our people have work and fair wages and fair profits, they can buy the products of their neighbors and business is good. But if you take away the wages and the profits of half of them, business is only half as good. It doesn't help much if the fortunate half is very prosperous – the best way is for everybody to be reasonably prosperous."³² It is, unfortunately, true that top income inequality remained high throughout Roosevelt's first two terms as president. Only with the United States entering World War II did income inequality decrease significantly (see Figure 1).

Inaugural addresses and fireside chats certainly focus on outlining the broader policy lines along which Roosevelt intends to move. Daily business, however, is probably better reflected in press conference transcripts between 1933 and 1940. From these transcripts it is also clear that top-end income inequality has not been a major policy issue for the president. Occasionally, the topic is being discussed in press conferences but mostly in terms of inequality between rural and urban areas, the south versus the north, or in terms of minimum wages and maximum hours to combat unemployment.³³ In one of the very

³⁰Fireside Chat, May 7th 1933.

³¹Fireside Chat, May 7th 1933.

³²Fireside Chat, July 24th 1933.

³³See for example, the 12th press conference from April 14, 1933, the 51st press conference from

few occasions where it is mentioned in conjunction with the macroeconomy, Roosevelt stated the following: "We need more distribution of national income, not Government expenditures but national income, which would include Government expenditures. We need more expenditures at the bottom and less at the top, because of the fact that expenditures of funds at the bottom goes primarily to people, millions of people, who are the consumers of consumer goods rather than consumers of durable goods."³⁴ This is, to the best of my knowledge, the only explicit statement about income inequality in connection with the macroeconomy. We therefore conclude that Roosevelt was indeed well aware about the low wage share (the "wage scale" is the term most often used) or the lack of purchasing power among the various groups of society. Top-end income inequality, increasing financial instability have almost never been mentioned or discussed except for the brief appearances mentioned in this section.

5 Inequality and the New Deal

The usual justification for inequality is that some inequality is necessary to provide an incentive scheme that encourages upward mobility and, thus, overall economic welfare. On the other hand, as an explanation, two factors stand out in the literature. Firstly, globalization puts pressure on labor and, secondly, skill-biased technological change which renders low-skilled jobs obsolete over time.³⁵ As intriguing as these factors may be as an explanation, inequality is heavily influenced by another factor, namely tax and social policy. For the purpose of the paper, we will focus on tax policy, as social policy as we understand it now was simply not in place for a big part of the 1930s. The first social insurance legislation in the history of the United States, for instance, was enacted only with the Social Security Act of 1935. It created the first federal social security system with unemployment insurance, pensions, aid to dependent children and grants for maternal and child welfare. In order to reduce inequality by large measures, such a system needs to be in place for several years if not longer. Hence, it will not be discussed here.

Figure 10 shows marginal income and inheritance tax rates for the United States between 1913 and 1941. Quick inspection reveals that both of these tax rates have been increased

September 13, 1933 or the 327th press conference from November 13, 1936.

³⁴357th press conference, April 2, 1937.

³⁵See, for instance, Jaumotte and Buitron (2015), IMF (2007) or Card and DiNardo (2002) for a discussion of these hypotheses.

in the period of interest. The first hike occurred around 1915, presumably to finance the engagement in World War 1. Top marginal income tax rates increased from below ten percent in 1913 to almost 80 percent in 1918. Simultaneously, top marginal inheritance tax rates increased from zero percent in 1913 to 25 percent in 1918.

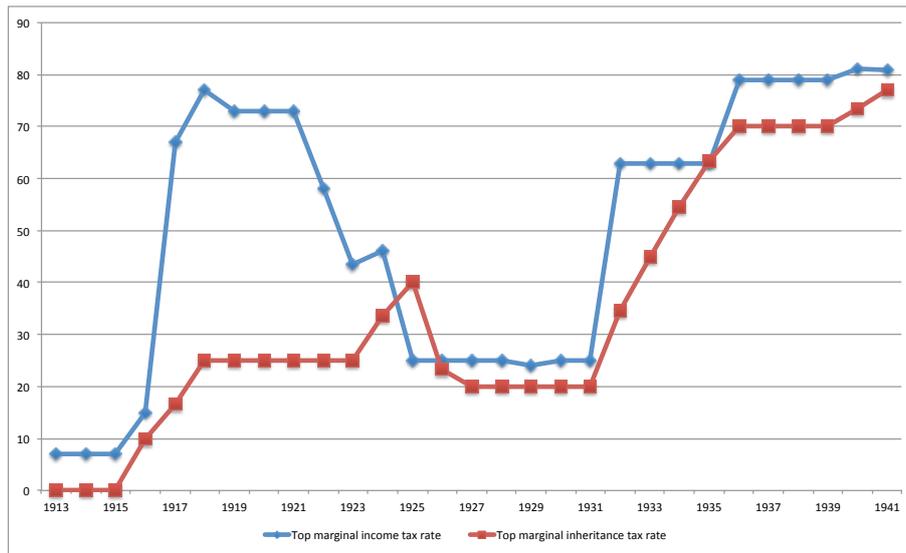


Figure 10: Top marginal income and inheritance tax rates, United States, 1913-1941.

Sources: Piketty (2014, Fig. 14.1 and 14.2)

Throughout the 1920s, both marginal tax rates were reduced, although top marginal income tax rates sooner and at a faster pace down from the peak in 1918 to 25 percent in 1925. Inheritance taxes were reduced from 1925 onwards to 20 percent in 1927 (half of its 1925 level). The top marginal income tax rate, however, peaks in 1944-45 at 94 percent. This is very close to recent estimates of the optimal marginal earnings tax rate computed, for instance, by Kindermann and Krueger (2015). The welfare optimizing marginal tax rate for the top 1% earners is around 90 percent, depending on the specifications of the model.³⁶ Supporting the argument for higher top marginal tax rates, Diamond and Saez

³⁶They employ a standard over-lapping generations model where welfare is defined as the weighted sum of expected life-time utility of households alive and born in the future. The key features of the model are ex ante heterogeneity of skills and, hence, earnings potential. Furthermore, they include idiosyncratic wage risk and endogenous labor supply and saving choices. The most crucial feature, however, is a policy-invariant productivity process which generates realistic distributions of wealth and earnings (see Kindermann and Krueger 2015 for more details).

(2011) compute values for the optimal marginal earnings tax rate for the top percentile to be in a range between 48 and 76 percent, depending on certain parameters used.³⁷

Kennedy (2009), however, disagrees that tax hikes did anything to redistribute income in a substantial way. He argues that "[t]he falling economic tide of the Depression lowered all boats, but by and large they held their relative positions. (...) True, the so-called 'wealth-tax', or 'soak-the-rich' tax, that Roosevelt pushed through Congress in 1935 imposed a 79 percent marginal tax rate on incomes over \$5 million; but that rate applied to but a single taxpayer in all the United States - John D. Rockefeller." (Kennedy 2009, p. 252). Furthermore, Kennedy (2009) adds, whatever decrease in relative incomes there was, was due to diminished returns to investment induced by the Depression. In addition, fewer than five percent of all households actually paid any income tax at all. Historical data from the Internal Revenue Service reveals that total income tax liability peaked at 1.2 billion dollars in 1936 (a mere 1.4 percent of GDP) before decreasing again to 766 million dollars in 1938 (0.9 percent of GDP). Only after 1940 did tax liabilities rise substantially to 3.9 billion dollars (7.2 percent of GDP) in 1943. Most of these trends seem to be highly cyclical and less dependent on the formal structure of the tax system. More rigorous analysis would certainly be helpful in determining the impact of tax policy on tax liabilities in the 1930s.

Another way to tackle inequality is to encourage labor to organize in trade unions.³⁸ Indeed, one of the intentions of the National Industrial Recovery Act (section 7a of the Act) was to facilitate the organization of laborers in their own trade unions without interference from employers. Measured by trade union density, the NIRA has been a great success. For instance, membership of unions rose from almost four million to nine million between 1930 and 1939 which constitutes an increase of 125 percent in nine years. Measured in percent of the labor force, union membership rose from its trough of 5.6 percent in 1933 to 18.8 percent in 1939 (see Figure 11).

³⁷The most important one being the elasticity of earnings (e) determining the behavioral response of top earners to a change in the top marginal tax rate. Another important parameter is the weight of top income earners in the social welfare function of the government. The higher their weight, the lower the incentives for the government to increase top marginal earnings tax rates. For a discussion of the political economy of inequality see Duca and Saving (2015), Bartels (2008) or Stiglitz (2012).

³⁸See Visser and Checchi (2009) for a survey of theoretical and empirical studies on the topic and evidence for the equalizing effect of trade unions. Roser and Crespo-Cuaresma (2016) recently confirmed this empirically.

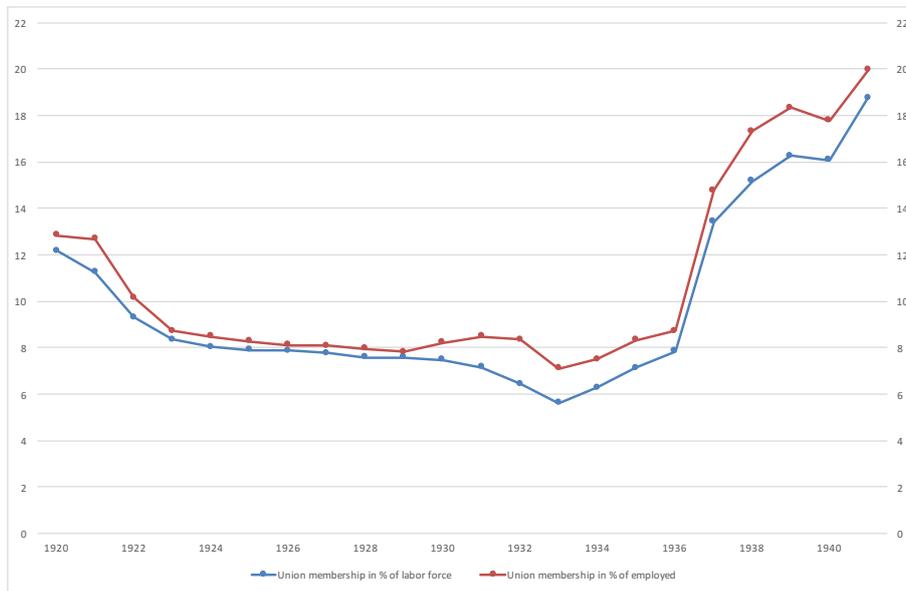


Figure 11: Union membership in percent of labor force and employed persons, United States, 1920-1941.

Source: Carter et al. (2006, Table Ba470-477 and Ba4783-4791)

The effect of the rise in trade union membership has, unfortunately, not led to a rise of labor’s share of GDP in the 1930s. As was mentioned before, top-end income inequality remained at high levels and the wage share remained flat throughout the 1930s.³⁹

6 Concluding Remarks

This paper attempts to answer two questions. Firstly, was top-end income inequality perceived as a problem by the Roosevelt administration? Secondly, if so, did the New Deal incorporate these concerns such that economic policy design did take seriously the problem of top-end income inequality?

This study analyzed important documents from Roosevelt’s presidency, including inaugural speeches and fireside chats which were a vehicle to outline broad policy lines

³⁹A comprehensive discussion of why increased union density did not lead to a rise of the wage share or a decline in top income shares is beyond the scope of the paper. One obvious reason is that union density alone may not be enough if there is low coverage of bargaining agreements (i.e. non-unionized workers do not benefit from bargaining results of unions).

and goals of the administration, and transcripts of press conferences of Roosevelt which are supposed to better reflect daily business of Roosevelt. Top-end inequality was rarely mentioned directly and if so, then always under the headline of creating employment for the unemployed or introducing minimum wages and maximum hours. This is particularly interesting, as top-end inequality has recently been discussed as one potential cause of macroeconomic and financial stability. Top marginal income and inheritance tax rates did increase during the 1930s, but their distributional impact has been modest to say the least. To the excuse of Roosevelt it should be noted that nowadays, researchers and policy makers have access to much more (sophisticated) data as was the case in the 1930s. It may be the case that the administration was not aware of the problem because of a lack of reliable data.

Contrary to the experience of the 1920s, debt was no way out this time. Demand for and supply of credit were reduced significantly in the aftermath of the economy's crash starting in summer 1929. Hence, a debt-financed consumption-driven economic recovery was not possible. All economic sectors, in particular households and firms, were struggling to repair their balance sheets, i.e. engaged in deleveraging processes. The result was a redirection of available income for non-consumption purposes such as debt obligations. One of the shortcomings of the New Deal presented in this study is the lack of engaging in a much more redistributive economic policy in times of crisis. As is well known, the focus was on reflation wages and prices, promote fair competition, and reduce unemployment.

Of course, this study does not rule out other possible causes and explanations for the prolonged slump. Indeed, given the length and magnitude of the crisis (from 1929 to 1941) it would be highly peculiar to rely on a mono-causal argument. This paper merely attempts to add another piece to the bigger picture. Certainly, the narrative developed here would gain significance with more rigor applied. Unfortunately, consumption and saving behavior of households cannot be modeled in such a way due to the lack of disaggregated data. A more rigorous analysis, thus, has to be left for future research as these data may eventually become available. In addition, we have only examined documents of President Roosevelt with respect to inequality, not of other members of the administration. These limitations, however, point to possible paths for future research on the topic as well.

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Appendix A

Data

Table 1: Series name and sources

Series name	Source
Components of GDP	BEA, Table 1.1.5
Top Income Shares	World Top Incomes Database
Household debt in % of disposable personal income	IMF (2012, Fig. 3.9)
Disposable personal income	Goldsmith (1955, Table N-1)
Employee compensation 1920-28	Kuznets (1937, Table 4)
Employee compensation 1929-41	BEA, Table 2.1
Gross domestic product 1920-28	Carter et al. (2006, Table Ca9-19)
Gross domestic product 1929-41	BEA, Table 1.1.5
Top wealth shares	Piketty (2014)
Finance income in % of GDP (various measures)	Philippon (2013)
Compensation in finance, insurance and real estate as a share of aggregate compensation	Philippon (2013)
Nominal household debt	IMF (2012)
Dow Jones Industrial Average	Carter et al. (2006, Table Cb797-807)
Shares sold on NYSE	Carter et al. (2006, Table Cb52-54)
New capital issues (preferred and common)	U.S. Department of Commerce (n.d.)
Union membership	Carter et al. (2006, Table Ba470-477 and Ba4783-4791)
Total short-term consumer debt	Goldsmith (1955, Table D-1)
Total nonfarm residential mortgage debt	Grebler et al. (1956, Table L-1)
Mortgage debt to wealth ratio	Grebler et al. (1956, Table L-6)
Personal savings (absolute and in % of DPI)	BEA, Table 5.1
Factory sales of cars	Carter et al. (2006, Table Df343-346)
Expenditures on automobiles and parts	Carter et al. (2006, Table Cd411-423)

Expenditures on goods and services; personal saving rate Olney (1991, Table 2.8)

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