

Women's Work and Wages during the First World War in Britain

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****Very preliminary!****

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I. Introduction

Countless accounts of the increase in female labor force participation in the United States in the second half of the twentieth century credit at least to some degree the positive shock to their labor supply provided by World War II (most recently, Goldin and Olivetti 2013). This raises a puzzle about the experience of female workers during and after the First World War in Britain. The number of female workers increased by as many as two million and proportionately by as much as 50% between 1914 and 1918, and women replaced male workers extensively in previously male-dominated industries (Braybon 1981). At the time, prominent suffragists and trade union leaders credited the Great War with revolutionizing the economic position of women in Britain. There is, however, no lasting impact on overall female labor force participation rates discernible in the data. Census figures show no increase in female labor force participation between 1911 and 1921, and very little if any increase by 1931, as can be seen in Figure 1. While the ultimate goal of this project is to determine why the female labor supply effects identified for WWII in the US appear to be absent for WWI in Britain, the economic history

literature is very sparse on even the extent and character of female labor during the war itself. Using Census data and data collected from numerous wartime government reports and surveys, this paper aims to first establish a more complete account than already exists of the wartime employment and wages of female workers engaged in a wide range of industrial and professional employment during the war, and then to examine whether wartime employment and pay had any apparent effect on postwar employment and wages.

A debate about whether the experience of female workers in Britain during the First World War constituted a watershed moment for women's position in the economy does exist in the historical literature, but the issue has mostly been explored in terms of its social consequences – how women perceived war work, how men perceived women's war work, and how women's experience during WWI did or did not shape subsequent attitudes about women's place in the economy (McCalman 1971; Braybon 1981; Woollacott 1994). The question of the economic impact of the mass mobilization of female labor during the First World War in Britain has not been addressed in the economic history literature, using the tools of economic theory and quantitative analysis, though, again, a large literature exists on the topic as it relates to the Second World War in the US and, to a lesser degree, Great Britain.

Two themes stressed in the historical literature are the key role that female workers played in munitions factories and other war-supporting industrial work, and then their rapid, almost total demobilization after the war ended. Was the issue primarily one of a decline in the demand for female labor after the war, or the lack of a positive labor supply response? In order to address this question, I plan to examine both the demographic characteristics and the industrial distribution of female workers before,

during and after the war. Did a large number of women who would not have been labor force participants during normal times enter war work and then leave it voluntarily? In which industries did the employment and wages of female workers increase the most during and decrease the most after the war? Is there evidence that they were being replaced with male workers, or were the jobs that occupied women during the war simply being phased out after?

Although there is no lasting impact on overall female labor force participation rates discernible in the Census data, the war has been credited with opening up opportunities for female workers in the clerical sector, and with contributing to the changing nature of domestic service during the interwar period (McCalman 1971; Seltzer 2011; Woollacott 1994). Was there really no lasting effect, or can we identify effects in some industries but not others? It may be that the wartime and postwar experiences of women in different industries and economic categories varied widely – as indeed Goldin and Olivetti (2013) find was the case for the U.S. after WWII. Among less-skilled female workers, there does appear to be evidence of a shift into clerical work and out of domestic service after the war, and, among college-educated women, a modest increase in female employment in chemistry- and engineering-related industry.

Also tied into questions about the nature of female employment during and after the war are the issues of their wartime pay and involvement with trade unions. Two fairly recent studies exist of the employment and pay of female workers in Britain during World War II (Hart 2007; Gazeley 2008). Kellogg and Gleason's 1919 *British Labor and the War* says very little about female workers during the First World War but raises interesting questions about their involvement in trade unions and negotiations about

female pay during that war. How were female wages negotiated? How did they compare to male wages in comparable work before, during and after the war? Did war work have any lasting impact on female pay and gender wage inequality?

The major contribution of the project so far has been documenting in much more detail than was previously available the wages earned by female workers in a wide array of war employments, using data collected from the Women's Work Collection at the Imperial War Museum. I am able to trace both the minimum wages set for war work by the Ministry of Munitions and by agreements with private factories and employers, and the actual wages paid across various industries. In munitions factories and other military employment, female wages by 1917 and 1918 appear to have been substantially higher than the minimums. Educated women working as clerks, chemists and welfare supervisors in factories typically earned annual salaries that were also substantially higher than most pre-war employment options open to them. There is also limited evidence of a reduction in the wage gap between male and female workers in several industries during the war. The next step of the project is to investigate whether the evident wage gains that female workers made during the war had any impact on female wages or the wage gap during the interwar period.

II. Extent of employment of female labor during the war

According to the Board of Trade figures reported in Table 1, the total increase in occupied females between July 1914 and July 1918 was just over 1.3 million, a 22.5% increase over the course of the war. The largest increase in absolute numbers was in industry, which included both the metal trades and government munitions factories, while especially large proportional increases are found in commerce – with many women

entering clerical works in banks and insurance companies – and the transport sector. The largest decline in female employment was in domestic service. Table 2 shows both the breakdown of the increases in numbers in different sectors within industry, and the increases in the share of female labor within the major industrial sectors – the proportion female increased from 9 to 25% in the metal trades, from 3 to 47% in government factories, from 20 to 39% in the chemical industry, and from 26 to 37% in industry overall. The transportation sector employed relatively few females before the war, so the proportional increase of female labor into work in that sector was among the largest. Table 3 shows the especially large increase in women working as telegraph and telephone operators, and also the entry of female workers into jobs they appear to have been excluded from entirely before the war, as ticket collectors, engine cleaners and porters and ticket checkers.

A limited amount of data collected so far sheds light on the sources of female labor in the industries that added most during the war. Table 4 shows the previous occupations of about 3000 women working in transport, for the London General Omnibus Company in April 1917. Nearly 40% had come from domestic service, 11% from the clothing trades, and about 12% from retail and waitressing. Fewer than 10% were new workers, and, interestingly, a small proportion appear to have left munitions work in favor of working as train or tram conductors. Table 5 shows the previous occupations of about 16,000 women who were placed by the Labour Exchanges in war work in the chemical and metal trades during the first two-thirds of 1916. In both industries about a fifth of the workers were new, and significant numbers came from domestic service and clothing and textiles. Nearly a third of the female workers placed in

the metal trades had worked in metal previously, and around 8% in the case of the chemical trades.

III. Impact

Several examinations of different aspects of the British economy in the early twentieth century have noted that, despite the significant mobilization of women into war work, there was no apparent lasting impact on female labor force participation rates following the war. Hatton and Bailey (1988) raised the issue in relation to female labor force participation in the interwar period, Broadberry and Howlett (2005) in relation to the mobilization of the British economy during the First World War, and Gazeley (2007) in an overview of work and pay in twentieth century Britain. Table 6 shows the distribution of male and female labor among the major census industrial categories in 1911 and 1921. While overall the concentration of female workers into the textiles, clothing, and domestic service did not change much, the proportions of female workers in each of those categories fell, while that in finance, commerce and dealing (clerical work) increased. There were especially large proportional increases in female employment in several industries that employed few women before the war but in which the expansion of female labor during the war had been greatest – the chemical industry, metal trades, and in government (again mainly in clerical roles). The question is whether the war really contributed to a redistribution of female labor, and Gazeley (2007, p. 61) notes that “Historians are divided on the question of whether the two periods of war had a lasting impact on sex segregation of employment.”

IV. Female wages and the wage gap during the war

Assessing the progress of wages and comparing them across different kinds of workers during the war is complicated both by the issue of wartime inflation and by that of wartime regulation of the economy, and wage-setting (and war bonus payments) in particular. At this stage I have focused more on the collecting of wage data than on interpreting it, but some initial tentative conclusions are that wages in munitions and other government-related work were on average much higher than in the non-munitions trades, that wages in many occupations within munitions work appear to have been higher than the set minimums, and that the war offered relatively high-paying work to educated and skilled women as factory welfare supervisors and in clerical work both for the government and in the private sector.

Figure 2 shows the trend in the average wages of female workers in the non-munitions trades compiled from the Department of Labour Statistics for the Ministry of Reconstruction Report of the Women's Employment Committee (1919, pp. 82-3). These include the textiles and clothing trades, along with paper and printing, pottery and glass, and food service. The average wage across these industries was consistently lower than the minimum wages set in munitions, and the conclusion of Report of the Women's Employment Committee was that real wages most likely did not increase overall for female workers; although the wage increases in some areas of war work, in munitions and engineering, were quite high, they concluded that "From certain figures submitted to the Committee it would appear, however, that the general increase in the trades in which women mainly found employment up to August, 1918, was only a little over 90 per cent.,

which is less than the increased cost of living, measured by changes in retail prices” (1919, p. 19).

Figure 3 shows the range of wages paid for different occupations at the Woolwich Arsenal, which employed 25,000 women by 1918 (Braybon, p. 46), in July 1918. The average – again, across occupations, not individual workers, was 60s. per week. The first minimum rate set in munitions work by the Ministry of Munitions in 1915 had been 20s. per week, raised to 24s. per 48 hour week in 1917 (Braybon, pp. 54, 59). The minimum rate continued to increase, to 35s. by the end of 1918 (Drake, pp. 50-51). Both Braybon and Yates state in various places that the minimum rates tended to become maximums, but this does not appear to be the case at least at the Woolwich Arsenal by 1918, where the majority of the listed jobs paid more than 30s. per week. Drake’s 1917 report for the Fabian society on women in the engineering trades during the war does note that “actual earnings vary considerably between one factory and another,” mentions the incidence of some very high wages at Woolwich, and explains that women employed on what had previously been relatively skilled male work were able to earn the highest amounts in munitions work: “Nor are men’s earnings unknown in the tool-room; and the female ‘fitter’ or ‘tool-setter,’ employed on piece-work in national factories, earns a sum as high as £5 and £10 a week at the rate ‘customarily paid for the job’” (Drake, p. 50-51).

[I need to add a lot more about the details of wage negotiations and wage setting during the war here.]

Figure 4 shows the range of wages paid in different kinds of jobs within the Women’s Army Auxiliary Corps in March 1917, when the minimum rate in munitions was 24s. per week. Pay in this branch of the National Service (and it was very similar in

the other branches) thus also looks relatively high compared to the pay in munitions. A question for further investigation is what kind of women, in terms of education and skill level, were attracted to the WAAC and similar National Service work. Figures 5 and 6 show the distributions (this time across individual women) of the annual salaries received by welfare supervisors in the National Shell Factories in 1916 and of university graduates employed by the Ministry of Munitions in a variety of roles – clerical, supervisory, statistical work, records-keeping, welfare officers, and administrative work. Table 7 gives the average annual and weekly salaries for the welfare supervisors -- £145.7 and 46.5s. – and the average annual salaries for the college graduates at the Ministry of Munitions, which was £202.9. **[I need to find data on annual salaries in comparable professional work by females from before and after the war to compare with these numbers.]**

Table 8 reproduces data provided by Bowley (1947) from the Board of Trade enquiries into earnings and hours from 1906, 1924 and 1935 which show that the average ratio of male to female earnings (in all manual occupations except distributive and domestic service) was 0.44 in 1906, increasing to 0.48 by 1924. Gazeley (2007, p. 67) concluded from this that although female workers did make some absolute and relative earnings gains, “the reduction in gender inequality was fairly modest across the First World War (a narrowing of 4 percentage points in the pay ratio between 1906 and 1924 – about 10 per cent), though there was some variance around this average figure” including in the metal industries, where the reduction was greater – 7 percentage points, about 18 per cent. Since these Board of Trade enquiries from 1906 and 1924 are most likely the best available source of data on wages from before and after the First World War, it may not be possible to say much more about the impact of the war on the gender wage gap.

However, it does appear that at least in some sectors the gender wage gap was narrower during the war than these aggregate averages from before and after. The Report of the War Cabinet Committee on Women in Industry (1919, p. 84) stated that “Speaking generally of women employed on men’s work, members of the Engineering and National Employers’ Federation placed the woman’s productive value at about two-thirds of the men’s.”

Table 9 shows male and female time and piece rate wages in various occupations in April 1918 within the National Shell and National Projectile Factors, supplied by the Ministry of Munitions to the War Cabinet Committee on Women in Industry and published in their Report (1919, pp. 121-2). The report notes that “The wages of men were fixed strictly on the basis of local rates, and those of women may be assumed to have met the requirements of the Statutory Orders” (122). In the shell factories, the female/male pay ratios are consistently higher for workers on time rates than on piece rates, and range from 0.38 to 0.68 depending on occupational category and type of pay. The report also noted that, in the shell factories, machine operators of both genders working on piece rates “would generally be confined to the more difficult operations and the heavier natures of shell” (122). In the projectile factories, the difference in the pay ratio is not as evident between time and piece rate workers, and the female/male wage ratios vary between 0.36 and 0.67.

Table 10 shows data on male and female earnings in the transport and retail sectors, also from the Report of the War Cabinet Committee on Women in Industry (1919, pp. 144-7). Among workers at the Great Western Railway, the female/male wage ration varied from 0.49 among clerks to 0.81 among conductors and 0.83 among passenger

porters. The War Cabinet Committee Report noted that the transport agreement relating to the entry of women into previously male occupations had specified that “women should take the place of men, under the conditions that nothing should be done to prejudice the re-employment of the men by establishing a precedent for the employment of women, and that the women should receive the minimum rate of the men for the same grade of work” (143). Thus in principle the pay should have been equal for men and women on the same jobs, but women were not on the incremental scale and got lower war bonuses, and “As a result of the lower total bonus, and of the women not being on the incremental scale, there was a difference in total wages which sometimes amounted to a considerable figure, and seemed an injustice to individual female employees of the railway companies, who claimed, in evidence before the Committee, that they were doing exactly similar work to the men they replaced” (143). At Harrod’s, the female/male pay gap varied from 0.56 among salespeople of men’s clothes and silver to 1 (!) among dispatch and ledger clerks. The manager of Harrod’s who provided this data to the War Cabinet Committee reported that he “believed this scale to conform to the relative work done efficiently by each sex. He referred to men generally drawing more in the way of commission on sales than did women” (147).

A final note is that several contemporary sources, including Kellogg and Gleason (1919) and the Ministry of Reconstruction Report of the Women’s Employment Committee (1919) noted the increase in female trade union membership and involvement. Table 11 presents changes in female trade union membership in a range of industries across the years 1914 to 1917 reported in the Ministry of Reconstruction report (1919, p. 94). They speculated about the impact of organization on female wages during and after

the war, first stating that “It would be as unreasonable to attribute the whole of the increases in engineering trades to organization as it would be to deny that the low wages paid in corset-making are in part due to its absence,” but then concluding that “in war industries, where organization is stronger, women’s wages have risen considerably more than the rise in the cost of living, measured by changes in retail prices, whilst in the non-war industries, where organization is weaker, they have not risen proportionately to the cost of living” (41).

V. Conclusion

Most of this brief overview has simply served to raise more questions for investigation. My priorities in the next stages are mostly in figuring out how to connect the data about war employment and wage patterns to trends in the interwar period. I am still working on collecting and coding the data about employment and wages of women who were working in clerical work, both in government and military divisions and in private banks and insurance companies. The Ministry of Reconstruction Report also speculated about the impact of the war on women and clerical work, suggesting that “Women’s employment in clerical work has been revolutionized by the war. To a far greater extent even than in the distributive trades, women have been introduced to do the work of men in almost every branch of clerical work. It seems probable that much of the work will be retained by them after the war” (33). Seltzer’s (2011, p. 464) investigation of female salaries and the wage gap in banking during the interwar period asserts that “The First World War transformed the role of women in banking”. It seems likely that the most lasting effects of the war on female employment could have been concentrated among more educated, skilled women who entered clerical (and also scientific, in the chemical

trades) positions during the war. If so, that would be consistent with what Goldin and Olivetti (2013, p. 259) concluded about the impact of WWII on American women, that the labor supply impact of the war was larger for educated women. The difference, they explain, lies in the fact that less educated women were disproportionately drawn into manufacturing during the war, and those jobs did not typically remain available to them afterwards, while “the more-educated group, however, entered sectors that enabled women to remain to 1950 and beyond” (Goldin and Olivetti, p. 262). It may be that the impact of the First World War in Britain was more similar to that of the Second World War in the U.S. than first impressions might suggest.

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Table 1: Changes in female employment during the war

Numbers of Women Working in:	July 1914	July 1918	Difference
Own account or employers	430,000	470,000	+ 40,000
Industry	2,178,600	2,970,600	+ 792,000
Domestic Service	1,658,500	1,258,000	- 400,000
Commerce	505,500	934,500	+ 429,000
Government inc. education	262,200	460,200	+ 198,000
Agriculture	190,000	228,000	+ 38,000
Hotel, public houses, theatres	181,000	220,000	+ 39,000
Transport	18,200	117,200	+ 99,000
Other inc. professional and home	542,500	652,500	+ 110,000
Total occupied	5,966,000	7,311,000	+ 1,345,000
Not occupied over 10	12,946,000	12,496,000	- 450,000
Under 10	4,809,000	4,731,000	-78,000
Total females	23,721,000	24,538,000	+ 817,000

Source: Board of Trade figures from the Report of the War Cabinet Committee on Women in Industry, HMSO 1919, p. 80.

Table 2: Changes in female employment within industry during the war

Trade:	Number Females July 1914	Number Females July 1918	Difference	% Female of Total July 1914	% Female of Total July 1918	Number Females Replacing Males 1918
Metal	170,000	594,000	+ 424,000	9	25	195,000
Chemical	40,000	104,000	+ 64,000	20	39	35,000
Textile	863,000	827,000	- 36,000	58	67	64,000
Clothing	612,000	568,000	- 44,000	68	76	43,000
FDT	196,000	235,000	+ 39,000	35	49	60,000
P & P	147,500	141,500	- 6,000	36	48	21,000
Wood	44,000	79,000	+ 35,000	15	32	23,000
China	32,000					
Leather	21,100	197,100	+ 93,000	4	10	62,000
Other	49,000					
Govt. est.	2,000	225,000	+ 223,000	3	47	197,000
Total	2,178,600	2,970,600	+ 792,000	26	37	704,000

Source: Board of Trade figures from the Report of the War Cabinet Committee on Women in Industry, HMSO 1919, p. 81.

Table 3: Changes in female employment within transport during the war

Occupation:	July 1914	July 1918
Booking clerks	152	3,612
Telegraph & Telephone operators	2,800	20,995
Ticket collectors	0	1,972
Carriage cleaners	214	4,603
Engine cleaners	0	3,065
Porters and checkers	3	9,980
Workshop laborers	43	2,547
Other laborers	420	580
Cooks, waitresses, attendants	1,239	3,641
Signals, gate-keepers, guards and conductors	437	1,292
Munitions, machinists, mechanics	44	1,082
Painters, cleaners	698	1,177
Total (including unspecified occupations)	12,432	65,887

Source: Board of Trade figures from the Report of the War Cabinet Committee on Women in Industry, HMSO 1919, p. 97.

Table 4: Sources of female labor in transport, 1917

Previous Occ.	Current Occupation				
	Conductor	Clerk/cashier	Inspector	Loading observer	All
Domestic servant	39.3%	14%	48.5%	21.2%	38.6%
Clothing	11.1%	6%	9.1%	18.2%	11%
Munitions	6.8%	0	0	3%	6.4%
Waitress	6.8%	0	9.1%	3%	6.6%
Shop assistant	6%	9.1%	3%	3%	6%
Packer/sorter	3.1%	0	1.5%	0	3%
Clerk/cashier	2.8%	48.5%	6.1%	12.1%	4.4%
Non-worker	8.7%	9.1%	12.1%	36.4%	9.1%
Miscellaneous	15%	13.1%	10.6%	3%	14.8%
Total Number	3027	99	66	33	3225

Source: London General Omnibus Company, 10th April 1917

Table 5: Sources of Female Labour in War Employment (from Labour Exchanges, Jan-Sept 1916)

Source of Female Labour	% of those placed in Chemical trades, of 11,415	% of those placed in Metal trades, of 4,667
Not previously occupied	22.5	21.5
Domestic service	20.5	12.6
Clothing trades	12.8	5.2
Metal trades	12.3	28.1
Chemical trades	7.8	8.1
Textile trades	5.1	4.9
Clerical and govt	3.4	5.0
Shop assistant/waitress	2.8	1.9
Paper & printing	2.1	1.8
Leather trades	1.9	0.9
Food & tobacco trades	1.8	1.0
China trades	1.5	
Professional	1.5	2.1
Rubber trades	1.2	4.1
Wood trades	0.9	0.7
Agriculture	0.5	0.1
Other	1.4	2.0

Source: A.W Kirkaldy, *Industry and Finance: War Expedients and Reconstruction* (1918), p. 65.

Table 6: Per cents occupied in Industrial Groups in England and Wales, 1911 and 1921

	Males %		Females %	
	1911	1921	1911	1921
Agriculture	9.9	8.6	2.0	1.7
Coal	8.5	9.3	0	0
Bricks, pottery, cement, quarries, glass, etc.	2.5	2.3	0.8	1.1
Chemicals	0.9	1.2	0.5	1.0
Metals, engineering, vehicles	12.4	15.7	2.1	4.4
Textiles	4.5	4.0	13.6	12.9
Clothing	3.0	2.6	14.5	9.9
Food, drink, tobacco	2.8	2.8	3.1	3.9
Paper, printing	1.7	1.8	2.0	2.3
Wood, furniture	1.9	1.7	0.5	0.5
Building, public works	7.5	6.2	0	0.2
Other manufactures	1.8	1.8	1.6	2.3
Gas, water, electricity	1.0	1.3	0	0.1
Transport	9.7	9.6	0.4	0.8
Finance, commerce, dealing	14.4	12.7	9.6	14.7
National and local government, defence	5.5	7.6	1.6	3.8
Professions, entertainments	3.3	3.4	7.7	9.0
Personal service	5.2	4.3	38.6	29.8
Miscellaneous	3.5	3.1	1.4	1.6
Total	100%	100%	100%	100%
Numbers occupied (thousands)	11,454	12,113	4,832	5,065

Note: More than half the women under the heading 'Professions' were teachers.

Source: Bowley 1947, p. 12.

Table 7: Salaries of educated women in war work

Type of work	Average Salary Annual £	Range	Average Salary Weekly s.	Range
Welfare Supervisor	145.7 (N = 182)	30-360	46.5 (N = 36)	25-80
Ministry of Munitions	202.9 (N = 131)	103-450		

Sources: Welfare supervisors from the Annual Report on National Shell Factories, 1916. Ministry of Munitions university graduates.

Table 8: Average weekly earnings

Year	Men & Boys	Women & Girls	Women/Men
1906	27.0s.	11.8s.	0.44
1924	57.6s.	27.5s.	0.48
1935	55.7s.	26.9s.	0.48

Source: Bowley 1947.

Table 11: Female trade union membership during the war

	Female membership at end of:			
	1914	1915	1916	1917
Trades	140	2300	2917	5582
Mining and Quarrying	1041	2485	4453	7745
Metal, Engineering	210272	218906	223939	244752
Cotton	7695	10378	17253	35137
Woolen and Worsted	18492	19300	19139	32963
Linen and Jute	3657	6267	6421	17217
Hosiery	6254	6524	6802	12110
Other textiles	7260	11211	15962	22527
Textile printing, dyeing, warehousing	10915	11945	17677	21299
Boot and shoe	14064	15982	21456	41170
Other Clothing	750	3827	35620	71702
Transport	470	455	356	1667
Agriculture and Fishing	8285	9747	9879	17341
Printing, Paper	568	546	1290	3306
Chemicals, Pottery	2129	2796	8187	13469
Food, Drink, Tobacco	3317	3563	4399	5123
Shop Assistants, Clerks	20039	22156	32880	46186
Other Trades	5594	5092	6174	10962
General Labour	23534	38106	79148	113021
Public Authorities	16460	18930	26989	50384
Total all trades	360936	410516	540941	773663

Source: Ministry of Labour figures from Ministry of Reconstruction Report of the Women's Employment Committee, 1919

Table 9: Wages and the wage gap in munitions work during the war

Occupation (Shell Factories)	Men	Wage Time Rates s.	Wage Piece Rates s.	Women	Wage Time Rates s.	Wage Piece Rates s.	W/M Time	W/M Piece
Foremen	102	96.5	133.3	62	42.2	50.8	0.44	0.38
Tool Room	645	68.2	101.8	127	32.2	34.8	0.47	0.34
Charge Hands	461	65.7	99.5	245	44.5	54.25	0.68	0.54
Machine Operators	355	49.8	75	7676	32.1	42.6	0.64	0.57
Labourers	1154	49	70.5	1315	31.3	37.8	0.64	0.54
Viewers	106	56.3	79.5	1193	35.2	43.4	0.63	0.55
Projectile Factories								
Foremen	295	105.8	132.6	68	49.67	64.2	0.47	0.48
Tool Room	2827	65.1	108.1	4	31.1	39.4	0.48	0.36
Charge Hands	1556	70.6	110.3	428	43.4	74.4	0.61	0.67
Machine Operators	951	51.6	92.67	9418	34.1	62.4	0.66	0.67
Labourers	5497	52.5	82.5	2858	34.1	46.3	0.65	0.56
Viewers	1081	58.3	76.5	2740	35.67	45.2	0.61	0.59

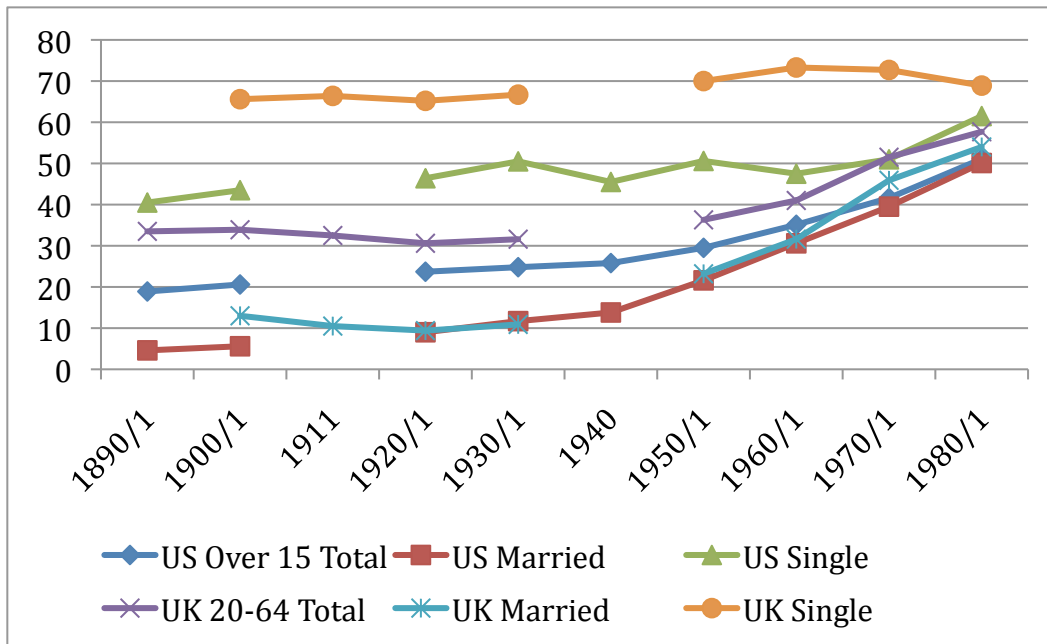
Source: Report of the War Cabinet Committee on Women in Industry, HMSO (1919)

Table 10: Wages and the wage gap during the war in transport and retail

Occupation: Great Western Railway	Men s.	Women s.	W/M	Harrod's Employees	Men s.	Women s.	W/M
Clerks	83	40.5	0.49	Grocery	60	42.5	0.71
Ticket Collectors	64.4	46.7	0.73	Provisions	60	46.5	0.78
Rail Motor Conductors	59.6	48.1	0.81	Fish	60	42.5	0.71
Porters - passenger	53.1	43.9	0.83	China	75	45	0.6
Porters - parcel	60.3	42.5	0.71	Silver	90	50	0.56
Porters - goods	59.4	46.8	0.79	Men's Clothing	90	50	0.56
Carmen/women	65.1	42.4	0.65	Lift Attendants	35	30	0.86
Checkers	66.8	47.5	0.71	Van Drivers	47.5	40	0.84
Callers Off	66.3	45.3	0.68	Despatch Clerks	35	35	1
Timekeepers		41.5		Ledger Clerks	57.5	57.5	1
Carriage Cleaners	60.9	40.8	0.67				
Lamp Trimmers	63.8	41.6	0.65				
Storemen/women	60.3	40.1	0.66				
Charwomen		14.6					
Messengers	69.9	40.3	0.58				

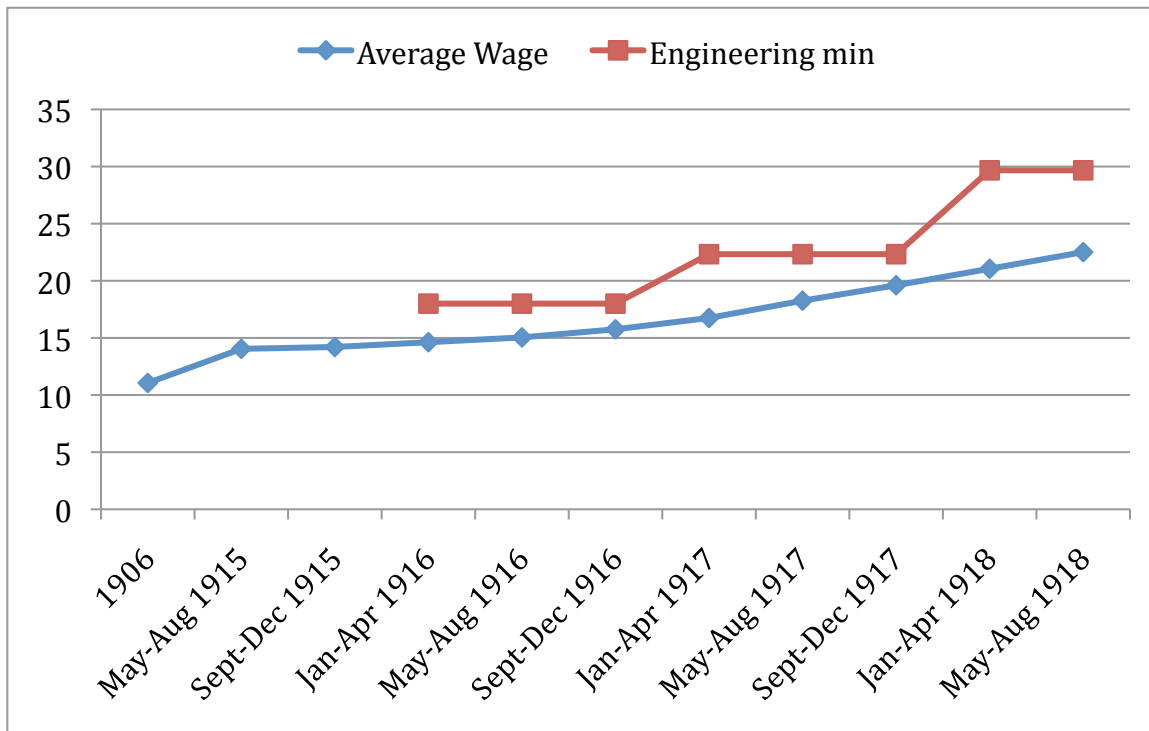
Source: Report of the War Cabinet Committee on Women in Industry, HMSO (1919)

Figure 1: Female Labor Force Participation Rates in the US and UK 1890-1980 (%)



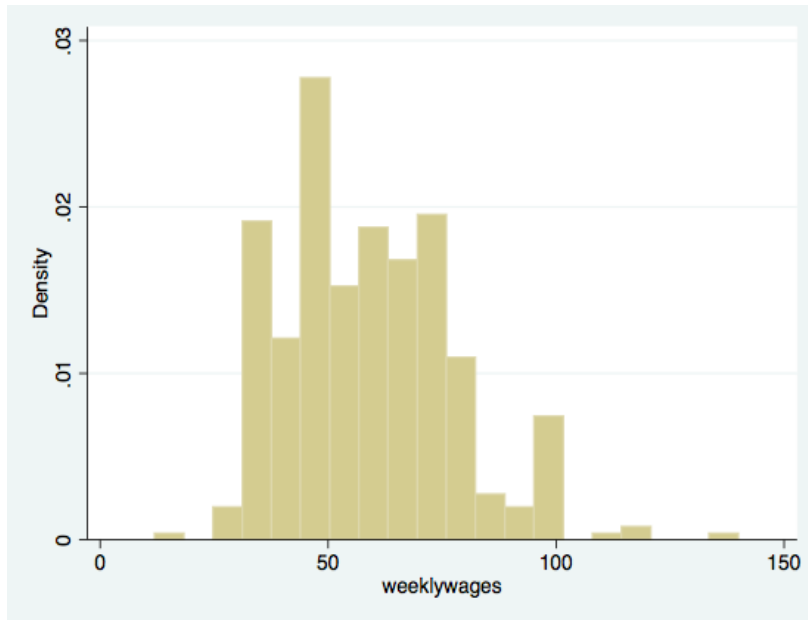
Source for US: Goldin 1990; Source for UK: Joshi et al. 1985

Figure 2: Wages of women and girls in 17 non-munitions trades (s. per week)



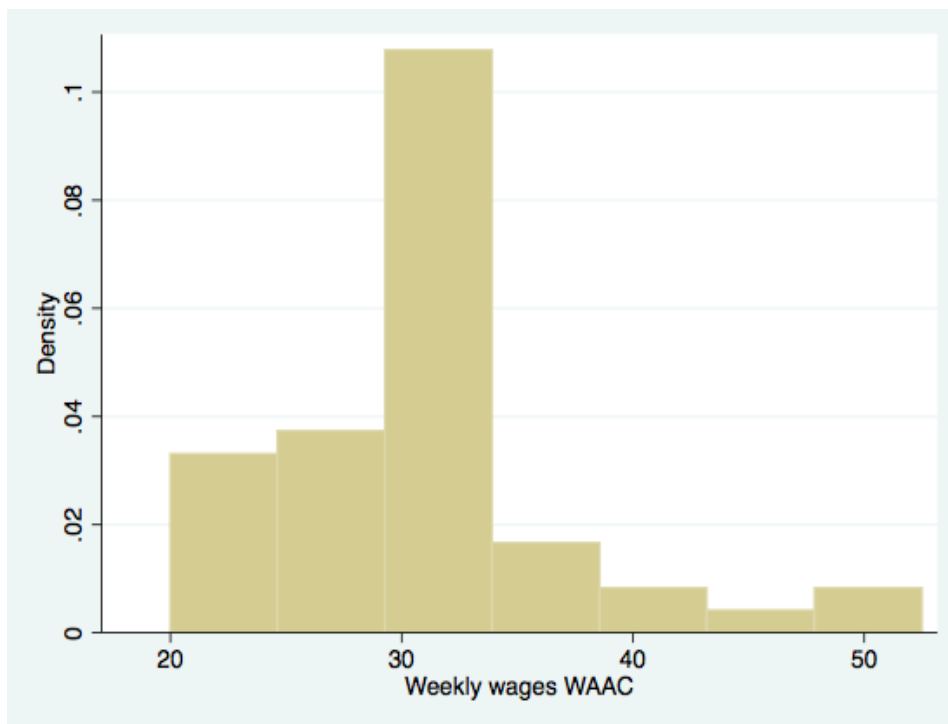
Source: Ministry of Reconstruction Report of the Women's Employment Committee, HMSO, 1919; Drake 1917.

Figure 3: Weekly wages at Woolwich Arsenal, July 1918
(mean = 60s.)



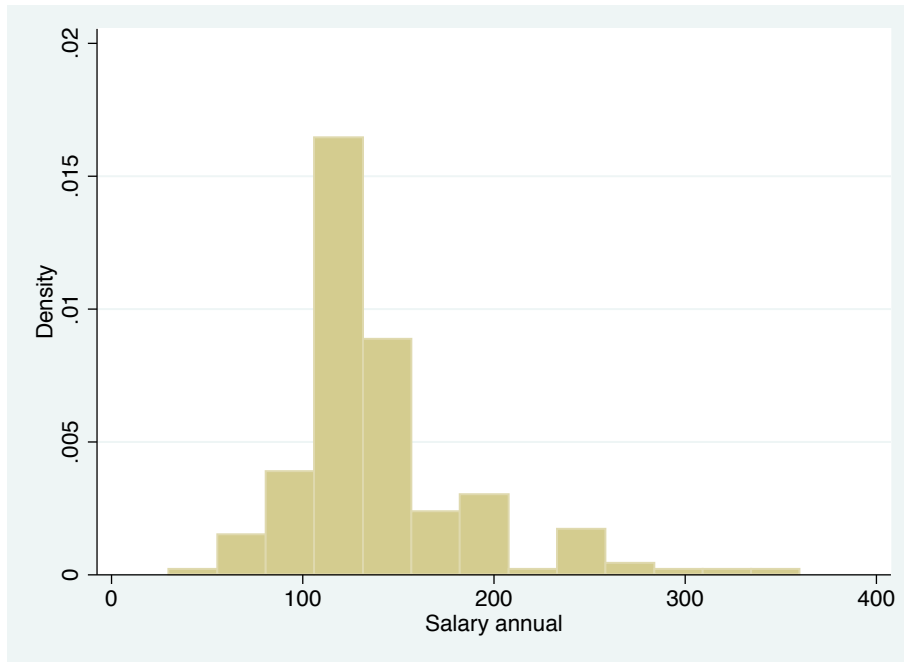
Source: IWM Women's Work Collection

Figure 4: Weekly wages in the Women's Auxiliary Army Corps, March 1917
(mean = 30s.)



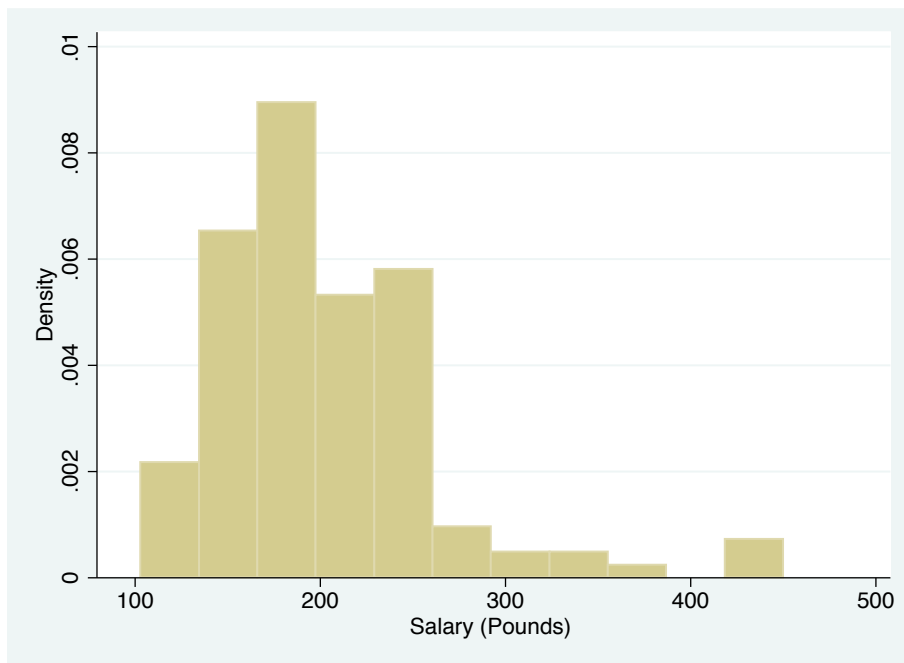
Source: IWM Women at Work Collection

Figure 5: Annual salaries (£) of welfare supervisors from the Annual Report on National Shell Factories, 1916



Source: IWM Women at Work Collection

Figure 6: Annual salaries (£) of university graduates employed by the Ministry of Munitions



Source: IWM Women at Work Collection