Historical "Real Wage Gaps": A Lesson for Economists from Economic History

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Abstract

"The Real Wage Gap" was the internationally accepted explanation for the sudden increase in unemployment which occurred in several countries in the mid-1970s. The term "Real Wage Gap" referred to an increase in real wages relative to labour productivity and hence was a convoluted way of saying that the share of wages in national income had risen. Those proposing this hypothesis, on the basis of neo-classical analysis, failed to acknowledge that such sudden displacements in the wage share are very rare, or to examine the historical record for the consequences of past "Real Wage Gaps". Henry Phelps Brown had examined the historical record and demonstrated the rarity of such events: he detected two occasions in the 19th century.

Richard Freeman would classify a "Real Wage Gap" as a "natural experiment". The experimental approach involves replication, which, in the case of economics, requires examination of the historical record to detect comparable "natural experiments"; in this case to assess the impact of historical "real wage gaps". The two 19th century "real wage gaps" detected by Phelps Brown and four which occurred in the 1960s are investigated; in no case was the neo-classical expectation of an increase in unemployment confirmed. Nor was the Keynesian/Post-Keynesian prediction of an increase in the aggregate consumption confirmed. Therefore economists from these competing paradigms both have valuable lessons to learn from an examination of the historical record.

In 2008, Queen Elizabeth caused some embarrassment to the assembled professors at the London School of Economics when she inquired why no one had foreseen the financial crash. One answer to her perceptive question is that the current generation of economists no longer have economic history as part of their training.

1. Theoretical expectations of real wage gaps

An LSE Professor of a previous time, Henry Phelps Brown, was one who had studiously complemented his economics with historical analysis (Riach, 2017). An awareness of Phelps Brown's work would have been valuable to those who enthusiastically proclaimed the "real wage gap" explanation for the increase in unemployment that occurred in several countries in the mid-1970s. The term "real wage gap" referred to a sharp increase in real wages relative to labour productivity, and as such was merely a convoluted way of saying that the share of wages in national income had risen. The OECD, which was one of the principal proponents of this hypothesis, defined it as "…the difference between the growth of real wages and that *warranted* by productivity and terms of trade changes." (OECD, 1980, p. 41, emphasis added). The causal link to unemployment that this analysis postulated was neoclassical factor substitution. According to Jeffrey Sachs, "In the short run, increases in real wages may induce profit-maximizing firms to reduce labour input, in order to equate the higher wage with a higher marginal product of labour, or may cause inefficient firms to shut down entirely" (Sachs, 1979, p. 285). Sachs was writing in the United States, whilst in Britain the Treasury also emphasized a factor substitution response to this "real wage gap" (H.M. Treasury, 1985), and in Australia W. Max Corden was advising that "One must be willing to change one's model with the times. It is Pigou rather than Keynes that (sic) is relevant now" (Corden, 1977, p. 30). The presumed neoclassical response to the increased wage share had acquired an international following.

The neoclassical analysis, with its emphasis on substitution effects, was the dominant paradigm in the 1970s, but as K.W. Rothschild has pointed out, "Economics is, by necessity, a multi-paradigmatic science. Several theoretical structures exist side by side, and each theory can never be more than a partial theory" (Rothschild, 1988, p. 13). In this vein Alfred Eichner explained that, with respect to an alternative paradigm, "…the importance attached to income as opposed to substitution effects is a sensitive barometer of just how post-Keynesian, or even Keynesian, any particular piece of analysis is" (Eichner, 1979, p. 12). An emphasis on the income effect of a higher wage share can be found as early as 1938, well before the official dawn of "post-Keynesian" economics: "This fall in the 'degree of monopoly' results in a shift of income to wage earners and a higher average propensity to consume for the community, which results in an increased output" (Dunlop, 1938, p. 433).

This thesis on the effects that a shift in the distribution of income has on the aggregate propensity to consume can also be found in the writings of Joan Robinson: "A smaller share of a given output going to the workers entails a lower propensity to consume for the economy as a whole, because the propensity to consume out of profits is less than that out of wages" (Robinson, 1960, p. 149). She consequently argues that "…the exercise of bargaining strength playing against monopolistic power raises real wages and increases employment" (Robinson, 1960, p. 150, emphasis added).

2. Checking for a neo-classical response

So what is the relevance of economic history in general, and Phelps Brown's research in particular, to the "real wage gap" hypothesis that spread across three continents in the 1970s? First, the proponents should have recognized that what they were observing was a highly unusual event: "The *stability* of the proportion of the national dividend accruing to labour is one of the most surprising, yet best-established facts in the whole range of economic statistics. It is the *stability* of this ratio for each country which is remarkable, and this appears to be a long-run, and not merely a short-run phenomenon" (Keynes, 1939, p. 48, emphasis added). "The mystery of the *constant* relative shares remains a reproach to theoretical economics" (Robinson, 1966, p. 81, emphasis added). In the 1950s Phelps Brown and his research assistants investigated the behaviour of the wage share in United Kingdom, in order to establish the veracity of this conventional wisdom. He summed up this work in a conference paper: "There have been some notable examples of inertia in the relation between wages and profits, notable because of the extent of the change in wage rates through which the inertia persisted" (Phelps Brown, 1957, p. 63). He notes "*l'experience Blum*" when, in 1936-37, French money wages rose by 60 per cent without achieving any real wage increase or squeeze in profit margins (Kalecki, 1938). Phelps Brown concluded that this wage share inertia could only be displaced in an upward direction by the most unusual concurrence of trade union strength with a product market that was not conducive to price increases, which he termed "a hard market environment". He identified two such episodes in British historical statistics: 1870-72 and 1888-89.

The sudden rise in wage shares in the 1970s presented an occasion that could be called a "natural experiment," a term suggested by Freeman in *Labour Markets in Action*. This book was stimulated by the scepticism that the author's room-mate, a students of physics, expressed for the research methods of economists; it was written expressly to deal with the "… problems of non-experimental social science" (Freeman, 1989, p. IX). He recommends that economists should "…analyze markets when they experience sufficiently sharp exogenous shocks so as to create 'natural experiments'" (Freeman, 1989, p. X). Freeman's physicist room-mate would also have observed that, besides experimental evidence, the scientific method of research involves the replication of experiments. In the case of economics, this means resort to the historical record to ascertain exogenous shocks that have engendered equivalent "natural experiments" in the past, so as to allow a sort of "replication". It follows that the second benefit of historical investigation, for those authoritatively propounding the inevitability of a neo-classical factor-substitution response to an increase in the wage share, would have been the opportunity to examine the performance of the labour market during previous "real wage gap" episodes. The obvious occasions to start with are 1870-72 and 1888-89. An unemployment series for this time span is given in Table 1: the unemployment rate fell during and immediately after the wage share increase of 1870-72, although it did rise from 1874 as the "long depression" impacted on the labour market. Likewise, in 1888-89 the unemployment rate fell during and immediately subsequent to the wage share increase. This should sound a clear note of caution for those tempted by a *post hoc ergo propter hoc* response to the emergence of a "real wage gap". In the latter case we actually observe unemployment falling when the "real wage gap" occurred during a period of economic depression (Coppock, 1961).

TABLE 1
British unemployment rate, 1870-1888

1870	4.6%	1882	5.0%
1871	3.6%	1883	4.9%
1872	2.7%	1884	6.3%
1873	2.8%	1885	8.0%
1874	3.3%	1886	7.9%
1875	4.0%	1887	7.1%
1876	4.8%	1888	5.8%
1877	6.6%	1889	4.3%
1878	7.9%	1890	4.0%
1879	9.1%	1891	4.9%
1880	6.6%	1892	6.1%
1881	5.7%		

Source: Boyer and Hatton (2002, p. 667).

For further elucidation, it would also have been appropriate to identify other episodes of upward displacement of the wage share prior to those of the 1970s. There are statistical problems in constructing a meaningful time series for the income shares of wages and profits that corresponds to the theoretical categories (King and Regan, 1976, pp. 12-14; Hill, 1979, pp. 113-114). One is that the entire product of the state sector of the economy is traditionally treated as labour income; the second is that the private sector includes self-employed workers, whose income is a combination of wages and profits. It is therefore the common practice, in calculating time series for the wage or profit share in income, to focus on those private sector industries where self-employment is minimal: mining, manufacturing, building and construction, public utilities, and transport and communications. T.P. Hill (1979) produced just such series for several countries for the period 1955-1976. These data are presented in Table 2. There was an episode of downward displacement in the profit share in the Netherlands from 1961 onwards. From 1955 to 1960 the profit share averaged 44 percent; from 1961 to 1966 it averaged 38.3 per cent, down 5.7 percentage points. Labour market statistics for the Netherlands are shown in Table 3. Here too, during the period when the wage share was displaced upward, unemployment

TABLE 2
Profit shares (%)

Year	Germany	Italy	Sweden	Netherlands
1955	41.1	41.3	31.3	45.8
1956	39.6	40.4	31.9	43.5
1957	39.3	40.4	32.7	42.5
1958	39.5	39.9	32.0	40.3
1959	39.7	41.2	33.9	43.3
1960	38.4	40.8	32.5	44.2
1961	36.7	40.0	30.5	40.4
1962	34.2	36.8	28.9	38.8
1963	33.8	32.4	27.3	36.5
1964	35.2	29.9	29.4	37.1
1965	35.8	33.5	29.9	36.8
1966	33.4	35.8	28.1	35.1
1967	34.9	33.9	28.1	34.8
1968	36.8	34.5	28.9	34.8
1969	35.1	34.1	30.1	36.4
1970	32.5	31.6	33.0	35.8

Source: T.P. Hill (1979, p. 122). Gross profits for mining, manufacturing, construction, public utilities, and transport.

declined; and vacancies considerably outnumbered unemployment throughout the period 1961-66. Clearly this was another historical episode when a "real wage gap" coincided with a macroeconomic labour shortage, and therefore constituted, according to neoclassical theory, a predictable response.

TABLE 3
Dutch labour market

Quarter	1st	2nd	3rd	4th
		1960		
Unemployment (thousands)	61	34	32	38
Vacancies (thousands)	77	108	104	90
		1961		
Unemployment	42	23	26	34
Vacancies	106	139	128	108
		1962		
Unemployment	36	23	27	36
Vacancies	116	142	127	103
		1963		
Unemployment	49	23	25	31
Vacancies	108	142	131	112
		1964		
Unemployment	35	20	24	33
Vacancies	114	137	148	125
		1965		
Unemployment	42	25	27	37
Vacancies	118	135	142	122
		1966		
Unemployment	48	28	34	62
Vacancies	115	131	127	87

Source: OECD, *Economic Survey: Netherlands* (Various Issues).

There was, likewise, a downward displacement in the profit share in Italy from 1962 onwards. From 1955 to 1961 the profit share averaged 45.8 per cent; from 1962 to 1967 it averaged 40.1 per cent, down 5.7 percentage points. Table 4 shows that the unemployment

TABLE 4
Italian unemployment rate, 1955-1968

1955	5.9%	1962	3.7%
1956	6.8%	1963	3.3%
1957	6.0%	1964	3.5%
1958	5.8%	1965	4.0%
1959	5.7%	1966	4.2%
1960	4.1%	1967	4.0%
1961	4.0%	1968	4.1%

Source: G. Bertola and P. Garibaldi (2003).

TABLE 5
Swedish labour market, 1960-66

Quarter	1st	2nd	3rd	4th
		1960		
Unemployment (thousands)	40	23	15	20
Vacancies (thousands)	33	46	44	41
		1961		
Unemployment	31	20	13	20
Vacancies	40	56	50	42
		1962		
Unemployment	34	23	15	22
Vacancies	39	51	46	39
		1963		
Unemployment	32	22	22	21
Vacancies	46	49	51	51
		1964		
Unemployment	19	22	24	22
Vacancies	52	55	54	57
		1965		
Unemployment	20	19	18	22
Vacancies	61	62	63	60
		1966		
Unemployment	30	23	22	28
Vacancies	60	55	51	44

Source: OECD: *Economic Survey: Sweden* (various issues).

rate fell in 1962 and 1963; also, that the average unemployment rate was lower in 1962-68 than it had been in 1955-61. The pattern is not as sharp as in the Netherlands, but nevertheless this represents another episode of a "real wage gap" not accompanied by an increase in unemployment.

Sweden too experienced a downward displacement in the profit share after 1960. From 1955 to 1960 it averaged 35.5 percent and from 1961 to 1966 32.5 percent, which is a fall of 3 percentage points. This was not as dramatic as in Italy or the Netherlands, but once again it is evident that this "gap" was not the harbinger of labour market doom: as Table 5 shows, vacancies exceeded unemployment throughout the period 1961-66.

The profit share in the Federal Republic of Germany averaged 46.8 percent between 1955 and 1960, after which it shifted down to 43.9 percent between 1961 and 1966; this decline of 2.9 percentage points is comparable to that registered in Sweden. In this case too, unemployment declined and was significantly lower in 1961-1966 than in 1955-60 (Table 6).

TABLE 6
Federal Republic of Germany unemployment, 1955-66 (thousands)

1955	935	1961	181
1956	765	1962	155
1957	668	1963	186
1958	689	1964	169
1959	480	1965	147
1960	237	1966	161

Source: OECD, Manpower Statistics.

We have now examined the labour market repercussions of "real wage gaps" on six occasions in the nineteenth and twentieth centuries prior to the 1970s. In all cases, there was no sign of a substitution process away from labour and consequent unemployment, which was economists' standard expectation in the 1970s. The lesson is that faced with an unusual economic event that constitutes a "natural experiment", it would be wise to undertake "replication" and investigate how common such unusual events have been in the past and what their consequences have been.

3. Checking for a post-Keynesian response

As Eichner explains, the alternative Keynesian / post-Keynesian emphasis is on income effects, which in this case amounts to the Dunlop / Robinson prediction that the aggregate propensity to consume will rise when there is an upward displacement of the wage share. Accordingly, we need to examine the reaction of the propensity to consume during the historical "real wage gap" episodes. Table 7 shows consumption as a percentage of GNP at market prices for the four countries that experienced a decline in the profit share during the 1960s. In no case was the Dunlop / Robinson expectation of an increase in consumption propensity confirmed. In the Netherlands there was virtual stability, with a decline of a mere 0.2 percentage points in the period 1961-66 compared with 1955-60. In the other three cases the consumption / GNP ratio actually fell. In Italy it averaged 63.7 per cent during 1955-1961 and 61.8 per cent during 1996-1966. In Germany it averaged 58.7 per cent during 1955-1960 and 57 per cent during 1961-1966. In Sweden it averaged 60.9 per cent during 1955-1960 and 59.3 per cent during 1961-66.

To sum up, our investigation of historical "real wage gaps" has failed to confirm the expectations of either neo-classical or post-Keynesian economists: neither unemployment nor consumption rose in response to these episodes of upward displacement in the wage share.

These findings present a clear lesson for those economists who accept Freeman's recommendation that markets be analyzed when they experience "…sharp exogenous shocks so as to create natural experiments". The lesson is that it is wise to attempt "replication" by resort to the historical record to unearth equivalent "natural experiments". Physical scientists never rely on a single experiment.

TABLE 7
Consumption/GNP (%)

Year	Germany	Italy	Netherlands	Sweden
1955	58.9	66.7	58.5	61.9
1956	59.1	66.4	60.0	61.7
1957	59.3	65.2	58.4	60.3
1958	59.3	63.7	58.6	61.9
1959	58.2	62.1	57.9	60.7
1960	57.2	61.4	56.6	58.8
1961	57.4	60.4	57.5	58.3
1962	57.6	60.5	58.5	58.4
1963	57.0	61.9	59.4	58.3
1964	56.2	61.1	57.6	57.1
1965	56.9	62.3	58.0	57.2
1966	57.1	63.1	57.8	56.3

Source: OECD, Main Economic Indicators.

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