Electric Power, Keynes and the $4.86 Pound: A Reexamination of Britain's Return to the Gold Standard

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Britain's return to the gold standard in 1925 has and continues to be the subject of much debate. Most recently, the debate has gone from one involving mainly the $4.86 pound and its effects on the British economy, to one involving the $4.86 pound and its effects on the world economy with the emphasis on the Great Depression [Temin (1989), Eichengreen (1992)]. According to Peter Temin, Chancellor of the Exchequer Winston Churchill's decision to restore pre-WWI parity at $4.86 set off a series of events, the end result of which was the Great Depression. Put differently, a 10 percent appreciation of one country's currency led to the most severe industrial depression the world has ever experienced.

In this paper, I re-examine the debate leading up to the return to the gold standard. It will be argued that what started off as a debate over the causes of Britain's deteriorating export position was transformed, largely as the result of Keynes involvement, into a debate over the social costs of price and wage rigidity. From as early as 1919, there was growing concern over the U.K.'s poor export performance. The Board of Trade, David Lloyd George and others, pointed to the U.K.'s failure to "electrify" as the main cause. The Treasury and the Bank of England, however, pointed to the breakdown of the international financial system (i.e. the gold standard), and the ensuing opportunistic behaviour on the part of countries such as France and Belgium. A swift return to the gold standard would put an end to such behaviour, reasoned Bank of England governor Montagu Norman.

This potentially fruitful debate, I argue, was cut short by Keynes whose failure to grasp the Board of Trade and Treasury arguments, and whose concern for the short-run consequences of a $4.86 pound, altered forever the course of history. The debate over the underlying causes of the U.K.'s worsening foreign trade position was reduced to a debate over price, especially wage, rigidity, and the international value of the pound. As I shall show, this was to have important short and long-term consequences. First, it aborted what was, in this author's view, a promising debate over the structural problems of the U.K. economy in the 1910s and 1920s, specifically with regard to electrification. Second, it marked the triumph of short-term stabilization over long-term structural issues. As I shall show, the U.K. economy never really recovered. To this very day, the level of industrial electric power consumption in the U.K. continues to lag substantially behind electric power consumption in the U.S., Japan and Germany.

These findings shed new light on the perennial debate over the U.K.'s decision to return to the gold standard in 1925 at pre-WWI parity. In short, Keynes' involvement altered the very essence of the debate which went from one over the causes of the U.K.'s worsening foreign trade - and hence, balance of payments - position to one over the merits of short-term stabilization policy. It therefore comes as no surprise that Keynes and the Treasury/Bank of England officials did not see eye to eye: they were pursuing fundamentally different objectives. Keynes focused on the short run, while The Board of Trade, the Treasury and the Bank of England focused on the long run.

Evidence will be presented which shows that Keynes' policy prescription, namely government-funded public works programmes, was, in large measure, inspired by the findings and recommendations of David Lloyd George's Coal and Power Inquiry in 1924. Finding that the U.K. had failed to exploit a home-grown technology, namely electro-magnetic power, the Coal and Power Inquiry recommended massive government expenditure in electric power generating and transmitting facilities, and a wholesale change in the coal industry as a means of closing the electric power gap which had been opened with the U.S., and secondly as a measure to attenuate the growing unemployment problem. Keynes focused on the latter objective. His calls for public-works programmes in 1924-1925 as a means of putting the one million unemployed Britons back to work, I maintain, were largely inspired by the Coal and Power Inquiry's report.

The paper is organized as follows. First, I examine the pre-Keynesian debate over the U.K.'s deteriorating export performance. Next, I examine Keynes' forays into economic policy, begining with his 1924 *Nation and Atheneum* article on public works. Lastly, I examine the role of purchasing power parity in the debate leading up to the resumption of the gold standard. It will be argued that, while crucial to Keynes, purchasing power parity was tangentially important to Treasury and Bank of England officials. Foremost on their minds was the hoped-for world-wide resumption of the gold standard and, consequently, a return to pre-WWI trade patterns.

2. The Deteriorating U.K. Foreign Trade Balance: Structural Versus Financial Theories

The debate over the causes of Britain's post-WWI trade predicament was between two non mutually-exclusive points of view. The first, best associated with the Board of Trade and former prime minister, David Lloyd George, maintained that Britain's failure to exploit a technology that was largely developed in the U.K., namely electro-magnetic power, was the leading cause. By the 1920s, U.S. industry consumed substantially more electric power, and, as a result, was more productive; moreover, the U.S. had cornered the so-called "new markets" for electric power-using products, such as household appliances, electric power generating, transmitting and transforming equipment. If Britain was to reclaim its share of the world market, it would have to "electrify," and fast! The second, best associated with the Treasury and the Bank of

England, maintained that the demise of the gold standard and the ensuing instability in foreign-exchange markets lay at the heart of the problem. Uncertainty and under-valued currencies were responsible for the overall decrease in world trade in the post-WWI period in general, and for Britain's trade predicament in particular.

2.1 The Structural Theory

Clearly, in the 1910s and 1920s, the world was in the midst of a major productivity shock: electric power. The U.K., however, was slow to adapt. The U.S. was aggressively "electrifying" while the U.K. languished in the glory of "steam power." Beginning in 1916, a number of committees were set up to study the problem. One such committee was the "Coal Conservation Sub-Committee," set up in 1916 under Viscount Haldane, which, in turn, appointed a sub-committee to investigate the question of electric power supply in the U.K. Its report, issued in 1918, dealt in considerable detail with "the use of electric power in industry, and recommended reorganization of the generation and main transmission on a regional basis under the central supervision of a "Board of Electricity Commissioners" with wide powers" [Self (1952),p.35]. In the same year, the Board of Trade appointed an Electrical Trades Committee to consider the position of the "electrical trades" after the war. Sir Henry Self describes its report as follows:

Reference was made in strong terms to the crippling handicaps of the local and political considerations which had prevented Great Britain from reaping the fruits of the outstanding pre-eminence which it had received in original constructive research and development of electricity generation at the hands of pioneers such as Faraday, Wheatstone, Kelvin, Swan, Hopkinson, and many others. The loss of that outstanding lead, the history of industry in the intervening years, and the evidence taken during their examination of the position, led the Committee to the following conclusions:

(*i*) That Government should recognize the dependence of the State, both from military and industrial standpoints, upon the supply of electrical energy as a "key industry."

(*ii*) That the distribution of electrical energy should be regarded no longer as parochial but as a national question of urgent importance.

(*iii)* that the present system of electrical generation and distribution is behind the times and is a serious handicap in international competition.

(*iv*) That the present conditions are mainly due to faulty legislation and to divided and therefore weak executive control.

(*v*) That the determination of questions concerning concentration of generating plant, with the resulting economy of coal and other savings requires immediate attention.

(*vi*) That only by such steps can the electrical manufacturing industry of this country be fully developed, not only for the home trade, but as a consequence of the great industry now maturing overseas; that the gain to the State from a well-planned scheme of reconstruction will be inestimable; and that the items which are capable of reasonable calculation, such as saving in fuel, reduction in factory costs, and increased output will together represent not less than 100,000,000 pounds per annum [Self (1952),35].

What is particularly noteworthy is the mention in point (*vi*) of the "great industry now maturing overseas." Clearly, the Electrical Trades Committee was aware, as early as 1916, of the threat posed by the electrification of U.S. industry. Similar conclusions were reached by the Williamson Committee, established by the Board of Trade in 1917:

(1) That when British industry is subjected to the test of keen international competition after the war, its success will depend upon the adoption of the most efficient methods and machinery, so as to reduce manufacturing costs as much as possible.

(2) That a highly important element in reducing manufacturing costs will be the general extension of the use of electric power supplied at the lowest possible price, and it is by largely increasing the amount of power used in the industry that the average output per head, and, as a consequence, the wages of the worker can be raised.

(3) That a comprehensive system for the generation of electricity, and, where necessary, reorganizing its supply should be established as soon as possible [Self (1952),37].

In 1924, David Lloyd George, then Liberal member of Parliament, set up an informal committee, the purpose of which was to address the "inter-linked questions of coal and electricity." The results of the inquiry were published in a report entitled "Coal and Power Inquiry," which called for compulsory powers of acquisition, coordination and regulation to enable the "Electricity Commissioners" to grant to approved bodies the right of supplying power within substantial defined areas."[Self (1952), 52]. H.H. Ballin chose the following quote to summarize the Inquiry's findings:

"With our various competitors going ahead swiftly in the direction of the greater utilization of power, a policy of preventing power development in industry would leave our workers in the position of having to compete on unequal terms so that the incompetence of management would have to be made up by the toil of the workers. It ushers in a vista of endless strikes, industrial trouble and internal strain. The way out is to be found in the direction of scientific production and utilisation of power [Lloyd George (1924b),99]."

A number of British economic historians have alluded to the "problem of electrification" in the post-WWI period. For example, in his seminal study of British economic growth in the inter-war years, Derek Aldcroft refers to the constraint imposed upon British industry by the nation's failure to "electrify":

Before 1914, and even for a few years after, these constraints limited their development. All the goods could be produced but for one reason or another, the mass-production stage of manufacture was still not possible. In rayon, for example, the technical perfection of the process of manufacture had only just been completed by 1914, while the manufacture of cheap mass-produced cars and electrical goods was impeded both by technical considerations and the prevailing methods of production. Similarly, the mass production and distribution of electricity was hindered by the multiplicity of electricity undertakings engaged in the industry together with the opposition of vested interest in gas.

Historian Sidney Pollard makes a similar point. Electrical engineering and the supply of electricity, he argues, was one of the most critically important industries to emerge in the early XXth century.

One of the most critically important of the new industries was electrical engineering, together with the supply of electricity. It could be taken as the symbol of the new industrial Britain, freeing other industries from dependence on the coalfields of the north and west and setting in motion a vast migration to the Midlands and the south-east. Backward technically until 1918, and behind other countries in consumption per head in the 1920s, by the late 1930s the industry was close, if not equal, to its foreign rivals, while the British 'grid' constituted a method of distributing electric power which had no equal anywhere in the world [Pollard (1970),99].

2.1.1 Electrification: The International Evidence

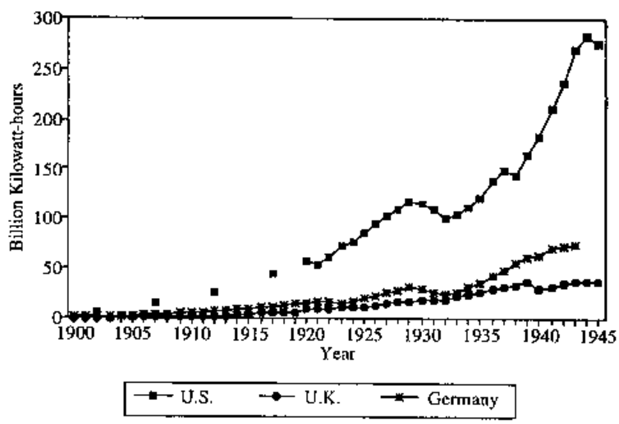
In this section, I examine the production and consumption of electric power in three countries, namely the U.S., the U.K. and Germany from the turn of the century to 1945. A by-product of the widespread application of electric power in the U.S. was the development of the electrical products industry. This sector of the economy includes electrical apparatus used for the generation, transmission and industrial conumption of electric power as well as the numerous electric power-consuming consumer goods such as electrical stoves, refrigerators, radios, etc. As we shall see, the U.S. was - and still is - the undisputed leader in both electric power consumption and the electrical products industry.

2.1.2 Industrial Electric Power Production and Consumption: International Comparisons

There is considerable evidence which suggests that the electrification of industry, which consisted of the application of electric power to production processes, raised overall productivity substantially [Beaudreau (1995, 1996), Sonenblum (1990)]. It therefore follows that, were the rates of "electrification" to differ markedly across countries, then comparative advantage would be altered. Such was the case in the early part of this century. The big winner was the U.S., while the big loser was the U.K. To gage the magnitudes involved, I collected data on electric power consumption in the U.S., the U.K. and Germany. Ideally, one would want data on industrial electric power consumption by country; however, it turned out that electric power consumption data by sector (i.e. manufacturing) were only available for the U.S. In light of this, I proxied industrial electric power consumption per worker using total electric power consumption per worker for each of these countries.

Referring to Figure 1, we see that in the 1902, total electricity output in the U.S. stood at 6.029 billion kilowatt hours. In the U.K. and Germany, it stood at 0.500 billion kilowatt hours and 1.4 billion kilo-watt hours, respectively. By 1907, these numbers had

FIGURE 1 - Electric Power Production 1900-1945: U.S.; U.K. and Germany

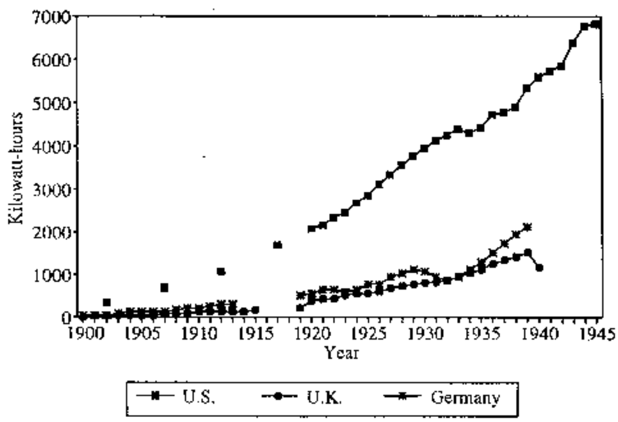


Source: U.S.: US. Department of Commerce (1975); U.K. and Germany: Mitchell (1992) and Flora, Kraus and Pfenning (1987).

increased to 14.262 billion kilowatt hours, 1.43 billion kilowatt hours and 3.2 billion kilowatt hours. Thirteen years later (i.e. in 1920), total electricity output for the three countries stood at 57.125 billion kilo-watt hours, 8.54 billion kilo-watt hours and 15 billion kilowatt hours, respectively.

Referring to Figure 2 which presents per-worker consumption of electric power by country, we see that in 1902, the U.S. led Britain and Germany with 346 kilowatt hours per annum. That is, each U.S. worker consumed 346 kilowatt hours of electric power to accomplish his/her tasks. This literally dwarfed per-worker consumption levels in Britain and Germany of 27 kilowatt hours and 62 kilowatt hours, respectively. Clearly, from the very start, the U.S. had opened up a considerable lead *vis-à-vis* its principal trading partners. By 1920, U.S. workers consumed roughly 2,082.27 kilowatt hours per annum, while British and German workers consumed 401 kilowatt hours and 560 kilowatt hours, respectively. Put differently, in 1920, U.K. workers consumed roughly what U.S. workers had consumed 20 years earlier.

FIGURE 2 - Per-Capita Electric Power Production 1900-1945: U.S.; U.K. and Germany



Source: U.S.: US. Department of Commerce (1975); U.K. and Germany: Mitchell (1992) and Flora, Kraus and Pfenning (1987).

There can be little doubt: while electro-magnetic power was largely a British invention, electrification in general and electrification of industry in particular were overwhelmingly U.S. phenomena. Throughout the early part of this century—-and indeed, throughout the whole century—-the U.K. and Germany lagged significantly behind in their overall production and consumption of electric power.

2.13. Colliery Productivity: International Comparisons

According to the members of the numerous electric power commissions listed above, cheap abundant coal was a necessary precondition for the successful "electrification" of U.K. industry. If the U.K. was to close the gap between it and the U.S., whose consumption of electric power was increasing at an increasing rate, it would require cheap abundant supplies of coal. Unfortunately, conditions in British collieries were such that instead of being cheap and abundant, coal was relatively costly. U.K. collieries, as we shall see, lagged significantly behind U.S. and European collieries. U.K. output per-man-shift (O.M.S.) was lowest in all of Europe. Mechanization, which, at this point in time, consisted chiefly of the use of electric-powered conveyor belts, and other mechanized handling systems, was least developed in the U.K. Moreover, according to British economic historian Sidney Pollard, in the 1910s and 1920s, it was on the verge of falling further behind. Productivity in British collieries lagged behind that in Holland, Poland and German:

Technically, the British Coal industry fell behind its foreign competitors after 1918. Output per man-shift rose, between 1913 and 1936, by 117% in Holland, 81% in the Ruhr, 73% in Poland, 50-51% in Belgium, 22-25% in France, and 10% in Britain. In 1927, output per man-shift measured in tons was much the same in Britain, Holland, Poland and the Ruhr; 10 years later, the other three areas had improved by 50-70%, and Britain alone was near the old figure [Pollard (1970),p.111].

Among the cited causes of low O.M.S. in the U.K. were (*i*) the use of archaic extraction techniques, (*ii*) poor labour relations (*iii*) and the small size of the average colliery. In the 1910s and 1920s, mechanized handling systems were rare in the U.K. In 1913, only 8% of the coal was cut by machine; by 1929, it had risen to 28%. Mechanical conveyors were used in 12% of the mines in 1928, 37% in 1934 and 54% in 1938. Since most of these were powered by electricity, the failure to "electrify" early on was to have dire consequences for later attempts at electrification. Adding to the woes of the industry was the small scale of British collieries: "The typical British colliery was too small to be efficient and there were too many independent and competing firms to form voluntary associations which could stand up to the German coal cartel of similar foreign organizations." Labour relations were far from good, to say the least. Distrust best describes labour's feelings towards the owners. Abnormally-high profits during and after WWI resulted in increased militancy on the part of miners. What is clear is that the pervasive distrust which characterized labour relations was not conducive to the changes required of both labour and management.

2.1.4 New Industries

A parallel, related development was the development of the electrical apparatus industry which included generating and transmission equipment, as well as electric power-consuming consumer goods. Again, while most of the generating and transmission technology had been developed in the U.K., U.S. firms such as General Electric and Westinghouse, quickly cornered the world market. Generators, transmitters, capacitators, and transmission systems were produced almost exclusively in the U.S., and exported throughout the world. Clearly, the U.S. had an almost insurmountable lead over its competitors. The same was true for electicity-using consumption goods, such as refrigerators, stoves, radios, clocks and washing machines.

Combined with the comparative advantage provided by the application of electric power in traditional markets, such as the automobile industry, these developments altered forever the pattern of world trade. U.S. manufactures usurped U.K. manufactures both in the U.K. and in its former markets (i.e. Commonwealth countries such as Canada). Britain's failure to "electrify" at an early point in time had cost it its title of manufacturer to the world.

2.2 The Financial Theory

The "Structural Theory" was not the only theory purporting to explain Britain's deteriorating foreign trade position. In this section, I examine what I shall refer to as the Financial Theory which maintains that Britain's deteriorating foreign trade position was due to the breakdown of the world trading system brought about by, among other things, WWI inflation and the resuting demise of the gold standard. No longer being tied to a fixed price of gold, a number of Britain's trading partners and competitors had opportunistically devalued their currencies. Table 1, taken from Brown (1940), reports average daily exchange rates, expressed in terms of their pre-WWI parities, for 14 countries. For example, in 1920, the Beglian franc was at 33 percent of its pre-WWI parity. The Italian lira was at 18 percent of its pre-WWI parity. Britain's troubles, it therefore follows, were financial, not real, in nature. Post WWI financial disorder wreaked havoc on its foreign accounts. Substantially lower U.K. current

Country	**%**
Canada	89
Switzerland	80
Argentina	80
Netherlands	75
Swede	71
Great Britain	71
Spain	67
Brazil	51
Denmark	50
Norway	50
Belgium	33
France	31
Italy	18
Germany	5

Source: Brown (1940), p. 216.

account surpluses implied larger capital account deficits. The City of London was losing ground as the financial capital of the western world. A return to the pre-WWI gold standard would restore order, and, more importantly, would restore the U.K. to its rightful position atop the western world, both as the leading exporting nation and creditor to the world, argued its proponents.

Foremost among the latter was Treasury official (i.e. Controller of Finance) Sir Otto Niemeyer, who from very early on, saw the U.K.'s return to the gold standard at pre-WWI parity, as holding the key to recovery. Tomlinson (1981) describes Niemeyer's reasoning as follows:

"The argument very briefly is that a major contribution to Britain's depressed export markets was the disorganization of the world's currencies following the war and therefore that the stabilizing exchange rates would encourage world trade and thereby lessen unemployment" [Tomlinson (1981), p.70].

This view was shared by Bank of England governor Montagu Norman. Accounts of his meetings in early 1925 with Federal Reserve Board chairman Benjamin Strong reveal a deeply-rooted intent on his part to return Britain to its pre-WWI position leading the western world. Consider, for example, the following passage from Monatgu Norman biographer, Andrew Boyle:

"The Governor (Montagu Norman) could naturally be relied on to glean enough inside information from his American friends not to misjudge the moment and shackle Britain prematurely to the sovereign metal that could make the old country rich and great again" [Boyle (1968),p.168].

According to Boyle, Strong concurred with Norman: a return to gold was necessary. In Strong's own words:

"...violent fluctuations in the exchanges, with probably progressive deterioration of the values of foreign currencies *vis-à-vis* the U.S. dollar; it would prove an incentive to all of those who were advancing novel ideas for nostrums and expedients other than the gold standard to sell their wares; and an incentive to governments at times to undertake various types of paper money expedients and inflation; it might even result in the United States draining the world of gold with the effect that, after some attempt at some other mechanism for the regulation of credit and prices, some kind of monetary crisis would finally result in ultimately restoring gold to its former position, but only after a period of hardship and suffering, and possibly some social and political disorder" [Boyle (1968),p.185].

In the minds of Niemeyer, Bradbury, and Norman, nothing less than a complete return to gold at pre-WWI parities was acceptable. A modified gold standard based on managed currencies was as unacceptable as the status quo. Countries wanting to improve their foreign trade balances could simply devalue their currencies (e.g. France and Italy). Nothing short of a complete return to pre-WWI parities would be acceptable. To this end, Britain would have to act quickly and alone, if need be. Time was of the essence. Not acting expediently would only make matters worse.

2.3 The Pre-Keynesian Debate

The point that I wish to make here is simple: prior to Keynes' oftentimes virulent attacks on the Treasury, the Bank of England and, of course, the Chancellor of the Exchequer, Winston Churchill, there existed in Britain a debate, or at least, opposing views, on the cause(s) of the deteriorating foreign trade position. On the one side were Board of Trade officials and former prime minister David Lloyd George pointing to structural problems, notably the failure on the part of industry to "electrify," while on the other side, were the Treasury, Bank of England and various government ministers pointing to the breakdown of the gold standard.

In the remainder of the paper, it will be argued that Keynes' overall contribution to the debate over the decision to return to gold was more harmful than helpful. Clearly, by the 1920's, the U.K., despite a century of economic and financial dominance, had lost ground. In short, electric power was doing for the U.S. what steam power did for the U.K. a century earlier -making it economically great. As pointed out above, not only had the electrification of U.S. industry made it more competitive, it spawned a host of new related industries, all dominated by U.S. firms.

By focusing attention on the short-run, I maintain, Keynes diverted attention from long-run considerations such as electrification and the structural problems in the U.K. coal industry. The focus went from restoring the U.K.'s position in world markets to putting the million or so unemployed workers back to work. Keynes' focus was clearly on the short run. This, of course, raises an interesting question, namely was Keynes aware of the Structural and Financial Theories, and, more importantly, did he fully understand them? These questions will be examined in the next section.

3. Enter Keynes

In this section, I attempt to answer two questions: was Keynes aware of the Structural and Financial Theories of the U.K.'s deteriorating foreign trade position presented above, and, secondly, did he fully appreciate the underlying arguments? With hindsight, the U.K. in the early 1920s found itself at an economic crossroad. A technology shock in the form of electric power had hit the U.S. with the results described above. The gold standard had collapsed as the result of WWI. World trade was in a state of disorder. The relevant policy question, it therefore follows, was: should the government, fully informed about the state of economic affairs, focus on the short run, or focus on the long run? Should it undertake public works programmes aimed at the unemployed and workers made redundant by foreign imports? Should the government manage the external value of the pound in the hope of restoring its former export position?

Clearly, to ask these questions is to answer them. For the first time in its history, Britain was confronted with the very real spectre of a becoming a second-rate industrial nation. The once dominant western industrial power which was the U.K. was clearly in decline. In this section, I shall argue that Keynes was either oblivious to the underlying structural problems facing British industry, or chose to ignore them. One could argue that, like millions of his fellow compatriots, Keynes could not fathom the thought that something was fundamentally wrong. Instead, he focused his energies on defending the *status quo*. Highly inefficient coal miners ought to be protected. Housing ought to be provided by governments. With hindsight, Keynes' inability to appreciate the state of the U.K. economy in the early 1920s, especially its foreign trade position, was harmful.

Was Keynes aware of the "Structural Theory" as outlined above? The evidence indicates that if he was, in fact, aware of the widening gap between U.S. and U.K. industrial electric power consumption levels, and the failure on the part of the U.K. to move quickly into the so-called new industries, he left little in the way of a written account. Only once in his extensive writings in the 1920's does he allude to the problem of electric power.

On 12 April 1924, former prime minister David Lloyd George, wrote to the *The Nation and the Atheneum* calling for wholesale changes in U.K. industry, especially with regard to electric power and the necessary investment to take advantage of this new technology. While not mentioning it by name, Lloyd George was particularly concerned by the phenomenal success of U.S. industry, and its implications for U.K. trade. The U.K., he maintained, must follow the example set by the U.S. Lloyd George favoured government involvement, especially in electric power generating and transmitting facilities. According to Keynes' biographer Roy Harrod, Keynes followed with interest the ensuing debate:

"On 12 April 1924 no less a person than Lloyd George wrote to *The Nation* calling for a large-scale programme of public works. Unemployment figures had been for some time in the neighbourhood of one million. Lloyd George was the type of Liberal who was not averse to state intervention....There followed a stream of letters from such authorities as Mr. Walter

Layton and Sir William Beveridge. Keynes allowed the correspondence to gather momentum, keeping his admirers in suspense about his own views, and finally intervening himself on 24 May: Does Unemployment Need A Drastic Remedy? Yes it did. He proposed that the Treasury should use its sinking fund 'to spend up to say 100,000,000 pounds per year on the construction of capital works at home.... Housing was clearly a much-needed form of capital development... He also recommended the adaptation of our road system to the needs of modern transport and a large scheme for the transmission of electric power" [Harrod (1951),p.407].

Further examination of the article in question shows an appreciation on the part of Keynes of the problems confronting the U.K. in the early 1920s:

"The discussion on this subject in the columns of *The Nation* has not lacked a few optimists. Nevertheless, most of those who have taken part share in some degree the misgivings which Mr. Lloyd George voiced in opening the debate. If a country, with no new advantages of raw materials or competitive power, with a larger population, produces less and lives better, it seems probable that its poise may be unstable and that something more drastic is needed than merely hoping for the best. But what? It is the lameness of the answers to this question-we must all admit-that The Nation discussion had proved weak" [Keynes (1924),p.236].

Judging from this excerpt, it is clear that he was at least familiar with the "Structural Theory." The relevant question, however, is whether Keynes had made the connection between "competitive power" and foreign trade, and consequently, the balance of payments? As it turns out, nowhere in his writings does he broach the topic. Not once in the debate over the merits of the $4.86 pound is electric power mentioned. One can only surmise that his interest in Lloyd George's calls for massive government involvement and investment in the British electric power industry was short-run in nature. Lloyd George saw both short- and long-run good coming from such a programme: increased industrial electric power consumption, increased competitiveness, and increased employment in the long run and greater employment in the short run. Keynes, however, appears to have focused on the latter.

That Keynes' appreciation of the Structural Theory was, at best, embryonic, is best seen in his views on the coal industry in general, and on coal miners in particular. Clearly, were Keynes to have been on the same wave-length as Lloyd George, he would have realized that a more efficient coal industry was as, if not more, important to electrification as was a national electric power transmission grid. As pointed out above, the U.K. coal industry was highly inefficient: wages were high and productivity was lowest among European countries. Clearly, either productivity had to rise, or wages had to fall. Keynes, however, felt otherwise: coal miners, ought not accept lower wages and longer hours. A return to the $4.86 pound, he argued, would harm the coal industry.

What is particularly interesting is the fact that while Keynes did not fully appreciate the nature and the extent of the "power problem," his work on private versus public investment mimicked the on-going debate over the role of the state in the electric power industry. To take advantage of the important economies of scale and networks, large undertakings were necessary, requiring large sums of money. In the U.S., roughly ten large electric power companies supplied the market. In the U.K., hundreds of small companies, each relatively inefficient, supplied the market. Furthermore, in the 1920s, the U.S. government began to invest heavily in hydro-electric power projects. The U.K. lagged behind on both accounts. Private producers were inefficient; secondly, government was not present.

The next question is whether he was aware of of the Financial Theory, and if so, did he fully appreciate the underlying arguments? As pointed out above, the Financial Theory held that the international financial system was a highly complex, interdependent entity. Britain's deteriorating foreign trade position, Treasury and Bank of England officials reasoned, was as much the result of the dollar value of the pound as it was the result of the dollar value of the French franc, or the dollar value of the Belgian franc. Opportunistic exchange rate behaviour on the part of France or Belgium, it therefore follows, was as important to the health of U.K. industry as the dollar value of the pound. Putting an end to such behaviour would require an unequivocal return to the gold standard at nothing less than pre-WWI parities. Managed currency values proposals were rejected for essentially the same reason, namely possible opportunistic behaviour.

Was Keynes aware of this argument, and if so, did he fully appreciate the underlying implications? The evidence seems to indicate that he was not. In his highly acclaimed piece entitled "The Economic Consequences of Mr. Churchill,", published in 1925, there is no mention of this argument. What one finds instead is a barrage of information and statisitics on purchasing power parity *vis-à-vis* the U.S. dollar. To Treasury and Bank of England officials, the exact value of the pound *vis-à-vis* the U.S. dollar was a second, or even third-order consideration, after the resumption of the world-wide gold standard at pre-WWI parities.

Nowhere in his writings, both prior to and after the return to the $4.86 pound, does Keynes refer to this argument. Could it be that he was oblivious to the goings on at the Bank of England and the Treasury? At first blush, this seems preposterous, even ludicrous. Here, one of Britain's leading thinkers and foremost critic of all matters economic in the dark over Bank of England policy. Yet, nowhere in his writings does he mention, attack, or dismiss the Financial Theory.

As preposterous as this might appear, there is perhaps a logical explanation. First, it is important to note that at the time, the Bank of England was a private institution, having no legal obligations to the government. Second, for the Norman-Bradbury-Niemeyer "power play" to succeed, a certain amount of discretion would be needed. Put differently, if the Bank of England, by restoring the pound to pre-WWI parity with the U.S. dollar, was to succeed, it would have to act stealthily. Were word to get out that the Bank's chief motive was to force Belgium, France, and Italy back to pre-WWI parity, then the central banks in these countries could, at least theoretically, offer resistance. For example, they could liquidate their holdings of pounds or raise interest rates.

This would explain why Keynes would have been kept in the dark. Had Norman, Bradbury and Niemeyer informed Keynes, there was the risk that Keynes, opposing a return to pre-WWI parity on purchasing power grounds, would "spill the beans," so to speak. Put differently, given Keynes access to the media, and his unfledging opposition to a return to pre-WWI parities, there is every reason to believe that he was not privy to all of the discussions. In other words, in their eyes, he was too much of a "loose cannon" to be allowed into the closed circle of monetary policy.

4. A Debate Transformed

In this section, it will be argued that Keynes' inability to fully appreciate the problems raised by numerous committees and commissions on the electric power situation in the U.K., and his overwhelming interest in short-run considerations, transformed what was a promising debate over the structural problems of the U.K. economy. The Board of Trade, David Lloyd George, Sir Otto Niemeyer, Lord John Bradbury and Montagu Norman all agreed that foremost among the causes of the problems plaguing the U.K. economy was the deteriorating foreign trade balance. They differed, however, with respect to the causes.

Keynes' forays into the debate, however, transformed both the nature and the scope of this debate. As pointed out above, Keynes' focus from the start was on the short-run. How would policy affect employment? How would a return to gold affect employment in export industries, notably coal? How could the government put construction workers back to work?

Clearly, these were important issues. In fact, were it not for the fact that, in a short time, they came to monopolize the debate, Keynes' contribution would have been positive. The problem, however, is that they did. Keynes was easily able to sway public opinion to his views, setting the stage for the "Keynes versus the Treasury debate" over the merits of public investment.

One understands why the debate between Keynes and the Treasury and Bank of England officials degenerated as quickly as it did. They spoke different languages. According to the Treasury/Bank of England, a return to gold would restore Britain's export position—-by ending unfair exchange-rate competition—, and in so doing, restore full employment. According to Keynes, a return to gold would throw thousands of workers out of work in export industries. Understandibly, convergence was impossible in such circumstances.

As it turns out, the government ignored Keynes' warnings. It remained convinced that a return to gold at pre-WWI parities would restore U.K. industry to pre-WWI prominence. Keynes warned of the dire consequences of such actions. Unemployment, labour unrest, strikes, etcetera would result.

With hindsight, it is clear that Keynes stood a greater chance of being vindicated by the ensuing events. Returning to gold would only bear fruit in the long run if other countries followed its lead. Clearly, the Treasury and the Bank of England were confident that other countries would follow suit. It bears reminding, however, that the risks were enormous. What if the others did not follow suit?

The labour strife in 1926 appeared to vindicate Keynes. Returning to gold at $ 4.86, he argued, brought about the depressed conditions in the coal industry which led to the strike. As a number of writers have pointed out, the strike had more to do with internal-to-the-industry problems, than they did to the $ 4.86 pound. Low productivity and high wages were crippling not only the coal industry, but also the nascent electric power industry. One could argue that the decision to renege on promises made to the coal miners' union was, in large measure, motivated by the deep-seated need to lower costs and increase productivity in the hope of providing cheaper coal to the electric power industry.

As it turned out, the Norman-Bradbury-Niemeyer "*beau risque*" failed. While Denmark and Norway followed Britain back to pre-WWI parities, Italy, France, and Belgium did not. In 1927, the French franc was worth 20 percent of its pre-WWI value. The Belgian franc was worth 14 percent of its pre-WWI value.

5. The Consequences of Mr. Keynes

These findings cast new light on this critical period in U.K. economic history, not to mention on the history of economic thought. History has, for the most part, judged Keynes' contributions in this period favourably, as evidenced by the current emphasis on the U.K.'s return to the gold standard at pre-WWI parity (i.e. $ 4.86 pound) in the debate over the causes of the Great Depression. My results, however, paint an altogether different picture of Keynes and, more specifically, his role in the post-WWI U.K. economic policy debate. Specifically, with hindsight, by focusing attention on short-run stabilization policy, he diverted attention away from the true underlying problem, namely the U.K.'s failure to enter the electric power age. In this author's opinion, this marked the beginning of the end for the U.K. as the leading economic power. From this point on, the gap between per worker consumption of electric power in the U.S. and the U.K. would continue to widen, never to be closed. For over a century, it dominated world trade on the strength of steam power. From this point on, it would be dominated.

In short, the problem with Keynes was his inability to appreciate trade and productivity-related issues. It is important to remember that Keynes was first and foremost a monetary economist. Notions of comparative advantage and productivity figured less prominently in his intellectual baggage. The problem of Britain's deteriorating foreign trade position, it therefore followed, was a consequence of the exchange rate-related problems. Returning to a $ 4.86 pound would only worsen matters.

As I have argued in a previous work, the decision in 1931 to abandon the gold standard was, in large measure, the result of extraneous events [Beaudreau (1996)]: that is, events outside the U.K. Specifically, the stock market boom in 1928-1929, and the Smoot-Hawley Tariff Act in 1930, are what ultimately caused the gold standard to fail. Keynes was vindicated, but for the wrong reasons. The gold standard did not fail as the result of the $ 4.86 pound. In fact, the balance of payments figures for this period show exports did relatively well [Aldcroft (1970), Foot (1974)].

By confronting the Treasury and the Bank of England on the issue of purchasing power parity, he single-handedly derailed what was a promising debate over the state of the U.K. economy in general, and the state of the U.K. foreign trade position in particular. From the early 1930s on, the U.K. government focused on short-run stabilization programmes in the hope of putting the million plus unemployed Britons back to work.

Conclusion

This paper has re-examined Britain's return to gold in 1925 at the pre-WWI parity of $ 4.86, paying particular attention to the debate leading up to this historic decision on the part of Stanley Baldwin's Conservative government. It was shown that (*i*) the return to gold was, first and foremost, an attempt on the part of the government, broadly defined to include the Treasury and the Bank of England, to force a worldwide return to pre-WWI parities, which, it was hoped, would restore Britain's deteriorating foreign trade balance to its pre-WWI position; (*ii*) the existence of a debate over Britain's deteriorating trade balance pitting those who saw the cause(s) in structual phenomena, notably the U.K.'s failure to electrify, and those who saw the cause(s) in financial phenomena, (*iii*) that Keynes was not fully aware of, nor fully understood these two theories, (*iv*) that, by focusing on the short-run ramifications of a return to gold at pre-WWI parities, he transformed a potentially fruitful debate into a trivial debate over purchasing power parity, and (*v*) that in so doing, he did unmeasurable harm to both the U.K. economy and economics in general.

Clearly, the Treasury and the Bank of England's "*beau risque*" (i.e. attempting to force other countries back on to the gold standard at pre-WWI parities) was just that, a risk. Treasury and Bank of England officials, with the complicity of the New York Branch of the U.S. Federal Reserve, believed that it was possible. Keynes failed to grasp what was a fairly simple, be it risky, proposition, preferring to focus on the short-run consequences of a more expensive pound.

With hindsight, it is important for the historian to put these events in their proper perspective. This epoch was marked by a series of firsts. Britain's deteriorating foreign trade balance marked the beginning of the Western world's first recorded case of industrial decline. It had dominated the XIXth century on the strength of steam; now, a new industrial giant had emerged, namely the U.S., largely on the strength of electric power. It also marked the beginning of government policy aimed specifically at preventing such a decline. This is particularly important when set in the appropriate historical context. Remember that the U.K. had, up until then, never had reason to doubt its strength. After all, it was responsible for the industrial revolution. Most Britons wanted to believe that the problem lay elsewhere, when, in fact, it lay at home. Ironically, their failure to exploit a technology which they had, in large measure, developed, namely electric power, is what caused them to fail.

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