Pigou on business cycles and unemployment: an anti-gold-standard view

Norikazu Takami

1. Introduction

This note studies A.C. Pigou’s position on what truly caused the mass unemployment in Great Britain in the 1920s. As shown in Figure 1, Great Britain suffered high unemployment during the 1920s. As a leading figure among the country’s economists, Pigou contributed much to the analysis of this problem. In an article published in *Economic Journal* in 1927, he addressed the issue and pointed to the failure of money wage adjustment as its main cause. In Figure 1 we see that money wage rates were held rigid despite high unemployment during this period. Therefore, he appears to have attached great importance to money wage adjustment or its failure.

In the same year that the article was published (i.e. 1927), Pigou made a full-fledged analysis of business cycles in *Industrial Fluctuations (IF)*. In this work, he squarely dealt with practical monetary problems like monetary policy and international exchanges, and he unambiguously stated that an inconvertible paper currency is superior to a gold standard in terms of the stabilization of a domestic economy. It is well known that Pigou served on the two committees whose reports recommended an early return to a gold standard, in 1919 and 1924. According to Milgate (1983), Pigou was, albeit cautiously, in favor of the return to a gold standard at that time. Therefore, we notice that by 1927 Pigou’s emphasis had shifted from the stabilization of international exchanges to that of the domestic economy. This note examines his position on the practical issue of high unemployment in the 1920s, focusing on the two above-mentioned aspects of wage rigidity and monetary disturbances.

Address for correspondence
Norikazu Takami, JSPS Fellow, Kobe University, 2–1 Rokkodai, Nada, Kobe, 657–8501, Japan. e-mail: no.liquors@gmail.com
The literature in the past tended to overlook one or the other of these aspects, typically the monetary aspect, in Pigou's diagnosis of unemployment in the 1920s. Laidler (1999) was exceptionally aware of both the monetary and wage-adjustment aspects of Pigou's views. The present study, however, will attempt to balance these two aspects and propose that Pigou considered monetary disturbances to have had a greater effect in bringing about the high unemployment of the 1920s than wage rigidity.

Section 2 presents Pigou's treatment of the issues related to money wages, ranging from the effect of wage adjustment on business cycles to the problem of wage rigidity in the 1920s. Section 3 examines a monetary aspect of his business cycle theory, more specifically his views on price movements and monetary policy. It also deals with his attitude toward the gold standard. Section 4 discusses the relative importance of the above two causes of business cycles and argues that Pigou considered monetary disturbances to have had a greater effect on economic fluctuations than money wage rigidity. In conclusion, I attempt to reconcile the above argument with the fact that Pigou endorsed the early return to a gold standard, and present Pigou's original impossibility theorem: that is, the impossibility between low unemployment, overarching social policies, and a fixed currency.

2. Wage rigidity

Pigou attached certain importance to money wage adjustment because he thought different kinds of labor were more likely to be complementary
than substitutive. When they are complementary, a wage reduction in one part of the economy would raise the demand for labor not only in that part, but also in other parts. Thus, Pigou rebutted ‘popular arguments’ as being too shortsighted to correctly estimate the whole effect of wage reduction. Flexibility or rigidity of wage rates, he thought, has greater effects than commonly suggested. Even so, Pigou thought that, in real life, mutual distrust between employers and employees would make it difficult for one party to even temporarily yield to the other, thus curtailing efficient money wage adjustment and resulting in extra unemployment.

In his earliest work, *Principles and Methods of Industrial Peace*, Pigou (1905) held the view that wage adjustment depends on the nature of the relationship between employers and employees, and the nature of that relationship, in turn, depends on the effectiveness of the machinery for negotiation. This implies that, according to him, rapport between employers and employees is not a given factor but one that can be improved gradually. In *IE*, too, Pigou made it clear that progress in wage adjustment crucially depends on the improvement of the relationship between employers and employees (Pigou 1927a: 313). The role of the government, however, is limited in this process, and therefore wage adjustment could not be relied on as the remedy for a short-term problem.

As noted above, wage adjustment in the 1920s was hardly as flexible as Pigou expected in *Principles and Methods of Industrial Peace.* In the article ‘Wage Policy and Unemployment’ published in 1927, Pigou claimed that, in the main, unemployment should be attributed to failure of wage adjustment in this period. Pigou identified two factors for the failure of wage adjustment: changes in social legislation, and structural disparities between industries.

First, there were major changes in two pieces of social legislation after World War I. The first refers to minimum wage regulation. In Britain, the Minimum Wage (Trade Boards) Act was amended in 1918 to include a number of occupations under its jurisdiction. Pigou was critical of this

1 In the period between the Armistice and 1922, money wage rates were highly flexible both upward and downward, unlike those in the later period. Since the development of social legislation mentioned in the text began before 1922, Pigou’s argument that social legislation was attributable to wage rigidity might not be logically watertight. As far as I know, Pigou does not mention this point. However, we can easily come up with a plausible rationale; for instance, it would take some time for institutional changes to affect actors’ incentive mechanisms.


3 In many other places, Pigou related mass unemployment in the 1920s to the postwar wage rigidity (Pigou 1933a: 252–256; 1941: 93; 1945: 73; 1947: 55; 1952: 103).
amendment because he thought that the wages of workers covered by the Act would tend to be kept higher than competitive levels.

The second legal change was the development of public unemployment insurance. Pigou thought that such a change strengthened bargaining positions of workers and helped raise wages above the full-employment level. Before the war, unemployed workers were, if entitled, paid benefit by trade unions from union funds, and ‘heavy unemployment means a heavy drain on union funds’ (Pigou 1933b: 254). This situation had served as a restraint on trade unions’ militancy. After the war, however, when public unemployment insurance was expanded to almost all occupations, ‘unemployed members [were] cared for, in the main, at the expense of other people, the union’s contribution being no larger when there are many unemployed than when there are few’ (Pigou 1933b: 254).

As a result of these two pieces of social legislation, Pigou concluded: ‘wage-rates have, over a wide area, been set at a level which is too high [to allow for full employment]’ (1927b: 355). Although critical of these two statutes, Pigou never argued for abolishing them. As for unemployment insurance, he stated: ‘I would not be prepared to scrap unemployment insurance . . . I think it has produced this bad effect which is something to set against its good effects’ (Pigou 1931: 49).

The second factor promoting wage rigidity in the 1920s, as explained in Aspects of British Economic History (Pigou 1947), was a disparity between two groups of industries; namely, the poorly performing export-related industries (unsheltered industries) and the better-off industries catering for the domestic market (sheltered industries). In real terms, British exports in 1923 were around 80% of what they had been in 1913. Pigou attributed this decline in exports to changes in the international economic situation such as the entry of new manufacturing countries, particularly in textile industries. The fall in the price of agricultural commodities witnessed after the war led the agricultural countries to depend on cheaper products from these countries. Export industries in Britain were thus curtailed because of competition from other nations. Meanwhile, the industries providing for the domestic market, being ‘sheltered’ from international competition, enjoyed relative prosperity.

Sluggish labor movement marked the labor market, which was divided between these two differently situated industries, so that in the economy as a whole the average wage rate became insensitive to large increases in aggregate unemployment. ‘[I]t is difficult to see how, in industries that

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4 Although not as comprehensive as in this volume, the disparity between sheltered industries and unsheltered industries was also mentioned in Pigou (1927b: 357n; 1931, passim).
were themselves prosperous, work-people could have been brought to accept wage reductions’ (Pigou 1947: 55). Pigou thus thought that the structural disparity and slow labor movement, although themselves the much-noticed causes of unemployment, brought about the wage rigidity that appeared in statistics. Under this circumstance, Pigou suggested elsewhere that forced transfer of labor from ailing industries to prosperous industries could ameliorate unemployment (Pigou 1933b: 283). It is not certain, however, how serious he was in proposing this remedy because he omitted to discuss its feasibility. Moreover, he later stated that the disadvantages might outweigh the advantages: ‘Unemployment is always an evil, but sometimes to reduce it might entail worse evils’ (Pigou 1945: 68).

Thus, Pigou thought that these two factors were responsible for the wage rigidity that occurred after World War I. He estimated that ‘at least 5 per cent. [sic] of extra unemployment’ (Pigou 1927b: 356) should be attributed to wage rigidity caused by the above changes. This quantitative estimate of 5% seems exceedingly high, but in Section 4 I will propose that this estimate was based on plausible assumptions. Before considering this issue, let us turn to the monetary aspect of his trade cycle theory.

3. Monetary disturbances

According to Pigou, the function of money in business cycles is twofold: to generate autonomous fluctuations, and to accelerate the fluctuations created by other causes. In the latter half of the 1920s, when most industrialized countries adopted a gold standard, disturbances in the international gold market led to changes in the quantity of money supply and therefore general prices within each of these countries. For instance:

[B]etween 1871 and 1873, Germany absorbed a large quantity of gold in order to establish a gold standard, and in the years following 1878, the United States did likewise in connection with a law making the inconvertible Government bank notes, which had been issued during the Civil War, convertible into gold at the Treasury. (Pigou 1927a: 103)

This led to a fall in general prices in Britain.

In addition to these autonomous fluctuations, the quantity of money supply is liable to vary through creation of bank credits encouraged by booming conditions. Through credit creation, businesspersons as a body can levy more real resources from the general public than the latter is willing to save. Furthermore, in times of rising prices, rates of wages and interest that have been contracted in the past are usually maintained nominally as they were, so that in real terms they become advantageous to
businesspersons. Thus, ‘forced levies’ and ‘doctorings of the terms of past contracts’ accelerate the boom and the rise in prices. ‘Until some external event, such as the refusal of bankers to create any more credits, intervenes, there is no reason why this process should ever come to an end’ (Pigou 1927a: 172).

In the 1927 article, where Pigou highlighted the relationship between wage rigidity and mass unemployment, he acknowledged that an upsurge in unemployment in 1920–1921 was spurred, if not initiated, by purely monetary factors:

> It is a matter of common knowledge that the great slump of 1920–21 had its origin in causes lying altogether outside wages, and was intimately associated, … as the direct effect of a deliberate policy of monetary deflation, … with a heavy fall in prices. (Pigou 1927b: 358–9)

What, then, necessitated the British authorities taking ‘a deliberate policy of monetary deflation’ in 1920–1921? The reason is that they had committed to restoration of a gold standard, as Pigou (1947) chronicled in Aspects of British Economic History, 1918–1925.

Let us look at the fluctuation in unemployment in this period. The statistics, adjusted with the estimate for 1918–1919 by Pigou (Figure 2), show how Pigou focused on a slump that started in April 1920. This rather prolonged slump was characterized by an unprecedented rise in the unemployment rate. Why did this slump build such momentum? Pigou’s answer is bifurcated into real and monetary causes. Real causes include: the quieting down of restoration demands, and the depressed British exports discussed above. As a result, aggregate demand for labor would have to be somewhat contracted after restoration demands were nearly satisfied. Even so, more essential in accentuating the slump was a monetary cause.

According to Pigou (1947: 145–51), the major factor was the government’s commitment to restoration of pre-war parity, the ‘sacrosanct’ £1 = $4.86.5

Owing to the relative rise in prices in Britain compared with those in the United States during the war, the authorities considered it impracticable to immediately restore pre-war parity. Consequently, the British government officially prohibited gold exports, which had been voluntarily curtailed during the war. When the restoration boom arose, the Bank of England, now relieved from the duty of maintaining the gold reserve, failed to swiftly respond to the rise in prices, resulting in an intense price increase in the period of the boom. After April 1920, the economy fell into a slump, and prices declined rapidly. Yet the Bank of England did not respond to the price change once again.

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5 Garside (1990: 115–24) laid out an almost parallel explanation on the monetary circumstances in postwar Britain.
This inaction of the bank, however, was a deliberate policy to bring the exchange rate to near pre-war parity:

This policy, which at the time was endorsed by nearly all persons of authority, dominated the outlook of the Treasury and the Bank of England over the whole of our period, until in April 1925 it was finally carried into effect. (Pigou 1947: 148)

The following two factors required British prices to decline substantially. First, the price rise in the boom period was large even relatively to the price movement in the United States, leading to the depreciation of Sterling by 16%; that is, from $4.65 to $3.91 to the pound. Second, at the time of the economic downturn in Britain, the US economy had also started to decline. Pigou asserted, however, that the newly formed Federal Reserve System in the United States had not yet become capable of coping with recession. Thus, in spite of the price fall, the interest rate was not lowered in the United States for a year, neither was the one in Britain, which had to bring down prices ahead of the United States. Consequently, British prices fell sharply, and this gave rise to an enormous amount of unemployment.

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6 According to Wheelock (1991: 14–17), the Federal Reserve System was formed just before World War I. It was not until 1923, however, that it came to play an active role in stabilizing the economy with the use of open market operations.
Realizing that money could cause an immense disturbance, Pigou examined monetary policy as a direct remedy. In *IF*, he argued for a shift to the monetary policy that directly aimed at stabilizing price movements. The conventional monetary policy employed by the Bank of England, which he termed a ‘reserve discount policy,’ had an important shortcoming. The aim of this policy was to keep the ratio of gold reserve to liabilities (i.e. money supply) above a certain level to secure against danger of default. In times of good business when people are ready to pay higher interest, the bank will try to maximize profits by raising the interest rate. The rise in interest motivated by such a reason, however, is likely to lag behind the price movement.

Pigou proposed to implement a ‘stabilising discount policy’ aimed exclusively at stabilizing general prices. Even so, he noticed two difficulties involved in this shift of policy. First, certain discretion was needed for a central bank to inspect and interpret various statistics. To effectively restrict price fluctuations, the bank would have to devise a policy before the price changes occurred, because:

> the seeds of expansions and contractions are sown some little while before the movements in [bank] credit [which tends to precede the price movements] occur, and it is the sowing of the seeds, and not their sprouting, if they have been sown, that discount policy is chiefly able to influence. (Pigou 1927a: 283)

Thus, in making decisions on monetary policy, a central bank needs to interpret the movements of such leading indicators as ‘prices of speculative securities,’ ‘the volume of new orders given per month in important industries, or in the stocks of finished goods in dealers’ hands,’ or ‘the percentage of workpeople out of employment’ (Pigou 1927a: 284–5). Even so, in the contemporary policy debate there existed a general distaste for permitting discretion to a central bank because it might involve ‘stupidity and perversity on the part of governing persons’ (Pigou 1927a: 295). Pigou, although paying attention to this caveat, was in favor of a stabilizing policy. 8

7 According to Eshag (1963: 136, n99), monetary policy based on leading indicators had already been advocated by Cambridge economists such as Hawtrey, Keynes, and Lavington before the publication of *IF* in 1927. But in 1924, in the article ‘Correctives of the Trade Cycle,’ Pigou proposed the same method (1924: 115–16). Therefore, it might not be wrong to say that Pigou started to recognize the importance of the monetary policy based on leading indicators about the same time as others did.

8 Pigou wrote: ‘since the restoration of the gold standard, the Bank of England have [sic] recently, it would seem, adopted in some considerable degree, a policy directed towards price stabilisation’ (Pigou 1927a: 278, n2). This seems to imply that the general distaste for central bank discretion was gradually waning around this time.
The second difficulty with the shift from a reserve discount policy to a stabilizing discount policy consists of the latter’s discrepancy with the gold standard. The gold standard, although making for a fixed exchange rate and therefore smooth international trade, renders a country vulnerable to disturbances from the international gold market. If the gold market is stable to some extent, a central bank can withstand moderate influxes into or effluxes out of its gold reserve. However, it would not always stay stable. Pigou anticipated that a situation might arise where, facing great disturbances in the international gold market, a country was forced to abandon the gold standard ‘in ignominy’ (Pigou 1927a: 305). Hence, Pigou declared as follows: ‘If a stabilising discount policy is adopted in a wholehearted manner, the logical sequel as regards currency is [not] the gold standard plan . . . It is a[n inconvertible] paper currency’ (Pigou 1927a: 296). It is true that Pigou endorsed a return to the gold standard on several occasions during the earlier half of the 1920s. Even so, one notices that the apprehension over ramifications of the gold standard greatly troubled him at the time he wrote *IF*. Reflecting such non-economic considerations as ‘the attitude of public opinion and the current political and diplomatic situation’ (Pigou 1927a: 305), he supported the attempts to stabilize the gold market through international coordination as contemplated in the resolutions of the Genoa Conference of 1922. Later in 1930, in the testimony before the Macmillan Committee, he recommended the same measure along with an increase in public expenditure in the spirit of the Minority Report of the Poor Law Commission.9

In light of the political incapability to voluntarily abandon the gold standard,10 it is relevant what kind of policy Pigou recommended after the gold standard was abandoned in 1931. In 1933, in a letter to the Editor of the *Times*, Pigou argued for exactly what the stabilizing discount policy would require: low interest rates. He praised the 1932 conversion of war loans to a lower rate for having ‘brought home to the minds of lenders the fact that the day of high rates of interest on long-term loans has passed’

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9 In *Theory of Unemployment*, Pigou (1933b) explained public works as a monetary process. In his variation of an exchange equation, $Mv = I$ ($M$ is money supply, $v$ income velocity, $I$ money income), $v$ is not constant in the short run because $M$ contains hoarded money that is variable depending on the general psychological state among businesspersons. In times of severe depression or under a fixed currency, where monetary policy is ineffective, public works alone could operate on the economy through a rise in $v$, or a decrease in the proportion of hoarded money to money supply (Pigou 1929: 186; 1933b: 197).

10 For example, Clarke (1988: 210–11) said: ‘Whereas going off gold would be seen as a political defeat, protection had a potential appeal as a patriotic policy—achieving the same ends not with a whimper but a bang of the drum.’
(Pigou 1933a: 14). This conversion would have been certainly impossible under the fixed exchange rate of the gold standard. Such reflationary measures as this, however, still carried substantial risks: they were likely to disrupt the currency market, which might lead to sudden depreciation of the sterling and capital flight from Britain. Pigou acknowledged, therefore, that it might be better to postpone the decisive action until the government could enlist coordination with the United States. Despite these risks, he considered it imperative for Britain to take whatever measures practicable in the face of three million unemployed workers, even without US coordination. Thus, in this letter, Pigou proposed to take advantage of the policy discretion enlarged by withdrawal from the gold standard and to set up reflationary pressure through monetary expansion.11

4. Relative importance of each cause

Thus far, I have dealt separately with two main causes for unemployment fluctuations. Now let us discuss the relative importance of wage rigidity and monetary deflation as a cause for unemployment in the 1920s. As noted above, Pigou attributed a major part of the prevailing unemployment to wage rigidity. It does not follow from this fact, however, that Pigou attached greater importance to money wage adjustment than to monetary policy stabilizing price movements. The reason for this is twofold.

First, the quantitative estimate of the effect of wage rigidity can be consistently related to historical statistics in Pigou’s views. Pigou mentioned in several books that the elasticity of aggregate demand for labor would be greater than unity (Pigou 1905: 46; 1932: 666). Finally, in *Theory of Unemployment* (Pigou 1933b), he made a formal attempt to estimate the exact figure of the elasticity and stated that one can ‘not unreasonably put the elasticity of the money demand for labour in times of deep depression at not less numerically than –1.5’ (Pigou 1933b: 106). If it is admitted that an approximate figure was already in hand in 1927, probably the figure of –1.5 was used to derive ‘5 per cent. [sic] of extra unemployment’ as the effect of wage rigidity. By dividing the rate of unemployment by the elasticity of the demand for labor, we can obtain how much decrease in the average wage rate would be required to dissipate that rate of unemployment. Thus, a

11 The Bank of England maintained a historically low bank rate from 1932 and throughout the remainder of the 1930s. In the meantime, the rate of unemployment, although always above 10%, crawled back from an extremely high level of 1931 to the pre-1929 level, and aggregate production rose by 45%. See Cairncross (1995: 65) and Garside (1990: 134–9).
3.33% wage reduction would be needed. According to Mitchell (1962: 344), there existed a decline in money wages of such order during the 1870s and 1880s. Therefore, had the situation in the British labor market not changed after World War I, as discussed in Section 2, the average wage rate would have fallen by 3.33%, and therefore, employment would have increased by 5%. A 5% estimate of the effect of wage rigidity may be large, but it was a reasonable figure grounded on historical statistics. The 5% estimate does not need to be brought to bear on the judgment on the comparative importance Pigou attached to the two causes of unemployment.

Second, after neutralizing the impression that Pigou attached exceeding high importance to money wage rigidity in the 1927 article, let us look at the quantitative estimates made in *IF*. Pigou rather intuitively assessed that the stabilization of price movements would have four times as great an effect in stabilizing movements in unemployment as the practical extent of improvement of wage adjustment (Pigou 1927a: 219 and 225). The rationale for this intuition could be that monetary causes will affect the demand for labor through the effects on real wage rates and also through price movements discussed in Section 3, while wage movements will affect it only through the former, as stated in Pigou (1931: 84–5). We can conclude that Pigou thought monetary disturbances could cause greater economic fluctuations than could money wages being rigidified.

5. Conclusion

We have thus far found that money emerges as a more important element than wages in Pigou’s overall analysis of unemployment. As a cause of unemployment, money could generate a greater disturbance in the economy; and as a remedy for it, monetary policy could much more effectively operate on the economy. Naturally, he was seriously concerned about the deflationary pressure exercised by the gold standard that prevailed throughout the 1920s. Could we reconcile this negative attitude with the fact that he had endorsed the return to a gold standard? In his testimony to the Macmillan Committee, Pigou attributed to politics as well as economics his earlier endorsement of the return:

What [the Bradbury-Chamberlain Committee in 1924] had to decide was, ‘Shall we go back to the pre-War gold now or later?’ . . . [T]he danger was that later on it would be still more difficult to go back [to gold] . . . I thought the politician would make the plunge, anyway. (Pigou 1931: 54)

As examined above, the British authorities exercised deflationary pressure on the country’s economy even before 1925. In this quote, therefore, he
was implying that, even if the authorities had not gone back to gold in 1925, they would still have taken whatever measures were required to bring the sterling–dollar exchange to pre-war parity; in addition, he had thought the conditions prevailing in 1925 were the most propitious and the least costly. In accordance with this, we can infer from the above argument that Pigou anticipated a voluntary wage adjustment at the time he endorsed the return. Yet, by 1927, he came to realize that postwar changes hampered resilient adjustment in the labor market, and that deflationary pressure had directly intensified the fluctuation in unemployment.

We can infer from the above discussion that Pigou noticed an important theorem concerning social welfare policies and international exchanges. Pigou pointed out that welfare policies were incompatible with the economic stability, but he also highlighted that a fixed currency could not be maintained without causing the disturbing effects in the domestic economy. In short, he noted the incompatibility of the three aims: a fixed currency, extended social policies, and low unemployment. Before the First World War, the British economy had maintained the fixed currency without being burdened with such high unemployment as existed after the war. Flexible autonomous adjustment in the labor market had checked the increase in unemployment in times of recession. In contrast, Pigou supposed that the extension of social policies after the war hampered the autonomous adjustment mechanism in the labor market and that the fixed currency was not compatible with the aim of keeping unemployment low under this circumstance. Thus, he tacitly envisioned the impossibility of simultaneously achieving three aims of fixing the value of currency for smooth trade, setting the safety net for laborers, and equilibrating the aggregate demand and supply.

References
Pigou on business cycles and unemployment


Abstract

This note examines A. C. Pigou’s views on the practical issue of high unemployment in the 1920s. In his *Industrial Fluctuations*, Pigou emphasized that the monetary aspect of business cycles was much more important to fluctuations in unemployment than wage adjustment. In a journal article, however, he stated that major part of the high unemployment should be attributed to the failure of money wage adjustment. I argue that, on balance, Pigou attached greater importance to monetary problems than to the wage rigidity.

Keywords

Pigou, business cycle, unemployment, inter-war period, gold standard

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