Trinity College
HARTFORD CONNECTICUT

Department of Economics
Trinity College
Hartford, CT
06106 USA

<http://www.trincoll.edu/depts/econ/>

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**Real Wages, Aggregate Demand, and the Macroeconomic Travails
of the US Economy: Diagnosis and Prognosis**

Mark Setterfield

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Abstract

This chapter argues that, while much attention has been paid to developments in the financial sector as causes of the Great Recession, the ultimate cause of the crisis was, in fact, longer term trends in the real economy. Specifically, it is argued that the tendency for real wages to grow slower than productivity since the 1970s has not only generated ever-increasing income inequality in the US, but has also led to a structural flaw in the process that creates the demand necessary for high employment and rising living standards. Although household debt accumulation postponed the “day of reckoning” associated with this structural flaw, the effect of sluggish real wage growth on the incomes of working households now has the potential to create a future of secular stagnation, not just for workers, but for the US economy as a whole.

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1. Introduction

The US economy faces two key macroeconomic problems. The first – increasingly evident to all since the fall of 2007 – is essentially short term. It involves responding to the financial crisis and its aftermath, and the subsequent “Great Recession” in the real economy. The second is a medium-long term problem. This second problem has been evident for some time, but has been much less widely acknowledged and discussed than the short-term problem. In a nutshell, it involves a structural flaw in the “aggregate demand generating process” – that is, the way in which total expenditures on goods and services are created. This structural flaw is, in turn, related most fundamentally to the stagnation of real wages for the great majority of wage earners over the last four decades, and the concomitant slow growth in the incomes of working households (and increase in household income inequality) over the same period. The focus of what follows is on the second of the two problems identified above which, from the perspective developed in this chapter, constitutes the “hard core” of the problems that the US economy faces both now and in the future.

The argument that will be advanced is not new.¹ But this does not detract from its importance, and nor does it mean that the argument is sufficiently widely understood and/or appreciated. Indeed, a hallmark of recent mainstream macroeconomics has been a steadfast failure (or refusal) to acknowledge the fact that weaknesses in the aggregate demand generating process have, for some time, been the “soft underbelly” of US macroeconomic performance. Hence prior to the onset of the Great Recession, macroeconomics was gripped by the idea that the US economy was experiencing a “Great Moderation” – a marked reduction in the volatility of the aggregate economy as

¹ See, for example, Palley (2010) and the various references therein.

compared with the 1970s and '80s (see, for example, Davis and Kahn, 2008; Galí and Gambetti, 2009). This literature completely failed to identify an equally if not more profound tendency: the “latent fragility” that was building as a result of the way in which aggregate demand – and in particular, household consumption expenditures – were being generated. Instead, identification and discussion of this latent fragility was confined to a small but coherent group of academic macroeconomists, largely outside of the mainstream, who drew more extensively on fundamentally Keynesian macroeconomic theory and who warned that the path of the U.S. economy was leading towards a deep and persistent recession (see, for example, Godley and Izurieta, 2002; Palley, 2002).

Even in the wake of the financial crisis and Great Recession – when the latent fragility of the US economy became suddenly and alarmingly manifest – mainstream macroeconomics has failed to grasp the problems at hand. Hence according to Feldstein (2010), growth during the 2010s will be the same as growth during the 2000s. Feldstein reaches this conclusion on the basis of the claims that, although potential output (determined by the availability and productivity of factors of production) will grow at a slower pace over the next decade than during the 2000s, this will be offset by “the serious deepness of the hole in which the U.S. economy now finds itself”, as a result of which actual output “will rise more rapidly in the past as the labor market returns to full employment, as the labor force participation rate rises, and as capacity utilization returns to normal” (Feldstein, 2010, p.2). This view anticipates no systematic problem associated with the need to generate sufficient aggregate demand to buy up all the output that productive forces (labour and capital) can, in principle, produce. In other words, it is blind to *precisely* the problem with the aggregate demand generating process that is (and

will remain) at the core of the US economy's macroeconomic travails. It is this persistent and continuing ignorance of the key medium/long term problem confronting the US economy (rather than any particular novelty in the argument that will be advanced) that motivates the discussion that follows.

The remainder of the chapter is organized as follows. Section 2 discusses the link between real wage growth and the growth of aggregate expenditures necessary to maintain full (or even simply a constant rate of) employment. Section 3 then explores US experience over the last four decades. It shows how the “golden rule” for growth consistent with a constant employment rate has been systematically violated in the US economy, why it is that this did not result in persistent mass unemployment, and why, in turn, the US economy thus sowed the seeds of the Great Recession even as (at least since the mid-1990s) it appeared to be performing well by historical standards.² Section 4 examines the prognosis for the US economy absent major structural changes, while section 5 examines the policy measures that would be necessary to prevent the worst aspects of this prognosis from materializing. Finally, section 6 offers some conclusions.

2. The Crux of the Problem

The central argument on which this chapter is based can be traced back to Glyn et al (1990) who, in their analysis of the so-called Golden Age (1945-73) of advanced capitalism, argue that the success of the Golden Age (rapid growth and low unemployment consistent with low and stable inflation and a roughly constant distribution of income) was based, in part, on real wage growth keeping pace with productivity growth. This simple equality results in similar rates of growth of total

² See, for example, Setterfield (2009).

expenditures and potential output – or “aggregate demand and aggregate supply”. In a growing economy, it therefore helps maintain balance or equilibrium in the goods market, the absence of which could, if unchecked, result in either high and rising unemployment or runaway inflation.

In simple terms, the equality of real wage growth and labour productivity growth can be thought of as a “golden rule” for sustainable growth consistent with full (or even simply a constant rate of) employment. This last statement can be verified by means of some growth accounting and simple Keynesian consumption theory – which is provided, for the interested reader, in the appendix to this chapter. But it can also be understood by appeal to some straightforward intuition.

As the Scottish essayist and satirist Thomas Carlyle once remarked, “teach a parrot to say ‘supply and demand’ and you’ve got an economist”.³ At risk of falling foul (no pun intended) of Carlyle’s jibe, the importance of maintaining real wage growth consistent with productivity growth can most easily be understood by appeal to (aggregate) supply and demand conditions in the goods market. Consider first, then, the link between real wages and aggregate demand. Wages are, of course, a cost of production from the perspective of firms – but they are also the main source of income for the majority of families in the US. Moreover, income is commonly understood to be the prime determinant of consumption expenditures, providing the main source of funds with which goods and services can be purchased. Profit (total income minus wages) is also a source of income, of course, but households that rely extensively or exclusively on profit as a source of income tend to spend proportionately less of their income on consumption

³ Carlyle is also responsible for labelling economics “the dismal science”, so he clearly knew a thing or two about the discipline!

goods. Finally, consumption is – overwhelmingly – the single largest component of total expenditures (aggregate demand) in the US economy. Historically, consumption expenditures have accounted for roughly two-thirds of gross domestic product (GDP) in the US; over the last few decades, however, the share of consumption in GDP has risen to something more like 70%. In sum, then, there is an important link running from wage formation, via household income and consumption spending, to the aggregate demand for goods and services. As wages grow in real terms (i.e., in terms of what they can buy), so, too, does real household income and hence consumption, and therefore total expenditures (in real terms) on goods and services.

Now consider the contribution of labour productivity – output per person employed – to the potential output or “aggregate supply” of the economy. The potential output of the economy stems from both: a) the availability of factors of production (how much capital and labour is at the disposal of producers); and b) the *productivity* of these factors (how much output one unit of each factor can produce). In this way, it is always possible to think of the *potential* output of the economy – how much the economy can produce, in total, if all productive resources are fully utilized – as being equal to the size of the available labour force multiplied by output per worker (labour productivity).⁴ It follows that the *growth* of potential output must follow from either the growth of the labour force or the growth of labour productivity (or both). The growth of the labour force depends on population growth (which is very low in wealthy, industrialized countries such as the US) and the labour force participation rate (which cannot grow indefinitely since, ultimately,

⁴ To see this explicitly, note that:

$$y_p = \frac{y_p}{L} L$$

where y_p is potential output, L is the labour force, and y_p/L measures output per worker employed under the assumption that the entire workforce is employed.

no more than 100% of the population can be active in the labour force). This leaves productivity growth as the main wellspring of potential output growth in the long run.

Putting the pieces together, we can now see that while real wage growth fuels the largest single component of total expenditures, productivity growth plays a similarly prominent role in the expansion of potential output. This means that equality in the rates of growth of real wages and labour productivity will more or less suffice to keep total expenditures and potential output – or “aggregate demand and aggregate supply” – growing at the same rate. In other words, and as asserted earlier, the equation:

$$\text{real wage growth} = \text{labour productivity growth}$$

is a good approximation for the condition necessary to maintain steady long run growth with full employment, or even simply a constant rate of unemployment. It can therefore be regarded as the “golden rule” for sustainable growth consistent with full (or a constant rate of) employment.

3. Recent US Experience

Diagnosis of the key medium/long term macroeconomic problem confronted by the US economy follows directly from the analysis in the previous section. Specifically, over the past 40 or so years, we have observed:

$$\text{real wage growth} < \text{productivity growth}$$

in the US economy. This inequality violates the “golden rule” for sustainable growth with a constant rate of employment, thus creating a structural flaw in the aggregate demand generating process: *ceteris paribus*, aggregate demand growth cannot keep pace with the

growth of potential output, or “aggregate supply”. The violation of the “golden rule” in the US economy since the early 1970s is illustrated in Figure 1 below.

[FIGURE 1 GOES HERE]

Figure 1 shows that the real wages of production and non-supervisory workers roughly kept pace with increases in productivity through the early 1970s. But thereafter, real wages stagnated even as productivity continued to grow, resulting in an ever-widening gap between the two.

It should be noted that the growth of *all* wages and salaries – including those of supervisory workers – showed a less marked departure from the rate of productivity growth over the same period. This is because the real wage growth of supervisory workers has fared much better than that of production workers and non-supervisory workers since the 1970s, as a result of which managerial salaries now take up an increasing share of total wages and there has been a marked increase in wage inequality over the past 40 years (Palley, 2002; Atkinson et al, 2009). Nevertheless, even including the salaries of supervisory workers, wages as a whole have grown at a slower pace than productivity. We know this to be true because, had the “golden rule” for sustainable growth with a constant rate of employment been realized, the wage share of income would have remained constant over time.⁵ Instead, the US wage share has fallen steadily

⁵ In addition to its role in balancing the rates of growth of aggregate demand and potential output, the equality of real wage growth and productivity growth is strictly necessary in order for the wage share of income to remain constant. This follows from the definition of the wage share, which can be written as:

$$\omega = \frac{WN}{Py}$$

since the 1970s, from a high of 82.1% in 1979 to 80.3% in 2004 (Mishel et al, 2007, p.83).⁶ Moreover, according to Mohun (2006), at least some part of the managerial “salaries” currently included in official statistics measuring total employee compensation may conceptually belong in residual earnings (i.e., profits). In other words, they do not constitute wages (properly defined) at all.

In sum, while the failure of real wages to keep pace with productivity is more pronounced for production and non-supervisory workers, this does not mean that Figure 1 exaggerates the extent to which the US economy has violated the “golden rule” for sustainable growth with a constant rate of employment. First, it is not clear that total wages and salaries as currently measured succeed in clearly separating wage and profit income (Mohun, 2006). As such, data for total employee compensation may fail to adequately capture the full extent of the aggregate demand generating problem confronting the US economy. And second, even if Mohun’s argument regarding the classification of income is not accepted, one very simple fact remains: focusing on the earnings of production and non-supervisory workers – who make up 80% of the workforce – makes clear the very real drama of real wage stagnation relative to

where ω denotes the wage share of income, W is the value of the nominal wage, N is the level of employment, P is the general price level and y denotes aggregate real output (GDP). This expression can be re-written as:

$$\omega = \frac{w}{q}$$

where $w = W/P$ is the real wage and $q = y/N$ is the level of labour productivity. It is clear from this last expression that, in order for the wage share to remain constant, any increase in q must be matched by an equal proportional increase in w . In other words, real wages must grow at the same rate as labour productivity.

⁶ This decline in the wage share since the 1970s is evident throughout the OECD. See, for example, Korpi (2002).

productivity growth (and the concomitant falling wage share of income) for the great *majority* of working Americans (on which see also Glyn, 2009; Atkinson, 2009).

According to the perspective developed in this chapter, with the “golden rule” for sustainable growth with a constant rate of employment thus violated for the majority of the working population, and all other things equal, the US economy should have experienced slow growth and rising unemployment over the last 30 years. But very clearly it has *not*. On the contrary, growth over the past two decades – and especially during the “Roaring Nineties” – reduced US unemployment to levels considered low by both contemporary international and historical standards, and well below the average levels it established during the 1970s and 1980s.⁷ This raises a very important question: what has offset the aggregate demand deficiency caused by slow real wage growth?

The Keynesian macroeconomic theory that informs this chapter suggests that it is possible for some components of aggregate demand to be *stimulated* if real wages grow slower than productivity. For example, we have already seen that one result of real wages growing slower than productivity is a redistribution of income towards profits. It is possible that this will stimulate investment spending to an extent that more than offsets the adverse consequences for consumption of real wage stagnation.⁸ Alternatively, since wages are a cost of production, the slow growth of real wages may give domestic producers a cost advantage *vis-a-vis* foreign rivals, thus boosting exports.⁹

But simple macroeconomic facts suggest that neither of these effects is responsible for recent US macroeconomic performance. First, since the early 1970s, the US has experienced chronic trade deficits, and has witnessed surging investment

⁷ In 1999, for example, the official US unemployment rate reached 4.0% – the lowest rate since 1970.

⁸ This possibility is discussed in detail by Bhaduri and Marglin (1990).

⁹ This possibility is discussed in detail by Blecker (2002).

spending only once, during the latter half of the “Roaring Nineties” (at the peak of the information technology boom, when even traditional businesses were seeking to establish an “online” presence). Second, rather than being replaced by an alternative source of aggregate demand, the importance of consumption spending in the US economy has actually *increased* even as real wages have stagnated. As noted earlier, consumption spending has traditionally accounted for about 66% of US GDP, but in recent decades this proportion has increased to approximately 70%. More than ever, then, the US economy is consumption-led. The question that we confront thus amounts to the following: in the absence of robust real wage growth for the majority of the working population, what has been propelling household consumption spending?

(i) The overworked American?

One possibility is that even as their real wages have stagnated, the household income of production and non-supervisory workers has been successfully shored up by increases in the number of hours worked. In principle, more and more hours worked at even the same real wage will result in rising real income, which could then fund continuing growth in household consumption expenditures.

According to Schor (1991), Americans worked 163 more hours in 1990 than they did in 1970 – that is, almost an extra month of full-time work per year. This finding suggests the reversal of a long term trend that had previously seen working time *fall* steadily as the economy as a whole grew ever more affluent and productive. Schor’s “overworked American” hypothesis is modified somewhat by Bluestone and Rose (1997), who argue that Americans have become both overworked *and* underemployed,

with latter causing the former. Hence according to Bluestone and Rose, men are caught in a “feast and famine” cycle, as a result of which they work longer hours (including overtime) when work is available in anticipation of subsequent bouts of either underemployment (part time or temporary work) or unemployment, resulting in an overall trend *decline* in their work hours of the sort consistent with earlier trends in working time. But, women, on the other hand, work unequivocally longer hours than they did forty years ago – a response, Bluestone and Rose hypothesize, to the male job insecurity implicit in the “feast and famine” cycle.

The upshot of all this, Bluestone and Rose contend, is that the average number of hours worked by *families* has trended upwards since the early 1970s, broadly corroborating Schor’s emphasis on the “overworked American”. But has this had any great effect on the living standards of working families? Bluestone and Rose certainly think not, arguing that the overall increase in household labour supply has failed to offset the stagnation of real wages to such an extent as to have mitigated the impact of the latter on working households’ income. This outcome is made clear in Figures 2 and 3 below, which illustrate the stark differences in the comparative rates of growth of income in the various quintiles (and top 5%) of the distribution of household income in the US both before and after 1979 – a chronological division of the post-war period that corresponds roughly to the point at which the “golden rule” for sustainable growth with a constant rate of employment was first violated in the US.

[FIGURES 2 AND 3 GO HERE]

Figures 2 and 3 call attention to two salient facts. First, they illustrate that *ceteris paribus*, changes in the functional distribution of income are an important driver of the

size distribution of income (Glyn, 2009; Atkinson, 2009). Simply put, if real wage growth lags productivity growth for the majority of the working population, the result will be an increase in household income inequality. This is exactly what we observe in Figure 3, where the differential rates of growth of household income across quintiles imply changes in the income shares of these quintiles, with households near to the top of the income distribution gaining at the expense of those below.¹⁰

Second, even though other things have *not*, in fact, remained equal (since evidence suggests that the “overworked American” phenomenon is real), Figure 3 shows that stagnant real wage growth for the majority of the working population has translated into no or slow growth in household real income for the majority of households. Hence note that the average annual rates of growth of household income for households in the bottom four quintiles in Figure 3 are –0.04%, 0.33%, 0.54% and 0.86% respectively.¹¹ These rates of growth of household income correspond to a period (1979-2005) during which Americans families worked longer hours and when real income in the economy as a whole (as measured by real gross domestic product) grew at an average annual rate of 2.96%.¹²

In short, and unlike the post-war period prior to the 1970s, it would seem that growing consumption expenditures in the (increasingly consumption-led) US economy have not, for the majority of working families, been funded by robust growth in real household incomes. Whatever has been responsible for shoring up aggregate demand as

¹⁰ On the evolution of inequality in the size distribution of income in the US, see, for example, Piketty and Saez (2003).

¹¹ Author’s calculations, based on Figure 3.

¹² Author’s calculations, based on data on real gross domestic product from the Bureau of Economic Analysis.

real wages have stagnated, it has not been the increased working time of American families.¹³

ii) Household debt accumulation

If the real incomes of the majority of American households have stagnated since the 1970s, what has grown rapidly is the level of their indebtedness – both absolutely, and as a proportion of total household income. It is this growth of indebtedness that has financed the continued growth of household consumption expenditures that, thanks to real wage stagnation (and despite the increase in family working hours), cannot be funded by rising real household income (see also Barba and Pivetti, 2009).¹⁴

Recent trends in US household debt accumulation are illustrated in Figure 4 below. Figure 4 shows that household indebtedness as a proportion of income has been increasing continuously since the 1970s. It also draws to attention two discrete accelerations in the pace of household debt accumulation – the first occurring during the mid 1980s, and the second (and more dramatic) taking place at the turn of the millennium.

[FIGURE 4 GOES HERE]

¹³ This result will come as no surprise to careful readers of the Appendix to this chapter, who will notice that the consequences for the goods market of real wage growth lagging productivity growth are inescapable, regardless of changes in hours worked. This is because an increase in hours worked contributes only to n (the rate of growth of the labour force) in the analysis in the Appendix. With $\omega_c < 1$, a rise in n makes a net contribution to the growth of potential output, *exacerbating* the demand-deficiency problem (see equation [5]) while in the limit (with $\omega_c = 1$), n has no impact whatsoever on the capacity of aggregate demand to keep pace with the growth of potential output. In other words, increasing the hours worked by American families cannot, in principle, offset the aggregate demand generating problem created by $\hat{w} < q$.

¹⁴ In other words, and referring again to the analysis in the Appendix, $\hat{D} > \hat{w} + n$ and a consequent rise in $1 - \omega_y$ (the proportion of consumption expenditures financed by debt accumulation) has offset the shortfall in real wage growth relative to productivity growth (see equation [5]).

An important and noteworthy feature of Figure 4 is that the overall trend in household debt accumulation is clearly associated with the growth of mortgage debt. *Prima facie*, this might appear to suggest that, to the extent that US households have been accumulating more debt, they have been doing so in order to accumulate more assets (specifically, housing), which would (in the first instance) leave household net worth unchanged.¹⁵

But comments about this sanguine view of the evolution of household balance sheets are in order. First, not all new mortgage debt accumulated by households is used to acquire (or improve) houses. As Cynamon and Fazzari (2008, p.16) note, changes over the last four decades in both household and financial sector norms regarding the accumulation of household debt have resulted in phenomena such as the “cash-out” refinancing of homes, designed to allow households to borrow against the existing value of the equity in their homes. Additional mortgage debt accumulated in this manner may or may not be used to acquire durable assets: it can just as easily be spent on a new car, furniture, or a family holiday.

Second, even if household debt is backed by home equity, housing wealth is not fungible in same manner as, for example, a bond portfolio. To put it bluntly, a family cannot sell the roof of their house in order to pay down a portion of their outstanding mortgage debt in the same way that they *could* sell part of a bond portfolio to reduce the household’s liabilities.

This brings us to the final point: mortgage debt – like all debt – must be *serviced*, drawing attention to the crucial relationship between the stock of outstanding household

¹⁵ Of course, the net worth of the household may actually improve over time *if* the mortgage debt is amortized *and/or* housing prices rise. As the sub-prime mortgage fiasco drew to attention, however, neither of these things can be taken for granted.

debt on one hand, and the flow of household *income* out of which payments towards principle and/or interest charges must be made. Even if a household accumulates debt that is backed by home equity, the household may become financially distressed if the debt accumulated places too great a debt-servicing burden on current household income. Note, then, that having begun by highlighting the use of debt as a substitute for income to finance current consumption expenditures, we now confront the possibility (once again) that weak household income growth must ultimately constrain consumption spending, this time by limiting the extent to which individual households can service debt (and therefore accumulate debt in the first place).

Figure 5 below illustrates the growth of the debt-servicing burden faced by US households over the last four decades. It shows that, despite some cyclical variation, total debt service payments as a proportion of disposable income remained roughly the same through the early 1990s. Since then, however, the total debt service burden has grown steadily. Note that even as financial obligations associated with mortgages *fell* as a proportion of disposable income from 1991 through 2000, the *total* debt service burden continued to rise. This draws attention to the fact that, Figure 4 notwithstanding, mortgages are not the only form of debt liabilities that US households have been accumulating in recent decades. On the contrary, since the 1970s, household access to revolving debt – primarily credit card debt – has increased markedly (especially among lower income households), as has the share of revolving debt in total consumer debt (Cynamon and Fazzari, 2008, p.15).

[FIGURE 5 GOES HERE]

Finally, it is important to call attention to the fact that the dynamics of household debt accumulation illustrated in Figures 4 and 5 were accompanied by marked *inequality* in the distribution of debt burdens, with lower income households (i.e., precisely those who have suffered most from the stagnation of real wages and resulting stagnation of household real income) bearing proportionally more of the household debt burden. This is illustrated in Table 1 below, which shows that although wealthier households accumulate more debt in absolute terms, debt to income ratios are far higher in low and middle income households. Hence even by the start of the millennium, the two-thirds of US households with annual income less than \$50,000 had debt to income ratios of approximately 300%. It is interesting to contrast these debt burdens with the current national debt to GDP ratios that are allegedly such cause for concern. Even by the middle of 2010, following the dramatic reductions in tax revenues and increases in government spending triggered by the Great Recession, the total public debt to GDP ratio in the US was below 90%. Unlike central governments, whose main source of revenue is taxes levied on *all* productive activities (making it a very diversified income stream), the income of working households is very much more specialized, depending in the main on one or two jobs.¹⁶ Moreover, the lower income households in Table 1 – those with the highest debt/income ratios – are more likely to be the ones most exposed to the increased job insecurity that has come to characterize the US labour market since the early 1970s (on which see, for example, Setterfield, 2006; 2007). In short, they are the economic units

¹⁶ Of course, this is not the only difference between central governments and households that affects their respective capacities to carry debt. See the chapter by Cynamon and Fazzari in this volume.

who are least well placed to carry the increasing debt burdens that have become a central feature of the US economy.¹⁷

[TABLE 1 GOES HERE]

Figures 4 and 5 and Table 1 draw attention to an important stock-flow imbalance in the US economy over the past four decades. Specifically, household debt has been growing faster than household income – especially among the lower and middle income households least well placed to sustain such a financial posture – with the concomitant result that the household debt-servicing burden has been increasing over time. In the tradition of Hyman Minsky, these trends suggest that household balance sheets were deteriorating and that, as a result, the financial fragility of the household sector (and by extension the US economy as a whole) was increasing over time.¹⁸

From the Keynesian perspective developed in this chapter, these developments herald two problems. First, debt servicing involves transferring income from lower income (and proportionally higher spending) net debtor households to higher income (and proportionally lower spending) creditor households. This only serves to exacerbate the basic flaw in the aggregate demand generating process that debt accumulation is supposed to offset. And as such, it requires still more aggressive household debt accumulation if the potential shortfall of aggregate demand stemming from the real wage stagnation experienced by the majority of working households is not to become manifest.

¹⁷ See also Barba and Pivetti (2009, pp.129-31).

¹⁸ See, for example, Papadimitriou et al (2006), Cynamon and Fazzari (2008), and Weller and Sabatini (2008) for extensive discussion of this last point. Note that these references once again exemplify the fact that, from the Keynesian perspective developed in this chapter, both the event and even the nature of the macroeconomic crisis that has recently beset the US economy were *anticipated*. The account of the financial crisis and Great Recession furnished here does not involve *post hoc* wisdom after the event.

Second, as Figures 4 and 5 and the discussion above suggest, the entire process of household debt accumulation is rather like putting the plug in the bathtub, turning on the taps and walking away: an exercise that can only be indulged for so long before disaster strikes. In this case, the disaster precipitated by an unsustainable pattern of household debt accumulation is widespread default. Default not only has an adverse effect on the borrowing and hence spending abilities of debtor households, but also destroys the wealth (and hence reduces the willingness to spend) of creditor households, as the value of bad debts (which constitute assets from the point of view of creditors) are written down or written off. In other words, the economic equivalent of water spilling over the rim of the bathtub, onto the bathroom floor, and through the living room ceiling is a sudden, sharp reduction in aggregate demand (with the inevitable adverse consequences for output and employment), as borrowing and lending freeze up and wealth is destroyed.

In sum, over the last four decades, the trajectory of the US economy has been characterized not so much by the dawning of a new era of macroeconomic tranquility (as suggested by the notion of a “great moderation”) as by increasing latent fragility. The latter has stemmed primarily from an unsustainable pattern of debt accumulation by lower and middle income households, seeking to offset weak real income growth caused by the failure of real wages to keep pace with productivity growth. On the basis of this analysis, the events that transpired between 2007 and 2009 are easy to understand: beginning in the fall of 2007, the latent fragility of the US economy finally became manifest, in the form of the financial crisis and, subsequently, the Great Recession.

4. Prognosis: What Lies Ahead?

The preceding analysis suggests that the stagnation of real wages experienced by the majority of the working population lies at the very core of the problems that have recently afflicted the US economy. Absent any major changes in the structure of the US economy designed to remedy this flaw in the aggregate demand generating process, what will the legacy of the financial crisis and Great Recession be in the medium to longer term?

From the Keynesian perspective utilized in this chapter, two possibilities present themselves. The first is predicated on the notion that the pattern of household debt accumulation that characterized the period prior to 2007 is now exhausted. This scenario will materialize if either: a) the “credit crunch” that accompanied the financial crisis signals the onset of tighter credit standards in the medium-long term – i.e., an enduring unwillingness on the part of the financial sector to continue lending to households; and/or b) if the financial crisis and Great Recession trigger a change in household borrowing norms, as a result of which households become more wary of accumulating debt in the medium-long term. What we are contemplating here is an end to the use of credit to finance increases in consumption spending that cannot be funded by real income – in other words, a permanent breakdown in the debt accumulation dynamics that had previously prevented the flaw in the aggregate demand generating process in the US from becoming manifest. In this scenario, then, and *ceteris paribus*, the future involves secular stagnation (slow growth accompanied by persistently high unemployment).

Of course, other things may not remain equal. The importance of consumption expenditures as the “engine of growth” in the US economy may diminish, as some other

component of aggregate demand comes to the forefront. However, this is unlikely to happen. Having acted as the “consumer of last resort” for the world economy for several decades now, it is difficult to imagine that foreign demand (in the form of a sustained export boom) will come to the rescue of the US economy. Corporate investment is also unlikely to emerge as a saviour. As noted earlier, investment has taken a largely backseat role in generating aggregate demand in the US for several decades now, even despite the ever-increasing rate of profit in the US economy since the early 1980s (on which see Mohun, 2010). Finally, and despite the remarks made earlier about the public sector being better placed than the household sector to deficit spend, political unwillingness is likely to thwart any attempt to use fiscal policy as an engine of medium-long term growth.

The second possibility alluded to earlier rests on both the credit crunch *and* households’ reluctance to borrow proving to be strictly temporary. In this second scenario, the financial crisis and Great Recession represent no more than a temporary interruption to the pattern of debt-financed, consumption-led growth that has come to typify the US economy. But even if this second scenario is plausible, it represents no more than “winding up the clock springs” of the same unsustainable growth process to which the last few decades have borne witness. The deficiency of aggregate demand caused by the stagnation of real wages experienced by the majority of workers may, once again, be offset. And as a result, growth over the course of the next business cycle (or two) may suffice to lower unemployment significantly from its Great Recession peak. But as we surely now know, the real question posed by this scenario is: when will the next crisis occur, and how bad will it be?

Either way, then, without major changes to the structure of the US economy designed to offset the flaw in the aggregate demand generating process related to real wage stagnation, the prospects for the US economy appear bleak.

5. Policy Implications: What is to be Done?

There has already been an extensive policy response to the 2007-09 financial crisis and Great Recession. This policy response includes short-term measures designed to address the illiquidity and/or insolvency of financial institutions (such as the TARP) and the loss of output and jobs in the real economy (record low overnight interest rates and several attempts at fiscal stimulus). However, consistent with the analysis in this chapter, any policy response to recent macroeconomic conditions that hopes to succeed in the medium-long term – that is, that hopes to provide a basis for sustainable growth consistent with full (or simply a constant rate of) employment – must address the structural flaw in the aggregate demand generating process emanating from the real wage stagnation experienced by the majority of working Americans.

As first noted in section 2, the US economy has not always violated the “golden rule” for sustainable growth with a constant rate of employment during the post-war era. Hence Glyn et al (1990) accredit the success of the 1945-73 Golden Age, in part, to the maintenance of a rate of growth of real wages roughly equal to that of labour productivity. This outcome can, in turn, be associated with the existence of a “value sharing” norm of distributive justice during the Golden Age, brought about by a “social bargain” (Cornwall, 1990) or “capital-labour accord” (Bowles, Gordon and Weisskopf, 1990) designed to reconcile the competing claims of the social classes on total income

and control over the conditions of employment. Under the terms of this social bargain, firms retained the “right to manage” (i.e., to decide what to produce, where, and how) in return for a commitment to steady growth in real wages consistent with a stable wage share of income. Instrumental in the creation and supervision of these arrangements were strong labour unions.

Since the early 1970s, changes in labour law and corporate organization have succeeded in disempowering workers – most conspicuously through a precipitous decline in rates of unionization (Palley, 1998; Osterman, 1999). These developments have been accompanied by the demise of the post-war social bargain and its “value sharing” norm of distributive justice. The latter has been replaced by a “winner take all” norm based on the exercise of market power (and therefore favourable, in the current environment, to corporations). Perhaps not surprisingly, the institutional changes just described coincide exactly with the period during which real wages have stagnated for the majority of American workers, and the US economy has violated the “golden rule” for sustainable growth with a constant rate of employment.

According to this analysis, the creation and enforcement, by a strong labour movement, of a particular norm of distributive justice was instrumental in ensuring that the US economy satisfied the “golden rule” during the first three decades of the post-war period, while the evisceration of organized labour (and accompanying demise of the advantageous norm of distributive justice) was instrumental in the subsequent violation of this rule. This, in turn, suggests that an important condition for a return to a situation in which the “golden rule” is satisfied is a reinvigoration of the labour movement. This would give workers – who already have a *vested interest* in the growth of the real wage –

sufficient bargaining power to actually *achieve* an increase in the growth of their real wages, which is necessary if the “golden rule” is once again to be satisfied.

The policy interventions necessary to successfully respond to the financial crisis and Great Recession therefore go far beyond short-run macroeconomic stimulus (through monetary and fiscal policy) and even financial re-regulation. They must also address the structure of US labour relations. One important starting point is labour law, changes to which have systematically disadvantaged workers since the 1970s, by making union organization more difficult and de-unionization by corporations much harder (see, for example, Block et al, 1996). This was the impetus behind the recently proposed Employee Free Choice Act which, among other things, would have made it harder for firms to intimidate workers who wanted to join unions.¹⁹

But disadvantageous changes in labour law are not the only obstacle that organized labour has confronted since the 1970s. Another challenge has arisen from the process of globalization and, in particular, the credible threat to relocate production that this has created for US-based corporations. Bronfenbrenner (2000) documents the adverse consequences that this has had for union organizing in the US. But rather than globalization *per se*, it may be the current *structure* of globalization that is disadvantageous to workers – specifically, its encouragement of competition in labour standards, with territories that succeed in denuding, *inter alia*, legal protections for trade unions proving the most attractive to footloose corporations. This, in turn, puts pressure on other territories to “dumb down” labour standards in the hope of retaining corporations currently located within their jurisdictions. The result is a “race to the

¹⁹ Even some mainstream economists rallied behind the Employee Free Choice Act. See, for example, Paul Krugman’s open letter to then President-elect Obama published in the January 2009 issue of *Rolling Stone* magazine.

bottom” that destroys labour standards (but that ultimately means that corporations need not move anywhere). One possible policy response to this involves greater regional (and ultimately international) co-ordination, designed to eliminate competition in labour standards and the resulting race to the bottom in favour of commitment to a common set of labour standards (see, for example, Palley 2002b; 2004). This would help to create a platform from which a strengthened labour movement might succeed in raising the growth of real wages towards the level required to satisfy the “golden rule”.

Quite apart from globalization, however, unions have also been challenged by the inexorable structural change that accompanies growth in capitalist economies – in particular, the steady shift of employment away from the secondary or manufacturing sector of the economy (where trade union organization has traditionally been strongest) towards the tertiary or service sector. Where the decline of manufacturing has been brought about by competitive failure due, in turn, to factors such as an over-valued exchange rate, a case can be made for policy interventions designed to redress the loss of manufacturing jobs (see, for example, Palley, 2007) that would, in turn, help to offset the decline of the labour movement.

But it is well known that some part of the tertiarization of growing economies is due to common developmental patterns that no obvious policy can (or should) address (Rowthorn and Wells, 1987). Moreover, the sort of inter-regional cooperation necessary to reverse the “race to the bottom” in labour standards would prove far from easy to achieve. Indeed, in the worst case scenario, it may prove to be the case that the post-war Golden Age was no more than a fleeting moment during Hobsbawm’s (1994) “short twentieth century” – a transitory confluence of remarkable events (a strong labour

movement, the existence of an alternative (Soviet) system of production, and the legacy of recent suffering from two world wars and the intervening Great Depression) that not only increased the bargaining power of labour, but also encouraged wealth owners to adopt a strategy of “concede and rule”. If so, then any of the policy remedies contemplated above are likely futile. It is only to be hoped that this fatalistic hypothesis is incorrect and that policy interventions – even if difficult in practice – can, in principle, restructure the US economy so as to redress the fundamental structural flaw that is the ultimate cause of the recent crisis.

6. Conclusions

Central to the Keynesian perspective that advises this chapter are the propositions that aggregate demand drives macroeconomic outcomes, and that finance is the “yin and yang” of capitalist growth and development, providing the means by which the economy can expand aggregate demand faster than current income, but at the same time resulting in the accumulation of debt burdens that can be the undoing of credit-fueled economic expansions. Drawing on this perspective, the chapter has advanced the claim that the central dilemma confronting the US economy is a structural flaw in its aggregate demand generating process. Specifically, real wages have grown dramatically slower than productivity for the majority of the working population, resulting in an imbalance between the growth of aggregate demand and the growth of potential output (“aggregate supply”). The resulting aggregate demand shortfall has been offset by household debt accumulation, which has financed an expansion of consumption expenditures that could not be funded by the stagnant real incomes of working households. As a result, and

despite ostensibly satisfactory macroeconomic performance since the 1990s, the US has for several decades been characterized by a latent fragility that, beginning in 2007, became dramatically manifest in the forms of the financial crisis and Great Recession.

Resolving these problems will require far more than temporary macroeconomic stimulus or even financial reform. Ultimately, it requires re-structuring the US economy to re-establish the robust growth of real incomes of working households last seen during the 1950s and 1960s. It is difficult to overestimate the magnitude of this task – but it is equally difficult to overstate its importance. Absent measures to correct the flaw in the aggregate demand generating process stemming from real wage stagnation, the US faces a future of either boom-bust cycles characterized by periodic financial crises, or else – and perhaps more likely – secular stagnation.

Appendix: Some Keynesian Growth Accounting

Goods market equilibrium with full resource utilization requires:

$$AD = Y^p$$

where AD denotes aggregate demand and Y^p is potential output, or:

$$C + A = \frac{Y^p}{L} L \quad [1]$$

where C and A denote consumption and non-consumption expenditures and L is the size of the labour force.

A growing economy therefore requires:

$$A\hat{D} = \hat{Y}^p$$

or from [1]:

$$\omega_c \hat{C} + (1 - \omega_c) \hat{A} = q + n \quad [2]$$

where ω_c is the share of consumption in total expenditures, q is the rate of productivity growth, and n is the rate of growth of the labour force.

Now suppose that:

$$C = c_w w N + c_\pi \Pi + D$$

where w is the real wage, N is total employment, Π is total profit, D is debt-financed consumption spending by wage earners and c_w and c_π represent the (constant) propensities to consume of wage and profit earners, respectively. Assuming that $0 = c_\pi < c_w < 1$, this expression can be re-written as:

$$C = c_w w \frac{N}{L} L + D$$

where N/L denotes the employment rate. Assuming that N/L remains constant, it therefore follows that:

$$\hat{C} = \omega_Y (\hat{w} + n) + (1 - \omega_Y) \hat{D} \quad [3]$$

where ω_Y denotes the share of total consumption spending that is funded by current income. Substituting [3] into [2] and re-arranging yields:

$$\omega_c [\omega_Y \hat{w} + (1 - \omega_Y) \hat{D}] + (1 - \omega_c) \hat{A} = q + (1 - \omega_c \omega_Y) n \quad [4]$$

If we now assume that D grows at the same rate as wage income – which is necessary to keep the debt: income ratio of working households constant over time – we can write:

$$\hat{D} = \hat{w} + n$$

and substituting this expression into equation [4], we arrive at:

$$\omega_c \hat{w} + (1 - \omega_c) \hat{A} = q + (1 - \omega_c) n \quad [5]$$

It is now obvious by inspection that as $\omega_c \rightarrow 1$, the expression in [5] reduces to:

$$\hat{w} = q \quad [5a]$$

(Recall that, historically in the US, $\omega_c \approx 0.66$; currently, $\omega_c \approx 0.70$.)

In sum, the condition:

$$\text{real wage growth} = \text{productivity growth}$$

is a good approximation for the condition necessary for sustainable long run growth consistent with full employment (or even simply a constant rate of unemployment) – as per Glyn et al (1990).

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Figure 1: Productivity and Hourly Compensation of Production and Non-Supervisory Workers, 1959-2005 (1959 = 100)

Source: Palley (2009, p.8)

Figure 2: Change in Real Family Income by Quintile (and Top 5%), 1947-79

Source: Korty (2008, p.2)

Figure 3: Change in Real family Income by Quintile (and Top 5%), 1979-2005

Source: Korty (2008, p.1)

Figure 4: Household Debt as a Proportion of GDP

Source: Cynamon and Fazzari (2008, p.18)

Figure 5: Debt Service as a Proportion of Disposable Income

Source: Cynamon and Fazzari (2008, p.22)

Table 1: Distribution of Household Debt by Income

<i>Household Type</i>	<i>Average Income</i>	<i>Average Debt</i>	<i>Debt/Income Ratio</i>
< \$50,000 (66% of households)	\$23,090	\$68,918	2.98
>\$50,000 (34% of Households)	\$112,232	\$157,681	1.40

Source: Palley (2002)