HOOVER AND WAGES IN THE DEPRESSION: A COMMENT ON DOUGLAS MACKENZIE: A REJOINDER

RICHARD VEDDER AND LOWELL GALLAWAY

INTRODUCTION

It is suggested in Daniel Kuehn's article in this issue (2011) that MacKenzie (2010) is wrong about Hoover's effectiveness in pushing a high wage policy that caused high unemployment. About 80 percent of the argument is predicated on the proposition that modern empirical work by others (*not* the author) shows that wages are pro-cyclical, and that empirical works by the likes of Gallaway (2010), Taylor and Selgin (1999), and Gallaway and Vedder (1997) suffer from aggregation bias, picking up an argument

Dr. Richard Vedder (vedder@ohio.edu) and Dr. Lowell Gallaway (lgallaway1@columbus.rr.com) are both Distinguished Professors of Economics, Emeritus, at Ohio University.

used by Brad DeLong (1998) and others. He fails to mention work by Austrians on this period, most notably Murray Rothbard (1963), and even at the time of the Depression, by such then-Austrian fellow travelers as Lionel Robbins (1934), not to mention later by others such as Benjamin Anderson (1949). A second, lesser point, of the author is that a new journal article by Rose (2010) suggests that the Hoover unemployment conferences beginning in late 1929 did not have the purported impact (Rose's paper came out roughly simultaneously with MacKenzie's fine work).

The gist of the main argument is this: Studies cited above that show relative wage rigidity use aggregate data showing that wage levels were relatively constant as the downturn unfolded, but modern studies using more disaggregated data show wage pro-cyclicality, which in this context means wage rates would fall with declining economic conditions. It is argued that compositional shifts in the labor force are not picked up in aggregate data. Specifically, as firms shed labor, they get rid of the junior, lower paid employees, maintaining average pay for the diminished work force even as total payrolls and hourly pay rates are reduced. The failure of aggregate wages during the early Depression to fall aggressively, the author opines, no doubt reflects this phenomenon. The empirical validity of this, he asserts, has been demonstrated by several modern scholars.

There are a lot of problems with all of this, but let us start with the obvious historical one. *All* the studies showing the pro-cyclical nature of wages come from such modern data sets as the Panel Study of Income Dynamics (PSID) or the National Longitudinal Survey (NLS). *All* of them deal with post-World War II labor markets. There was a revolution in labor markets between the early 1930s and the early 1960s (or even the early 1940s). In 1930 and 1931, labor unions were weak and essentially not important in huge mass production industries like steel and autos. This is before the Wagner Act of 1935 or even the wage-enhancing characteristics of the National Industrial Recovery Act of 1933. Unions, however, were extremely important in industry when the PSID and NLS data were starting to be collected. The notion of "last hired, first fired" incorporated into collective bargaining agreements was almost certainly dramatically less prevalent in, say, 1930 or 1931. Indeed, we could see the possibility that employers in 1930 or 1931

shedding workers would disproportionately discharge *more* highly paid workers in order to more aggressively lower labor costs. If so, the aggregation bias runs in the other direction, and the changing composition of the labor force would lead to reductions in average reported aggregate wages, not increases. But who knows? The author has no evidence on this, and he is merely *speculating* that the world of 1930 was not much different than the world of, say, 1970 or 1980 with regards to this phenomenon. To base an argument based on other research for a period far removed from the one in question is very questionable, in our judgment.

But there are three other forms of at least circumstantial evidence supporting the notion that wage rigidity not only existed after the autumn of 1929, but that it was unique compared with other downturns. First, many contemporary economists commented on the wage rigidity. For example, Columbia economist Carter Goodrich (1931, p. 187) said "so far… the patient does not seem to have swallowed the prescribed medicine [wage reductions]." The iconic economist Joseph Schumpeter (1931, p. 180) noted that the depression "is much intensified by this factor" (high wages), a point made by others in different venues, including Robbins (1934). It seems to me that the observations of economists of that era (see also Benjamin Anderson) are more likely to be accurate than the musings of later scholars relying on research postdating the depression by decades.

Second, if there were a significant compositional shift to senior workers as newer workers were discharged, one would expect that the aggregate data would show an upsurge in labor productivity if one reasonably presumes that these higher paid senior workers were more highly paid because of their greater productivity owing to more experience, skills, etc. That productivity surge or even productivity stability, however, in fact did not occur: we estimate productivity *fell* 5.7 percent from the fourth quarter of 1929 to the fourth quarter of 1930. If aggregation bias impacted the true interpretation of wages, it should have also had an impact on productivity that the data do not support. In a sense, what is critical is not the real wage rate, but the real wage rate adjusted for productivity change.

Third, there is absolutely no question that certain government policies had a dramatic impact on raising wages in the middle of

the Great Depression and prolonging its duration. The mammoth increase in hourly wages from June to December 1933, for example, certainly is not a reflection of "aggregation bias," but rather of the effects of the implicit minimum wages applicable under the National Labor Recovery Act (wages in major industries increased something on the order of 20 percent). Similarly, large (double digit) wage increases in 1937 were a reflection of the delayed impact of the Wagner Act, particularly after a court decision rendering the law constitutional.

We think a detailed discussion of Rose's paper is beyond this comment. Suffice it to say that looking at the wage behavior of those firms whose president attended the employment conference of, say, November 21, 1929, as opposed to those not attending, appears to us to be a very dubious approach, particularly since no one to our knowledge has ever claimed that Hoover's impact was solely on the small number of industrial leaders in the room—the exhortations of Hoover and reports of the conference were well known to everyone, since they made the front pages of major newspapers.

We need to make a small literature review comment. To ignore the writings of several in the Austrian tradition in the author's comments is somewhat inappropriate for a journal dedicated to Austrian economics. Murray Rothbard (1963) nearly a half century ago, for example, spoke approvingly of the high wage doctrine, as did other classical liberal economics like W. H. Hutt (1939). In the modern era, Cole and Ohanian (2004) and Ohanian (2009) have used modern high tech econometrics to more or less affirm, with a couple of added new twists, the Vedder and Gallaway (1997) conclusions that preceded it.

Allow us to give our interpretation of the Depression experience, which we have elaborated upon elsewhere (1997, 2000). In the latter, we demonstrate that all the major macroeconomic paradigms have in common the following relationship:

(1) $E = f(W / (P, O)$

where E denotes employment, W represents the money wage level, O indicates a measure of the productivity per unit of labor, and P signifies the general level of prices. This formulation embraces the actual co-ordination, or dis-coordination, among all the elements relevant to labor markets. A brief description of

one of the primary data sets we collected for *Out of Work* is illustrative. It begins with the first quarter of 1959 and concludes with the second quarter of 1996, a span of 150 quarters. All data are expressed in index number form with the year 1992 = 100. While the subcomponents (W, P, and O) vary considerably over time, the productivity-adjusted real wage rate has a maximum value of 104.14 (in 1980.2) and a minimum of 96.24 (in 1965.4). Basically, the productivity-adjusted real wage rate constitutes a stationary time series with a plus or minus four percent range of variation. During the Depression, variations were somewhat larger, but most changes in one key variable were considerably but not completely offset by moves in another one. For example, as productivity fell, money wages tended to move downward (although not enough—creating most of the massive rise in unemployment).

This is the essence of our story. The productivity-adjusted real wage rate is the product of a set of systematic interactions between the price level, money wage rates, and the productivity of labor. What is implied here is that the real wage rate and the productivity of labor move in near lock-step. Only "near" lock-step, though. There are divergences, and these divergences are capable of generating business cycles in the American economy.

More to the point is the significance of the productivity-adjusted real wage rate for the particulars of this debate. To begin, it largely vitiates the aggregation bias criticism. It stands to reason that if employers dismiss low money wage workers first during a cyclical downturn, these workers will also be lower productivity individuals. While it may not be a perfect match, even an approximate one will alleviate greatly any aggregation bias, rendering the productivity-adjusted real wage rate a reasonably accurate approximation of the relationship between the real wage rate and productivity.

Further, in the specific context of Hoover's attempts at implementing the high-wage doctrine, it is especially useful. For example, Rose's critique treats money wage rates in isolation. What is important is the behavior of money wage rates relative to the general levels of prices and labor productivity. In such a context, we conducted a specific statistical test (1997, pp. 95–96) of Hoover's high-wage doctrine. What we did was use the annual data for the years 1901–1929 describing money wage, price, and productivity levels to estimate a function explaining money wage

rates, with prices and productivity being the major independent variables accounting for movements in money wage rates. We note that any aggregation biases in the money wage and productivity variables should be of roughly similar magnitude and thus will only affect the constant term in any linear regression. In addition to these independent variables, given the importance of immigration in this era and the enactment of the Smoot-Hawley tariff in 1930, we also included independent variables measuring the amount of immigration and the level of tariffs in the money-wage function. The full estimated relationship is:

$$(2) \quad \text{WAGES} = - \ 3.486 \ + \ 0.225 \bullet \text{CPI} \ + \ 0.145 \bullet \text{PRDTY}$$
$$\qquad\qquad\quad (20.485) \qquad (16.650) \qquad\qquad (13.797)$$

$$\qquad\quad - \ 0.008 \bullet \text{TARIFF} \ - \ 0.014 \bullet \text{IMM/POP}$$
$$\qquad\qquad\quad (2.614) \qquad\qquad\quad (0.224)$$

$$\bar{R}^2 = .9964, \quad D-W : 1.978, \quad F\text{-stat.} : 1585.358$$

where WAGES is an hourly wage measure, CPI represents the consumer price index, PRDTY indicates hourly output of labor, TARIFF represents the percentage tariff levied on durable goods, and IMM/POP is immigration as a proportion of the population. The values in parentheses beneath the coefficients are t-statistics.

We then employed the 1930 and 1931 values of the independent variables to calculate the level of money wage rates that would be expected to occur in these years. These were then compared to the actual values of money wage rates. The results are striking. In 1930, actual money wage levels exceeded the expected by 8.3 percent. In 1931, the overhang is 10.5 percent. Between the fourth quarters of 1929 and 1930, money wage levels fell by a mere 1.7 percent. At the same time, prices declined by 7.0 percent and labor productivity dropped by 5.7 percent. As a result, the productivity-adjusted real wage rate rose by an astounding 12.0 percent and the estimated unemployment rate broke into double digits at 10.7 percent.

Four quarters later, at the end of 1931, money wages were 7.9 percent below their fourth quarter 1929 level. However, prices were now 16.6 percent less than in 1929.4 and labor productivity was down by 7.5 percent. The productivity-adjusted real wage? Up

by 19.3 percent over 1929.4. The unemployment rate? 18.4 percent. Now, perhaps Herbert Hoover's actions in late 1929 were irrelevant, an unfortunate coincidence. However, a far more likely scenario is that Hoover was successful in implementing the "high-wage doctrine," just as many contemporary observers opined. If this is the case, in the process, he produced the most precipitous rise in unemployment in American history. We accept this interpretation, and come down on the side of MacKenzie in this debate.

REFERENCES

Anderson, Benjamin. 1949. *Economics and the Public Welfare: A Financial and Economic History of the United States, 1914–1946*. Princeton, N.J.: Van Nostrand.

Cole, Harold L., and Lee E. Ohanian. 2004. "New Deal Policies and the Persistence of the Great Depression: A General Equilibrium Analysis." *Journal of Political Economy* 112, no. 4: 779–816.

DeLong, J. Bradford. 1998. "It Doesn't Work." *Critical Review* 12, nos. 1–2: 59–69.

Gallaway, Lowell E. and Richard Vedder. 2000. "The Fraud of Macro-economic Stabilization Policy." *Quarterly Journal of Austrian Economics* 3, no. 1, 19–33.

Gallaway, Lowell E. 2010. "Unions, the High Wage Doctrine, and Employment." *Cato Journal* 30, no. 1: 197–213.

Goodrich, Carter. 1931. "The Business Depression of Nineteen Hundred Thirty: Discussion." *American Economic Review* 21 (S): 183–201.

Hutt, William H. 1939. *The Theory of Idle Resources*. London: Jonathan Cape.

Kuehn, Daniel. 2011. "Hoover and Wages in the Depression: A Comment on Douglas MacKenzie." *Quarterly Journal of Austrian Economics* 14, no. 4: 442–453.

MacKenzie, Douglas W. 2010. "Industrial Employment and the Policies of Herbert C. Hoover." *Quarterly Journal of Austrian Economics* 13, no. 3: 101–119.

Ohanian, Lee E. 2009. "What—or Who—Started the Great Depression?" *Journal of Economic Theory* 144, no. 6: 2310–2335.

Robbins, Lionel. 1934. *The Great Depression*. London: Macmillan.

Rose, Jonathan D. 2010. "Hoover's Truce: Wage Rigidity in the Onset of the Great Depression." *Journal of Economic History* 70, no. 4: 843–870.

Rothbard, Murray. 1963. *America's Great Depression*. Princeton, N.J.: Van Nostrand.

Schumpeter, Joseph A. 1931. "The Present World Depression: A Tentative Diagnosis." *American Economic Review* 21: 179–182.

Taylor, Jason and George Selgin. 1999. "By Our Bootstraps: Origins and Effects of the High-Wage Doctrine and the Minimum Wage." *Journal of Labor Research* 20, no. 4: 447-462.

Vedder, Richard K. and Lowell E. Gallaway. 1997. *Out of Work: Unemployment and Government in Twentieth-Century America*. New York: New York University Press.