Employment during the Second World War  
  
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Unemployment had scarred the inter-war years and had blighted the lives of more than one generation of workers, particularly in the depressed areas. With rearmament in the late 1930s, the total unemployed had fallen by 1939 to about 1 million men and 250,000 women. By 1944 only 40,000 men and 14,000 women were officially registered as unemployed. War, as ever, had been a massive job-creation exercise.   
  
The number of men in the armed forces rose from half a million in 1939 to over 4.5 million in 1945, with another quarter of a million in civil defence, the fire service and the police. With the absorption of unemployed men, there were 3 million less male workers in civilian employment by the end of the war than at the beginning. In the main this 'manpower' gap was filled by women. Hence the song:  
  
'She's the girl that makes the thing that drills the hole that holds the spring  
That drives the rod that turns the knob that works the thingumebob.  
She's the girl that makes the thing that holds the oil that oils the ring  
That makes the shank that moves the crank that works the thingumebob.  
It's a ticklish sort of job,  
Making a thingumebob,  
Especially when you don't know what it's for!  
But it's the girl that makes the thing that drills the hole that holds the spring  
That works the thingumebob that makes the engines roar.  
And it's the girl that makes the thing that holds the oil that oils the ring  
That works the thingumebob THAT'S GOING TO WIN THE WAR.'  
  
Women's paid employment rose from some 4.8 million in 1939 to over 7 million civilian workers by 1943 (the peak year) plus nearly half a million in the Women's Auxiliary Services and another 70,000 in civil defence, fire and police. (Female civilian employees included 750,000 part-time - 30 hours per week or less - workers in 1943, a figure that rose to 900,000 the next year, though only 200,000 of these were in the munitions and related industries. From April 1942 the government directed the work of part-time women to maximize the use of this extra labour supply.)  
  
The biggest increase in female civilian work was in the metalworking sector (particularly in the munitions industries) where employment quadrupled from about 400,000 to 1.6 millions by 1943 (men's employment had also risen here, though more slowly, to 3 millions that year). The next biggest rise was in national and local government where the number of women workers more than doubled from 450,000 in 1939 to over 1 million in 1945. On the railways, by the summer of 1943, some 100,000 women had replaced the same number of under-25-years-old men who had been called up.  
  
The amount of extra labour from overseas was quite small in comparison. Apart from the Irish already working in Britain, Irish men came to work in agriculture or as labourers in civil engineering while Irish women came into domestic and hospital service. Later, some 40,000 Irish workers were recruited direct from Ireland for the munitions industries. A small number of West Indians was also brought over, to be trained before starting work; Learie Constantine, the famous West Indian cricketer, was made a welfare officer to deal with their problems.   
  
By the end of the war, 130,000 Italian and 90,000 German prisoners of war were also working. They were mainly employed in agriculture and other outdoor work. When, in the spring of 1944, Italy ceased to be an enemy, the range of work for Italian POWs was extended - but on the understanding no British labour was available, and if the local trade union branch did not object. The German POWs continued to require armed escort but this was relaxed in the potato harvest of autumn 1944.   
  
Once the large programme of factory and camp construction just before and at the beginning of the war had nearly been completed, building workers were seen as an important supply of male labour - both for the forces and the munitions sector. There had been 1.3 million workers in building and civil engineering in 1939 but, with the ending of private building, this had fallen to under 1 million in 1942. Churchill wanted their numbers further reduced to 500,000 by the end of 1943. The demands of housing American GIs slowed this down and numbers did not drop below 600,000.   
  
The prefabricated floating (Mulberry) harbours and breakwaters needed for D-Day and its aftermath in 1944 meant scouring the country for carpenters, scaffolders and steel fixers as well as training other building tradesmen. No less than 1,000 firms were involved in contributing to the construction of the Mulberry harbours. Simultaneously, the demand for scarce building labour increased with the need for repairs to the damage caused by flying bombs in London.  
  
The distributive trades (both wholesale and retail) were another potentially large source of labour. The 1.9 million men (including employers and self-employed) in these trades in 1939 had halved by 1945. By contrast, the number of women working in this sector remained at around 1 million through the war but this disguised the withdrawal of, first, those in their twenties and, then, those in their thirties, who were replaced by school leavers and older women. With fewer staff available in larger shops and a proportion of the small independent shops shut down when their owner was called up, queuing became a feature of most women's lives.  
  
With the reduced output in many traditional industries, the normal route into employment for many boys and girls was disrupted. Thus by 1945 there were 40,000 fewer boys in coal mines than in 1938 and 50,000 fewer girls in textiles. Furniture manufacture and tailoring saw significant drops in boy labour while clothing manufacture and laundries saw a similar decrease for girls.  
  
With the loss of imports caused by the war, employment in the Lancashire cotton industry, after an initial rush of service orders, started to contract quickly. Workers left in droves, attracted by higher pay in war industries. The Royal Ordinance Factory at Chorley in Lancashire employed 35,000 workers at its peak and workers did not want to leave, despite long travelling times for many. In September 1943, the Ministry of Labour had to call for registration of women who had formerly worked in cotton, as there was now a shortage of female workers to produce manufactured cotton for parachutes and other essential supplies.

But it was not just large factories that contributed to war production. Garages, formerly servicing private cars, were eventually put to use overhauling army vehicles, while car showrooms were converted into shell-turning shops; the retail motor trade trained thousands of men to be drivers and mechanics for the armed forces. On a larger scale, the Nuffield Organisation (Morris Motors) was responsible, among other war work, for collecting, housing and sorting damaged aircraft components. Some 25 million items passed through its workers' hands, with reparable parts going to repair shops while those irretrievably damaged were scrapped and the metals melted down in the company's Metal and Produce Recovery Depots - the one at Horspath, near Oxford, employed more than 1,500 men and women.  
  
The importance of military aircraft in the Second World War led to the 200 existing airfields being supplemented by 500 new ones. Each required, among other materials, miles of electric cables. The aircraft themselves also needed extensive electric cabling, with four and a half miles in each Lancaster bomber. At the retail store of Perrings in Staines, volunteer (rather than directed) female workers produced the cable preparation for the complete electrical equipment of 1,400 Halifax and Lancaster bombers between 1942 and 1944. According to one account: "The factory still looked like a store and the works office, wages department, girls' restroom and canteen kitchen were housed in the peace-time 'show flat' on the first floor."  
  
The production figures are quite staggering. For example, some 360 million shells, grenades and mines and 12,000 million rounds of small arms ammunition were produced. Factories producing the latter employed well over 100,000, including some 70,000 women. Eventually some 600 firms were involved in the production of Bailey bridges, making over 200 miles of fixed bridges and 40 miles of floating bridges; the longest bridge erected was one of over 5,000 feet across the river Rhine.   
  
By 1945 more than 3 million miles of cable were produced for use in military communications. During the war the Post Office laid cables providing five million miles of underground telephone circuits for the armed forces and other essential services. At their peak, some 38 million radio valves a year were being manufactured. On a more mundane level some 40 million jerricans (steel four-gallon petrol containers) were manufactured and nearly 100 million pairs of standard army socks produced during the war.  
  
The mobilization of the whole workforce, along with central government control of most economic activity, showed most working men and women that the waste of the inter-war years did not have to be repeated. This experience, despite the austerity (including the continuation of rationing for several years after the war), profoundly changed the outlook of the younger generations of workers.  
  
  
Further reading:  
  
The Times, British War Production 1939-1945: A Record (The Times, London: 1945) ('produced in complete conformity with the authorized economy standards').  
  
Ernest Fairfax, Calling All Arms: The Story of How a Loyal Company of British Men and Women Lived through Six Heroic Years (Hutchinson, London: 1945).  
P. Inman, Labour in the Munitions Industries (HMSO and Longmans, London: 1957).  
  
H. M. D. Parker, Manpower: A Study of War-time Policy and Administration (HMSO and Longmans, London: 1957).  
  
(Both Inman and Parker are in the History of the Second World War: United Kingdom Civil Series.)  
  
Angus Calder, The People's War: Britain 1939-45 (Panther, London: 1971).  
  
Asa Briggs, Go to It! Working for Victory on the Home Front 1939-1945 (Mitchell Beazley and the Imperial War Museum, London: 2000).