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In this paper I examine A. C. Pigou's views on the unemployment policies, based on the premise that, as he himself acknowledged, his theory of business fluctuations was one integral part of his whole thought about unemployment. In his *Industrial Fluctuations* (1927), Pigou gave the most extensive treatment to the monetary policy among the measures against business fluctuations. There he advocated more prompt and smooth action by the Bank of England in order to effectively stabilize the movement of general prices and the economy as a whole. In order for its action not to be affected by external monetary shocks, he suggested the withdrawal from the gold standard should the public opinion and international diplomatic relations allow it. Pigou, meanwhile, placed much less importance on wage adjustment as a palliative against business cycle.

The recent studies direct attention to the fact that Pigou pointed out that after World War I money wages were made rigid by such factors as contemporary institutional changes in labor markets. This picture, however, lacks a more important element of his thought: the monetary cause due to the gold standard on the prewar parity. Putting his indirect remarks on this influence together, I argue that Pigou was well aware of the monetary situation and seemed to place greater importance on the monetary influence than the wage rigidity.

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1 Introduction

Keynes condemned Pigou in *General Theory* so unflinchingly and definitively that Pigou had been seen for long as proposing in *Theory of Unemployment* (1933) the overall wage cut as an ameliorative policy against unemployment. Hutchison (1978) and Aslanbeigui (1989), however, showed their oppositions against this view, pointing to the fact that Pigou proposed reflationary policies in the *Times* in the thirties. They demonstrated the agreement in the policy proposal between Keynes and Pigou.[1] But it is undoubtable that Pigou proposed wage adjustment, not just as a theoretical consequence, but as a practical policy; and that he continued to do so until the end of his career. Then how much weight did he place on wage adjustment? How much more, or less, effective did he think wage adjustment was than other ameliorative measures such as public works and monetary policy? In this paper we will examine the relative importance Pigou attached to each measure based on his *Industrial Fluctuations* (1927), which he himself noted was complementary to *Theory of Unemployment*; and conclude that wage adjustment, in his system, was a less effective measure.

Next we will be concerned with how Pigou applied this system of industrial fluctuations to the British economy after World War I. As Laidler (1999, 159–60) already notices, Pigou pointed to the postwar change that the average rate of wage had been made much more rigid than it was before the war. It is true, as Laidler suggests, that Pigou found this change responsible for the substantial part of the contemporary mass unemployment; but it is inadequate, we argue, in grasping his thought on practical policy. Less explicit though it was than the problem of wage rigidity, Pigou had left many indirect statements, as well, on the contemporary significant fall in prices due to the finxed exchange rate under the gold standard. Based on these evidences I will argue that Pigou had a consistent analysis on the causes for mass unemployment, putting more weight on the price fall rather than wage rigidity in spite of his clear statement above.

Sections 2 and 3 presents respectively the analytical aspect and the remedial aspect of Pigou's theory on business fluctuations. Section 4 examines the relation between the problem of wage rigidity in the twenties and the contemporary monetary disturbance in Pigou's writings. Then I conclude that Pigou consistently recognized the importance of monetary policy.

[1] Ambrosi (2003), who points out the macro-theoretical difference between Keynes and Pigou, acknowledges that Pigou supported reflation (Ambrosi, 2003, 117–8).

2 Causes of unemployment

Pigou's theory of business cycle originates out of the purpose to analyze unemployment, as stated in the preface of his earlier book, *Wealth and Welfare* (1912).[2] This purpose is kept in *Industrial Fluctuations* (*IF* hereafter), too, the evidence of which is that Pigou uses the rate of unemployment as the main barometer of business fluctuations.

First in *IF*, Pigou notices the broad tendency that the aggregate supply of labor adjusts itself to the long-term movement of the aggregate demand for labor; and thereby defines the direct cause of the movement of unemployment (or business cycle) as "deviations in the movement of the demand schedule away from its general line of trend" (Pigou, 1927a, 22). That is to say, when the demand for labor is stable,

> the wage-rate would settle down at the level required to give employment to the whole available supply of able-bodied labour. It is only ecause demand fluctuates that convention in wage-rates acts as it does: the rate is adapted to the conditions of normal times. (Pigou, 1927a, 245)

To Pigou, who holds that the absence of the movement in demand for labor means the absence of unemployment in the long run, the theory of business fluctuations subsumes the theory of unemployment.

Pigou starts his analysis by relating the movement of demand for labor to the present value of the anticipated yield entertained by businessmen (Pigou, 1927a, 26). The present value depends on its numerator, the anticipated yield and its denominator, the rate of discounting. The latter's changes come about, in the short run, only through the variation in the quantity of money. Consequently, in the system of *IF*, direct causes of business fluctuations are reduced to the following two: (1) the anticipated yield entertained by businessmen and (2) the quantity of money.

Pigou divides the first cause of business fluctuations, the anticipated yield of businessmen into two subdivisions. The first of them is "real causes", which consist in "changes that have occurred, or are about to occur, in actual industrial conditions" (Pigou, 1927a, 35). Among real causes are included changes in the yield of crops, inventions and improvement in the method of production, discovery of mineral deposits, industrial disputes, wars, and foreign business fluctuations (including changes in custom duties). The second of the subdivisions is "psychological causes". Psychological causes consist in the "errors" necessarily involved in the forecasts for future conditions, the existence of which enlarges the fluctuation beyond the magnitude real causes account for. Pigou attributes the fact that a competitive economy is liable to this error to the following reasons. First, industries highly organized, manufactures carry less stock, while dealers undertake the office of forecast; and the way is still widely opened for the error.[3] Second, it is practically impossible to extrude the general public from stock exchange; and their lack of judgment or information causes disturbances. Third, the fact that in a competitive economy independent agents make decisions on investment is a factor to extend errors of forecast. Because each of the agents "usually pays too little attention to

[2] "Several years ago I began to study the causes of unemployment. It soon became apparent, however, that these causes are so closely interwoven with the general body of economic activity that an isolated treatment of them is scarcely practicable" (Pigou, 1912, v).

[3] Though Pigou doesn't mention this, the role of dealers is indispensable in the system of R. Hawtrey. According to Hawtrey, it is through the stock held by dealers that the rate of interest or the movement of prices affects the level of output and employment. See Howson (1985).

the fact that his rivals are likely to have formed the same opinion and to be acting on it" (Pigou, 1927a, 77). This circumstance makes difficut the optimal intertemporal allocation of productive factors. It is not practicable to devise "forward buying", or future trade on all kinds of factors; nor is it possible for the single combined agent in a Trust or a Kartel to continually perform business, in any case, because it will "presently break up again" (Pigou, 1927a, 81). And fourth, while thus firms and investors are independent of one another, they are vulnerable to other agents' psychological states. Pigou takes notice of the possibility that a person may be influenced by someone with whom he/she has no business or credit connection. "Perhaps the buoyancy of a grocer", he quotes from one author, "gives a lumber dealer no adequate reason for altering his conservative attitude towards the business projects upon which he must pass. . . . The fundamental conditions affecting his own business may remain the same; but his conduct is altered because he sees the old facts in a new emotional perspective." (Pigou, 1927a, 86).[4] It is much more certain, however, for the psychological influence to spread among buyers and sellers and debtors and creditors. Thus excessive optimism or pessimism would easily spread itself around the business world. The substantial part of a business fluctuation, he asserts, depends on psychological errors.

The second cause of business fluctuations is, as noted above, the variations in quantity of money that affect the rate of discounting. In the latter half of the 1920s, "there were, in all, some thirty countries whose currencies were legally or de facto based on gold" (Pigou, 1927a, 104); and, therefore, disturbances in the international gold market brought about changes in quantity of money within each of these countries. Consequently, for instance, when "between 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, 193), the general prices in Britain fell. Thus between countries on the gold standard a simple fact of credit expansion in any foreign country might be a factor to disturb the monetary situation in a domestic economy through fixed exchange rate.

Money has not only the function of generating such autonomous changes, but also, Pigou emphasizes, the function of expanding the fluctuations initiated by some causes. If the present value of the anticipated yield of businessmen were improved by whatever causes, they can resort to, except internal reserves or issuing of debentures, bank credits as a financial resource. In the latter case, the aggregate quantity of money rises. Since it is likely that "income velocity of monetary circulation" rises, the general prices is likely to rise, which brings about what Pigou calls "forced levies".[5] Through this process, businessmen can levy the real resources from the general public more than the latter is willing to save. In addition, in the case of rising prices the rates of wage and interest contracted in the past are changed into the rates in real terms advantageous to businessmen, who are "in the main, borrowers and wage-payers" (Pigou, 1927a, 137). "Forced levies" and "doctorings of the terms of past contracts" will further the improvement of the anticipated yield through the psychological channel, resulting in further rise of prices. Thus business improvement once started will continue to accelerate itself; and "[u]ntil 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).

[4] These sentences are quoted from Mitchell, *Business Cycles*, p. 455. In *IF*, Pigou relis on him in many other places.

[5] Laidler (1999, 89–90) says Pigou absorbed the idea of forced saving or forced levy, not from the Austrian School, but from D. H. Robertson.

What has been thus far discussed is concerned with the movement of demand for labor. Pigou doesn't end his explanation here, but places some importance on wage adjustment between employers and employees. The reason why he does so is that he thinks different kinds of labor are more likely to be complementary than to be substitutive to each other.

> Suppose that ten groups of workpeople in ten occupations contribute in about equal proportions towards making some finished commodity. Suppose, further, that the elasticity of demand for the finished commodity is unity . . . Then a 10 per cent cut in the wages of one of the occupations will involve a 1 per cent fall in the price of the commodity and also a 1 per cent increase in the quantity of labour demanded in that occupation. But it will also involve a 1 per cent increase in the quantity of labour demanded in each of the other occupations. Hence, although, if a single group accepts a 10 per cent wage-cut, employment in that group will expand only 1 per cent, should all the groups accept a 10 per cent wage-cut employment in all the groups collectively will expand 10 per cent. . . . As regards industries which are not joint contributors to a common work, if the mutual demand for one another's products has an elasticity greater than unity, a reduction of costs in one will stimulate output in the others. (Pigou, 1927a, 201–2)

Based on this general-equilibrium reasoning, Pigou rebuts "popular arguments" whose sights are too small to correctly estimate the evil effects of wage rigidity. Flexibility or rigidity of wage-rates, Pigou concludes, has greater effects than they suggests. Yet he assumes that in real life the mutual distrust between employers and employees, as will be discussed below, prevents wage adjustment from being flexible, which generates more large movement of unemployment than can practically be reduced.

To sum up, Pigou's system of business fluctuations can be characterized by its simplicity and flexibility. The channels through which to bring about changes in demand for labor are distinguished into (1) real, (2) psychological, and (3) monetary ones; the impulses of these different channels affect one another so as to create the further effects continually. Furthermore, the movement of demand for labor thus brought about is hardly ameliorated by wage rigidity. Analyzing the causes of business fluctuations in this manner, Pigou passes on to the examination on remedies by which to minimize the fluctuations. The methods to which he directs attention are monetary policies, public works, and wage adjustment.

3 Remedies to business fluctuations

Pigou recognizes the social losses due to unemployment (Pigou, 1927a, 241–7). Unemployment is diminution of incomes "concentrated on the unfortunate few" and also deteriorates psychological as well as physical capabilities of workers. Besides, the fear of unemployment begets a "haunting sense of insecurity and danger" even to the mind of currently employed workers. Meanwhile, excessive prosperity that lies on the other end of business cycle is not a propitious condition to workers. Because "when, as often happens, the fat months imply long hours of overtime, they will not yield any good effects to set against the evil effects of the lean months, but will themselves add further evil effects". For Pigou, to stabilize business fluctuations means the "relief [of workpeople] from the distresses of unemployment and the strain of booms".[6] Thus it is with the aim of improving the predicaments of workers that Pigou discusses the following remedies.

[6] Keynes's rhetorical imperative in the *General Theory* to the effect that we should aim at a constant boom might have been directed against such an orthodox view as Pigou's that we should restrict a boom as well as a slump. See Keynes (1936, 322–7).

3.1 Monetary policy

Keynes's assertion that Pigou relies too much on real analysis might be valid when concerned with *Theory of Unemployment* (1933), but not so when concerned with *IF*. It is safe to say monetary policy is the most important subject in the latter volume. Pigou raises an issue that until at least the middle of the 1920s the Bank of England had been aiming at stabilizing its gold reserve rather than the general prices in Britain; and proposes that it take on the latter goal proactively.

Pigou calls the conventional policy the Bank of England had been employing "reserve discount policy"; and characterizes it as follows (Pigou, 1927a, 278–9). First, this policy tries to keep the proportion of the gold reserve to its liabilities (i.e. money supply) above a certain level in order to secure against any danger of default. Second, In times of good business condition where the danger of default is remote, "people are ready to pay higher interest on a given volume of loans"; and under this circumstance the Bank maximizes the profit by reducing the proportion of reserve down to the acceptable minimum. The reason why the Central Bank makes it a principle to maximize profit is to use this profit as a resource to augment the gold reserve. Thus in times of rising prices the rate of interest will be raised, not to restrict the rise in prices, but to take advantage of the opportunities for profit. The manipulation of interest rate, as a result, is likely to lag behind the price movement under the "reserve discount policy".

Pigou proposes to substitute for "reserve discount policy" "stabilising discount policy" aiming at stabilizing general prices. Yet he notices two difficulties involved in this shift of policies. On the one hand, there needs to exist some discretion for the Central Bank to inspect and interpret various statistics. To effectively restrict the price fluctuations, it has to devise a policy in an earlier stage than it is possible to spot the realized price changes and to respond mechanically to them. Because "the seeds of expansions and contractions", he says, "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, when making decisions on monetary policy, the Central Bank, instead of responding to the realized movements of prices or bank credit, needs to interpret the movements of such "forecasters", or 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).[7] Yet in the contemporary policy debate there existed a general distaste for permitting to the Central Bank discretion because it might involve "stupidity and perversity on the part of governing persons" (Pigou, 1927a, 295). Pigou, though paying attention to this, is in favor of stabilizing policy on the whole.[8]

The second difficulty with the shift from "reserve discount policy" to "stabilising discount policy" consists in the latter's discrepancy with the current international monetary system, the

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[7] According to Eshag (1963, 136n99), monetary policy based on leading indicators had been already advocated by such Cambridge economists as Hawtrey, Keynes, and Lavington before the publication of *IF* (1927). But in 1924 in the article called "Correctives of the Trade Cycle" Pigou proposed the same method (Pigou, 1924, 115–6). It might not be wrong, therefore, to say that Pigou started to recognize the importance of the monetary policy based on leading indicators at about the same time as they did.

[8] Pigou writes, "since the restoration of the gold standard, the Bank of England have recently, it would seem, adopted in some considerable degree, a policy directed towards price stabilisation" (Pigou, 1927a, 278n2). This seems to imply that the general distaste for the discretion was gradually waning around this time.

gold standard. The gold standard, though making for the fixed exchange rate, makes a country on it vulnerable to the disturbances from a international gold market. If the international gold market is stable to some extent, the Central Bank can refuse to have its policy affected by moderate influxes into or effluxes out of its reserve. But it doesn't always stay stable. In the following quote Pigou anticipates the situation where, facing the great disturbances in the international gold market, Britain was forced to abandon the gold standard several years later. If the value of gold strongly trends upward for a long time,

> [t]he Central Bank, to prevent prices [in the domestic economy] from falling, must reduce its discount rate and create more and more credits on the basis of a steadily diminishing gold reserve. Obviously it cannot carry on this policy for long: if it presses it too far, it may find itself without sufficient legal tender to meet its customers' cheques, and collapse in ignonimity. (Pigou, 1927a, 305)

That is to say, in such a condition the Central Bank has to pursue the two contradictory goals, that is, (1) to enlarge the money supply in order to prop up the domestic economy, and (2) to maintain the proportion of the gold reserve in order to preserve confidence in the currency. This is why Pigou declares 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). He finds it possible to stabilize the gold market for the time being by such international coordination as contemplated in the resolutions of the Genoa Conference of 1922. Yet he doesn't have complete faith in this method. Pigou suggests that there will come up the situation which will require a national decision on international monetary system. "To make a choice between that policy [i.e. the maintenance of the gold standard helped by international coordination] and the other various policies that are open to us is a task that cannot be attempted in a work of this kind. Economic analysis can provide data for statesmen; but the attitude of public opinion and the current political and diplomatic situation are dominant factors in determining what, on the whole, it is best to do" (Pigou, 1927a, 305). This quote can be safely interpreted as proposing the introduction of an inconvertible paper currency should the "political and diplomatic situation" allow, since "economic analysis" clearly suggests what is best; and since Pigou supposes the possible restrictive measures against overissue of currency after the assumed departure from the gold standard.[9]

What has been shown suggests that Pigou's attitude towards monetary policy was closely in touch with realities of those days. He, though somewhat hesitating the drastic shift in view of the rigid nature of the general opinion, preferred forward-looking policy aimed at stabilizing a domestic economy to the mechanical "fool-proof" method of maintaining the gold reserve. Even the depart from the gold standard was on the agenda of his discussion. Pigou guesses the quantitative impact and says that "if a policy of price stabilisation were successfully carried through, the amplitude of industrial fluctuations would be substantially reduced—it might be cut down to *half* of what it is at present" (Pigou, 1927a, 219, my emphasis).

[9] Pigou was one of the signatories to the Cunliffe Report (1918) and the Bradbury Report (1924), both of which recommended the restoration of the gold standard on the prewar parity. Yet, according to Winch (1969, 154), in 1930 in his testimony before the Macmillan Committee Pigou looked back at the situation and said no other policies could not be accepted by the general public. There he mentioned, "I was a stabiliser long before [serving at the Cunliffe Committee]"(*ibid.*).

3.2 Public works

Pigou also take note of the following defect of monetary policy. In times of serious depression when borrowers anticipate unacceptably low profit from any investment "[p]eople do not want to borrow on any terms, and the banks cannot force them to do so" (Pigou, 1927a, 267). Then monetary policy is not valid unless the negative rate of interest is possible. In *IF* Pigou fails to provide any way out; and says instead that monetary policy is effective to restrict booms so that it is just as effective to restrict slumps, which Pigou assumes are resulted from the burst of booms.

In his later work, *Theory of Unemployment* (1933) Pigou, assuming the same framework as in *IF*, briefly discusses the measure effective even to the serious depression. Here Pigou introduces the new concept of "proper rate of interest" (Pigou, 1933b, 213) that should be the rate under the "stabilising discount policy", or that should stabilize the general prices. And he says,

> [i]t is, indeed, always possible for the Central Bank, by open market operations, to force out money into balances held by the public. But in times of deep depression, when industrialists see no hope anywhere, there may be no positive rate of money interest that will avail to get this money used. The proper money rate . . . may, in short, be a negative rate, and, therefore, one which it is impossible to introduce. In these circumstances attempts to uphold the standard monetary system [i.e. stabilising discount policy in *IF*], so long as reliance is placed on purely monetary defences, are bound to fail. If, however, at the same time that the banking system keeps money cheap the Government adopts a policy of public works, the risk of failure is greatly reduced. For this policy, providing, as it does, new openings for real investment, pushes up the proper rate of bank interest above what it would otherwise have been. Thus it may turn a negative proper rate, to which it is impossible for any actual rate to conform, into a positive one. (*ibid.*)

Here we notice that Pigou considered the public works as a complementary measure to monetary policy.

Through what channel Pigou thinks the public works would affect the "proper rate of interest"? The public works normally involve the following two actions: (1) increasing bank credit more than the private sector alone attains, and (2) putting into use the money thus borrowed. To explain this with the exchange equation Pigou uses in *Theory of Unemployment*, $Mv = I$ (M means the total money stock, v the income velocity, I money income), the former action is represented by the increase in M, the latter by the increase in v. Pigou places more importance on the movement of v than of M. The reason is that, since M includes the hoarded money that is not put into the "income-expenditure circuit", the increase in M realized by the increase in new bank credit doesn't always lead to the increase in money income, but might only lead to the increase in the hoarding, which is represented by the decrease in v (Pigou, 1933b, 197). For Pigou the public works consist in the only effective measure to raise the money income in the times of serious depression.[10]

[10] Pigou mentions elsewhere there is another situation where monetary policy is ineffective so that public works are the only effective measure. If a country is on the gold standard and the international market is unstable, the cut of a domestic interest rate might incur a serious efflux of gold (Pigou, 1929, 186). In such a circumstance public works is the only effective measure against unemployment. According to Howson (1985, 165) Keynes also makes the same point.

Obviously this assertion of Pigou's that in times of depression income velocity is more important than money stock is directed at R. Hawtrey. Hawtrey, one of the contributors to the so-called "Treasury View", insisting the invalidness of public works,[11] was a authority figure in monetary theory, arguing public works are relevant only insofar as they augment money stock (Hawtrey, 1928, 112). Hawtrey, assuming that there is negligible amount of hoarded money in reality so that changes in income velocity v are rare and insignificant, considered the money stock M to be the all-important element. For him public works was "merely a piece of ritual, convenient to people who want to be able to say that they are doing something, but otherwise irrelevant" (*ibid.*). Hawtrey had no doubt, on the other hand, that the increase in money supply by monetary policy could in any circumstance overcome unemployment. It was this view of Hawtrey's that Pigou implicitly criticized with the argument above.[12]

Pigou estimates the effect of the price stabilization to be fairly large ("*half* of what [the amplitude of industrial fluctuations] is at present") as noted above. Here we've shown that for Pigou public works are the integral part of price stabilization policy; and so we cannot doubt that he recognizes public works as an important remedy against unemployment. What he criticizes was the so-called "Treasury View" and its contributor, Hawtrey. There is nothing for Keynes to accuse Pigou of in this field.

3.3 Wage adjustment

The next measure to come under examination in *IF* is wage adjustment. Yet Pigou considers this measure to be of less importance than such measures as noted above.

Pigou had had since the earliest book, *Principles and Methods of Industrial Peace* (1905) practical views that flexibility of wage adjustment would depend on the states of the relations between employers and employees; and that the states of the relations would depend on the effectiveness of the machinery for negotiation. Thus for Pigou the relations between employers and employees are not a given factor, but one to be improved. These views are maintained in *IF*.

> Machinery for collective bargaining may be set up, and, partly as cause, partly as effect of this, a spirit of goodwill and accommodation may be engendered. In representative meetings of employers and employed not only mechanical indices of prices and so on, but al considerations relevant to wages, may be periodically reviewed in a whole-hearted effort to secure a reasonable settlement. Where arrangements of this kind exist each side will be ready to make concessions if the conditions seem to call for them, confident that the other side, in converse circumstances, will do likewise. Wage-rates will be rendered less rigid, the amplitude of industrial fluctuations associated with given variations in demand will be pro tanto reduced, and economic welfare correspondingly augmented.

Here Pigou makes it clear that wage adjustment should be improved through the betterment of the relations between employers and employees: the government could not directly play a

[11] According to Clarke (1988, ch. 3), the "Treasury View" was a counterargument which the Conservative Chancellor of Exchequer W. Churchill ordered to compose against the expansion policies advocated by the Liberal Party in the 1929 election. This view was stated in the Budget speech in April 1929, and published as a White Paper in the following month. Although Hawtrey stayed in Harvard in 1928–9 so that he could not be involved in the formulation of the Treasury View in the final stage, he was counted on as being "the one man who ought to know whether Keynes was talking nonsense.

[12] The settlement of this dispute would require the actual amount of the hoarded money. Hawtrey also, assuming its insignificance, questioned the theory of liquidity preference in Keynes's *General Theory*. See Laidler (1999, ch. 11).

role in this process.

In addition, Pigou doesn't consider, it should be noticed, wage adjustment to be quantitatively important. His guess on the effect of improvement of wage adjustment is "one-eighth [of what the amplitude of fluctuations is at present]" (Pigou, 1927a, 225), which is much less than the effect of price stabilization (half).

That Pigou had never called for the wage cut as a practical policy of government is made clear further by the following quotes. In the preface in *Lapses from Full Employment* (1945), the volume recasted for the general reader, he says, "Professor Dennis Robertson, who has very kindly read my proofs, has warned me that the form of the book may suggest that I am in favour of attacking the problem of unemployment by manipulating wages rather than by manipulating demand. I wish, therefore, to say clearly that this is not so." (Pigou, 1945, v). The similar remark is found in *Theory of Unemployment*: "[this book's] aim is to clarify thought, not to advocate a policy" (Pigou, 1933b, v). Then what was his policy at the time of the publication of *Theory of Unemployment* in 1933? It is expressly stated in his article in the *Times* in the same year.

> For prosperity to be restored either money costs must fall or money prices must rise. The practical difficulties in the way of the former solution have proved so serious and the friction to be overcome so great that the main body of instructed opinion has turned towards the latter. (Pigou, 1933a, 13)

Pigou goes on to recommend the cheap money policy so as to raise general prices.

4 Wage rigidity in the 1920s

It is now evident that Pigou places much more importance on price stabilization than on wage adjustment in *IF*. Nevertheless, Pigou brings up the apparently opposing view in the article called "Wage Policy and Unemployment" published in the same year as *IF* (1927), to the effect that the failure of wage adjustment causes a great deal of unemployment. As Laidler (1999, 159–60) notices,[13] Pigou asserted that after World War I the factors particular in this period had caused wage adjustment between employers and employees to be more rigid than before the war, the result of which was mass unemployment (fig. 1 shows the movement of unemployment in 1850–1926). Those factors consist in, Pigou identifies, (1) a couple of institutional changes in a labor market, and (2) structural disparities between two groups of industries.[14]

First, there were two following major institutional changes in the labor market after World War I: (1) "direct State action" and (2) the "development of unemployment insurance" (Pigou, 1927b, 355). The first of these, "direct state action", as specified in *Theory of Unemployment* (Pigou, 1933b, 255), refers to the minimum wage regulation. In Britain the minimum wage legislation (Trade Boards Act) was so amended as to enlarge the range of covered occupations in 1918. Pigou, in 1922, treated the amendment of the Act critically, warning that it would create the tendency for the wage rates of covered workers to stay higher than the competitive levels. Second, the development of public unemployment insurance, Pigou believes, has promoted higher wages by solidify employees' bargaining position. Before the war, since the trade unions paid for their benefits to the unemployed unionists out of their own funds, "heavy unemployment means a heavy drain on union funds" (Pigou, 1933b, 254). This situation had

[13] Aslanbeigui (1992, 422) briefly mentions this.

[14] In many other places Pigou relates mass unemployment in the 1920s to the post-war wage rigidity (Pigou 1933, 252–6; 1941, 93; 1945, 73; 1947, Pt. 2; 1952, 1003).

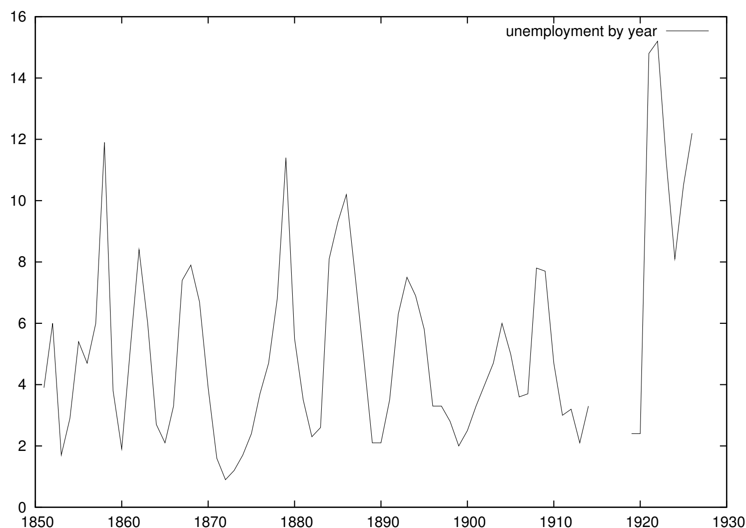

Fig. 1

brought about a proactive restraint on the side of trade unions before the war. After the war, however, when the public unemployment insurance was expanded to almost all the occupations, and when "unemployed members are 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, this check does not operate" (*ibid.*). By these two social legislations, Pigou asserts, "wage-rates have, over a wide area, been set at a level which is too high [to realize full employment]" (Pigou, 1927b, 355). Yet Pigou has no intention to call for the abolition or the cutback of these legislations, which suggests that as regards these social legislations he attaches more weight to their merit of helping the ill-situated people than to their demerit of promoting higher wages.

The second factor in promoting wage rigidity in the 1920s that Pigou points to is, as detailed in *Aspects of British Economic History* (1947),[15] the structural disparity between two groups of industries, namely the depressed export-related industries, "unsheltered industries" and the better-off industries catering to the domestic market, "unsheltered industries". In the real terms the British exports in 1923 was around 80 per cent of what was in 1913. Pigou attributes this fact to several causes, one of which is that, particularly in the textile industries, new manufacturing countries such as Japan and India developed not only at home but in other countries, first, because they had been shut off from the supply of the European countries during the war and, second, because the agricultural countries, faced with the fall of prices of their produce after the war, had to be content with cheaper products from these countries. The unfavorable situation in the export industries also deteriorated dock and river transport industries. Meanwhile the industries for the domestic market, being "sheltered" from such fierce competition as the export industries had to bear with, enjoyed the relative prosperity. Pigou thinks that the structural disparity, aggravated with slow labor movement, was, though itself the much-noticed cause for unemployment, a factor in promoting rigidity of the average

[15] The fact that this volume was written in the 1940s might stir up the doubt that Pigou did not notice the factor in promoting wage rigidity due to the structural disparity in earlier period. But according to Howson and Winch (1977, 64) Pigou mentioned it at the Economic Advisory Council in 1930.

rate of wages in the economy as a whole. For, "it is difficult to see", he writes, " how, in industries that were themselves prosperous, work-people could have been brought to accept wage reductions" (Pigou, 1947, 55). Thus his point here is that since the labor market was divided between these two differently-situated groups of industries, in the economy as a whole the average rate of wages had become insensitive even to the large increase in the aggregate amount of unemployment. Under this circumstance forced transference of labor from the depressed industries to the relatively prosperous industries could make an ameliorative measure. Pigou gives a cursory treatment to this measure in *Theory of Unemployment* (Pigou, 1933b, 283). Yet this treatment doesn't include discussion on the feasibility or the possible ramifications of this measure, not to mention that he clearly state the disadvantage outweighing the advantage in his later *Lapses from Full Employment* (1945), saying "[u]nemployment is always an evil, but sometimes to reduce it might entail worse evils" (Pigou, 1945, 68).

Thus Pigou considers these two factors to cause wage rigidity after World War I. In fact, leaving aside the violent fluctuations immediately after the war, in spite of the fact that in the twenties the general prices fell around 10 per cent and the rate of unemployment almost always remained above 10 per cent, the money rate of wages remained unchanged over this period (Mitchell 1962, 345; Clarke 1996, ch. 4).[16] For Pigou, who has faith in the effectiveness of the collective bargainings (see 3.3 above), this situation must have been surprising. He assumes that "at least 5 per cent. of extra unemployment" (Pigou, 1927b, 356) be attributed to the wage rigidity particular to the post-war economy. The quantitative estimate of 5 per cent, however, seems to contradict Pigou's own system in *IF*, which has been examined in section 3 above. He has placed much more weight on price stabilization than on wage adjustment in *IF*. Why does he identify the worsening of wage adjustment alone as a factor responsible for the substantial part of the increase in unemployment in the twenties? Why doesn't he identify the heavy price fall as a more powerful factor, so that his diagnosis could be consistent with the system of *IF*? The answer I suggest is that in the late twenties he didn't have an option to deal with the abrogation of the gold standard as a practical policy, so that he had to content himself with identifying the factor other than the price fall the gold standard forced on Britain. Before taking on this problem let us discuss the direct cause for the abrupt rise in unemployment in the early 1920s.

Pigou says the following in "Wage Policy and Unemployment", the article which first points to the problem of wage rigidity in 1927. "It is a matter of common knowledge that the great slump of 1920–1 had its origin in causes lying altogether outside wages, and was intimately associated, whether, as some hold, as the direct effect of a deliberate policy of monetary deflation, or, as others contend, as a joint consequence of the bursting of a gigantic bubble of unwarranted optimism, with a heavy fall in prices" (Pigou, 1927b, 358–9). He acknowledges here that the upsurge in unemployment in 1920–1 was spurred, if not initiated, by the purely monetary factor. Then why was "a deliberate policy of monetary deflation" taken? That is because the government wholeheartedly committed to the restoration of the gold standard at that time. Pigou depicts this situation at some length in *Aspects of British Economic History, 1918–1925* (1947).

First let us look at the movement of unemployment in this period. By means of the statistics adjusted with the estimate of 1918–19 by Pigou (fig. 2), we can see how Pigou divides this period into four parts. First, what Pigou calls the "Breathing Space" consists in the short period between the Armistice and April 1919, when the unemployment rose. Second, the reconstruction boom persisted just one year from April 1919 to April 1920, during which the

[16] According to Howson and Winch (1977, 59–60), L. Robbins and H. Henderson, too, pointed to the wage rigidity at the Economic Advisory Council in 1930.

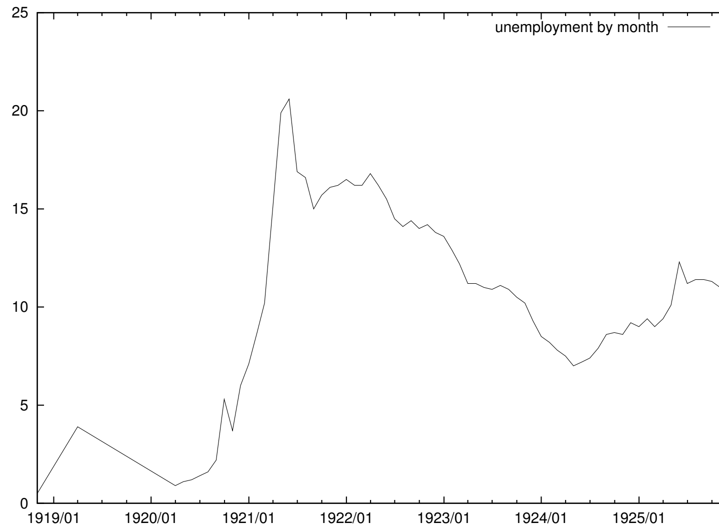

Fig. 2

statistics show unemployment fell. Third, the rather prolonged slump, which started from April 1920, is characterized with the unprecedented upsurge in unemployment. In June 1921 the rate of unemployment, aggravated further by the great strike in the coalmine, went beyond the mark of 20 per cent. The great slump, Pigou asserts, continued around two years and a half till the end of 1922. Fourth and lastly, the downward momentum ran out of steam in the end of 1922, leaving the economy in stagnancy. This stagnant state of economy, Pigou supposes, extended beyond the period under discussion and lasted till "the Wall Street crash of 1929 heralded a second and greater Slump" (Pigou, 1947, 7).

Why did the slump starting from April 1920 build such momentum? Pigou's answer is bifurcated into (1) the real and (2) the monetary causes. The real causes he points to includes (1) the fall of aggregate demand as the restoration demand quieted down, and (2) the depressed export of Britain, which has been discussed above. By virtue of these real causes the aggregate demand for labor would have to be somewhat contracted after the restoration boom. More essential in spurring the slump, however, were the monetary causes.

Pigou, who has criticized Hawtrey for his excessive reliance on the monetary phenomena and for assuming the invalidity of public works as discussed in 3.2, in *Aspects of British Economic History* criticizes him and emphasizes that purely monetary causes alone cannot directly turn the business fluctuation. Nevertheless he acknowleges that monetary causes are capable of accelerating the fluctuations much further than real causes alone are capable. He depicts the process through which the government at that time threw the economy into chaos by committing to the restoration of the pre-war parity, the "sacrosanct" £1 = \$4.86 (Pigou, 1947, 145–51).[17] After World War I it did not seem within the range of practicable policy for Britain to fix the exchange rate to the pre-war parity because of the relative rise in the prices in Britain relative to those in the United States. Consequently the British government officially prohibited the gold export, which had been refrained from voluntarily during the war. When the restoration boom came soon, the Bank of England, now relieved from the duty of

[17] (Garside, 1990, ch. 5) laid out the almost parallel explanation on the monetary circumstances in post-war Britain.

maintaining the gold reserve, failed to swiftly respond to the price rise, resulting in the intense price rise in the Boom year by around 40 per cent. After the turn of business fluctuation in April 1920 there was in turn the sharp decline of prices. Yet the Bank of England didn't respond to the price fall. This second inaction of it was not a mistake, but a deliberate policy with the aim which must be pursued even at the cost of the short-run stabilization.

> Though in March 1919 the British Government deliberately broke that link, it only did so with the firm intention of forging it again in the near future. Its avowed policy was to re-establish our country on a gold basis at the pre-war parity as soon as that should prove practicable. 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. . . . A necessary preliminary to the restoration of the Gold Standard was to bring the exchange back to the neighbourhood of par. When it began to run away, measures had to be taken to arrest it; when it tended to stand still, further measures to improve it. These measures took the form of operations on the discount rate and Bank dealings in securities aimed at reducing the English, relatively to the American, price level. (Pigou, 1947, 148)

There were two reasons why Britain had to accept the extensive fall of prices. First the price rise in the Boom year in Britain was also large relatively to the price movement in the United States, leading to the depreciation of the sterling by 16 per cent in that year, that is, from $4.65 to $3.91 to the pound. Thus in April 1920 the aimed parity was substantially far from the current rate of exchange and the significant relative fall in the British prices would be needed. Second, around the same time as the downturn of the British economy the United States economy also saw its downturn. Yet in the United States the newly-formed Federal Reserve system failed to effectively act in response, Pigou asserts, because it had not realized the cumulative effect of deflation and the working of the interest rate (Pigou, 1947, 196).[18] Thus, in spite of the price fall, the rate of interest had not been lowered in the United States for a year, neither had it been in Britain, which had to reduce its prices ahead of the United States. As a result the British prices fell sharply, yet with the benefit of which the sterling came back nearly to the prewar parity against the dollar by the end of 1922. The exchange rate being more or less stable from that point of time, the rate of interest was kept low. In July 1924, when "the goal of a restored Gold Standard was in sight" (Pigou, 1947, 151), however, the Bank of England take the tightening measure to slightly raise the market rate of interest. In the same month the rate of unemployment turned upward. To sum up, the British government, while attaining the original goal of restoring the gold standard, by the same process gave birth to the violent movement of prices and put its economy into the tremendous disorder.

Thus Pigou realizes that what enlarged the unemployment, aside from initiating the turn, in the post-war period was the purely monetary cause of the sharp deflation. Therefore, it was the unemployment thus enlarged before the restoration of the gold standard that, Pigou emphasized in the 1927 article, the wage rigidity prevented from declining at all. As is clear from what has been seen, however, the cause for the enlargement of unemployment was by no means unrelated to the gold standard; on the contrary it was the deliberate credit crunch by the government in order to restore the gold standard. The pressure of deflation persisted,

[18] According to Wheelock (1991, 14–17), the Federal Reserve system was formed just before World War I. Although it came to play an active role in stabilizing the economy with the use of open market operation from around 1923, it did not until then.

of course, after the restoration in 1925. Through the latter half of the 1920s, according to (Clarke, 1996, ch. 4), the Bank rate was held around 5 per cent; the wholesale prices declined by 17 per cent, and the cost of living by 6 per cent.Nonetheless, "few had the nerve", writes one historian, "even to consider voluntarily breaking with gold" (Garside, 1990, 132). Winch (1969, 137–8), too, notes that in the Macmillan Committee no one including Keynes, except Ernest Bevin, stood up for abandonment of the gold standard. The reason why they objected the abandonment was that "the earnings of the City depended on international monetary stability; and that the export trade was likely to be damaged by fluctuating exchanges" (*ibid.*). In addition the gold standard on the prewar parity seems to have had the symbolic significance among the major industrialized countries that each of them restrict itself from the competitive depreciation of currency. Let us recollect the quote from Pigou's *IF*: "Economic analysis can provide data for statesmen; butthe attitude of public opinion and the current political and diplomatic situation are dominant factors in determining what, on the whole, it is best to do [as regards the international monetary system]" (Pigou, 1927a, 305). His economic analysis with the domestic stability has clearly suggested that it be the best to abandon the gold standard and restrict the price fall. This view of his wasn't made less important so much as more important and more urgent by the realization of the problem of wage rigidity particular to the postwar economy.[19]

It was not a coincidence that Pigou argued for the cheap money policy in 1933 when Britain had gotten off the gold standard. Pigou, as mentioned above, laid out the policy advice in *Times* in 1933. There he proposes such monetary expansion measures as a reduction in the rate of interest and sinking fund payments; and he praises the conversion in 1932 of the War Loan into 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" (Pigou, 1933a, 14). These measures had been impossible to apply under the fixed exchange rate of the gold standard. That said, these expansion measure still had substantial risks: chances were that they would cause destabilization in the currency market, which might lead to the sudden depreciation of the sterling and the capital flight from Britain. Pigou acknowledges, therefore, that it would be the better policy to postpone the decisive action until she could enlist the coordination from the United States. Despite these risks Britain, he maintains, have to do something by herself under the situation in which unemployment exceeded three million.[20] Thus Pigou's advocacy for the monetary expansion should be seen as pleading that the British government take advantage of the policy discretion enlarged by the withdrawal from the gold standard.

5 Conclusion

We have seen Pigou's analysis of unemployment from the viewpoint of its relation to his theory of industrial fluctuations. In his system on industrial fluctuations Pigou divides the causes of business fluctuations under the following three headings: (1) real, (2) psychological,

[19] Pigou supported the restoration of the gold standard at the Cunliffe Committee in 1918 and the Chamberlain-Bradbury Committee in 1924. Probably at that point of time he counted on the effect of wage adjustment. According to his own estimate of the elasticity of aggregate demand for labor with regard to money wages in *Theory of Unemployment* (1933), to reduce 5 per cent of unemployment would require 3.33 per cent of wage reduction. There seems to have existed, according to Mitchell (1962, 344), the decline of wages of such order.

[20] Britain maintained the historically low level of Bank rate from 1932 through the thirties. In the meantime the rate of unemployment, though always above 10 per cent, crawled back from extremely high level of 1931 to the pre-1929 level; the aggregate production rose by 45 per cent. Cf. Cairncross (1995, 65) and Garside (1990, 134–9).

and (3) monetary causes. These three kinds of causes, he asserts, affect one another to initiate and cumulatively strengthen the pressure of either direction. Among the possible remedies what intrigues Pigou most is the price stabilization and the monetary policy as an effective measure to realize it; he, on the other hand, placed much less emphasis on wage adjustment.

When dealing with the economy after World War I, Pigou adds to the system of business fluctuation a new element, that is, the problem of wage rigidity. Before the war the slow but steady wage adjustment was forthcoming when unemployment rose; but after the war, despite the existence of mass unemployment, the average rate of wage was held rigid as the statistics actually show. Pigou ascribes this change to the following facts: (1) that the expansion of state unemployment insurance after the war, he believes, had changed the balance of bargaining positions between employers and unions, and (2) that the structural differential between industries which prevailed after the war prevented the average rate of wage from declining. Though it was quite natural for a contemporary economist to point to this new phenomenon of wage rigidity, it requires some explanation that Pigou didn't pay attention to the substantial fall in prices in the same period.

In Britain in the twenties under the gold standard, the rate of interest had to be held high in order to attract the short-term foreign deposits in Britain so she can maintain the prewar rate of exchange; and this consisted in the pressure of deflation in the period. As regards the gold standard Pigou in his *Industrial Fluctuations* (1927) was concerned with its possible conflict with the domestic stabilization; he, in the meantime, avoided an unambiguous policy proposal because of the actual complexities involving the gold standard such as the confidence in currency. As shown by this cautious attitude of Pigou's, the gold standard seemed to be unchallengeable to the contemporaries. Putting these together we can safely say that for Pigou the wage rigidity in postwar Britain had a significance in suggesting that, aside from the large-scale public works which political circumstances would not permit, the only effective measure against unemployment, namely wage adjustment, would no longer be counted on. When Britain depreciated her currency in 1931, the situations had changed; and in 1933 Pigou proposed that she take advantage of these situations and continue to apply credit expansion policy. From what has been said we can conclude that Pigou consistently recognizes the importance of price stabilization and, as an effective measure, of monetary policy for the sake of minimizing the amplitude of industrial fluctuations and predicaments of workers due to them.

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