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JOHN MAYNARD KEYNES AS A GLOBAL ECONOMIC POLICYMAKER: FIRST DO THE MACRO AND THEN DO THE REST

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ABSTRACT

This paper discusses Keynes's approach to global economic reform after World War II, and considers how such an approach might be applied in current economic conditions. The key problem then facing Britain was one of trade. The United States was likely to impose on Britain an end to Imperial Preference, as a price for its economic support in the war. Yet Keynes argued that, rather than concentrating on trade, it was necessary to begin with macroeconomic reform: he helped to create an International Monetary Fund before any work was done to establish an International Trade Organization. The paper assesses the present-day implications of Keynes's approach, at a time when unreformed macroeconomic policies, in the form of fiscal austerity, are endangering support for an open international trading system.

Keywords: Fiscal austerity, Global economic reform, Imperial preference, International Monetary Fund, John Maynard Keynes, Open international trading.
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There was a logical reason for dealing with the monetary proposals first. It is extraordinarily difficult to frame any proposals about tariffs if countries are free to alter the value of their currencies without agreement and at short notice. Tariffs and currency depreciations are in many cases alternatives. Without currency arrangements you have no ground on which to discuss tariffs [...]. It is very difficult while you have monetary chaos to have order of any kind in other directions [...] if we have a firm ground on this particular issue it will be a great deal easier to reach a satisfactory answer on other questions. It is perhaps an accident that the monetary proposals got started first [...] but I am not sure that it was not a fortunate accident (John Maynard Keynes, *House of Lords Debates,* May 16, 1944)

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Introduction

We are living through an era of high international drama. In these troubled times, I think the main message that John Maynard Keynes would have given us is this: our first priority should be to make sure that the global macroeconomic system works properly, or, in other words, 'to get the macro right'. Only then will it be possible to pursue the other objectives of economic policy.

We have been here before. In 1945 the world was emerging from war and the crisis of the Great Depression. Many foresaw a return to closed economies and authoritarianism. But the world's best leaders, including Keynes, looked back to the pre-World-War I era of globalisation. And the leaders of the United States and Britain agreed on creating a liberal international order, and reached out to cooperate with other countries to bring this about. They created three global economic institutions of lasting significance. The International Monetary Fund (IMF) and the World Bank were both set up at the Bretton Woods Conference in 1944 and were located in Washington. And the General Agreement on Tariffs and Trade (or GATT) – which later became the WTO – was established soon afterwards in Geneva. The result was a remarkable period of global economic growth – a golden age – which lasted for 60 years.

The world is still recovering from the global financial crisis of 2008. The initial response to crisis – epitomised by the summit of G20 leaders in London in April 2009 – was one of global cooperation, as in 1945. But last year, the American people voted into office a President who had vowed to "put America first", and tear up the liberal international economic order which the Americans had helped to create. Similarly, there was another seismic shift in the Referendum in the UK, in which the British people voted to leave the European Union, that extraordinary institution of international economic cooperation whose origins also go back to the time immediately after World War II. The best of the world's leaders still know that outward-looking growth is possible and can be beneficial to all. But what kind of cooperation is necessary to bring this about?

The conference on the relevance of Keynes to the contemporary world, held in Turin in October of 2016, gave me the chance to go back and re-examine, once again, the discussions which took place in the run-up to the Bretton Woods Conference. Histories of the time give a sense of the exhilaration felt by those involved.[1] One of the key players, Dean Acheson,

[1] See especially Harrod (1951), van Dormael (1978), and Skidelsky (2000).

Under Secretary of State in the US at the time, conveys this in his autobiography, aptly entitled "Present at The Creation".

Keynes was, of course, central to that creation. As we think about what to do now, in our current existential crisis, it is helpful to remind ourselves of what Keynes thought then. What kind of international cooperation did he think would be important in order to recreate the kind of liberal international system which had existed before World War I? And what can we learn about what to do now from what Keynes thought then? These are the two questions that I have set myself to answer in this paper.

I answer my two questions in four distinct steps. First, it is helpful to set out Keynes's vision. What – exactly – was Keynes's idea of a liberal international order? It turns out that, right back in 1919, in the *Economic Consequences of the Peace* (Keynes 1919), he had set out such a vision. In Chapter 2 of that book, Keynes describes an earlier golden age of globalisation, the one into which he was born in 1883 and which lasted until the First World War. The vision that he set out in 1919 was – I think – the vision that he had in mind in the run up to the Bretton Woods conference in 1944. So I begin the paper by summarising what Keynes said about this in 1919.

Second, I will show what problems Keynes had to deal with, when thinking in particular about Britain's position in the post-war international economic order that he and his colleagues were helping to build. I will describe how the problem that would face Britain after World War II was a *trade* problem: how to ensure that Britain would be able to export enough to pay for it imports. This was difficult because so much of Britain's export capacity had been run down during the War. It was also difficult because the United States was determined to dismember the British Empire after the War. The loss of this "Imperial Preference", which had governed the trade relations between Britain and the members of its Empire obviously created an issue for Britain. How would Britain find markets to replace those which it could have relied on if countries in the Empire had been able to continue to provide preference for British goods within their markets? Keynes needed to understand how the international economic system should adapt to make a satisfactory outcome possible for the United Kingdom. But when the trade problem was so central, why did he approach the bigger picture first? Why spend three years between 1941 and 1944 working towards the establishment of the International Monetary Fund, whose purpose was to manage the global *macroeconomic* system, rather than first turning to deal with the regulation of international *trade*, and the access which countries would have to each other's markets?

Third, I will describe the analytical argument which Keynes brought to bear in answering this question. I have worked on Keynes for a number of years and have published a significant number of books and papers on this subject. In this paper I will summarise what I have learnt about how Keynes developed his analytical equipment, what ideas he already had in place during those years of discussion leading up to the Bretton Woods conference, what new ideas he had to invent, and how these led to his answer to the question that I posed at the end of the previous paragraph. The quotation at the beginning of the paper sums up Keynes's answer to this question. In the second and third sections of the paper I will describe the analytical reasons why Keynes proceeded in the way he did. I will explain how he reached the answer that he did, and I will discuss how this answer fitted into his conception of how to manage the international economic system.

In the last section of the paper I will examine the relevance of what Keynes did for our present circumstances.

1. Keynes's Vision of an Open Liberal Economic System

Keynes was in charge of the international aspects of Britain's economic policy by the end of the First World War, even though he was by then only in his mid-thirties. He was sent to Paris after the war as the chief Treasury representative of the British delegation at the negotiations that led to the Treaty of Versailles. But at the end of June 1919 he resigned in disgust at what was happening in these negotiations. Returning to Britain, he slipped away to a country house that was the rural retreat of artistic friends from the Bloomsbury group and wrote his book *The Economic Consequences of the Peace* to register a protest about what had happened at Versailles. Keynes leapt to international fame when that book was published.

The *Economic Consequences* (as I will describe this book from now on) is known for Keynes's vitriolic attack on the Versailles Peace Settlement – which I will describe briefly below. But it is important for another reason. Keynes was not the sort of person who would merely set out to attack the Versailles Peace Settlement. He also thought that it was important to understand how the world had worked before the War. To attack a course of action because it is bad, one first needs to get clear where one should be heading instead. And that is just what Keynes sets out to do in Chapter 2 of the *Economic Consequences.*

In this early short chapter of the book, Keynes sets out, in an admiring manner, his view of how the world economy had worked in that first great age of globalisation. He set out the open nature of the international economic system, the kind of system which – as I have already said – was recreated in the second half of the twentieth century, in the period running up to, and including, the Great Moderation.[2]

[2] In what follows I will use the term 'Great Moderation' to describe the period of contin-

Keynes prefaced his analysis of how the globalised economy had worked in that earlier age, in a remarkable paragraph that has been quoted[3] widely ever since:

> The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages; or he could decide to couple the security of his fortunes with the good faith of the townspeople of any substantial municipality in any continent that fancy or information might recommend (CW 2: 6).

Wonderful though this paragraph is, it is merely description. In the remarkable few pages which followed Keynes sketched out how such a set of circumstances could actually have come about. In doing this he set out what is – in effect – a macroeconomic model of the world economy. This model which Keynes presents is a real (and not a monetary) story. That is to say there is not within it anything about the kinds of disturbances that can be caused by the financial system – or indeed caused by a demand by the private sector for more liquidity. That would not come until later, first in his *Tract on Monetary Reform* (Keynes 1923) and then in his *General Theory* (Keynes 1936).

Keynes's model of the world economy has three key areas of emphasis. It focuses on the process of economic growth that was happening at the time, on the international nature of this process, and on the fragility of this process.

The first thing to notice about what Keynes did is that – way back in 1919 – he set out what economists have come to call a model of economic *growth*. This growth model itself has three key components, which modern day economists will recognise as being later embodied in the Lewis model, the Solow-Swan model, and the Ramsey model. The first key component reflects the fact that this was a time in which fast economic growth could take place. That was the case, says Keynes, because there had been a rapid growth in the industrial labour force, with increasing numbers of workers available at very low wages. That was, in turn, possible because of the movement of very large numbers of people from the countryside

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uing economic growth, with very moderate fluctuations, which was a observed in advanced countries, from the late 1980s onwards, until the global financial crisis of 2008.

[3] The page numbers which accompany the quotations which follow refer to the 1971 edition of the *Economic Consequences* (hereafter CW 2).

into rapidly growing cities, *i.e.* it went hand in hand with a transformation of the economic system from an agricultural one into an industrial one. Here is the Lewis model at work.[4] There was also, says Keynes, very rapid labour-saving technical progress happening at the same time, coming from the increasing division of labour that came about as a result of the new machines that were invented as part of the industrial revolution. The second key component, says Keynes, is that a high savings-rate was needed to ensure that investment was large enough to make possible the accumulation of capital which would be required to set the growing labour force to work, and to equip these workers with the newer kinds of machines that were being invented. This is a Swan-Solow type of idea.[5] And the third component, says Keynes, is that this high level of savings – the savings that are necessary to make the growth process possible – emerged naturally from the structure of society in place at the time. Keynes' description of what happened look remarkably like the kind of words which we would now use to describe the process of intertemporal optimisation which consumers undertake in a Ramsey growth model.[6]

> The psychology of society [was such that] there grew around the non-consumption of the cake […] [the] instincts of puritanism […] And so the cake increased [by means of capital accumulation]; but to what end was not contemplated […]. Individuals [were inclined] not so much to abstain as to defer […] and to contemplate the pleasures of […] anticipation (CW 2: 11-12).

Secondly, Keynes sets out what is in effect, a model of an *international* economic system. This system is seen as spreading throughout Europe:

> On the prosperity and enterprise of Germany, the prosperity of the rest of the Continent mainly depended. The increasing pace of Germany gave her neigh-

4 Ricardo had discussed this process in his *Principles,* but not until the Lewis model of the 1950s was this process of agriculture-industry transfer studied in a fully working growth model. See Vines and Zeitlin (2008).

5 The central idea, put forward by Solow and Swan in the late 1950s – *i.e.* also very much later – was that real wages would rise along with this growth process, and that, as a result, the capital-to-output ratio would adjust to ensure that the supply of capital equipment made possible by investment would exactly keep pace with the demands for capital equipment resulting from rapid labour force growth and from labour-saving technical progress.

6 It is not widely known amongst economists that the Ramsey model emerged as the result of a dinner time conversation between Keynes and Ramsey in the mid-1920s, not long after Keynes wrote the *Economic Consequences*. The two of them were discussing, in an intuitive sort of way, the ideas that Keynes had put forward in the few pages of that book which I am discussing here. Keynes told Ramsey to go away and write down these ideas formally, saying that if he did this then he, Keynes, would publish the resulting piece of work in the *Economic Journal*. That is what happened.

bours an outlet for their products, in exchange for which the enterprise of the German merchant supplied them with their chief requirements at a low price [...]. Germany not only furnished these countries with trade, but, in the case of some of them, supplied a great part of the capital needed for their own development (CW 2: 10).

But such a system also spread much further; the same process was clearly also at work within the British Empire. It was a global system, not just a European one.

[T]he accumulative habits of Europe before the war were the necessary condition [for this growth]: [...] [o]f the surplus capital goods accumulated by Europe a substantial part was exported abroad, where its investment made possible the development of the new resources of food materials and transport, and enabled the Old World to stake out a claim on in the natural wealth and virgin potentialities of the New (CW 2: 13-14).

Keynes described in some detail the workings of this international economic system, a system very like that which came to develop much more recently, during the Great Moderation.

Thirdly, Keynes believes that this growth process, of an open international kind, was a fragile one. There were – he says – two aspects to this fragility, aspects which we might term immediate and more fundamental.

The immediate problem arose from the reparations payments which were being imposed on Germany in the Peace Settlement at Versailles. As is well known, Keynes wrote the remaining chapters in the *Economic Consequences* to analyse this obligation to pay reparations and to show the way in which it endangered the whole of the European growth process. I discuss this issue below.

But in addition, Keynes made clear, in these few short pages, just how fragile the growth process had been, a process on which Europe had depended even before the war arrived. Towards the end of this short Chapter he wrote as follows.

I seek [...] to point out that the principle of accumulation based on inequality was a vital part of the pre-war order of society and of progress as we then understood it, and to emphasize that this principle depended on unstable psychological conditions, which it may be impossible to re-create. It was not natural for a population, of whom so few enjoyed the comforts of life, to accumulate so hugely. The war has disclosed the possibility of consumption to all and the vanity of abstinence too many. Thus the bluff is discovered; the labouring classes may be no longer willing to forgo so largely, and the capitalist classes, no longer confident of the future, may seek to enjoy more fully their liberties of consumption so long as they last, and thus precipitate the hour of their confiscation (CW 2: 13).

Two pages later – before he returned to the immediate problem of reparations which was to occupy him for the rest of the book – Keynes summed up as follows.

> Much else might be said in an attempt to portray economic peculiarities of the Europe of 1914. I have selected for emphasis the three or four greatest factors of instability – the instability of an excessive population dependent for its livelihood on a complicated and artificial organisation, the psychological instability of the labouring and the capitalist classes, and the instability of Europe's claim, coupled with the completeness of her dependence, on the food supplies of the New World (CW 2: 15).

In these few remarkable pages we find, crisply articulated, Keynes's vision of the European society in which he had grown up. But it is a society which no longer existed by the time that he was writing; a vision of how things had once been, but were no more. Things had been disrupted by war, and by the reparations demands which had been imposed on the top of that.

I believe that we can see all of Keynes's life's work as a struggle to re-establish this kind of global economic system. Only then might the inhabitants of London, or indeed the inhabitants of anywhere else, look out on the global world in the way which Keynes described in the passage quoted above. And only then would such people be able to conduct their businesses both effectively and securely whilst moving from country to country. Such a world, he said, had been a fragile one, for fundamental reasons. And this would remain true. To recreate it – Keynes would come to argue – would require an openness to international trade and an international financial system very different from the Gold Standard. Because of its fragility it would need to be managed by a new set of international economic institutions: the IMF, the World Bank, and the GATT (eventually the WTO). And more than this, these institutions of economic management would only be able to do their work well if, first of all, the global macroeconomy was well managed.

It will be obvious that I partly agree with Joseph Schumpeter's thought-provoking obituary of Keynes published in the *American Economic Review* in 1946, in which he writes as follows:

> In those pages of the *Economic Consequences of the Peace* we find nothing of the theoretical apparatus of the *General Theory*. But we find the whole of the vision of things social and economic of which that apparatus is the technical complement. The *General Theory* is the final result of a long struggle to make that vision of our age analytically operative.

But I have always thought – ever since I first read this obituary nearly 40 years ago – that Schumpeter only partly understand what Keynes was doing. In his brilliant account, Schumpeter compellingly argues for a view of Keynes the economist which has survived ever since: life as a theoretical journey, with the *General Theory* as the destination at the top of the mountain, and with the 'practical stuff' during the war as mere coda; Schumpeter's article contains exactly one line (!) on Keynes' work as an international economist during the Second World War. Harrod (1960: 68) is much choser to the mark. He suggests – and I agree with him – that what is foreshadowed here by Keynes is not just the *General Theory* but also Keynes's recognition of the need to bring about, by deliberate intervention, a satisfactory outcome for the *world economy as a whole.*

2. The Development of Keynes's thought from 1919 to 1941

In this section of the paper I summarise the macroeconomic theory which Keynes had available in 1941, as he began to think about how to create a liberal postwar order. In brief, I show what ideas he had already developed, before the years of discussion leading up to the Bretton Woods conference. There were two components to this set of equipment. First there were his theories on *closed economy* macroeconomics, which had culminated in the *General Theory* (Keynes 1936); this set of ideas was clearly in place by the time he turned to the post-war problem in 1941. Then there was *international macroeconomics.* Keynes's ideas on this were much more scattered and less well worked out. Nevertheless, it is possible to see the foundations of his later theories in what he had already written (See Vines 2003).

2.1. Closed Economy Macroeconomics

Economic conditions in the 1920s were even more depressing than Keynes had predicted in the *Economic Consequences*. The first half of the decade was replete with hyperinflations and bank crises all across Europe. Germany resisted paying reparations – the "debt" it had inherited from the war and the Treaty of Versailles. France invaded Germany's coal and steel areas to force the Germans to pay up. Germany responded by inflating its currency to reduce its debt, resulting in a famous hyperinflation. At the same time, Britain was deflating its currency in order to return to the gold standard at the old rate. The internal strife generated by Britain's deflation culminated in a general strike as the government strove to reduce wages. It also led to widespread unemployment.

A new Labour government came to power in the election of May 1929. By October, policy making was overwhelmed by the Wall Street crash. Soon afterward, the Prime Minister created a Committee of Enquiry; this became known as the Macmillan Committee after its chairman, a Scottish judge. The Macmillan Committee was charged with carrying out a wide-ranging investigation of the options facing Britain. Keynes was by far the most eminent member of the Committee; he had published his *Tract on Monetary Reform* some years earlier (Keynes 1923), and his *Treatise on Money,* to be published while the Committee was sitting, was keenly awaited (Keynes 1930). He was central to what happened. He was asked to advance the members' thinking by presenting his ideas for five whole days in the early stages of the committee's work and for three further days when the committee was beginning to draft its report. Through the published papers of the Committee, it is possible to see Keynes at work at the Macmillan Committee in 1930, just ten years after he had written the *Economic Consequences*. We can see him wondering how to restore the kind of growth process which he had analysed in that earlier book.

What emerges is a portrait of someone with outstanding intuition who has not yet, however, equipped himself with the analytical tools with which to get the macro right. He could not yet fully understand why the British economy was in such a poor position, or how to correct the external difficulties in which it found itself.[7] His task was a difficult one. Montagu Norman – the Governor of the Bank of England – said to the committee "I have never been able to see myself why for the last few years it should have been impossible for industry, starting from within, to have readjusted its own position".

At this stage, Keynes did not quite know how to deal with Montagu Norman's robust interjection; this is because he was a victim of his training in Cambridge as an expositor of Marshallian economics. We can see how Marshall and his followers would have analysed the problem that Keynes was grappling with during his presentations to the Macmillan Committee. To someone trained in the Marshallian tradition, the problem of unemployment is caused by trade unions and other institutions keeping the wage above the market clearing level. At that level, the price for labour (that is, the wage) is above the equilibrium level. The amount of labour that workers would like to supply is larger than the amount of labour that business are willing to hire. More formally, the supply of labour exceeds the demand for labour at this high wage. If wages were cut, this would increase the demand for labour because business firms would find it profitable to

[7] For further details about the pages which follow, see Temin and Vines (2014, 2016).

hire more workers. A wage cut also would reduce the supply of labour, as some workers would find it less desirable to find a job at the lower wage. This is the way to understand how Montagu Norman saw the situation. He believed that employment was determined by the wages set within each industry, which had nothing to go with Bank of England policy. Wage adjustment said he believed, was a matter for industry and its workers. Only after Keynes had written *The General Theory* could he see how to object to such an analysis. According to *The General Theory*, if wages were cut but there was no increase in aggregate demand at the same time, then firms would find themselves unable to sell any increase in output, and so would not increase their demand for labour. A cut in wages would simply lead firms to cut their prices.

The problem of an imbalance between savings and investment was analysed similarly in the Marshallian tradition. The price for savings and investment was taken to be the interest rate in that tradition. At a high interest rate, people are eager to save, and the supply of savings slopes upward. The demand for investment by business firms would be low at a high interest rate because a firm would have to pay more to borrow funds to invest. The interest rate would move to equilibrate savings and investment. Parallel to the analysis of the labour market, an interest rate above the equilibrium level would produce an excess supply of savings relative to the demand for investment. A decrease in the interest rate would lead to an equilibrium where the supply of savings equals the demand for investment. In this Marshallian framework, there is no reason ever to think that an excess supply of savings could lead to a reduction in production, as Keynes wanted to argue.

It was also only after Keynes had written The *General Theory* that he saw how to object to such analysis. According to The *General Theory*, if people decided to save more there would not be any reduction in the interest rate – or at least there would not be much of a reduction – since the *General Theory* argued that the interest rate was determined in the money market. The interest rate, according to the *General Theory*, would adjust to make the demand for money equal to the supply of money, rather than adjusting to make savings equal to investment. And so when savings increased there could emerge a 'Paradox of Thrift.' Savings would be brought into line with investment, not by a fall in the interest rate, but by a fall in output. This was the kind of analysis which Keynes tried to deploy at the Macmillan Committee. But such a line of argument was not yet available to him. This is because he still believed that the interest rate would adjust to ensure that investment and savings were equalized, and resources would remain fully employed.

Indeed, the very possibility of low output of goods and of generalized unemployment that Keynes was trying to understand seemed completely impossible to comprehend for people trained in the Marshallian tradition. The Quantity Theory of Money told them that prices would adjust to make sure that low output could not emerge. With a fixed quantity of money, prices were set by the demand for money. The lower the price of goods, the greater the quantity of goods that would be demanded; prices would settle at the level at which the quantity of money was just enough to enable all of the goods produced in the economy to be purchased. Of course, prices needed to be flexible to enable this to happen. Keynes had not yet seen why this did not happen. Only by writing the *General Theory* did he come to understand this part of his own argument. Only then did he understand that, because wages only adjust gradually in the presence of unemployment, the kind of price flexibility on which Marshall had relied would not be able to ensure that everything produced would actually be purchased.

As is now generally appreciated, Keynes needed to make four analytical moves in order to demonstrate what he was seeking to show. Firstly, if wages do not adjust in the way that Montague Norman said would happen, then there would come to be a shortage of aggregate demand. Secondly, the resulting fall in aggregate demand would cause consumption to fall, as analysed using Keynes's new piece of equipment, the consumption function. Thirdly, it is necessary to use this consumption function in order to calculate the multiplier and thereby show how much output will fall, and employment will fall, when investment is too low.[8] Fourthly, and finally, it is necessary to insert the determination of the interest rate by liquidity preference into the argument, to show why the interest rate will not fall enough to prevent any shortage of demand from actually emerging.

Keynes was later to demonstrate that – when this happens – fiscal intervention can produce a better outcome. However, he had not understood any of this properly in 1930. But he did by 1940. As I discuss below, this enabled him to write *How to Pay for the War*.

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[8] Richard Kahn had already done this by 1930 (Kahn 1931). But it took some time to see how to put all the pieces together. Peter Temin and I have described how it was really James Meade who saw what to do. Meade conceded that a reduction in aggregate demand, and the resulting fall in output and employment which it caused, might not cause wages to fall enough to actually prevent output and employment from falling, and so maintain full employment. But he said that, instead, the economy will actually move to the left along a short run aggregate supply curve; output will fall, as well as their being a fall in the level of prices. How much output falls depends on the size of the propensity to consume, and so on the size of the multiplier.

2.2. *International Macroeconomics*

As I have already said, Keynes wrote his book *The Economic Consequences of the Peace* to register a protest about what had happened at Versailles.

In the body of the book – following on from Chapter 2 which I have discussed above in detail – Keynes identified the reparations imposed on Germany as putting at risk the process of economic growth that he had analysed at the beginning of the book. He saw reparations as politically unwise. In fact, as already described above, economic conditions in the 1920s were even more depressing than Keynes had predicted. Germany resisted paying reparations. France invaded Germany's coal and steel areas to force the Germans to pay up, and Germany responded by inflating its currency to reduce its debt, resulting in hyperinflation. This destroyed the post-war political settlement in that country.

But Keynes had not yet turned, in the *Economic Consequences*, to an analysis of the international implications of reparations for the global macroeconomy. That only came later in an extended discussion with the Swedish economist Bertil Ohlin, about the transfer problem (Ohlin 1929 and Keynes 1929). If Germany were to actually attempt to repay this burden, Keynes said, that would require it to run a current account surplus in order to make payments to foreign countries. But that would lead to a "transfer problem"; other countries might not be prepared to expand their aggregate demand enough to enable Germany to run the required current account surplus.

What we again see is someone with strong intuitions who did not yet fully understand his own argument. All he understood by that stage was the need to get the macro right, but he did not yet know how to do this. Even if the country on which the reparations are imposed tries to pay them, that payment will only become possible if the rest of the world acts to increase its demands for these products. Keynes thought that this might not happen. But how to analyse the consequences was not yet clear to him.[9]

At the same time as this reparations problem was occurring in Europe, Britain was attempting to adjust to a lack of external competitiveness, because of its position on the Gold Standard. Keynes believed that the required fall in wages was too large for adjustment to actually happen. However, he did not advocate abandonment of the Gold Standard. His analysis of this international problem was very unclear. In fact, he ended up advocating protectionism as a solution to the problem (See Temin and

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[9] As I note in Vines (2003) there is some discussion of interactions between countries in Keynes's Treatise on Money, but it is not well worked out.

Vines, Chapter 3). And his analysis would have remained a mess, even if he had had the equipment available in the *General Theory*: the fiscal expansion which he was advocating to solve Britain's unemployment problem would have worsened the external position which Britain was facing.

Keynes had to wait until the discussions taking place between 1941 and 1944 to clarify his position on international macroeconomics.

3. The Challenge Facing Keynes in 1941: Britain's Postwar Economic Problem

3.1. *Preliminary: "How to Pay for the War"*

Keynes had a heart attack soon after the *General Theory* was published, and nearly died. By the time he had recovered, he needed to turn to the problems which would emerge as Britain started preparing for the war and – as a result –neared full employment. Of particular concern was the need to fight the war without creation inflationary or balance of payments pressures.

In February of 1940, Keynes published *How to Pay for the War* published. (Keynes 1940). He was able to use the model of the General Theory to make clear that paying for the war would require a reduction of aggregate demand, relative to what it would have been, to make room for the use of labour in military activity. By using this model, he was able to show how to avoid the kinds of inflationary problems which had emerged during the First World War. Avoiding these problems would require more – he said – than merely ensuring that war time expenditure was financed by issuing bonds, rather than by printing money. It required, instead, that other forms of demand would be reduced, so that producers would be able to turn to carrying out military activity. Furthermore, Keynes had distributional reasons for not wanting the war to be fought with the high interest rates which would emerge if all of the war-time expenditure was – in fact – financed by the issuance of bonds. That would – he said – provide an unacceptable benefit to the rentier class.

Thus was born Keynes's plan for war-time fiscal restraint in the form of compulsory savings, along the lines of what we now know as the 'Singapore model'. *How to Pay for the Wa*r explained this idea to a wider public in what became a phenomenally successful op-ed book. The plan put forward in *How to Pay for the War* was adopted only to a small degree – that is not the point here. The point here is that Keynes was able to use the model of the *General Theory* to show how to conduct actual macroeconomic management and achieve what was desired: to ensure that demand for domestically produced goods was no greater than the supply of these goods that was possible, once the needs of war had been met.

3.2. The Ending of Imperial Preference

The management of the British economy during World War II needed to face up to the problems of Britain's external payments – effectively the question of how to pay for the war internationally. It is important to remember that the Keynes has been unable to deal with the problem of external adjustment when he was talking to the Macmillan committee in 1930. How would the country's external accounts be made to add up during and after the war?

The need for war-time external balance in Britain imposed two requirements, which differed according to their time-frame. Given the achievement of full employment (using the tools laid out in the *General Theory*), we can think of external problems simply by asking the question: can the country export enough to pay for the imports it will need if it is operating at – or close to – full employment?

In the *short run* (i.e. during the war) there was a financing need: the level of imports (both military and non-military) required for survival during the war needed somehow to be paid for. But the conversion of a large proportion of Britain's export trades to the production of armaments made this physically impossible. As a result, the country became dangerously dependent on the US for its short-run survival, a problem exacerbated by Britain's commitment in the summer of 1940 to 'total war, whatever the price' (Lukacs 2000).

This led to Churchill's famous letter to Roosevelt of 8 December 1940 "one of the most important that I ever wrote" and to Roosevelt's generous response in the form of Lend-Lease. This was announced on 17 December 1940 in the homely image of 'lending a neighbour a hose to put out a fire'. As a result of Lend-Lease, Britain was able to fight the war without the kind of daily threat of financial crisis which had characterised the First World War (Skidelsky 2000: 100).

In the *long run,* external balance imposed the need for solvency, and required consideration of the intertemporal issues which have been raised to a central position in modern open-economy macroeconomics. Keynes' intertemporal strategy here was to save enough external and financial strength for Britain to preserve its freedom of manoeuvre in order to regain – in time – a satisfactory external account.

Here Keynes ran up against a sting in the tail of Roosevelt's fire hose. Members of Congress – and others – asked Roosevelt what he meant by Lend Lease. Would Britain pay for the military supplies which it needed to win the war? Of course not. Was this money a gift to Britain? Of course not! Then would Britain pay interest on the money which it receives? Of course not. Well what was Lend Lease then? Roosevelt set the state department the task of determining the price which the UK would need to pay. The result was article VII of the Lend Lease Treaty.

Article VII of Lend-Lease, which became known as the 'Consideration' read as follows.

> The terms and conditions upon which the United Kingdom receives defense aid from the United States of America and the benefits to be received by the United States of America in return therefore, as finally determined, shall be such as not to burden commerce between the two countries but to promote mutually advantageous economic relations between them and the betterment of worldwide economic relations; they shall provide against discrimination in the United States of America or the United Kingdom against the importation of any product originating in the other country; and they shall provide for the formulation of measures for the achievement of these ends" (See Keynes 1980a: 175 and Skidelsky 2000: 99-100).

When Keynes read this, he asked Dean Acheson (Under-Secretary of State) whether the article referred to Imperial Preference and to the sterling payments system. Acheson said that it did, upon which Keynes

> burst into a speech such as only he could make. The British could not 'make such a commitment in good faith'; 'it would require an imperial conference': 'it settled upon the future an iron-clad formula from the 19th century'; 'it contemplated the hopeless task of returning to the Gold Standard' and so on (Acheson 1969: 19-30).

One can regard this discussion between Keynes and Acheson as revealing a profound difference of view about principles. To the British, the Imperial preference and the Imperial Payments system involved the management of what could be viewed as the British economic system. James Meade once described to me a conversation which he had with Dean Acheson which made this difference of view very clear. Acheson said to Meade "[I]t is about time that you faced the new reality. The Empire is a thing of the past. Your country will need to trade increasingly trade elsewhere, including with countries in Europe". To this Meade replied "But I have a cousin who is a farmer in New Zealand, sending dairy products to this country, in exactly the same way that the farmers in the midwest of the United States send their grain to Boston and New York". To that Acheson replied: "But there's a lot of water between the United Kingdom and New Zealand". And to that Meade responded: "There also is a lot of water between us and France". To Meade and others, the preferences involved in Empire Free Trade involved the kind of preferential access to markets that one would give to those who belonged within one's own country, such as in the trade in grain between the midwest of the United States and Boston.

In contrast, non-discrimination was a part of the American heritage, involving a commitment to the liberal values of openness and avoidance of discriminatory trade relationships. But this liberalism was of a particular kind. It saw protection of producers in the home market, for the benefits of home producers, as entirely acceptable; it was regarded as an expression of nationalism. But preferences offered by one country for goods from another country was not regarded as at all acceptable. It was seen as an expression of modern imperialism and to be resisted as a matter of principle.

President Roosevelt was passionately determined to dismember the British Empire, on grounds of principles such as these, as was Cordell Hull, the Secretary of State. It thus became an aim of the US State Department that Imperial Preference should be dismantled.

But there were less principled positions involved as well. Treasury Secretary Morgenthau, and others, were determined to build up the power of New York as a financial centre, and to take business away from London. Thus, catastrophically, it also became an aim of the US Treasury that Britain would be denied the use of an Imperial Payments System (or indeed of any serious balance of payments restrictions). This was the case, even though the abolition of Imperial Preference in trade might make such balance of payments restrictions absolutely necessary. The penultimate chapter of Part One the Third Volume of Skidelsky's biography of Keynes (Skidelsky 2000: 133) concludes with a succinct statement of this contradiction.

3.3. *Keynes's Initial Response: The Clearing Union*

Keynes asked himself: how might the UK deal with these American demands?

Keynes came to see that, since the war against Germany was inescapable, there was no way to escape from the sting contained in Lend Lease. Nevertheless, he saw, at first dimly and then in the end with great clarity, that perhaps there was a way out of the impossible contradiction into which the US was pushing his country. However, this escape route required him to remake the whole world economy. Suppose that free trade (including the absence of trade restrictions against the US and the unwinding of more specific Imperial Preference) were to be imposed on Britain along with open international finance. Britain faced the prospect of having to deal with a United States that was likely to act in a protectionist manner in defending its own industries, even though its rhetoric supported free trade for the world as a whole. And – as a result of Article VII of Lend Lease – the United States would now have the power to require that Britain abandon the form of protectionism that it had embraced since the early 1930s with Imperial Preference. This was a grim economic prospect for Britain. Could a multilateral world of free trade and open international finance really be made to work, to replace the imperial system(s) of the late nineteenth century? Could Britain be given an important and prosperous place in such a brave new world?

Keynes began with the financial money problem. In the late summer of 1941 he produced the first draft of his proposal for a Clearing Union. As Lionel Robins said: "it would be difficult to exaggerate the electrifying effect on thought throughout the whole relevant apparatus of government of the production of this document [...] nothing so imaginative and ambitious than ever before been discussed as a possibility of responsible government policy. It became as it were a banner of hope; an inspiration to the daily grind of wartime duties" (See Skidelsky 2000, Chapter 6).

Keynes had a desired outcome in mind for the world economy as a whole: he wanted full employment of resources and he wanted this at a low level of global interest rates. Accommodating finance, at low interest rates, would provide the environment in which the world's capital – so much of which been destroyed by the war – could be rebuilt. He had already effectively studied how the world worked as a whole in the *General Theory* so he knew how to think about this. Thus, in his Clearing Union draft, we see him deploying the model of the *General Theory*. He was concerned that a shortage of global liquidity might trigger global malfunction in the form of a global recession. He thus wanted a global monetary system which would be entirely accommodating. To this end, he pressed for a global 'Clearing Union' – literally something like the clearing system within a national banking process – which would enable global liquidity needs to be met without any international risk and without any hindrance or restraint at all (See Skidelsky 2000: 304, 310, 312). And he wanted this to happen at a low level of global interest rates.

But with an entirely accommodating financial system, what exactly was to be the control mechanism to avoid contractionary, or expansionary, pressures? When I first read Keynes' Clearing Union draft 30 years ago I then re-read it three times with increasing amazement, looking for the adjustment mechanism – the discipline which, like that in the Gold Standard, would exert expansionary pressure if it got pressure on world aggregate demand if it got too small, or too large. It is not there. For years I wondered whether, in this aspect of the draft, Keynes had simply taken leave of his senses. (This I discovered from Skidelsky (2000), was also Robertson's and Harrod's view – see p. 224.) However, I now realise that I did not understand Keynes' system properly. For Keynes, the adjustment mechanism was to be *fiscal*. It is in the full employment policies of individual countries, of the kind advocated on the *General Theory*, pursued by fiscal policy. In the aggregate these would give rise to the right level of global aggregate demand. I thus now interpret Keynes as meaning that post-war full employment should be ensured by fiscal policy – the full employment plans of the separate Treasuries of the separate countries. If expansionary policy was needed, then it should be assured by fiscal means, with cheap money in the background. If restraint was needed, Keynes wanted it to be fiscal restraint.

But the other objective set out in the Clearing Union document was to avoid the difficulties which the Gold Standard caused for countries in balance of payments difficulties. The Gold Standard required such countries to contract, as Britain had been required to do in the late 1920s after it returned to the Gold Standard in 1925. How could an international monetary system avoid this difficulty?

As Chapter 6 of Skidelsky (2000) clearly shows, Keynes first thoughts deliberately did not presume a response consistent with the requirements of Article VII of the Lend Lease Treaty. (See also Vines 2003.) His initial thoughts were illiberal and ran along the following lines. First, as already described, explicit demand-management policies should replace the workings of the Gold Standard. These should be mainly fiscal in character (but accompanied by an accommodating monetary policy) and should be organised so as to pursue a high level of employment and output. Second, restrictions on foreign trade (i.e. tariffs and quotas) should replace the wage adjustment mechanism in the Gold Standard, as the process which would re-equilibrate exports with imports after a negative external shock. In these circumstances, the financial system should differ from the Gold Standard in its provisionsof generous international liquidity, sufficient to allow time for the required adjustments to work. Third, capital controls should be used where necessary (perhaps all the time) to rub out the malfunctionings of the capital-account mechanism. At the core of these illiberal ideas was the view that a balance-of-payments constraint might stand in the way of full employment policies.

But why not take the modern liberal view and use exchange depreciation as the way of dealing with this constraint? Partly the reason was elasticity pessimism. But partly it was a very modern view of that the global economic system was likely to malfunction and that, as a consequence, the risks of full-on exposure to it, which one meets when protectionism is dismantled, might be too extreme. Extreme global scarcity of gold and dollars was a serious possibility after the war, meaning that there was a real risk of global slump along the lines of the 1930s. Without protectionism, a country might need to resort to aggressive beggar-thy-neighbour depreciation of its currency if it were to have the means of protecting itself against such a global slump – and surely that was not desirable (See Vines 2003).

Keynes' moves away from protectionism towards a position consistent with the liberal global order that he had once admired is explained by Skidelsky (2010) in Chapters 7, 9 and 10.

3.4. *Keynes's Conversion to Multilateralism*

As already noted, Keynes's initial difficulty was associated with whether trade was sufficiently responsive to exchange rate change. Even if global aggregate demand was adequate, Keynes believed, external adjustment by means of relative price change by any one country would be difficult if all others were protectionist. Keynes and his disciples realised early on the prisoners' dilemma problem of trade liberalisation and, in the context of their monetary discussions, they realised that globally freer trade was also necessary: adjustment through relative price changes would then be in an environment of expanding trade, and so demands for goods would be much more price-elastic at the margin. Meade (1990: 22) summarises, in a diary entry made on December 31, 1944. He emphasised 'the need for flexible exchange rates to adjust balance of payments [to avoid pushing the burden of adjustment onto] rigid trade controls … in a world in which internal wage levels were not easily reduced. [Such adjustment might be] more easily acceptable if it was preceded by an international agreement to lower trade barriers, since in that case smaller movements in exchange rates would be required'. This need was why, once work was moving forward on the monetary proposals, James Meade set to work in 1944 to produce a first British draft of a proposal for an International Trade Organisation (See Keynes 1980b: 239-327). Meade, Keynes and others on the British side saw clearly that the connection between trade and finance was circular, since a well-functioning international financial system would ease the path to the trade liberalisation which they sought.

Central to Keynes's change of view was the time and effort spent by the young group of economists in Whitehall (consisting of Denis Robertson, Marcus Fleming, Roy Harrod and James Meade) in trying to persuade Keynes to move away from the protectionism. As I have described, Keynes initially espoused such protection in his Clearing Union draft. But, as I have already shown, that view was inconsistent with his earlier vision of what an open liberal international system might look like. The pages of the Keynes' Collected Papers on Commercial Policy' (Keynes 1980b: 239-327) bear eloquent testimony to Keynes's change of view. 'What Keynes wanted to recreate was a modified version of the Britain in which he had grown up – a liberal world power set in a liberal world' (Skidelsky 2000: 385). In this, a liberal trading world was central. The final three pages of Keynes's last paper (Keynes 1946), published posthumously, set out how he hoped such a system of international payments adjustment, relying on changes in relative prices, might keep balances of payments and, in particular, the US trade balance in order.

3.5. *Keynes' Final Vision of a Liberal Global Economic System*

In our book on Keynes, Peter Temin and I describe how, one day in 1944, in a particularly tedious meeting at the Board of Trade, Keynes sketched a plan for an open liberal world economy on the back of an envelope and passed it to Meade. He remarked, as he did so, that at last he was convinced: he now knew how the world economic system should be remade. Here is what that sketch looked like.

Objective	Instrument(s)	Responsible Authority
Full Employment	Demand Management (mainly fiscal)	National Governments
Balance of Payments Adjustment	Pegged but Adjustable Exchange Rates	International Monetary Fund
Promotion of International Trade	Tariff Reductions etc.	International Trade Organisation
Economic Development	Official International Lending	World Bank

Keynes listed four goals of international economic policies down the left side of his sketch. The first two goals were short-term; the other two were long-term. There was a policy instrument for each goal, since four instruments were needed to achieve four goals, and there were separate organizations to operate each of these instruments.

The first organization, concerned with domestic balance, was national; all the others were international. The first goal was full employment. This was national, representing balance within each country. The aim was to have full employment without inflation. Since the goal was national, the organizations to make policies to achieve the goal were national as well. The Full Employment White Paper in the UK, and a similar document in Australia and in many other countries, set out how this was to be done; in the US the Employment Act of 1946, revised and expanded in the Humphrey-Hawkins Full Employment Act of 1978, enjoined the US government to reach this goal.

The second goal was adjustment of the balance of payments. This, and the goals that followed, were international. The institutions to accomplish these goals had to be international as a result. Keynes anticipated a set of pegged rates that could be adjusted from time to time as needed. This became the basis of the Bretton Woods System after the war ended.

The International Monetary Fund (IMF) was established as an institution that would help nations adjust their exchange rates, advise them when adjustments were needed, and deal with crises that could occur if adjustments were delayed. The IMF—an improved version of Keynes's Clearing Union—eventually became a crucial policy-making institution.

Keynes's third goal was the promotion of international trade. He hoped that tariffs would be reduced after the war to promote trade. Since the Americans were determined to dismantle the British trading system of the 1930s, Keynes hoped that free trade around the world would provide opportunities for Britain and other countries to prosper. The international trade organization that Keynes proposed to Meade, now known as the World Trade Organization, pursues this goal in a series of international negotiations designed to lower trade barriers.

Finally, Keynes returned to his concerns in *The Economic Consequences of the Peace* for the promotion of economic development. He had maintained his interest in this goal for a quarter of a century and wanted to establish an organization to promote it through international lending. He proposed that a World Bank would complement the IMF among the new institutions. The IMF would deal with short-run macroeconomic problems, while the World Bank would work to promote investment in support of long-run growth.

In effect, Keynes hoped that the prosperity that came from international growth and specialisation would enable the European conditions before the First World War that he had described in chapter 2 of *The Economic Consequences* to spread throughout the world.

In the decade or so since he was writing the *General Theory*, Keynes had incorporated macroeconomic thinking into his framework. No longer would he struggle against Marshall; instead he was firmly asserting that several markets had to be in equilibrium in order for the economy to be in equilibrium. Keynes had become comfortable with the new field of macroeconomics he had created. But his objectives were now also international. Having understood how to analyse the macroeconomics of just one country, Keynes came to see that one also needed to achieve a satisfactory outcome for the world as a whole.

My claim in this paper, is that Keynes came to think that, in order to achieve the objective of an open liberal economic system, one needed an understanding of how the world macro-economic system would be managed, in the global economy in which this open liberal trading system was to be located.

4. Should International Cooperation in Macroeconomic Policymaking still be a Central Agenda Item Agenda – as for Keynes in 1941?

Keynes's key idea was that cooperative macroeconomic management of the world economy is necessary if other objectives of economic policy are to be obtained. Is this still the case? I will argue that it is, for two key reasons.

Of course there may be circumstances when such macroeconomic co-operation is not necessary. In 1971 the world moved to floating exchange rates. The pegged exchange rates of the Bretton Woods system were abandoned. The world moved towards the Great Moderation, in which there was very little international cooperation of macroeconomic policies. Inflation targeting enabled countries to pursue their own internal objectives. Floating exchange rates ensured that external developments might not be a constraint on doing so (See Vines 2015a and 2016a).[10]

But there are two significant reasons why international cooperation in macroeconomic policy is currently necessary (See Ostry and Ghosh 2013 and Vines 2015a, 2016a).

First, countries ceased to be able to defend themselves from external developments after the world economy reached the zero bound in 2008. Initially, after the global financial crisis of that year there was very significant international cooperation. Interest rates were cut drastically, to the zero bound Countries agreed to allow the automatic stabilizers to operate, and, at the London summit in April 2009 a very large fiscal expansion was agreed upon. These co-operative actions averted the kind of collapse into a second Great Depression which many people felt might happen. Nevertheless, interest rates were at the zero bound meaning that there was no longer any effective means of stimulating employment.

Nevertheless, in June 2010, at the Ottawa summit of G20 leaders, policymakers agreed to begin the process of fiscal consolidation i.e. to begin a policy of austerity. They were concerned at the very rapid increase in public debt. Despite the fact that monetary policy was no longer able to ensure full employment, fiscal policy was prevented from pushing countries in that direction by taking a more expansionary stance. This has slowed down the global recovery to significant degree. Many argue, and I agree, that the

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10 Hélène Rey has argued against this claim, producing compelling evidence about the existence of a global financial cycle. I have argued that whilst in the aggregate these claims are undoubtedly true, and important, it is nevertheless possible for countries to defend themselves from this global financial cycle, with the appropriate mix of policies. I cite Australian experience as an example (See Vines 2016b).

disturbing political developments in Europe and in the United States, which are in danger of pushing the world away from an open liberal international order, are a direct consequence of the fact that macroeconomic policy has been of this kind. I believe that the move towards increased protectionism can be interpreted in this way an. the return to a situation in which fiscal consolidation was beeing used to bring down public debt should have a more rapid global recovery. (Vines 2015, 2016a). I believe that Keynes would have agreed with this conclusion.

Second it is clear that the conduct of fiscal policy within the European monetary union is dysfunctional, and is preventing other objectives of growth within the European economy. A very different form of macroeconomic policy cooperation is necessary in Europe, compared with that wich is currently embodied in the Stability and Growth Pact. European policymakers allowed imbalances to develop during the first 10 years of the Monetary Union, during which time inflation was persistently higher in Southern Europe than in Northern Europe, in part because of a very rapid increase in bank lending in Southern European countries. After the European crisis set in during 2010, fiscal austerity was imposed on southern European countries, even though they were unable to devalue their currency in order to stimulate exports so as to substitute for the reduction in fiscal expenditures. A resolution of the resulting imbalances problem within Europe would have required very different policies from those which were adopted. In particular, a looser fiscal policy was necessary in Germany, in order to enable a more rapid rate of growth rate of inflation in that country. This needed to be coupled with a loosening of austerity in Southern European countries. A write-down of sovereign debt in Southern European countries was also necessary. This failure to conduct a satisfactory macroeconomic policy in Europe has been responsible for the very slow recovery from on the global financial crisis in Europe as a whole, and for general dissatisfaction with the European Union which is now affecting Europe (Vines 2015b, 2016c).

I think we should agree with Keynes. Good outcomes for our overall economic policy objectives require sound macroeconomic policy. Without such macroeconomic policy, many other objectives of economic policy are likely to be jeopardised.

References

Acheson D. 1969, *Present at the Creation,* New York: Norton.

Bayoumi T., S. Pickford and P. Subacchi 2016, *Managing Complexity. Economic Policy Cooperation after the Crisis*, Washington: Brookings Institution.

BLANCHARD O., J. OSTRY and A. GHOSH 2013, "Overcoming the Obstacles to International Macro Policy Coordination Is Hard", *VoxEU*.(http://www.voxeu.org/article/obstacles-international-macro-policy-coordination).

HARRIS S. 1960, *The New Economics: Keynes' Influence on Theory and Public Policy*, London: Denis Dobson.

HARROD R.F. 1960, "Keynes, the Economist", Chapter VIII in Harris (1960).

– 1951, *The Life of John Maynard Keynes*, London: Macmillan.

KAHN R.F. 1931, "The Relation of Home Investment to Unemployment", *Economic Journal*, 41: 173-198.

KEYNES J.M. 1971-1989, *The Collected Works of John Maynard Keynes*, London: Macmillan:

– vol. 1. *Indian Currency and Finance* [1913].

– vol. 2. *The Economic Consequences of the Peace* [1919].

– vol. 3. *A Tract on Monetary Reform* [1923].

– vol. 4. *The Economic Consequences of Mr Churchill* [1925].

– vols. 5 and 6. *A Treatise on Money*, volumes 1 and 2 [1930].

– vol. 7. *The General Theory of Employment, Interest and Money* [1936].

– vol. 8. *How to Pay for the War* [1940].

– vol. 9. *Essays in Biography* [1975].

– vol. 23. *Activities 1940-1943: External War Finance* [1980a].

– vol. 25. *Activities 1940-1944 Shaping the Post War World: The Clearing Union* [1980b].

– vol. 26. *Activities 1941-1946 Shaping the Post War World: Bretton Woods and Reparations* [1980c].

– 1946, "The Balance of Payments of the United States", *Economic Journal*, 56: 172-187.

– 1929, "The German Transfer Problem", *The Economic Journal*, 39: 1-7.

MEADE J.E. 1990, *The Collected Papers of James Meade*, vol. 4 (S. Howson and D. Moggridge, Eds.), London: Unwin Hyman.

– 1951, *The Theory of International Economic Policy*, vol. 1: *The Balance of Payments*, Oxford: Oxford University Press.

OHLIN B. 1929, "The Reparation Problem: A Discussion", *The Economic Journal*, 39: 172-182.

OSTRY J., and A. GHOSH 2013, "What Are the Obstacles to International Policy Coordination? What Is to Be Done?", IMF Staff Discussion Note SDN/13/11, December. Washington: International Monetary Fund.

REY H. 2013, "Dilemma Not Trilemma: The Global Financial Cycle and Monetary Policy Independence", Federal Reserve of Kansas: Paper presented at Jackson Hole Symposium, (http://www.kansascityfed.org/publicat/sympos/2013/2013rey.pdf).

SCHUMPETER J.A. 1946, "John Maynard Keynes, 1883-1946", *American Economic Review*, 36 (4): 495-518.

SKIDELSKY R. 2000, *John Maynard Keynes: Fighting for Britain*, London: Macmillan.

TEMIN P. and D. VINES (2016), "Keynes and the European Economy", *Review of Keynesian Economics*, 4 (1): 36-49.

– 2014, *Keynes: Useful Economics for the World Economy*, Cambridge, Mass.: MIT Press.

– 2013, *The Leaderless Economy: Why the World Economic System Fell Apart and How to Fix It*, Princeton: Princeton University Press.

Van Dormael A. 1978, *Bretton Woods: Birth of an International Monetary System*, London and Basingstoke: Macmillan.

Vines D. 2016a, "On Concerted Unilateralism: When Macroeconomic Policy Cooperation is Helpful and When it is Not", Chapter 2 in Bayoumi *et. al.* (2016).

– 2016b, "Comment on 'Real Interest Rates, Imbalances and the Curse of Regional Safe Asset Providers at the Zero Lower Bound' by Pierre-Olivier Gourinchas and Hélène Rey", ECB Forum, Sintra, Portugal.

– 2016c, "Fiscal Governance: How Can the Eurozone Get What It Needs?", *Journal of Financial Regulation*.

– 2015a, "Cooperation between Countries to Ensure Global Economic Growth: A Role for the G-20?", Paper presented at the thirteenth Heinz Arndt Memorial Lecture, Australian National University, September 17, 2014, *Asia Pacific Economic Literature*, 29 (1): 1-24.

– 2015b, "Impossible Macroeconomic Trinity: The Challenge to Economic Governance in the Eurozone", *Journal of European Integration*, Special Issue 2015, 37 (7).

– 2003, "John Maynard Keynes 1937-1946: The Creation of International Macroeconomics", Review of *John Maynard Keynes 1937-1946: Fighting for Britain* by Robert Skidelsky, *Economic Journal*, 115: F338-360.

Vines D. and A. Zeitlin 2008, "Dual Economies", in *The New Palgrave Dictionary of Economics,* 2nd. ed., ed. by S. Durlauf and L. Blume, London: Palgrave Macmillan. (http://www.dictionaryofeconomics.com/article?id=pde2008_I000183)