Keynes on Economic Stagnation and Debt
Chapter 1 in
Essays on Political Economy Volume III: Keynes.

George H. Blackford
George@rwEconomics.com
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Abstract

Keynes on Economic Stagnation and Debt explains how the failure of neoclassical economics to embrace Keynes' arguments with regard to the long-run tendency of the system to trend toward stagnation and to ignore the problems endemic in the economics of debt facilitated the adoption of economic policies in the United States that contributed to the economic, political, and social problems we face today.

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Chapter 1: Keynes on Economic Stagnation and Debt *

There is a surprising lack of reference to Keynes by mainstream economists in the current literature on Hansen's (1934; 1938; 1939) stagnation thesis. (Delong et al.; Diebolt and Perrin; Eggertsson et al.; Eichengreen 2015; Gordon; Summers; Rachel and Summers; Teulings and Baldwin)[1] This is particularly surprising in light of the fact that the long-run tendency of the economic system to trend toward stagnation, which Robertson dubbed Keynes' "long-period problem of saving" in 1936 (p. 187), is a central theme of the *General Theory* and one of its most fundamental and most basic conclusions.

I. Long-Period Problem of Saving

The fundamental issues raised by Keynes with regard to this problem can be seen by examining what Keynes actually said in "one of his extremer passages (pp. 211-13)" in Chapter 16 cited by Robertson (1936, p. 187) in his critical review of *The General Theory*. In this passage Keynes objected to the "absurd, though almost universal, idea … that current investment is promoted by individual saving to the same extent as present consumption is diminished." According to Keynes:

> It is of this fallacy that it is most difficult to disabuse men's minds. It comes from believing that the owner of

* I wish to thank John Komlos for insightful comments on an earlier draft of this paper.

[1] For a history of the interest in this subject see Backhouse and Boianovsky.

> wealth desires a capital-asset as such, whereas what he really desires is its prospective yield. Now, prospective yield wholly depends on the expectation of future effective demand in relation to future conditions of supply. If, therefore, an act of saving does nothing to improve prospective yield, it does nothing to stimulate investment.... The creation of new wealth wholly depends on the prospective yield of the new wealth reaching the standard set by the current rate of interest....
>
> Nor do we avoid this conclusion by arguing that what the owner of wealth desires is not a given prospective yield but the best available prospective yield.... For this overlooks the fact that there is always an alternative to the ownership of real capital-assets, namely the ownership of money and debts; so that the prospective yield with which the producers of new investment have to be content cannot fall below the standard set by the current rate of interest. (pp. 211-15)

In spite of the fact that Robertson chose this "extremer" passage for criticism in the name of Keynes' long-period problem of saving, Robertson failed to address directly any of the issues raised by Keynes in this passage with regard to this problem:

1. "the owner of wealth ... desires ... prospective yield,"
2. "prospective yield depends on the expectation of future effective demand in relation to future conditions of supply,"
3. "If ... an act of saving does nothing to improve prospective yield, it does nothing to stimulate investment,"
4. "there is always an alternative to the ownership of real capital-assets, namely the ownership of money and debts," and

5. "the prospective yield with which the producers of new investment have to be content cannot fall below the standard set by the current rate of interest."

Robertson also ignored the fundamental issue raised by Keynes in Chapter 11 with regard to this problem:

> If there is an increased investment in any given type of capital during any period of time, the marginal efficiency of that type of capital will diminish as the investment in it is increased, partly because the *prospective yield will fall as the supply of that type of capital is increased*, and partly because, as a rule, pressure on the facilities for producing that type of capital will cause its supply price to increase; the second of these factors being usually the more important in producing equilibrium in the short run, but *the longer the period in view the more does the first factor take its place*. [*emphasis* added] (p. 136)

The essence of Keynes' understanding of the long-period problem of saving is clearly stated in this passage: "If there is an increased investment in any given type of capital during any period of time, the marginal efficiency of that type of capital will diminish as the investment in it is increased," and it is essential to understand that—contrary to what seems to be the neoclassical understanding of this problem—*the fall in perspective yield is not simply the result of diminishing returns in terms of output*; increasing the stock of any particular kind of capital good reduces the prospective yield on that particular kind of capital good even in the absence of diminishing returns in terms of output by way of *the negative slopes of the demand curves for the output that particular kind of capital good produces.*

Herein lies the crux of Keynes' understanding of the long-period problem of saving, namely, that there is a limit to the number of steel mills, automobile factories, gas stations, and Starbucks the economic system can *profitably* support given the state of technology, distribution of income, and the psychological and institutional conditions that constrain the economic system. (Keynes, p. 217, 228; Blackford 2020a, pp. 20-8, 78-84, 118-22; 2020b, ch. 3; De Antoni)

Keynes' understanding of this problem as reflected in the passages quoted above can be summarized as follows:

1. As saving/investment increases the stock of capital over time the increasing stock of capital has a tendency to reduce the Marginal Efficiency of Capital (MEC) (i.e., the demand for investment goods) by reducing the prospective yield on additional units of various capital assets as these assets become plentiful or even redundant. (Keynes, p. 136)
2. The failure of the propensity to save to fall (i.e., the propensity to consume to increase) in a way that offsets the negative effects of the fall in the MEC as capital accumulates and prospective yields fall over time leads to a situation in which a fall in the rate of interest is required in order to achieve the level of investment needed to maintain full employment. (Keynes, p. 31)
3. Since the rate of interest is determined by the supply and demand for liquidity there are limits to the rate and the extent to which the rate of interest can fall. (Keynes, pp. 165-74)
4. To the extent a fall in the rate of interest or propensity to save is unable to offset the effects of the fall in the MEC as the stock of capital increases

and prospective yields fall the rate of investment must fall below the level needed to maintain full employment. (Keynes, pp. 31)

5. Given the propensity to save, even if the rate of interest were to adjust rapidly enough to avoid sporadic unemployment in the short run, in the long run the MEC and rate of interest (adjusted for risk and the costs of bringing borrowers and lenders together) must eventually be forced to zero and can fall no more. At this point the economy will stagnate as the fall in output and increase in unemployment force net saving and investment to zero. (Keynes, pp. 217-9)

This is the way Keynes' viewed the long-period problem of saving—as a dynamic struggle between the forces that determine saving, investing, capital accumulation, prospective yield, and the rate of interest—a struggle that must play itself out *through time*. (Keynes, pp. 210-21; Blackford 2020a, pp. 18-25, 74-90; 2020b, chs. 3, 6; De Antoni)

II. Effects of Ignoring Keynes

Keynes was able to obtain a number of critical insights as to how the economic system works on his way to *The General Theory of Employment, Interest, and Money*. These insights have been examined in detail in Blackford (2020a) and can be summarized as follows:

1. The ultimate justification for production in a market economy is to satisfy the demands of consumers.

2. The truly causal variables in an economy in which the process of production takes time are expectations with regard to the future.

3. The willingness to invest in real assets depends on the prospective yield of those assets—that is, the yield investors *expect* to receive in the future as a result of investing in those assets.
4. Prospective yields are affected not only by the rate of interest (which affects the cost of investing in real assets) but also by the stocks of real assets relative to the demand for the outputs those assets produce (which affect expectations with regard to the proceeds that can be obtained from *increases* in the stocks of real assets) as well as by the infamous "animal spirits" that take the investor beyond the limits of rational calculation.
5. The rate of interest is a purely monetary phenomenon, determined by the supply and demand for money (i.e., liquidity) as rates of interest adjust to equate wealth-holders' demands for liquidity with the existing stocks of assets.
6. Monetary policy is limited in its ability to affect rates of interest by the propensities of wealth holders with regard to their demands for liquidity and the ability of the monetary authority to affect the existing stocks of assets available to meet their demands.
7. Given the existing stocks of assets and the rates of interest determined by the propensities of wealth holders, the level of economic activity is determined by the effective demands for consumption and investment goods—that is, by the proceeds producers *expect* to receive as they maximize their *expectation* of profits through the employment of resources.
8. Since the ultimate justification for production is to satisfy the demands of consumers, and since the

ultimate purpose of investment is to increase the production of consumption goods in the future, the demand for investment goods is ultimately determined by expectations with regard to future consumption.

9. And since expectations with regard to future consumption are largely determined by current consumption, the effective demands for consumption and investment goods (hence, the level of economic activity) are largely determined by current consumption.

These insights drove Keynes to the inescapable conclusion that *consumption is the driving force for economic growth and employment, not saving*:

> For we have seen that, up to the point where full employment prevails, the growth of capital depends not at all on a low propensity to consume but is, on the contrary, held back by it; and only in conditions of full employment is a low propensity to consume conducive to the growth of capital. (Keynes, 1936, p. 372-73)

Given the force of Keynes' arguments, this conclusion would appear to be rather straightforward and irrefutable. And, yet, it seems to have had very little impact on economic policy leading up to the Crash of 2008.

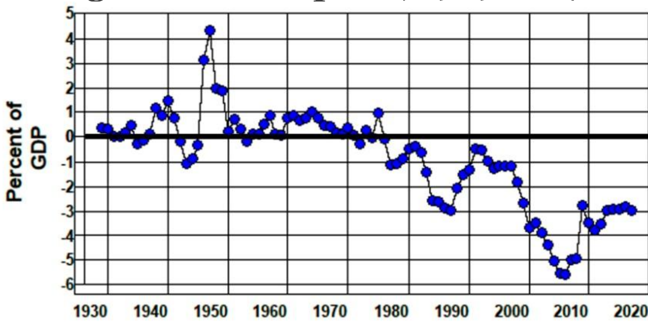
Over the thirty-five years leading up to the Crash of 2008 we managed to a) encourage individual and municipal retirement accounts and funds, b) convert Social Security from a pay-as-you-go to a partial-prepayment system, c) neglect the minimum wage while emasculating labor unions, d) cut corporate taxes and taxes on the wealthy while increasing taxes on the not so wealthy, e) weaken usury laws while enacting draconian bankruptcy laws, f) refuse to enforce

antitrust laws, g) reduce investment in physical infrastructure and human capital, and h) dismantle our domestic and international financial regulatory systems (Blackford, 2018; 2020a; Crotty, 2009). These are policies that enhance the aggregate propensity to save by increasing the concentration of income and facilitating trade deficits—*policies that only make sense in macroeconomic models that ignore the long-run relationship between consumption and effective demand and assume that saving enhances economic growth and employment.*

Of particular importance in this regard is the abandonment in 1973 of the capital controls embodied in the *managed* international exchange system negotiated by Keynes at Bretton Woods in 1944 and adopting what became known as the Washington Consensus which promoted unrestricted international finance and trade. This eventually led to bilateral trade agreements with China after Nixon's historic visit in 1972, the North American Free Trade Agreement in 1994, and our joining the World Trade Organization in 1995. (Bair; Blackford, 2018; Crotty, 2002; Klein, 2007; Rodrik)

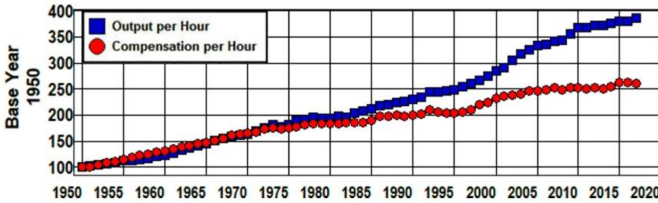
These policies changed the *institutional structure* of our economic system in a way that led to a dramatic decrease in our international balance of trade that can be seen in **Figure 1** which was mostly positive following World War II through the mid 1970s, and had fallen to a deficit equal to 5 percent of GDP by 2007. They also led to a decoupling of the growth of wages and productivity in the economic system that can be seen in **Figure 2** which facilitated a dramatic increase in the concentration of income that can be seen in **Figure 3** as the as the income share of the top 1

Figure 1: Net Exports, 1929-2017.



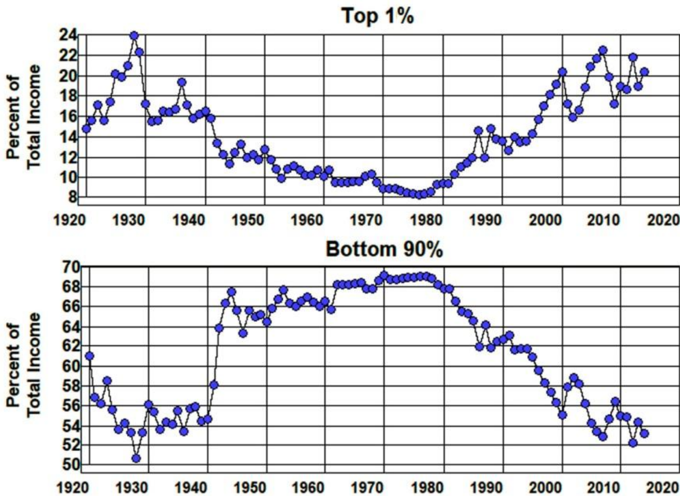
Source: Bureau of Economic Analysis, Table 1.1.5.

Figure 2: Labor Productivity and Compensation, 1950-2017.



Source: Bureau of Labor Statistics, Productivity and Costs.

Figure 3: Income Share of Top and Bottom of the Income Distribution, 1920-2014.



Source: World Wealth and Income Database.

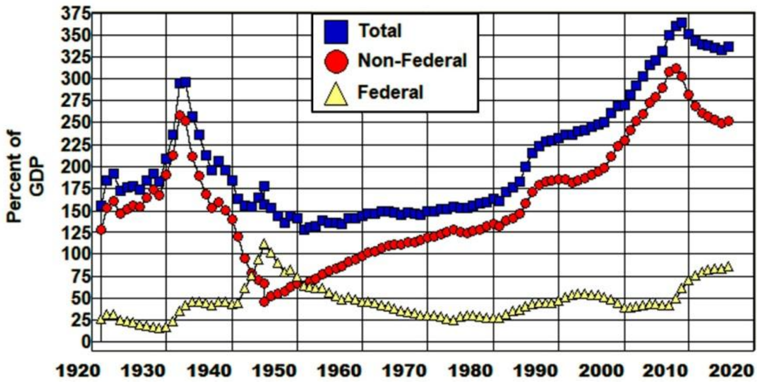
percent of the income distribution increased from 8 percent of total income 1975 to 23 percent by 2007, and the income share of the bottom 90 percent fell from 69 percent of total income to 53 percent.

The end result of these changes was an increase in saving in the foreign sector and at the top of the income distribution in the private sector. (Blackford, 2020a)

III. Build up to the Crash of 2008

Maintaining the full employment of our resources in this situation required that the increase in saving in the foreign sector and at the top of the income distribution in the private sector be offset either through a) a decrease in saving in some other part of the system or b) through an increase in investment. The way in which this was actually accomplished over the twenty-five years leading up to the Crash of 2008 was through a) an increase in dissaving in the public sector and at the bottom of the income distribution in the private sector and b) an increase in investment as a result of speculative bubbles in the junk bond and commercial real estate markets in the 1980s, in the markets for tech stocks in the 1990s, and in the housing markets in the 2000s. (Black; Blackford 2018; Blanchard et al.; FCIC; FDIC; Stewart; Levin and Coburn; Wray) Given the dramatic institutional changes that occurred over this period of time these increases in saving in the foreign sector and at the top of the income distribution in the private sector were accompanied by the continual increase in debt relative to income shown in **Figure 4** as total domestic debt in the United States increased from 165 percent of GDP in 1980 to 364 percent by 2008. In 2008 the GDP stood at $14.7 trillion and the total debt at $53.6 trillion.

Figure 4: Total, Non-Federal, and Federal Debt, 1920-2016.



Source: Federal Reserve (L1), Historical Statistics of the U.S. (Cj870, Cj872, Ca10), BEA (Table 1.1.5).

This kind of debt places a huge burden on the system through the transfer of income and wealth from debtors to creditors. Even an average interest rate as low as 3 percent would require an annual transfer equal to 11 percent of GDP when total debt is as high as 364 percent of GDP as it was in 2008. An average interest rate of 5 percent would require an annual transfer equal to 18 percent of GDP.

Even more ominous is the fact that non-federal domestic debt relative to income more than doubled from 1980 through 2008, increasing from 139 percent of GDP to 321 percent. Unlike the federal government (which has the constitutional right to print money to pay its debts) those entities that make up the non-federal sector of the domestic economy—individuals, businesses, and municipal governments—must service their debt out of income. When they cannot service their debt out of income they must borrow to do so. Barring the ability to borrow they are forced to either sell assets in an attempt to obtain the money needed to meet their financial obligations, or they are forced

to default on those obligations—the kinds of selling of assets and defaults that lead to financial crises. (Acharya; Bair; Bernanke; Blackford 2018; 2020a; Crotty 2009; De Antoni; FCIC; FDIC; Fisher; Friedman and Schwartz; Graeber; Kindleberger; Levin and Coburn; MacKay; Minsky; Reinhart and Rogoff; Roubini and Mihm; Tropeano; Wray)

Non-federal debt of this magnitude makes the economic system extremely vulnerable, and when much of that debt is the product of speculative bubbles and backed by assets and incomes generated by speculative bubbles the situation becomes perilous. It should not have been a surprise that the upturn in interest rates that began in 2005 in response to the Federal Reserve's attempt to moderate the housing bubble *while refusing to regulate the mortgage market* sent shockwaves throughout the financial system in 2007 as the prime rate rose from 4.3 percent in 2004 to 6.2 percent in 2005 to 8.0 percent in 2006 and remained at 8.0 percent into 2007. (CEA, Table B-73, p. 410)

IV. Stagnation Following the Crash

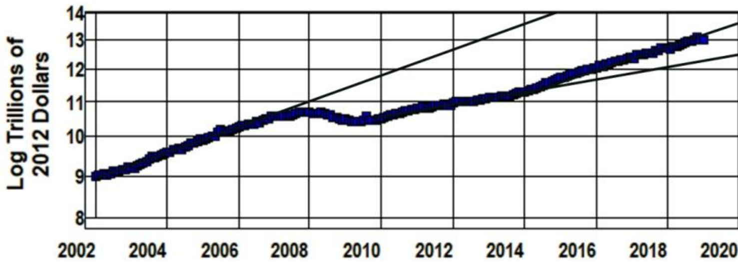
The economic stagnation in the United States that followed the Crash of 2008 is easily understood in terms of Keynes' long-period problem of saving:

1. The institutional changes that occurred over the thirty-five years leading up to the crash increased the propensity to save a) in the foreign sector by way of increasing international deficits that resulted from increased capital flows into the United States, b) in the private sector by way of the increase in the concentration of income at the top of the income distribution, and c) in general by way of policies that encourage private- and public-

sector saving (such as encouraging private and municipal retirement accounts and funds and converting Social Security from a pay-as-you-go to a partial-prepayment system). The result was an increase in the aggregate propensity to save that was *offset* by an increase in the propensity to *dissave* in the rest of the private and public sectors as interest rates fell and *the capital stock grew* in the midst of speculative bubbles.

2. The reduction in the propensity to dissave and increase in the propensity to save in a large portion of the private sector following the crash combined with the unwillingness of the federal government to enact policies that would reduce the propensity to save (e.g., to institute capital controls on international capital flows and to tax savings by increasing corporate taxes, the capital gains tax, and the top marginal tax rates while increasing government expenditures) increased the aggregate propensity to save.
3. The increased aggregate propensity to save and lack of speculative bubbles to generate investment and income in the way speculative bubbles had generated investment and income as the capital stock grew during the twenty-five years leading up to the crash led to the reduction in consumption and its rate of growth shown in **Figure 5** below.
4. The reduction in consumption and in its rate of growth, combined with the increase in the capital stock leading up to the crash diminished prospective yields and the willingness to invest.
5. The inability of interest rates to continue to fall in the wake of the crash led to the economic stagnation that followed.

Figure 5: Real Consumption Expenditures,



Source: BEA, Table 2.3.6

Explaining the buildup to the crash and the crash itself, however, takes us beyond Keynes' analysis of the long-period problem of saving.

V. Long-Period Problem of Debt

While Keynes analyzed the long-period problem of saving in intricate detail throughout the *General Theory*, one aspect of this problem he did not examine in intricate detail is the role played by the flow of loanable funds in the economic system. Even though this flow does not determine the rate of interest, as Keynes clearly understood (Blackford 2020a, pp. 37-77; 2020b, chs. 2-5), the flow of loanable funds does change the stock of debt in the economic system over time just as the flow of investment changes the stock of capital in the economic system over time. And even though changes in neither the stock of capital nor the stock of debt affect the system in a significant way in the short-run, both can have dramatic effects on the system in the long run. There is nowhere to be found in Keynes' an analysis of the relationship between the flow of loanable funds and the accumulation of debt comparable to that of his analysis of the relationship between the flow of investment and the accumulation of capital in spite of the fact that:

1. The creation of debt plays an essential role in achieving an efficient allocation and the full employment of economic resources by providing a mechanism by which purchasing power can be transferred from those who have it and are unwilling to spend to those who do not have it and are willing to borrow in order to spend. (Blackford 2020a, pp. 110-22)
2. At the same time, the most serious depressions involve financial crises that have at their root the inability to service debt. (Acharya and Richardson; Blackford 2018; 2020a; De Antoni; FCIC; FDIC; Graeber; Levin and Coburn; Mian and Sufi; Minsky; MacKay; and Reinhart and Rogoff)
3. If the *institutions* of society are such that, given the state of technology, the resulting distribution of income and balance of trade require an increase in debt relative to income in order to maintain full employment in the short run, eventually debt service must overwhelm the system and cause a financial crisis that will make it impossible to sustain full employment in the long run. (Blackford 2018; 2020a; De Antoni; Minsky; Tropeano; Wray)

It is fairly obvious that herein lies the cause of major financial crises and recessions, and, yet, not only was the relationship between consumption and economic growth and employment ignored by policy makers leading up to the Crash of 2008 the circumstances in which the *institutions* within society are such that full employment can be maintained only through an increase in debt relative to income was ignored as well.

Maintaining full employment through dissaving

in the public sector and in a large portion of the private sector while increasing investment through speculative bubbles led to an increase in debt that was dramatically out of proportion to the growth in income. This situation proved to be unsustainable in the long run as the system became unstable and eventually broke down in 2008 as debtors were unable to meet their financial obligations. Given the state of technology, distribution of income, and the psychological and institutional conditions that existed following the Crash of 2008 it was the inability to continue to increase debt relative to income that led to the fall in the growth of consumption and to the diminished long-term expectation with regard to consumption that is the primal cause of the economic stagnation we experienced following the crash in 2008.

In other words, the economic stagnation that followed the Crash of 2008 arose from the fallout from Keynes' long-period problem of saving combined with what may be referred to as *the long-period problem of debt*, that is—*an inability to achieve and maintain the full employment of resources in the absence of an increase in debt relative to income*. (Blackford 2018; Blackford, 2020a, pp. 20-36; De Antoni; Minsky; Tropeano; Wray; Fisher) [2]

[2] Keynes' long-period problem of saving also goes a long way toward explaining why developing countries with a high domestic propensity to save and concentration of income and a low balance of trade (low foreign-sector dissaving) have suffered from low productivity growth while those countries in a similar situation with a high balance of trade (high foreign-sector dissaving) that have adopted mass-production technologies while pursuing a policy of export-led growth were able to grow relatively rapidly leading up to the Crash of 2008. At the same time, the long-period problem of debt goes a long way toward

VI. Lessons Not Learned

Ignoring Keynes' analysis of the long-period problem of saving combined with a failure to deal with the fact that an increasing debt relative to income is unsustainable in the long run resulted in the adoption of economic policies that inhibited consumption and promoted saving and debt. These policies created a situation in which, given the state of technology, distribution of income, and the psychological and institutional conditions that constrain the economic system, we could no longer achieve the full employment of our resources in the absence of an increase in debt relative to income. (Blackford, 2018; 2020a) This is a road that inevitably leads to the kind of financial crisis that began in 2007 and to the economic stagnation that followed the Crash of 2008. It is also a road that leads to the kinds of economic, political, and social problems we faced following the Crash of 1929, problems that eventually led to World War II. (Bernanke, Kindleberger, Lindert, Piketty, Polanyi, Bullock, Shirer, and Zinn)

What is particularly disconcerting about the situation we face today is that in spite of the differences between the way in which we survived the recent financial crisis compared to the disaster that followed in the wake of the Crash of 1929 we have not yet

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explaining why export-led growth has proved unsustainable in the long run as the *institutions* supporting employment in the importing countries led to an unsustainable increase in debt relative to income. It is not surprising to find that the recent economic crisis began in the United States while running a substantial current account deficit in the midst of a massive speculative bubble as debt increased dramatically relative to income or that this crisis hit hardest in those countries that were in a similar situation. See Blackford (2018 chs. 1-4, 7-12; 2020a, pp. 15-9), Crotty (1990, 2002), FCIC, and Stiglitz (2014).

learned the lessons that should have been learned from the Great Depression, World War II, and the economic prosperity that followed the war.

Few economists seem to realize that, contrary to the conventional wisdom, the United States economy did not recover from the Great Depression. What actually happened was the failure of the private sector to cope with the crisis that began in 1929 led to the New Deal and eventually to a government takeover of the economic system during World War II. There were 8.1 million unemployed in the United States in 1940 and the unemployment rate did not fall below 14 percent until 1941 after net exports (**Figure 1**) increased as a result of the expanding war in Europe. It was not until 1943 that the unemployment rate fell below the level in 1929, and by then we were fully mobilized for World War II and employment in the military had increased by over 8.5 million men and women. By 1945 non-federal debt as a fraction of GDP had fallen by 50 percent from what it had been in 1940, and total debt as a percent of GDP was essentially held constant during and following the war.

In other words, it was not until *after* the institutional changes of the New Deal were in place, wage and price controls were instituted, the top marginal tax rate was increased to 94 percent, consumer goods were rationed, the production of consumer durables ceased, total government expenditures had risen to 48 percent of GDP, non-federal debt was reduced dramatically relative to GDP, *and the size of the military increased by more than the number of unemployed in 1940* that the Great Depression came to an end. (Blackford, 2018, pp. 93-100)

This is what it took to end the Great Depression,

and *it was the institutional changes* that occurred as a result of the New Deal and World War II—the rise of unions, adoption of a minimum wage, progressive taxation, government regulation of financial institutions, the capital controls of the Bretton Woods Agreement, and government investment in capital projects as well as in education, social-insurance, and innumerable other government programs—that led to the prosperity that followed the war, not an economic recovery as such

As a result of these institutional changes, the economic system that emerged from the New Deal and World War II was not the system of *laissez-faire* that led us into the Great Depression:

1. The economic system that emerged from the New Deal and World War II was a system with the substantially reduced nonfederal debt relative to income shown in **Figure 4** as a result of the rationing, wage and price controls, and the huge increase in government expenditures and income that had taken place during the war.
2. It was a system in which the capital control provisions of the Bretton Woods Agreement made it possible to keep our international balances in check as can be seen in **Figure 1** and in which the newly established financial regulatory institutions made it possible to achieve relatively full employment in the absence of speculative bubbles.
3. It was a system in which the progressive tax structure put in place during the war (which remained largely intact for twenty years after the war) combined with the rise of unions, and an increasing minimum wage led to a reduction in the concentration of income as the income share of the bot-

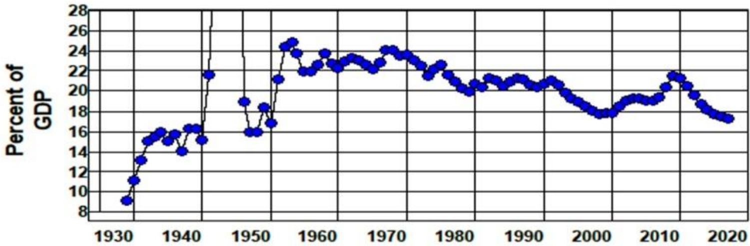
tom 90 percent of the income distribution (**Figure 3**) increased from 51 percent of total income in 1928 to 69 percent by 1973 and the income share of the top 1 percent fell from 24 percent to 9 percent.

4. And it was a system in which a dramatic increase in the size of our domestic mass markets brought about by the increase in the purchasing power relative to income of the vast majority of the population led to a dramatic increase in mass-production technology and productivity as the economic system in general thrived throughout the 1950s and 1960s in the absence of an increase in debt relative to income (**Figure 4**). (Blackford 2018, pp. 57-9, 62n; 2020a, pp. 118-23)

Not only was the economic system that emerged from the New Deal and World War II not the system of *laissez-faire* that led us into the Great Depression, it was a system that embraced the *"somewhat comprehensive socialisation of investment"* that Keynes had called for in the final chapter of the *General Theory* (p. 378 and cf., pp. 164, 217-18, 320; Lindert; Seccareccia) as the government made unprecedented *investments* in our defense and space programs; paved city streets, country roads, and built the U.S. and interstate highway systems; built and improved water and waste treatment facilities throughout the land along with ports and dams as it electrified vast regions of our country; expanded social-insurance, regulatory, educational, public health, and public safety systems as the role of government in the economic system expanded dramatically. As a result of these *government investments* the capital stock grew and unemployment remained relatively low in defi-

ance of Keynes' long-period problem of saving for some twenty-five years following World War II as the government's contribution to GDP shown in **Figure 6** increased from 9 percent of GDP in 1929 to 17 percent by 1950, and had reached 24 percent by 1970.

Figure 6: Government Contribution to GDP, 1929-2017.



Source: BEA, Table 1.1.5.

And throughout this period there was a negligible international balance (**Figure 1**), and total debt relative to income (**Figure 4**) decreased from 157 percent of GDP in 1945 to 141 percent in 1950, and had barely increased to 149 percent of GDP by 1970 in defiance of the long-period problem of debt.

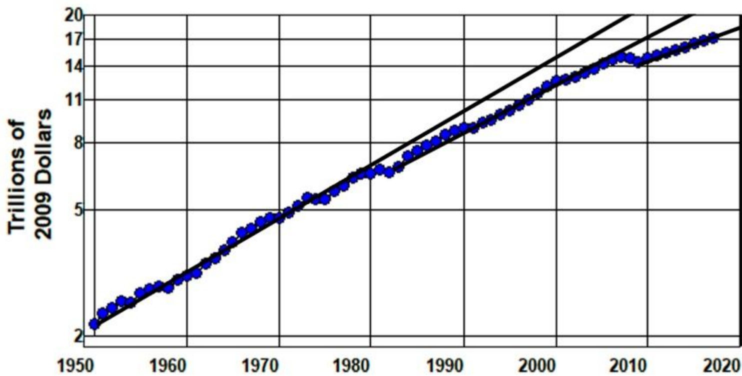
In other words, *it was the economics of Keynes' long-period problem of saving*, not the neoclassical economics of the Keynesians, that was validated by the New Deal, World War II, and the economic prosperity that followed the war. And the economics of Keynes was further validated by the institutional changes that occurred as a result of the policies adopted during and following the 1970s—suppression of unions, failure of the minimum wage to keep pace with inflation, regressive tax policies, financial deregulation, the abandonment of the capital controls of the Bretton Woods Agreement, failure to enforce antitrust laws, and government neglect of capital projects

as well as education, social-insurance, and other government programs as government participation in the economic system diminished. These are the policies that brought us to where we find ourselves today, faced with the fallout from Keynes' long-period problem of saving as the contribution of government to GDP (**Figure 6**) fell from 24 percent in 1970 to 19 percent in 2007 and by 2018 had fallen to 17 percent which is where it stood in 1950, far below the 23 percent average during the prosperous years of the 1950s and 1960s. At the same time, the concentration of income (**Figure 3**) rose to levels not seen since the 1920s and trade deficits (**Figure 1**) to levels not seen throughout the twentieth century, and we became overwhelmed by the long-period problem of debt as total debt (**Figure 4**) increased from 149 percent of GDP in 1970 to 350 percent by 2007 leading up to the Crash of 2008 and was still at 333 percent of GDP in 2018.

It should not have been a surprise that in the wake of the institutional changes that began in the 1970s total debt rose to the unsustainable levels that led to the Crash of 2008 as the concentration of income increased to levels comparable to those leading up to the Crash of 1929. Nor should it have been a surprise that the system failed to recover to its prerecession trends as shown in **Figure 7** in the face of persistent trade deficits and the increased concentration of income in the absence of speculative bubbles and the failure of debt to increase relative to income.

These are the kinds of results that should have been expected from the attempt to reverse the institutional changes and "somewhat comprehensive socialisation of investment" that led us out of the Great

Figure 7: Trends in Real GDP, 1950-2018.



Source: BEA, Table 1.1.6.

Depression and into the prosperity that followed World War II.

Why should any of this have been a surprise? After all, what we are talking about here is an attempt to reestablish *laissez-faire*, a system plagued by the same long-period problems of saving and debt that not only led to the Crash of 2008 and the economic stagnation that followed, but to wide spread civil unrest throughout the nineteenth through first half of the twentieth century, not to mention World War I, the Crash of 1929, and the Great Depression as well—*a world-wide depression that culminated in World War II*. (Acemoglu and Robinson; Amy; Blackford 2018; Beckert; Bullock; Boyer and Morais; Graeber; Kindleberger; Johnson 2006; Lindert; Piketty; Polanyi; and Shirer)

VII. Conclusion

There are, of course, a number of factors that have the potential to offset the effects of Keynes' long-period problem of saving—specifically, to offset the tendency for the MEC to fall as saving/investment increases the capital stock over time—factors such as

population growth, technological change that increases the demand for capital and consumption goods, and an increasing balance of trade. (Delong et al.; Diebolt and Perrin; Eggertsson et al.; Eichengreen 2015; Summers; Rachel and Summers; Teulings and Baldwin; and Wisman) It may even be possible to offset this tendency through economic policies that foster the kinds of speculative bubbles and increases in debt relative to income that made it possible for employment to increase and unemployment to fall in spite of the accompanying increase in trade deficits and the concentration of income that we witnessed for twenty-five years leading up to the Crash of 2008. But there are limits to these offsets, and it would take either an extraordinary degree of ideological blindness or a giant leap of blind faith for anyone who knows anything about the history of the nineteenth through the beginning of the twenty-first century to believe these offsets can be relied upon by way of *laissez-faire* to avoid the kinds of economic, political, and social catastrophes that were the byproduct of *laissez-faire* during this period of history. (Acemoglu and Robinson; Amy; Beckert; Black 2013; Blackford 2018; 2020a; Boyer and Morais; Bullock; FCIC; FDIC; Fisher; Friedman and Schwartz; Graeber; Johnson; Kindleberger; Keynes; Levin and Coburn; Lindert; Piketty; Polanyi; Reinhart and Rogoff; Sachs; Shirer; Wray; Zinn)

The history of the nineteenth through the beginning of the twenty-first century clearly shows that the institutional changes that resulted from the New Deal and World War II are *essential* in combating the effects of the long-period problem of saving and its companion the long-period problem of debt. This is

obvious from the way in which the expanded role of government in the economic system led to the economic prosperity and domestic tranquility that followed the war, not only in the United States, but in those countries in North America and Western Europe that adopted similar changes compared to the lack of prosperity and domestic tranquility in those that did not. This is also obvious from the way in which the systematic dismantling of these institutions led to the Crash of 2008 followed by economic stagnation and the rise of political and social unrest. (Blackford 2018)

To effect institutional change by way of the imperatives of depression and war is hardly an optimal way to achieve economic growth and prosperity. It makes much more sense to address the problem proactively than to wait for the inevitable economic, political, and social catastrophe that results from economic stagnation and collapse and hope for the best. But avoiding catastrophe requires that the problem be clearly understood and confronted directly.

There can be little hope for the future so long as economists are unable to come to a clear understanding of Keynes' long-period problem of saving in a way that leads to an overwhelming consensus within the discipline of economics to the effect that — *consumption is the driving force for economic growth and employment, not saving*. The failure of economists, both Keynesians and anti-Keynesians alike, to face this reality and address it directly is a serious mistake. Only by facing this reality and addressing it directly will it be possible to affect the institutional changes needed to solve Keynes' long-period problem of saving proactively, hopefully, in a way that will make it pos-

sible to avoid yet another worldwide conflagration that, in this nuclear age, is likely to be even more devastating than the one that began on September 18, 1931 and reached its climax on August 6, 1945.

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