

# WAGES AND KEYNES: LESSONS FROM THE PAST

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Keynes' ideas on wage setting and unemployment had a profound effect on American economic thought.<sup>1</sup> Discussion of these ideas can be divided into two categories: historical and analytical. Under historical falls the question of why Keynesianism came (with a lag) to be so influential. Under analytical comes the identification of key Keynesian insights of enduring validity.

The historical analysis below suggests that the influence of Keynesian analysis of wages and unemployment was due to the disarray of economic thinking in the 1930s. It was not "Keynes versus the classics" but Keynes versus the muddle. An important contributing factor to that muddle was lack of appropriate data bases in the 1930s. When such data bases were later developed, Keynesian insights became apparent. Keynes' chief analytical contribution was drawing a distinction between macro versus micro elements of the wage and unemployment issues.

## I. Wages in the General Theory

Keynes emphasized that "classical" theory (illustrated by the writings of A.C. Pigou) could only explain frictional and "voluntary" unemployment. Since workers make wage bargains in nominal terms, they accept real wage cuts caused by rising prices, but resist those caused by nominal wage decreases. But it would be incorrect to attribute cyclical unemployment to such behavior. Keynes noted that money wages fell during the depression and yet unemployment grew. Thus, even when nominal wage cuts occur, they do not alleviate unemployment.

The problem with nominal wage reductions, according to Keynes, was that prices were tied to wage costs. In a micro-level labor market, a wage cut could raise the demand for labor by improving profitability of employers in that market. But, when there is a general reduction in money wages, the cut leaves the ratio of wages to prices (the real wage) unchanged. Classical economists, in Keynes' view, were prone to the "fallacy of composition." They falsely assumed that since workers in a given market could negotiate real wage reductions via nominal wage cuts, workers en masse could do the same.

In the Keynesian model, workers cannot negotiate the real wage, due to the wage/price connection. And they do not seek to do so since preferences in wage determination are linked to wages paid to other workers. Under decentralized, staggered wage setting, a cut

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in wages of one group lowers *relative* wages. But increases in the price level cut real wages across the board and, hence, meet less resistance.

Nominal wage rigidity in the Keynesian system permitted a definition of "involuntary" unemployment. It occurs when more jobs could be created by an increase in the price level, i.e., a diminution of the real wage by inflation rather than by wage cuts. Without the "involuntary" label, unemployment would appear not to be a problem, since the unemployed would have brought the condition upon themselves willingly.

Also, nominal wage rigidity stabilizes the price level when the economy is below full employment. In an auction-type labor market, wages would keep falling in the face of excess supply, whether such reductions would do any good or not. Since real world wages and prices do not fall without limit, the assumption of money wage rigidity made the model more realistic.

Keynes provided a list of possible exceptions to his conclusion that the problem in the labor market cannot be solved in the labor market. Wage cuts (accompanied by price cuts) could have a monetary effect, lowering interest rates and stimulating investment. But Keynes pointed out that it would be easier to increase the money supply to achieve this effect. In any case, he was pessimistic that interest rate manipulations could sufficiently stimulate investment.

According to Keynes, a cut in money wages in an open economy might increase net exports, a stimulatory effect, by improving international competitiveness. It could also worsen the terms of trade, reducing national welfare and, thus, saving (another expansionary impact). Wage cuts might make entrepreneurs more optimistic, stimulating investment. And, the investment effect could be enhanced, if the wage cut were seen as temporary; firms would undertake projects while labor was cheap.

Arrayed against these positive impacts of wage cuts were reverse arguments. Wage cuts cause strikes, making entrepreneurs fearful and harming investment. Pay cuts might lead to expectations of further wage reductions, thus causing postponement of investments. And wage cuts (with price cuts) raise debt burdens, inducing investor pessimism.

Keynes noted that wage cuts redistribute income toward "rentiers" through lower prices. If rentiers had a lower propensity to consume than workers, aggregate demand would decrease and unemployment would rise. This argument is related to a theory then popular in the U.S. that high wages maintained demand through enhanced worker purchasing power, and that low wages caused depressions. The wage/purchasing power doctrine was *not* central to Keynes. But some in the U.S., looking for rationale for the wage/purchasing power doctrine, assumed Keynesian support for New Deal policies aimed at pushing up wages.

By listing a series of pro and con arguments for wage cutting, Keynes struck a non-dogmatic pose, showing himself willing to consider special cases in which wage cuts would do some good. He could then argue that the special cases were all second order effects, not the stimulus to labor demand he attributed to classical economics. Thus, by listing arguments for wage cutting, Keynes actually degraded the idea.

Keynes recommended that long run policy should aim at gradually rising real wages and stable prices. This approach would permit declining industries to shed labor gracefully without the necessity of nominal wage cuts. But despite the desirability of stable prices, he feared that excessive wage inflation might be touched off as full employment was approached. Apart from a productivity-linked upward trend, flexible wages should be avoided, according to Keynes, because they would lead to erratic price fluctuations.

In summary, Keynes made three key arguments about wages:

1) Wage bargains are made in nominal terms. But real wages, not nominal, determine the amount of labor demanded. Thus, *the problem of the labor market cannot be solved in*

*the labor market.*

2) Nominal wage bargains determine prices, as firms base their pricing decisions on costs.

3) Nominal wage rigidity is explained by decentralization in the labor market and interdependent worker utility functions. Any wage cut is seen as a relative wage cut and thus is resisted.

Note that Keynes often referred to unions and wage *bargaining*. Had Keynes been writing from a U.S. (rather than British) perspective, his bargaining orientation would have been much less pronounced. During the great slump (1929-33), American unions were a negligible force. Indeed, in late 1932, the president of the American Economic Association noted their "declining influence" and doubted unions could stage a comeback.

## II. The Debate Over Keynes and the Classics

Keynes saw his model as general, with classical theory relegated to the special case of full employment. Later interpreters of Keynes were more likely to see the classical case as general, with Keynes as a special case featuring money wage rigidity and weak links between money and real activity. As Harrod said in 1937, "Mr. Keynes has not effected a revolution in fundamental economic theory but ... a shift in emphasis."

Defenders of classical theorists have long argued that Keynes misrepresented the classical position. In this view, the classical economists did not ignore unemployment and the business cycle. Rather, they had a dynamic view of the cycle which was difficult to model precisely. And they were more concerned with secular labor market adjustment than with short run phenomena. Recent empirical literature emphasizing real wage rigidity as the villain for high unemployment rates in Europe and elsewhere in the late 1970s and early 1980s is sometimes seen as "redeeming" Pigou and the classics.

Pigou himself went on to refine the classical position. He introduced the real balance effect which permitted wage cuts to restore full employment by raising the real value of what was later termed "outside" money. But despite his later intellectual accomplishments, Pigou reportedly became a figure of mirth for younger Keynesian colleagues, as he authored books such as *Lapses from Full Employment*. (Was the Great Depression well characterized as a "lapse"?) Yet he left Keynesians clinging to the argument that wage cuts were impractical or *might* lead to harmful deflationary expectations.

Despite the recent classical revival, it is still commonly believed that Keynes' views overwhelmed the alternative, classical position and thus became dominant in economic thinking by the late 1950s. In the U.S. case at least, this view is misleading. It *is* true that Keynesian ideas eventually became dominant. But it is *not* true that they overwhelmed classical notions which prevailed in the 1930s. The fact is that there was *no* coherent prevailing view of unemployment and its relation to wages in the U.S. literature. Rather the issue was shrouded in theoretical and empirical fog. Wages were often seen as having some role in the Great Depression. But the precise nature of that role was murky and ambiguous as reflected in Schumpeter's analysis of 1931:

"The Depression has not been brought about by ... wages, but having been brought about by other factors, is much intensified by this factor. The causes are different in different countries but everywhere wages are higher than is compatible with full employment. This statement does not mean that unemployment in its present extent is due to ... wages. But part of it is, as shown by the unusually high figures during the preceding prosperity. ... Our statement does not mean that the rate of wages is too high in any other sense or that the policy of high wages is ... mistaken ... for there may be compensating advantages."

Keynes' ideas on wages and unemployment came to be accepted in the U.S. for three reasons. First, Keynesian views seemed to explain the Great Depression (particularly when

relevant data later became available). Second, Keynesian doctrines could be related to—and taken to support—policies regarding wages and unemployment associated with the New Deal. Third, Keynesian activism supported the development of an empirical base which reinforced Keynesian thinking.

### III. International Analysis of Wages and Unemployment

There are good reasons for doubting the wide acceptance in the 1930s of the classical conclusion that unemployment could be remedied by wage cuts. Keynes singled out Pigou's *Theory of Unemployment* for criticism because, he said, it was the only place a statement of the classical theory could be found. But Hicks commented in 1937 that he doubted most economists were familiar with Pigou's work. Indeed, after Pigou's book appeared in the U.S., it was reviewed by S.E. Harris in 1935 as "one of the truly great books . . . since Marshall's day" and as a specific challenge to Keynes—whose ideas were already circulating—rather than the other way around. The application of classical theory to wages and unemployment was thus seen as a NEW contribution.

Conveniently, the *Encyclopaedia of the Social Sciences* was published in London at the time Keynes' theories were being formulated, with review articles on various economic problems. Karl Pribham, writing on unemployment, explained that there were diverse theories on the subject, but that those which indicated that wages could bring about equilibrium in the labor market were inadequate. Apart from the wage approach, Pribham described theories of long waves in economic activity caused by non-economic forces, theories of financial disturbances, theories of underconsumption, of corrections of excesses which accumulated during booms, and of technological displacement.

A similar review by business-cycle analyst Wesley C. Mitchell also appeared in the *Encyclopaedia*. He cited his own work suggesting that "costs" (including wages) squeezed profits at cyclical peaks, a problem corrected at troughs. Falling costs had a perverse effect of causing delays in purchasing during depressions, and only when they stopped falling could the perverse effect cease.

Finally, Jakob Marschak's review of wage theories contained little discussion of any connection between wages and unemployment. He did note that theoretically unions might push wages high enough to cause unemployment. But this possibility was treated skeptically, and was a minor point in the exposition.

A League of Nations study of contemporary business cycle models, directed by Gottfried Haberler, provides further evidence of the diversity of opinions. Many of the theories he reviewed had no explicit wage component. Haberler himself seemed of two minds. On one hand, he was not sympathetic to the wage/purchasing power theory underlying New Deal legislation in the U.S. He argued that public works could make up for losses in worker purchasing power which wage cuts might cause. Thus wage cutting could be fostered without concern about demand. But on the other hand, the failure of wages to be high enough in booms caused excessive investment and insufficient consumption, precipitating busts.

### IV. American Literature before World War II

If the international literature was cloudy, American writings presented an even denser miasma. Fifty years before the *General Theory*, the American Economic Association originated in a revolt of "institutionalists" against what was then considered the classical tradition. By the 1930s, institutionalists were criticized "as poorly disguised professors of sociology" but their continued prominence indicates the prevailing tension over methodology. "Orthodox"

economists were mocked as impractical theoreticians and as inhabitants of "universities where the surviving specimens of the dying race of nineteenth century economists are kept artificially alive, carefully guarded against any breath of reality." There was not, in short, a clear consensus on theory or policy in the 1930s.

#### *Textbook Economics*

Advanced American graduate students in the 1920s and 1930s may well have used Marshall's *Principles* as a text. If so, they would have found virtually no reference to unemployment. To Marshall, the view that unemployment was linked to industrial society was false. Worker idleness was just more visible because of the separation of employee and employer. In earlier agricultural society, idleness was hidden.

Undergraduate texts must have been disappointing to students hoping to understand of the Great Depression. Such textbooks devoted much space to corporate organization, the regulation of monopolies, and similar topics. Regarding wage determination, the student confronted an array of different theories, presented as equally plausible. The same was true of explanations of the business cycle. "Perhaps one man's guess is as good as another's . . .," concluded one book.

Textbook writers in the late 1930s felt a greater obligation to take positions on public policies such as make-work projects and the National Industrial Recovery Act (NIRA). Still a panoply of theories was offered. And lest the student come away with the impression "that if all the economists in the world were placed end to end they would not reach a conclusion . . . " assurance was given that "the diversity of opinion . . . is a matter more of differing emphasis than of disagreement." Would that it had been true!

#### *Academic Literature*

A review of articles appearing in American economics journals during the 1930s confirms the impression of confusion obtained from the textbooks. The primitive state of U.S. economic literature in the 1930s must be kept in mind. Theories relating depressions to sunspots were still being discussed in the *Quarterly Journal of Economics*.

Also noteworthy was the lag in perceiving economic developments. As cyclical unemployment worsened in the early 1930s, discussion of the problem as one of technological displacement continued. Unemployment was seen as "the price of economic progress" which would ultimately benefit those displaced. The notion that technological change was important in unemployment of the 1930s persisted until World War II.

Fascination with what would later be called automation was a hangover from the 1920s. During that period, unemployment was assumed (but not really known) to be high and automation was often considered the cause. In the early 1930s, Hansen advanced a theory of how demand deficiency could result from worker displacement by technology. The incomes of the displaced workers were said to fall by more than the offsetting rise in the real incomes of consumers (increased by lower prices). But Hansen's theory was regarded as mischievous. Haberler responded that since money would stop circulating among displaced workers, its increased velocity would create demand to re-employ them.

To the extent that wage adjustments were connected with unemployment, the analysis was vague. Five years before the *General Theory* appeared, Keynes argued that nominal wage cuts in the U.S. case were not socially possible. Although his reasons for this judgment were not clear, Keynes may well have had in mind the wage/purchasing power theory which had taken root in the U.S. in the 1920s. In 1927, for example, Tugwell reported that business no longer considered wage reductions the appropriate response to declines in product demand. According to the wage/purchasing power theory, high wages were needed to maintain worker

purchasing power and consumption. Wage cuts would therefore aggravate depressions by indirectly reducing consumption.

#### *The Wage/Purchasing Power Doctrine and Economic Analysis*

It is not surprising that union officials widely subscribed to the wage/purchasing power theory (and still do). But a doctrine of wage cuts as a contradiction in capitalism might not seem appealing to business executives. Indeed, the high wage doctrine was confined to certain larger, more "progressive" employers. Yet adoption of the principle by prominent businessmen influenced public policy and eventually posed a theoretical challenge to American economists.

President Hoover accepted the doctrine; at the outset of the Great Depression, he urged business to refrain from wage cuts. But under Hoover, wage/purchasing power theory was embodied only in statements. Later, as the doctrine became part of in New Deal policy, economists were forced to consider its merits.

The National Industrial Recovery Act of 1933 was the centerpiece of the early New Deal. A variety of contradictory pressures shaped the Act. It promised a form of economic planning, although whether the planning would be by business or government was unclear. Firms were organized into cartels regulated by "codes" which covered such matters as pricing and wage rates. Large wage increases were promoted under NIRA. Nominal wages in larger manufacturing firms rose by 18% in 1933 and by 8% during 1934. Real wages rose by 14% and 3%, respectively, according to National Industrial Conference Board (NICB) data.

NIRA codes fostered use of collective bargaining to set wages. Unions grew rapidly with NIRA encouragement. When the NIRA was declared unconstitutional in 1935, Congress replaced its labor sections with the Wagner Act, which contains the wage/purchasing power theory in its preamble. The Fair Labor Standards Act (1938) went further by providing a minimum wage floor, rather than just encouraging unions to bargain.

Initial reaction to the NIRA by economists was conditioned by the general despair felt about the state of the economy. Sumner Slichter, for example, wondered in 1934 whether "... we should discard this industrial system which throws millions of men out of work whenever business managers have difficulty ... (making) money ... " The depth of the crisis promoted a receptiveness to untried remedies.

As time passed disenchantment with the NIRA set in, and criticisms became more common. Some defended the wage/purchasing power theory. But the prevailing argument became that the NIRA had squeezed profits, eventually pushed up prices as fast as wages, and hindered recovery. Thus, by 1936, Slichter, who once had been willing to try anything, argued that "raising the price is not likely to increase the sales of any article and ... there is no reason to expect labor to be different."

Yet the issue of wage cutting versus wage raising as a depression remedy was not closed. The Keynesian argument that cuts in money wages would not alter the real wage became popular, although there was some empirical disputation. In response, proposals were developed to cut *relative* wages in capital goods industries to promote investment.

Economists writing on wages and unemployment were not careful to distinguish between the absolute level of wages and wage responsiveness to changes in demand. Slichter argued that unions not only should, but eventually would, introduce profit sharing into their contracts to attain greater wage flexibility. Willford King went into detail about how profit sharing could enhance wage flexibility and the macroeconomic benefits that would accrue. Harold Moulton felt that profit sharing could bring benefits because firms set prices on costs (excluding profits). Thus, prices would be lower if a component of pay was based on a profit share. These writings were precursors of modern proposals for encouraging a "share econ-

omy" by Martin Weitzman and others. But they originally received little attention due to the spreading Keynesian conviction that money wages and unemployment were unrelated.

#### *Alternative Views of Money and Prices*

Despite the discussion of wages in the 1930s, many economists did not view the wage issue as central to the fashioning of a depression remedy. Those who gave a monetary interpretation to the depression were interested in preventing credit contraction. The Chicago proposal put forward in 1933 of 100% reserves for bank deposits was based on this objective. There were also schemes for issuance of money whose nominal value would decrease to promote more consumption. And there was much interest in price behavior *apart* from its relation to wages.

Irving Fisher emphasized that deflation increased the real debt burdens. He proposed a "reflation" through monetary expansion until prices were back to "normal" levels. Then, monetary policy should be aimed at price stability. Fisher's work was sophisticated compared with much of the pricing literature. Other authors believed simply that raising prices back to 1929 levels would restore 1929-style prosperity. Distinctions were not made between lifting prices by money expansion, NIRA cartels and restrictions of farm acreage, or pushing up wages.

Raising the gold price was supported in the belief that money was a veil for gold and that higher gold prices would translate into higher prices for everything else. Influential in setting the President's gold policy were George Warren and Frank Pearson who stated "Inflation results in unusual business activity. Deflation stops business."

Contributing to the interest in the macroeconomics of prices (as opposed to wages) was a new literature on oligopolistic pricing in the U.S. These studies suggested that stickiness in prices was not a simple reflection of nominal wage rigidity, as Keynes assumed. The price mechanism itself was seen as hindering economic adjustment.

#### *The Fiscal Alternative to Wage Cutting*

Before the *General Theory* appeared, individuals such as Lauchlin Currie advocated use of deficit spending to stimulate the economy. Young academics with similar views gravitated to Washington, although conservative economics departments apparently resisted granting leaves to these budding New Dealers. Proto-Keynesian government economists did have concerns about wages; they worried about wage-push from the CIO unions in 1937. But their emphasis was fiscal.

Despite the biases of some of his economic advisors, Roosevelt was not impressed with Keynes' ideas when the two men met. For his part, Keynes became fixated on Roosevelt's hands during the conversation. More pointedly, the fiscal activists in the Roosevelt administration were unsuccessful in their efforts to convert the President to their view. Still, Keynesianism and the New Deal quickly became associated.

Keynes' bent toward government intervention meant that economists with similar leanings would gravitate to his theory. His views on wages thus were spread along with his other ideas. That Roosevelt was not a Keynesian was of no more import than that Hoover wasn't a Marshallian.

## V. The Empirical Fog

Blaug has argued that "no single economist ever held all the ideas Keynes attributed to the 'classics'" and that the real problem was that "almost no economist after 1870 considered the type of macroeconomic problem with which Keynes was concerned." By the early 1930s,

however, most U.S. economists *were* forced to ponder the depression. But it is difficult to find any consensus about the relation between wages and unemployment which emerged from this contemplation. Part of the problem was empirical.

The relative absence of empirical work in the 1930s is striking. Primitive technology partly explains the void. Preparation of simple tables can be very time consuming without data processing equipment. Paul Douglas, for example, complained of the 18,000 hours and 3 million computations required by his famous book on *Real Wages in the United States*. But the root problem was deeper. Federal data collection was limited in the 1920s and 1930s. Today, books are not written developing real wage indexes since such data are available from official sources.

Lack of data hindered the analysis of wages and unemployment until economic activists pushed for the public collection of statistical series. The pushing came from Keynesians and proto-Keynesians. Until good data became available, theorizing about unemployment and wages could be undertaken without the discipline of empirical reality. Much of the wage confusion in the 1930s was due to this lack of discipline.

#### *Deficiencies in Labor Market Data*

Large gaps in labor market data existed in the 1920s and 1930s. Most glaring was the absence of unemployment data. Unemployment was seen as a social problem but was measured (if it was measured at all) by subtracting employment from previous peaks or normalized trends. The neat figures appearing today in historical data sources that show unemployment during the 1930s were computed long after the events.

While economists in government or interested in social reform agreed on the need for direct measurement of unemployment, political barriers existed in the 1930s to collecting unemployment data. Congress insisted on a one-time postcard unemployment census in 1937, but the President reportedly resisted the idea. Reasons for this resistance are unclear, but a survey revealing high unemployment was potentially embarrassing to an administration elected to end the depression. Not until 1940, with the economy clearly expanding, was the Current Population Survey (the source of modern unemployment data) inaugurated.

Wage data also were unsatisfactory. The Bureau of Labor Statistics (BLS) had developed a payroll-based establishment survey in the 1920s and continued expanding it in the 1930s. But the survey was centered on manufacturing, with only spotty coverage elsewhere. Continuous hourly earnings data were not collected until the early 1930s. Even then, the format in which data were published was inconvenient for users. Thus, labor market analysts often relied on hourly earnings data gathered by the private NICB. Unfortunately, the NICB surveys were biased toward larger firms and covered only manufacturing.

Price data (to compute real wages) were available from the BLS, but there were problems of quality and frequency. The concept of utilizing price information to set wages developed in response to the use of arbitration to settle wage disputes during World War I. Although there was often confusion over absolute data (worker budgets) versus price change data, BLS efforts in gathering price information expanded.

But in the 1920s, budget cuts reduced the frequency of collection of retail price data by BLS. A substantial effort to enhance BLS price data did not come until the mid 1930s. The NICB produced a cost of living index on a monthly basis. However, detailed methodological statements were not available and there may have been some reluctance to rely on a business-oriented entity for such data.

Difficulties in obtaining reliable price data conditioned economic modeling. Keynes' view that wages were *inherently* set in nominal terms seems less plausible today than it did in the 1930s. At that time, if wage indexation was desired, questions arose as to the source and

quality of a price index. But after World War II, retail price indexes were easily available and were prepared in ways to facilitate indexing.

#### *National Income Accounting*

Modern empirical work makes heavy use of the national income and product accounts. But historical data sources which list these accounts back to 1929 are almost as misleading as those which show unemployment rates for the 1930s. Economists seeking information on consumption, investment, or other product flows integral to the Keynesian model during the depression could not turn to the national income accounts.

Early work on national income analysis was undertaken at the National Bureau of Economic Research (NBER) in the 1920s. The lack of official information on national income flows led to a Congressional push for such data in the 1930s. Popularity of the wage/purchasing power theory with its emphasis on payroll income contributed to this interest. In 1934, the Commerce Department and NBER published income accounts for the period 1929-32. However, although the idea of product data had been suggested earlier, product flows were not estimated until the early 1940s. Not only did the U.S. go through the Great Depression without measuring unemployment, it also failed to measure real output.

#### *Summary on the Data Gap of the 1930s*

The reader should not come away with the impression that *no* data were available in the 1920s and 1930s. To the contrary, the *Survey of Current Business* was filled with statistics on freight car loadings and such. But the kinds of data most critical to analysis of the depression were missing. Without a complete set of national income and product accounts, for example, much ink was spilled on whether saving *really* equaled investment. Economists were free to theorize about the wages and unemployment without fear of empirical contradiction.

A brief look at Table I, composed of data not available (or not readily available) at the time, illustrates this point. It is evident from the table that if one wanted to compose a theory of unemployment during the depression, the theory would include the following elements:

- 1) Emphasis would be placed on investment. Excluding inventories, real investment fell by 74% and accounted for over 40% of the fall in real GNP during 1929-33. Yet noninventory investment accounted for only 16% of GNP (in 1972 dollars) in 1929.
- 2) Consumption would be viewed as a relatively stable flow. It fell by less than real GNP.
- 3) Nominal pay cuts would be assumed to have little impact on real wages. Despite a 27% drop in money wages, real wages fell by only 3%.
- 4) Monetary policy would be pictured as relatively ineffective. The monetary base ("high powered money" defined by Friedman and Schwartz) rose by 12% in nominal terms and 49% in real terms. Yet the nominal money supply fell and real GNP collapsed.

#### VI. A Postwar Postscript

As the data of Table I became available in the 1940s and later, it is hardly surprising that Keynesian ideas became commonplace. In the first edition (1948) of his Keynesian textbook, Samuelson took note of the vast increase in available data and made extensive use of the new series. The contrast between the empirically oriented Samuelson text and the vacuous texts of the 1930s makes clear the impact of the data revolution on economic thought.

Keynesians could foster data collection because they had a coherent macro model in which to put empirical evidence. Looking at wages and unemployment in a comprehensive model was a Keynesian idea. Many criticisms can be made of postwar Keynesianism thinking

Table I. Output, Employment, Wages, and Money, 1929-1933

	Percent Change, 1929-33	Change as Percent of Change in Real GNP, 1929-33
Real GNP_a/	-30%	100%
Consumption	-21	48
Investment_b/	-74	41
Nonresidential	-65	26
Residential	-80	12
Government_c/	+5	-2
Federal	+56	-4
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Private Employment (Full-Time Equivalent)	-27%	-
Private Wage_d/		
Nominal	-27	-
Real_e/	-3	-
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Monetary Base_f/		
Nominal	+12%	-
Real_e/	+49	-
Money Supply_g/		
Nominal	-34	-
Real_e/	-13	-

a. Real GNP and components are based on 1972 dollars. Includes net exports and inventory investment not shown separately.

b. Excludes inventories not shown separately.

c. Includes state and local government not shown separately.

d. Total compensation per full-time equivalent employee.

e. Deflated by personal consumption deflator.

f. "High powered money" as defined in Friedman and Schwartz as of June.

g. Currency plus commercial bank time and demand deposits as of June.

Source: U.S. Department of Commerce; Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States: 1869-1960* (Princeton, N.J.: Princeton University Press, 1963), pp. 712-14, 803-04.

on wages and unemployment, particularly the weak micro theory on which modeling and policy were based. But those who now look longingly to a nonexistent classical past need to review the pre-Keynesian literature. Keynes replaced a muddle with a model.