

# **Keynes and the financing of public works expenditures**

“Look after the unemployment, and the budget will look after itself”  
(Keynes, January 1933, *CW XXI*, p. 150)

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The argument for public works in the 1930s went a good deal further than that of the present day. Keynes and others were concerned with not only the impact of the multiplier process on aggregate demand, but equally with the implications for financing the expenditure. Their conclusion was of the utmost importance: that spending would pay for itself and would not ‘crowd out’.

The aim of this brief paper is to restate this argument and to clarify other misconceptions about Keynes’s theory and the associated practical conclusions. Empirical data are examined to show that these conclusions were supported by outcomes.<sup>2</sup>

## **1. The multiplier, aggregate demand and employment**

From the perspective of aggregate demand and employment, the three main points of the theory developed in the 1930s were:

- i. the multiplier was a nominal relation;
- ii. the multiplier was not a constant; and
- iii. the impact on employment depended on the conditions of supply.

For completeness the relation is stated as in the *General Theory*:

$$\Delta Y = \frac{1}{1-c} \Delta I$$

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<sup>2</sup> In the early 1930s, the most substantial contributions to the case for public works expenditures was by Richard Kahn (1931), though this followed Keynes’s and Hubert Henderson’s argument in their joint article ‘Can Lloyd George Do it?’ (*CW IX*, pp. 86-125). Many draw attention to parallel contributions by Jens Warming (1932 is particularly important), L. F. Glibin, Ralph Hawtrey, James Meade and others. The original theory reached its final form in the *General Theory*. The ‘Keynesian’ theory that survived into the textbooks was a different theory and is responsible for many of the oversights and misunderstandings with which this essay is concerned.

$\Delta Y$  can be regarded as the change in aggregate demand in nominal terms following an increase in investment (private or public); the relation depends on and is derived from the marginal propensity to consume ( $mpc$ ;  $c = \Delta C / \Delta Y$ ). The  $mpc$  was not necessarily stable; Keynes claimed only that its value was less than one. As a consequence, the relation cannot be integrated to give a straight line of gradient  $c$ .

Keynes and others argued that at times of high unemployment, the large part of this increase in aggregate demand would go to employment rather than prices. It is, however, ludicrous to argue that they neglected the possibility of some rise in prices.<sup>3</sup>

## 2. Empirical evidence for the size of the multiplier

All present analyses seem to be based on real measures, either of GDP or employment. The approach most compatible with Keynes's theory is to study nominal measures. The estimates in the 1930s were based on a substantial development of National Accounts that occurred roughly concurrently with the development of the multiplier theory. As a consequence the expenditure information on which Keynes and his colleagues based their estimates was highly provisional with very few (annual) observations.<sup>4</sup> Table 1 shows a selection.

Table 1: Example estimates of the multiplier

Author / publication year	Years	Estimate	Comments
Kahn (1931)	N/A	2	employment multiplier
Keynes (1932; CW IX, pp. 335-366)	N/A	2	income multiplier
Warming (1932)	1928	2.5	Estimate for Denmark, originally made by Mr. F. Johannsen, a businessman
Keynes (1936; CW VII, p. 128)	1925-33	2 1/2 to 3	Estimate for the US
Clark (1938)	1929-37	1.532	UK
Clark (1938)	1934-37	2.082	UK

<sup>3</sup> “[T]he whole question ultimately turns on the nature of the supply curve of consumption-goods” (Kahn, 1931, p. 182). “When full employment is reached, any attempt to increase investment still further will set up a tendency in money-prices to rise without limit, irrespective of the marginal propensity to consume; *i.e.* we shall have reached a state of true inflation. Up to this point, however, rising prices will be associated with an increasing aggregate real income” (CW VII, pp. 118-19).

<sup>4</sup> There is even the possibility that guesstimates of the multiplier were used to aid construction of some of the measures.

As is well known, there was a vast increase in the production of National Accounts after the war. We are now in a position to look at estimates for nominal multipliers across the whole post-war period. Figures 2 show estimates of the marginal propensity to consumer ( $mpc$ ) and import ( $mpi$ ) for the US and UK; Figures 3 show estimates of the multiplier. The figures are based on annual changes in the relevant macroeconomic aggregates, with the multiplier adjusted for trade through the conventional textbook adjustment of adding the marginal propensity to import to the denominator of Keynes's formula.<sup>5</sup>

Figure 2A: Marginal propensities, UK

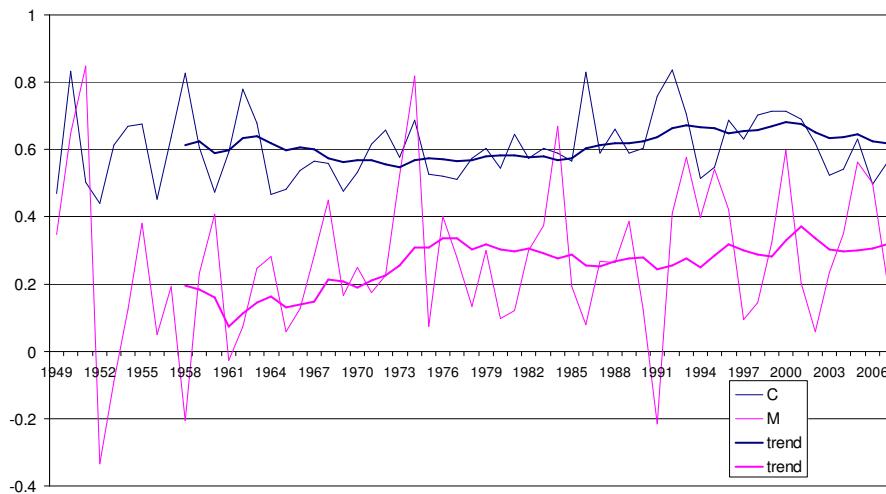
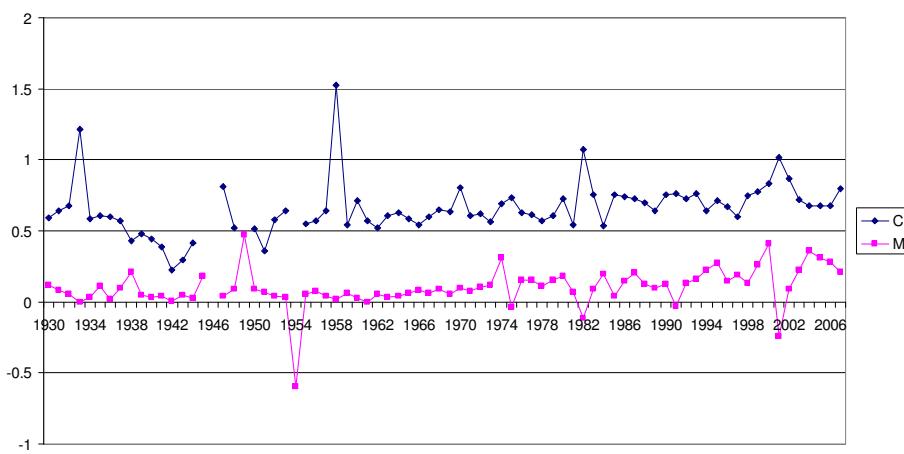


Figure 2B: Marginal propensities, US




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<sup>5</sup> So the multiplier is the reciprocal of the leakages to saving and overseas, measured as the sum of the marginal propensities to save ( $1-c$ ) and import: the higher the leakages, the lower the multiplier.

Figure 3A: The multiplier, UK

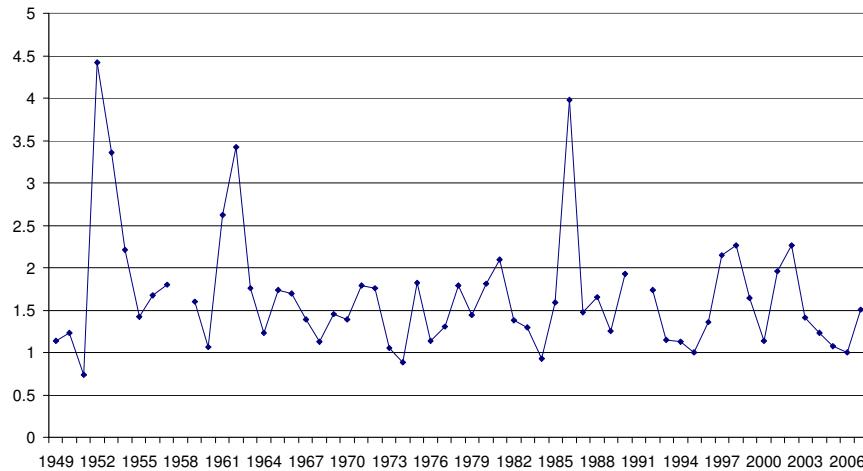
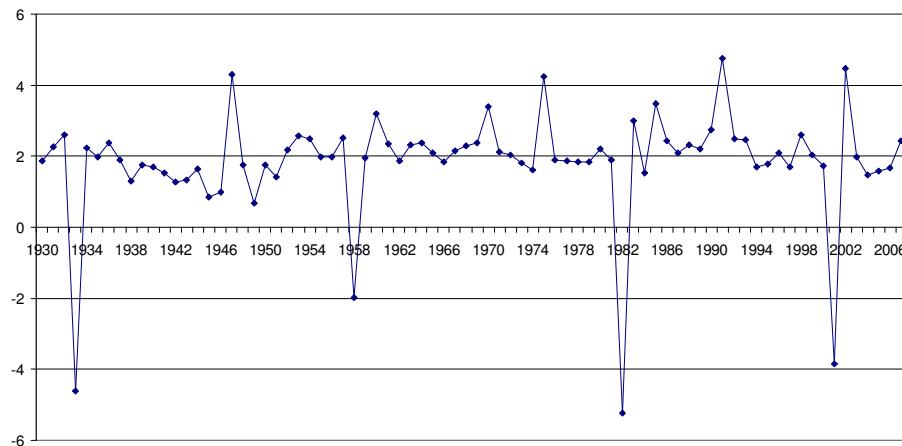


Figure 3B: The multiplier, US



The figures straightforwardly indicate values for the multiplier of around  $1\frac{1}{2}$  for the UK and 2 for the US, with the US having a higher *mpc* and lower *mpi*. In spite of high year-to-year volatility, the relative stability of the trend is quite striking. Recent years have, however, seen lower multipliers, mainly as import shares have increased (though multipliers were up in 2008).

The real effects are a different matter. Given the conditions of supply have varied greatly over economic history and over the cycle, it is simply not valid to look at average results over time. Each episode will be different. But in a severe decline it is highly unlikely that much of an increase in expenditure will go to wages and prices, and the real multiplier should be close to the nominal multiplier.

A sure-fire way to conclude that the multiplier is very low is through use of linear regression over a long time range. Periods when capacity is low and government expenditure is high (e.g. the 1970s) will dominate in the estimation of parameters. But such estimates are not valid, because the relationship is not

linear and it is not fixed.<sup>6</sup> More recent estimates of a US multiplier of 1.5 from the Council of Economic Advisers (Romer and Bernstein, 2009) may be slightly less implausible, but there is very little detail on how they have been derived. <sup>7,8</sup>

### 3. Financing the expenditure

A central claim of those who advocated public works in the inter-war period was that expenditures would be self-financing. This can be seen first in the 1929 Liberal Party Manifesto: "... we are ready with schemes of work which we can put immediately into operation ... . These plans will not add one penny to national or local taxation" (cited and presumably motivated by Keynes, *CW IX*, p. \*). A little later Kahn (1932, p. 494) would assert: "savings are always and necessarily equal to investment: that is a mere truism ... . Whatever the level of investment, funds [9] are always available to pay for it". There are two aspects:

- i. the impact on the government budget; and
- ii. the impact on aggregate saving.

The terribly simple idea was that public works expenditures would have a cumulative impact on national income through the multiplier. This would create new saving, increase tax revenues and reduce benefits expenditures. More exactly, through the multiplier equation, the newly generated saving could be

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<sup>6</sup> I suspect this is Barro's approach (eg 2009), but he offers little detail.

<sup>7</sup> "For the output effects of the recovery package, we started by averaging the multipliers for increases in government spending and tax cuts from a leading private forecasting firm and the Federal Reserve's FRB/US model. The two sets of multipliers are similar and are broadly in line with other estimates" (Romer and Bernstein, 2009, Appendix 1).

<sup>8</sup> A *Financial Times* report (23 January 2009) had the following viewpoints, as well as Romer's:

- Robert Barro: "with partial crowding out the multiplier will be a lot less than one" [While his claim is qualified, he fails to acknowledge that Keynes rejected crowding out – see (3.)]; and
- Ken Rogoff: "Academic economists are far more uncertain about the impact of the fiscal stimulus than Wall Street ... The range of estimates is very wide. But given the situation we're in it is certainly worth trying". [The range of estimates is certainly wide, but whether there is a great deal of *genuine* uncertainty about the impact of public works in deep recession might be more contestable.]

<sup>9</sup> Post-Keynesians would say 'financing', to make a distinction between the initial drawing on bank credit and the subsequent 'funding' of expenditures through capital markets and hence newly-created saving.

shown to be equal to the original expenditure.<sup>10</sup> The claims countered the ‘Treasury view’ that public works would crowd out private expenditure.<sup>11</sup>

Keynes set out his budgetary case most fully in his *Means to Prosperity*. He showed how a loan expenditure of £100 would lead to a total benefit to the Exchequer of £53, following basic assessments of benefit costs and taxation revenues. He argued that this revenue would more than exceed the amount of public subsidy required for certain proposals (“£7 million on the new Cunarder”, and “the expenditure of £100 million on housing”, *CW IX*, p. 348).

... [W]e see that it is a complete mistake to believe that there is a dilemma between schemes for increasing employment and schemes for balancing the budget – that we must go slowly and cautiously with the former for fear of injuring the latter. Quite the contrary. There is no possibility of balancing the budget except by increasing the national income, which is much the same thing as increasing employment. (*CW IX*, p. 347)

Today it is likely that any schemes would recoup even more money, because taxation rates and benefit payments are likely to be higher.<sup>12</sup> Equally as importantly, public works lead to a revival in spending and in businesses revenues which should have an enduring and cumulative benefit.

The advocates of public works in the 1930s argued that expenditures should be financed in the first instance with credit from banks (see also (4.) below).<sup>13</sup> Today the notion of ‘helicopter money’ or ‘printing money’ continues to trivialise and stigmatise such processes, but they are valid and sensible when unemployment is high, so that new expenditures create employment and incomes and *not* price inflation. Those who now acknowledge a significant multiplier

<sup>10</sup> Defining the change as saving as follows:

$$\Delta S = \Delta Y - \Delta C$$

substituting using the definition of the *mpc*:

$$= \Delta Y - c \Delta Y$$

$$= \Delta Y (1 - c)$$

substituting for the multiplier equation

$$= (1 / (1-c)) \Delta G (1 - c)$$

$$\Delta S = \Delta G$$

<sup>11</sup> Kahn offered the following example: “... the decision taken by the Government at the end of 1925 to restrict grants for relief schemes was based mainly on the view that, the supply of capital in the country being limited, it was undesirable to divert any appreciable proportion of this supply from normal trade channels” (British Government to ILO, 1927, cited by Kahn, 1972 [1931], p. 2).

<sup>12</sup> For example: average earnings are about £25,000; individual benefits for the unemployed can be crudely estimated at £10,000; and the tax rate is around 35%. With a multiplier of 1.5, the tax gain will be  $25,000 \times 1.5 \times 35 / 100 = 13,000$ , so the total gain to the exchequer is £23,000 (the cost of employing one individual through public works is more complicated than simply starting with average earnings (eg. materials and employers’ contributions); the calculation is offered for illustrative purposes alone).

<sup>13</sup> “It is, however, important to realise that the intelligent co-operation of the banking system is being taken for granted” (Kahn, 1972 [1931], p. 3). “The alternative is to borrow from the banking system, from the private banks if they are able and willing to lend, and failing that from the central bank ... . But as soon as recourse to the banking system is alluded to, the cry of ‘inflation’ is raised and fears are expressed as to the ‘safety of the currency’; and the policy is probably doomed. But in the light of common sense it can be seen that it does not make the slightest difference where the money comes from ... ” (Kahn, 1972 [1933], pp. 30-1).

effect cannot avoid this conclusion. To finance such expenditures with longer-term gilts would be to deliberately avoid the advantage of low bank lending rates that would inevitably prevail at the stage of a cycle when public works were implemented, and would mean sole reliance on capital markets that can become very anxious in the face of the unknown. In the medium-term, gilt issues might be used to draw on newly created savings and repay the banks (see next section).

In WWII Keynes and his HM Treasury colleagues devised Treasury deposit receipts that formalised processes for borrowing from banks. Howson is one of the few authors to discuss this vital tool of government policy:

The introduction in July 1940 of Treasury Deposit Receipts (TDRs), by which the major banks were obliged to lend directly to government added a new instrument to the floating debt, enabling the authorities to borrow on short term without either increasing the Treasury bill issue or having recourse to Ways and Means Advances. Of longer maturity (six months) than three-month Treasury bills and non-marketable, TDRs were less liquid than Treasury bills and carried a slightly higher interest rate (1 1/8%). This wartime expedient [<sup>14</sup>] was, as Sayers put it, ‘concocted . . . [so as] not to disturb the customary relationship [between banks, discount houses, and the Bank of England] and customary “ratios” of the peacetime [banking] system’, but it was nonetheless seen as a revolution in fiscal policy, at least in Labour Party circles ... (Howson, 1988, pp. 252–3)

TDRs were quickly discontinued after the war, in spite of Keynes's and HM Treasury's recommendations to the contrary.

In the 1930s the monetary environment as a whole was undergoing great change in parallel to the debate on public works, changes that were greatly beneficial to subsequent expenditure policies. Britain abandoned the gold standard in September 1931 and the US did so in April 1934, there was then a substantial reduction of both short- and long-term interest rates. In Britain, Bank rate was cut to 2 per cent in 1932; the long-term rate on government bonds was reduced from 4.5 per cent in 1931 to 2.8 per cent in 1934. In the US, the Federal Reserve rediscount rate was reduced to 1.5 per cent by 1934; long-rates were reduced from 3.7 per cent in 1933 to 2.7 per cent in 1936 (see Figure 5 below for long rates). Actions on long rates were supported by the introduction of some control on the movement of international capital. In *The Means to Prosperity* Keynes saw such actions, especially those on the long-rate as pre-requisite to any fiscal action <sup>15</sup>

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<sup>14</sup> This is misleading: TDRs played the same role in Keynes's proposals for post-war debt management policy.

<sup>15</sup> “This requires a combination of manoeuvres by the government and the central bank in the shape of open-market operations by the bank, of well-judged conversion schemes by the treasury [in June 1932 the UK converted 5% War debt to 3 %], and of a restoration of financial confidence by a budget policy approved by public opinion in other ways. It is at this stage that a certain dilemma exists; since it may be true, for psychological reasons, that a temporary reduction of loan expenditure plays a necessary part in effecting the transition to a lower long-term rate of interest. Since, however, the whole object of the policy is to promote loan-expenditure, we must obviously be careful not to continue its temporary curtailment a day longer than we need” (*CW IX*, pp. 353–4). Such policies somewhat pre-date quantitative easing.

Apart from these immediate objectives, Keynes's wider goals for economic policy management were based on permanently low interest rates on all government borrowing instruments and hence on all borrowing. He saw this as fundamental to private activity through reducing the costs of fixed capital investment, as well as reducing the burden of any public borrowing on the nation's finances. Tragically this central goal of Keynes's policy was not given prominence in subsequent literature and policy discourse; here is not the place for further discussion, but see Tily (2006 & 2007).

#### **4. Aside: the relation between credit, saving and investment**

In his important contribution, Warming (1932, p. 215) explicitly linked credit creation and saving: "If a bank promises credit for an investment it really disposes of something belonging to the future: the coming saving". In a monetary economy, the relevant consideration is the availability of finance not of saving, and there is no necessary constraint on finance. As Keynes forcefully argued:

... in general, the banks hold the key position in the transition from a lower to a higher scale of activity. If they refuse to relax, the growing congestion of the short-term loan market or of the new issue market, as the case may be, will inhibit the improvement, no matter how thrifty the public purpose to be out of their future incomes. On the other hand, there will always be *exactly* enough *ex post* saving to take up the *ex post* investment and so release the finance which the latter had been previously employing. The investment market can become congested through shortage of cash. It can never become congested through shortage of saving. This is the most fundamental of my conclusions within this field. (1937, CW XIV, p. 222)

He might have added: so long as institutional arrangements are sound, apart from administration, credit creation is costless to society. But perhaps he thought everybody understood that.

To adopt roughly Keynes's analogy, saving is not the dog but the tail (CW XIII, p. 276). Economic activity *generates* saving, it is not constrained by saving. The relationship between saving and investment was not one of equilibrium, it was an identity, just as sales equal receipts. Yet the origin of this relation in monetary considerations is rarely acknowledged. Keynes used national accounts identities; others have used the geometric progressions underlying the multiplier process. As far as I am aware, Chick (eg. 1983 Chapter 9 & 1997) was the first to articulate matters clearly and fully. And she completed the picture by showing how, following an expansion of credit (in a closed economy), newly created deposits ensure that saving and investment are equal (or identical) at all times, rather than just at the end of the process.

As the quotes from Kahn and Warming indicate, the identity was well understood at the time, if not fully formalised. It was then the foundation to the *General Theory*, leading Keynes to new theories of interest (liquidity preference), investment demand (the marginal efficiency of capital) and consumption (the mpc / multiplier).

Those who now base macroeconomic analysis on perceived divergences between saving and investment are operating with a theory different from the *General Theory*.<sup>16</sup> This theory appears to permit Keynes-type conclusions on fiscal policy, but avoids entirely credit and monetary considerations. Like classical economics, it is a real not a monetary theory. It does not do justice either to Keynes's theory or to the wider approach of the 1930s.

## 5. Outcome in the 1930s - macroeconomic

The use of public expenditure in the 1930s was tentative, erratic and ultimately inadequate, but it was not as insignificant as some portray. Christina Romer (2009) has argued that Roosevelt's spending "was quite small".<sup>17</sup> However she makes the common error of using the public sector deficit as a guide to the extent of fiscal policy. The deficit will reflect the *outcome* of fiscal policy, not the *extent* of expenditure; in particular, it will incorporate any reductions in benefit expenditure and increases in tax revenues that follow as a consequence of public expenditure programmes.

The most straightforward way to examine the extent and effect of public expenditure programmes in the 1930s is through historic National Accounts and labour market information. Tables 4 show levels and changes of gross domestic product (GDP), government expenditure and unemployment for the US and UK.

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<sup>16</sup> Eg Martin Wolf in the *Financial Times*, 5 June 2009 "My approach is 'Keynesian': in extreme moments, the excess of desired savings over investment soars. Again, monetary policy, while important, becomes less effective when interest rates are zero. It is then wise to wear both monetary belt and fiscal braces. A deep recession proves there is a huge rise in excess desired savings at full employment, as Prof Krugman argues. At present, therefore, fiscal deficits are not crowding the private sector out. They are crowding it in, instead, by supporting demand, which sustains jobs and profits".

<sup>17</sup> She has concluded: "**One crucial lesson from the 1930s is that a small fiscal expansion has only small effects.** I wrote a paper in 1992 that said that fiscal policy was not the key engine of recovery in the Depression. From this, some have concluded that I do not believe fiscal policy can work today or could have worked in the 1930s. Nothing could be farther from the truth. My argument paralleled E. Cary Brown's famous conclusion that in the Great Depression, fiscal policy failed to generate recovery 'not because it does not work, but because it was not tried.'" (Romer, 2009; emphasis in original).

Table 4A: GDP(E), UK, £ millions

	GDP at market Government prices expenditure						Unemploy- ment rate	
	Y	G	ΔY	ΔG	ΔG %	G / Y %	U	ΔU
1928	4659	550					10.8	
1929	4727	558	68	8	1.5	11.8	10.4	-0.4
1930	4685	575	-42	17	3.0	12.3	16	5.6
1931	4359	585	-326	10	1.7	13.4	21.3	5.3
1932	4276	550	-83	-35	-6.0	12.9	22.1	0.8
1933	4259	524	-17	-26	-4.7	12.3	19.9	-2.2
1934	4513	543	<b>254</b>	<b>19</b>	3.6	12.0	16.7	-3.2
1935	4721	598	208	55	10.1	12.7	15.5	-1.2
1936	4905	676	184	78	13.0	13.8	13.1	-2.4
1937	5289	791	384	115	17.0	15.0	10.8	-2.3
1938	5572	947	283	156	19.7	17.0	12.9	2.1
1939	5958	1360	386	413	43.6	22.8	9.3	-3.6

Source: Feinstein (1976 [1972]), Tables 2, 3 & 39; Office for National Statistics (1996), Table 1.

Table 4B: GDP(E), US, \$ billions

	GDP at market Government prices expenditure					Unemployment rate		
	Y	G	ΔY	ΔG	ΔG %	G / Y %	U	ΔU
1929	103.6	9.4				9.1	3.2	
1930	91.2	10	-12.4	0.6	6.4	11.0	8.7	5.5
1931	76.5	9.9	-14.7	-0.1	-1.0	12.9	15.9	7.2
1932	58.7	8.7	-17.8	-1.2	-12.1	14.8	23.6	7.7
1933	56.4	8.7	-2.3	0	0.0	15.4	24.9	1.3
1934	66	10.5	<b>9.6</b>	<b>1.8</b>	20.7	15.9	21.7	<b>-3.2</b>
1935	73.3	10.9	7.3	0.4	3.8	14.9	20.1	-1.6
1936	83.8	13.1	10.5	2.2	20.2	15.6	16.9	-3.2
1937	91.9	12.8	8.1	-0.3	-2.3	13.9	14.3	-2.6
1938	86.1	13.8	-5.8	1	7.8	16.0	19	4.7
1939	92.2	14.8	6.1	1	7.2	16.1	17.2	-1.8

Source: Bureau of Economic Analysis historical data, Table 1.1.5; US Bureau of the Census (1976).

In both countries gross domestic product ( $Y$ ) revived substantially as government expenditure ( $G$ ) increased substantially and hence as public works programmes came on stream.<sup>18</sup>

In Britain, according to these figures and mindful of limitations noted above, GDP stopped falling in cash terms in 1934, the same year that government expenditure was increased. Over the next years the rate of growth of government expenditure accelerated and GDP growth became relatively robust. The share grew from 12% to 22%, though the latter figure must be affected by re-armament expenditures. Unemployment fell in parallel (in fact the first improvement came a year ahead of the improvement to GDP); there was a setback in 1938, but this presumably followed events in the US, and was seriously addressed in 1939.

In the US, GDP also recovered in 1934, in parallel to a very great increase in government expenditure. Unemployment also fell back quite sharply from its peak of nearly 25% in 1933. Spending increases continued through to 1936, as did recovery. In 1937, however,  $G$  was reduced, and this appears to have driven a short and sharp recession in 1938, which had repercussions across the world.<sup>19</sup> Resumed increases to  $G$  appear to have put the economy back on track. While the manner of spending throughout the 1930s was erratic, the increases were certainly not insignificant, especially in cumulative terms: over the 1930s the share of government expenditure in national income grew from about 9% to 16%.

In both countries it might be argued that recovery was driven by the initial monetary actions on leaving the gold standard, discussed in (3.) above. Certainly these cuts in interest rates were necessary to recovery, but presumably they were understood at the time to be insufficient. The greatest calls for public works came after the initial monetary easing. In October 1932, *The Times* published a letter by A. C. Pigou and other leading academic economists (including Keynes). Keynes's *Means to Prosperity* was published in March 1933. The controversial and highly contested policy that was gradually effected from 1934 would surely not have been implemented if there was confidence in recovery. The steady acceleration in government expenditure growth throughout the 1930s suggests gradual recognition of the importance and validity of the policies.

In the *General Theory*, with the benefit of hindsight, Keynes was quite clear that he thought that cuts in the rate of interest alone were insufficient for full employment (e.g. pp. 164, 320 & 325; he was speaking in general terms rather than in the specific instance of recovery from recession). For what it is worth, the whole 'Keynesian' edifice was underpinned by the notion that monetary action was unlikely to be sufficient against recession. Some forty years

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<sup>18</sup> The government expenditure figures include government final consumption and investment expenditures, but do not include transfer payments such as unemployment benefits.

<sup>19</sup> Romer (2009b) has recently written about this episode in an article for *The Economist*, warning of the dangers of cutting back public expenditure programmes too soon. She noted that the US government was forced to make payments to veterans which had detrimental impact on other spending programmes. She does not mention large-scale industrial action in the motor vehicle industry, which brought production to a halt and must have had a bearing on wider outcomes.

later, Lionel Robbins's *mea culpa* is perhaps the ultimate testimony to the necessity and validity of public works expenditures at the time.<sup>20</sup>

It should also be noted that, even if recovery had come about through monetary action alone, the fiscal action had no detrimental effects (see below). Conversely, the detrimental impact of the *reduction* in expenditure in the US is particularly compelling, as is the complete failure of recovery from 1929 to 1933, when government expenditure was restricted in a very severe manner. Then, finally, actions for the war showed what could be achieved with full and formal application of Keynes's monetary and fiscal policies in tandem.

## 6. Outcome in the 1930s – financial

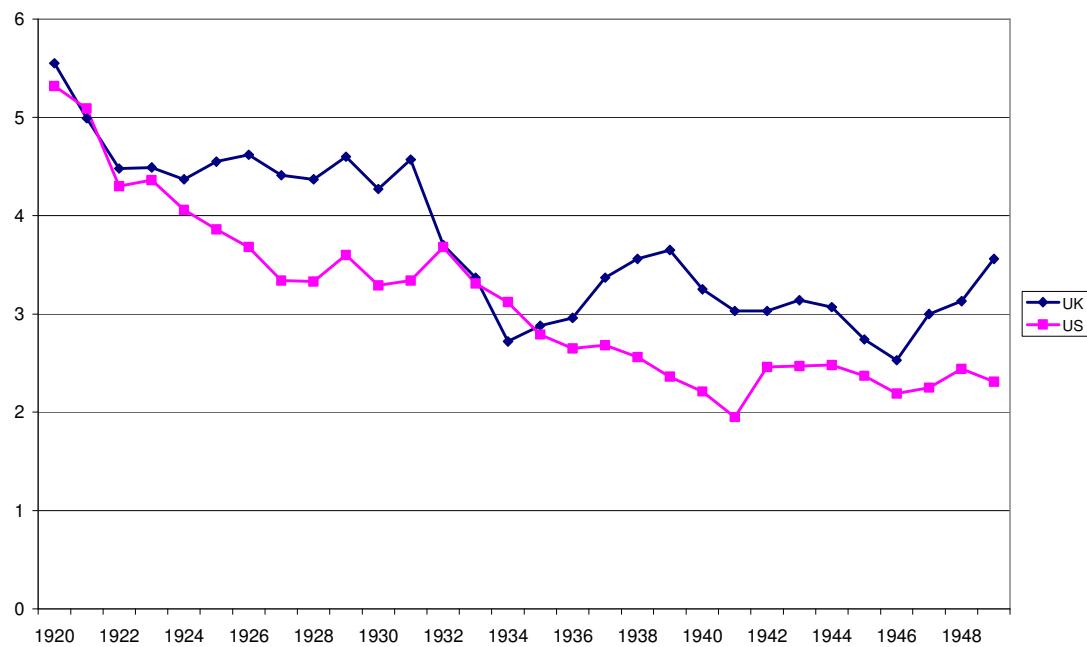
As far as I am aware, the claims on the financial side of Keynes and his allies in the 1930s have not been tested. There are two aspects: the impact on interest rates, and hence the validity of the 'crowding out' / 'Treasury view' thesis, and the impact on public finances.

The former can be tested by examining the long-term interest rate on government bonds. These show rates falling as the public works expenditures were implemented. In Britain there was a major setback between 1935 and 1939, but this was related to the timidity with which the authorities approached Keynes's policies, rather than inherent shortcomings in his argument. Keynes was very critical of the authorities in their permitting this to happen (eg in his February 1938 speech as Chairman of the National Mutual, *CW XXI*, pp. \*- 446). The substantial reduction of rates into the war as public expenditure and borrowing reached unprecedented levels, demonstrated without question that public borrowing did not lead to higher interest rates. Crowding out was hence proven a fiction.

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<sup>20</sup> Kahn (1984, p. 184) cites Robbins speaking at the House of Lords in July 1966: "In the inter-war period when mass unemployment actually prevailed, I was on the wrong side: I opposed measures of reflation which I now think might have eased the situation".

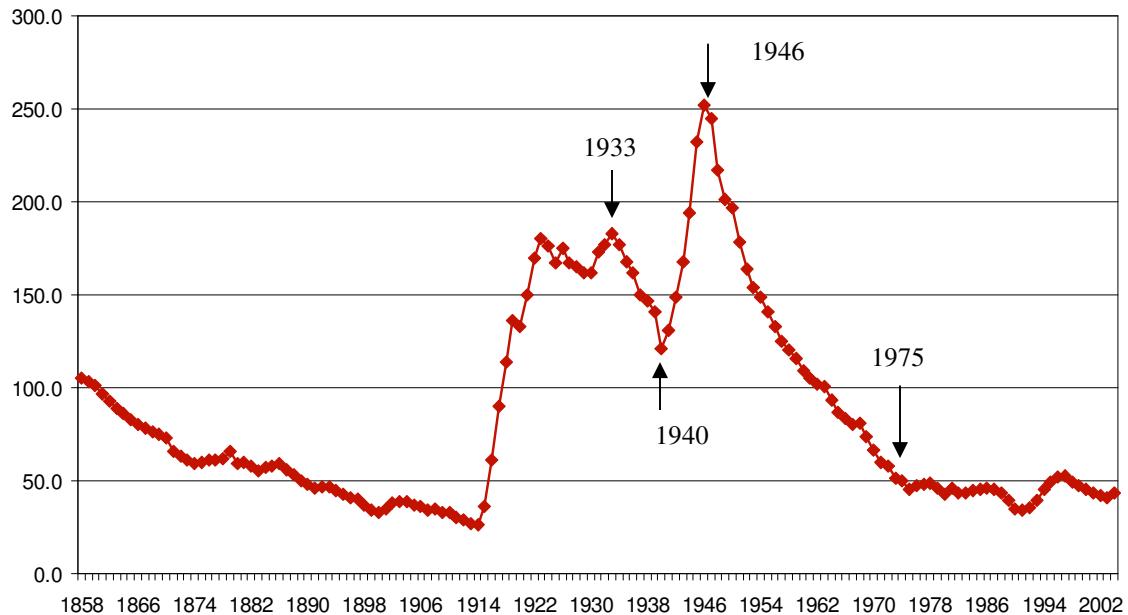
Figure 5: Long-term interest rates on government borrowing



Source: Homer (1991)

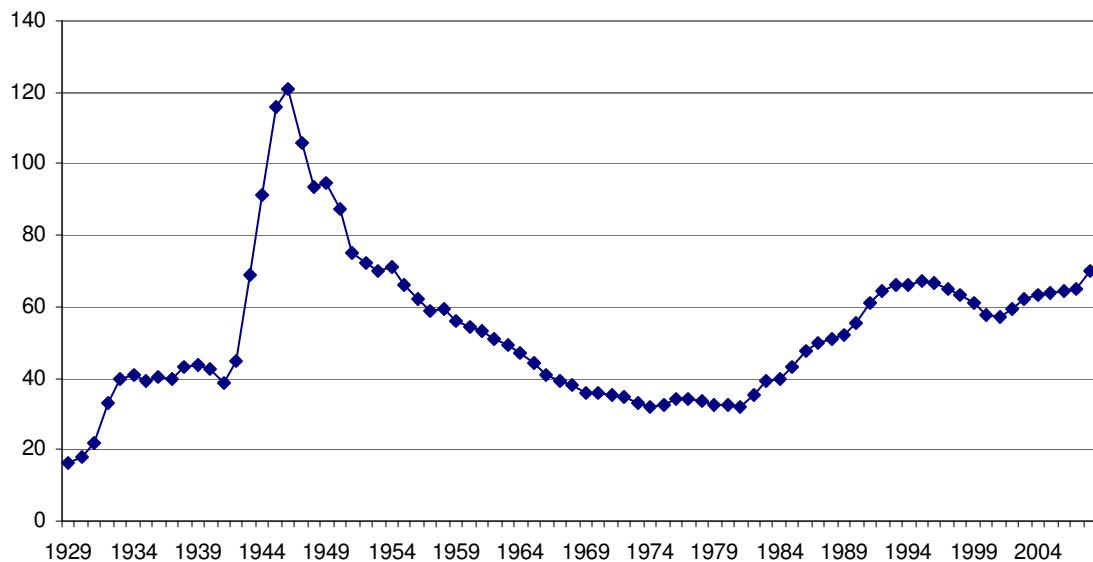
Equally, public debt figures for the US and UK affirm Keynes's position. Figures 6 show public sector debt rising substantially as the Great Depression developed. The rise in debt is arrested as soon as public works programmes came on stream; in Britain the fall in debt between 1933 and 1940 is very striking

Figure 6A: Public sector debt, UK, % GDP



Source: HM Treasury; public finances databank, Table A10  
[http://www.hm-treasury.gov.uk/d/public\\_finances\\_databank.xls](http://www.hm-treasury.gov.uk/d/public_finances_databank.xls)

Figure 6B: Public sector debt, US, % GDP



Source: US Bureau of the Public Debt and author calculations  
<http://www.treasurydirect.gov/govt/reports/pd/histdebt/histdebt.htm>

In both countries public debt again rose with the great increase in public expenditure for the war effort. But in both countries it was brought under control very swiftly; indeed improvements in the public finances were only arrested in the 1970s. The era associated with a more market-based approach to economic activity has in broad terms been associated with a far worse performance of the public finances.

## 7. Conclusion

Some are looking to public works in the wake of the present global recession. Yet – as evidenced by the hysteria concerning the public finances, especially in the UK and the Euro-zone – the case is not well made. Keynes, Kahn, Warming and various others were less interested in what was to them the quite obvious need for public works expenditures in recession. The main point of their contributions was to explain theoretically why such expenditures would not be damaging in any way to the economy, and then to use that theory to advise on practical implementation, particularly on the monetary side.

Data have long been available to test their arguments. However, the Keynesian depiction of Keynes's theory has distracted attention from the monetary and financial considerations that were fundamental to their approach. Restoring these dimensions to his theory and examining the outcomes of the implementation of public works policies in the 1930s appears to vindicate completely the arguments of Keynes and his colleagues.

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