

Employing the enemy: the contribution of German and Italian Prisoners of War to British agriculture during and after the Second World War*

by Johann Custodis

Abstract

German and Italian prisoners of war (POWs) were a common sight in parts of rural Britain during and immediately after the Second World War. This article seeks to ascertain their economic contribution to the British wartime and post-war economy. The analysis of new evidence from the National Archives reveals that Italian and in particular German prisoners were productive assets on the land, more so than previous estimates have shown. At a peak in 1946 they formed one fifth of the rural workforce. Both their productivity and the scale of their employment was highest in the immediate post-war years, leading to a contribution to British GDP of one per cent in both 1946 and 1947.

Historians have already emphasized the ‘substantial contribution’ of prisoner of war (POW) labour to wartime British agriculture.¹ On one assessment, Italians were ‘more useful to Britain’s cause in the wheat fields than the battlefields’.² Official government publications are more cautious, referring to a time lag and the need to remove security constraints before POW labour could be fully used.³ Davis considered POWs a liability for their captors during both World Wars holding that they crowded out native workers, were costly, inefficient, and lacked motivation and skills.⁴ This paper seeks to determine which of these views is correct. Davis’s hypothesis is tested by assessing the German and Italian POW contribution to British agriculture. New qualitative and quantitative evidence is used to revise POW employment numbers, evaluate qualitative accounts on Italian and German POW productivity, establish POW productivity proxies and yield a first estimate for the contribution of rural POW labour to British GDP. The paper concludes that POWs made significant contributions to British agriculture, particularly in the immediate post-war years.

* The author would like to thank many colleagues at various conferences for their suggestions, but most importantly Peter Howlett for his ongoing support and help, and the ESRC for its financial support. This article is dedicated to my Father. All manuscript references are to the National Archives, London.

¹ Bob Moore, ‘Turning liabilities into assets’, *J. Contemporary History* 32 (1997), p. 127.

² Neville Wiley, ‘POWs in the era of total war’, *War in History* 13 (2006), p. 224.

³ H. M. D. Parker, *Manpower: a study of war-time*

policy and administration (1957), pp. 187, 384; H. Satow, *The work of the prisoners of war department during the Second World War* (1950), pp. 33–5.

⁴ G. Davis, ‘POWs in twentieth-century war economies’, *J. Contemporary History* 12 (1977), pp. 627–9.

Over 470,000 German and 400,000 Italian POWs were held on British soil or in the British Commonwealth during and after the Second World War. Almost half of them (360,000) were working by early 1945.⁵ Britain was the heaviest user of this labour supply in the British Commonwealth, employing over 150,000 Italians and 380,000 Germans at peak. The 1929 Geneva Convention explicitly allowed captors to force captured enemy soldiers of signatory countries to work provided they were not engaged in labour which was directly linked to the war effort or dangerous, excessive or unhealthy.⁶ Britain and the British Commonwealth countries abided very closely by these rules.⁷ The last Italian POWs were repatriated from the British Commonwealth in the summer of 1947 and the last Germans had left Britain by July 1948.⁸ Post-war POW employment was possible because of an unprecedented legal peculiarity. According to the Geneva Convention, POW status would only cease with a peace treaty.⁹ However, neither Italy nor Germany had formally signed a peace treaty after armistice. Italy surrendered after Mussolini's fall in September 1943 and in May 1944 the provisional Italian government agreed on a 'co-belligerent' status supporting the Allied war effort. A peace treaty was only signed in the summer of 1947.¹⁰ Germany surrendered unconditionally in May 1945 and no peace treaty has ever been signed. For this reason, POW status did not end for Germans in the hands in the Allies. However, the Allies informally agreed to repatriate all POWs in their hands, in Europe, by December 1948.¹¹ The repatriation of all German POWs on British soil was completed by July 1948, but after that date, 15,700 German and 1,400 Italian ex-POWs remained in Britain as civilian rural workers.¹²

I

New evidence located by the author at the National Archives in Kew allows for a more complete and consistent analysis of German and Italian POW employment in Britain than has been achieved before. Many British government files on POW employment and POW policy have been closed until recently. The Maschke Commission, a German historical commission researching the history of German POWs in British captivity during and after the Second

⁵ Helmut Wolff, *Zur Geschichte der deutschen Kriegsgefangenen des 2. Weltkrieges, Band XI/1: Die deutschen Kriegsgefangenen in britischer Hand* [The history of German POWs in World War II: German POWs in British hands] (1974), pp. 21–8; Bob Moore and Kent Fedorowich, 'British perceptions of Italian prisoners of war, 1940–47', in Bob Moore and Barbara Hatley-Broad (eds), *Prisoners of war, prisoners of peace: captivity, homecoming and memory in World War II* (2005), p. 25; MT 39/568, Draft War Cabinet paper, 'Employment of German POWs in the UK after the cessation of hostilities', Annexes B and C, 4 Apr. 1945.

⁶ Articles 27–32, in Dietrich Schindler and Jiri Toman (eds), *The laws of armed conflicts* (third edn, 1988), pp. 347–8.

⁷ R. Overmans, *Soldaten hinter Stacheldraht – Deutsche Kriegsgefangene des 2. Weltkriegs* [Soldiers

behind barbed wire – German POWs in the Second World War], p. 83.

⁸ Bob Moore and Kent Fedorowich, *The British Empire and its Italian prisoners of war*, (2002), p. 220.

⁹ R. Overmans, 'Das Schicksal der deutschen Kriegsgefangenen des Zweiten Weltkrieges', in Jörg Echternkamp, Andreas Kunz, Wilfried Loth, Rolf-Dieter Müller, Rüdiger Overmans and Michael Schwartz (eds), *Das Deutsche Reich und der Zweite Weltkrieg, Band 10/2, Die Folgen des Zweiten Weltkrieges* [The Reich and World War II, 10: Consequences of World War II] (2008), pp. 431–505.

¹⁰ Moore and Fedorowich, *Empire*, p. 137.

¹¹ Overmans, *Soldaten*, p. 303.

¹² Julius Isaac, *British post-war migration* (Occasional papers series of the National Institute of Social and Economic Research, 17, 1954), p. 183.

World War in the 1970s, was unable to access many of the files which are now available. Also, this paper for the first time presents consistent quantitative evidence on both German and Italian POW employment in Britain. The evidence mainly comes from War Office (WO) and Ministry of Agriculture and Fisheries (MAF) files. It is supplemented by documents from the Cabinet Office records (CAB) and from other departments such as the Home Office (HO).

During and after the Second World War, almost 400,000 German and 154,000 Italian POWs were held in Britain.¹³ The treatment of and policy towards Italian and German POWs diverged sharply. While German POWs were regarded as a serious security threat, especially in 1940, when a German invasion of Britain appeared imminent, the Italians were generally considered to pose less of a danger. This difference in treatment was further intensified following Italy's surrender in September 1943. The Italians were offered the choice to become 'co-operators' or 'non-co-operators'. The former performed work contrary to the Geneva Convention and under lower security constraints while receiving higher financial rewards than non-co-operators.¹⁴

The new evidence shows that while only 9,000 Italians had been employed by December 1941, the figure had quadrupled within a year and peaked at 162,000 in June 1945. After that date, repatriation depleted their numbers until it was completed in June 1946. German POW employment only commenced in March 1944 and remained small until the autumn of that year, but rapidly expanded after the German armistice in May 1945 (VE Day). At its peak in August 1946, 377,000 Germans were working in Britain.¹⁵ Subsequently, German POW repatriation progressively reduced employment numbers until completed in July 1948. The composition of the POW workforce during and after the war reflects these drastic changes. While Italian POWs formed almost all the POW workforce until the summer of 1944, their share fell progressively after D-Day and the German armistice in May 1945 to less than half. By June 1946, the POW labour force consisted exclusively of Germans except for a small number of 1,400 Italians who had assumed civilian status to work in agriculture.¹⁶ The combined German and Italian workforce had almost doubled by May 1946 compared to spring 1945. This suggests that the impact of their employment must have been larger post-war than during the war years.

The prisoners worked in many different sectors, such as housing, road construction and brick production, but the great majority were employed in the rural sector. The new evidence shows that from July to September 1945, for instance, on average 60 per cent of all German POWs employed were working in agriculture, making up approximately 11 per cent of the British agricultural labour force.¹⁷ By November 1945, 174,750 out of 333,750 of the Italian and

¹³ Bob Moore, 'Axis Prisoners of War in Britain during the Second World War: a comparative survey', in Bob Moore and Kent Fedorowich (eds), *Prisoners of War and their captors in World War II* (1996), p. 19.

¹⁴ *Ibid.*, p. 33.

¹⁵ Plus another 4,000 base camp staff.

¹⁶ Lucio Sponza, *Divided loyalties, Italians in Britain during the Second World War* (2001), p. 313. These are not included in the figures as their number was small and they no longer had POW status. The absolute figures on

German and Italian POW employment provide more details on the trends mentioned above.

¹⁷ On average, 132,000 German POWs were employed in agriculture from 7 July to 8 Sept. 1945, MAF 47/132, employment return sheets July to Sept. 1945. The British rural labour force was 1.04 million in this period. Peter Howlett and Central Statistical Office, *Fighting with figures: a statistical digest of the Second World War* (1995), p. 38.

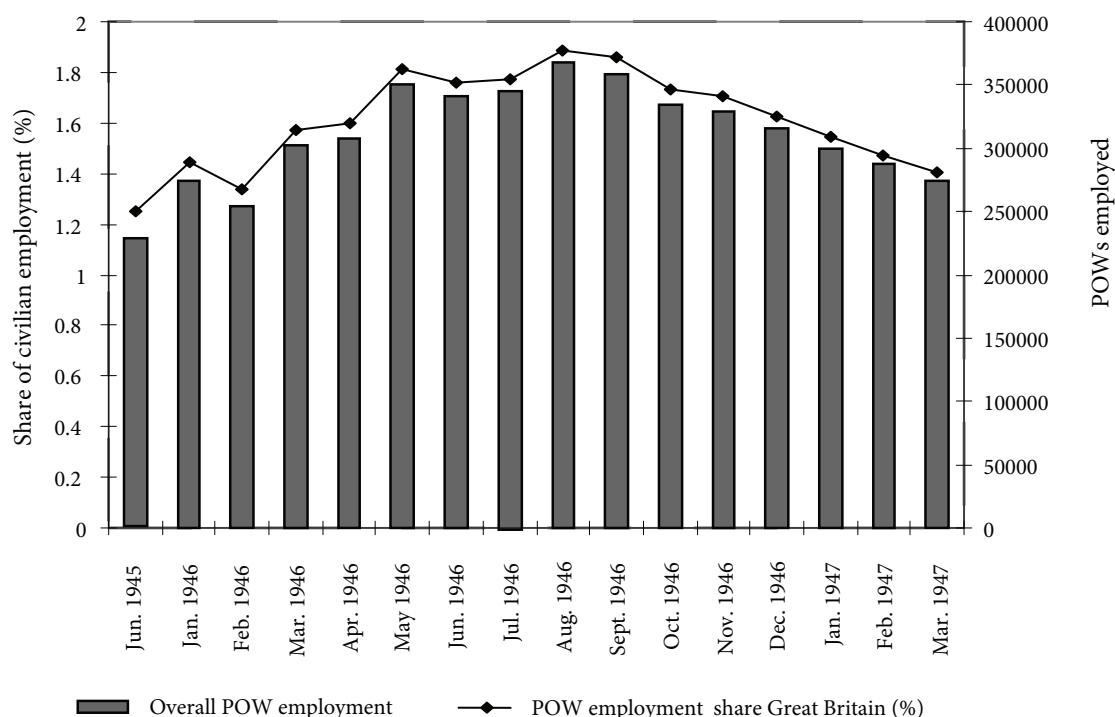


FIGURE 1. Aggregate POW employment in Great Britain in absolute terms and as a share of civilian employment

Source: NA, WO 165/59, various monthly reports.

German POWs (52 per cent) employed were under the auspices of the Ministry of Agriculture and Fisheries (MAF).¹⁸

The aggregate POW employment appears small at first glance compared to the British civilian labour force. Italian POWs represented only 0.27 per cent of the civilian labour force by July 1943.¹⁹ However, this situation changed drastically post-war: by June 1945, Italian and German POWs represented over one per cent of the British civilian labour force. Figure 1 shows that at peak in August 1946, this figure had almost doubled to 1.86 per cent (almost exclusively German POWs). On average from June 1945 to March 1947, the POW employment share was 1.55 per cent. Similar to the absolute POW employment figures, the relative contribution of POW labour only seems to have taken off after the war, but remained significant for at least two years. The increasing importance of POW labour in the post-war period was linked to the state of the British post-war labour market. Tomlinson has shown that a severe shortage of labour (and

¹⁸ CAB 114/33, C.P. (45) 305, memorandum by the Minister of Labour and National Service, 26 Nov. 1945, 'The employment of German and Italian POWs in Great Britain'. Of this number, 108,750 were Germans and 66,000 Italians.

¹⁹ Aggregate civilian labour force in mid-1943 was

22.28 million (*Ministry of Labour Gazette* 53 (1945), p. 199). Adding the Italian POW workers (61,000) to this yields 22.34 million, so Italian POWs represented 0.27% of this aggregated labour force. Calculations for the other employment share estimates are made on the same basis.

capital) until 1947 encouraged the Attlee government to focus on increasing labour productivity.²⁰ Cairncross identifies the peak of the post-war excess labour demand during 1946 and 1947 with a steady decline thereafter until 1951.²¹ For December 1946 for instance, a manpower gap of 1.346 million workers was predicted. Cairncross claims this gap reflected the general excess demand in the post-war economy and in essence presented an inflationary gap. German POWs were an essential part of the government's battle against this excess labour demand as it expected to employ 460,000 German POWs in 1946.²² The actual peak employment of 377,000 was lower than predicted, but still represented a significant share of the labour force.²³ POW labour, along with Polish ex-soldiers working in agriculture and civilian workers from Central Europe under the 'European Volunteer Worker' (EVW) scheme played a key role in mitigating the British post-war labour shortage.²⁴ In addition to the German POWs and the Polish ex-soldiers, at peak approximately 8,000 Ukrainian POWs also worked on the land from the summer of 1947 onwards and eventually joined the EVW scheme in 1948. The Ukrainians had fought on the German side as part of the Wehrmacht but had surrendered to the British in Italy in May 1945. They were transferred from Italy to Britain in 1947 because the Foreign Office feared that they would be handed over to the Soviet Union once British troops were withdrawn from Italy.²⁵ Overall, approximately 75,000 EVWs were working in Britain in 1948 under various schemes, predominantly in areas such as nursing, hospitals and agriculture.²⁶

II

British agriculture during the Second World War had to cope with pressure to expand output in order to compensate for lost imports. Moore-Colyer found that the U-Boat war had reduced food imports by 85 per cent compared to pre-war levels. Still, he considers Murray's claim of a severe food crisis during the entire wartime period to be exaggerated.²⁷ The industry mainly reacted to the shortfall in imports by increasing arable acreage through the conversion of grassland. Cropped acreage during the war rose by 6 million acres of which 4 million went into extra cereals and 700,000 into potatoes.²⁸ The composition of rural output changed. The main problem according to Moore-Colyer was not maximization of output, but the fulfilment of production targets of directly consumable food crops. For this purpose, the Ministry of Agriculture and Fisheries (MAF) was equipped with extensive powers of economic planning. County War Agricultural Executive Committees (CWAECs) were introduced in 1939 which exercised substantial planning and executive powers at the county level. They were set

²⁰ J. Tomlinson, 'Managing the economy, managing the people: Britain, c.1931-70', *EcHR* 58 (2005), p. 562.

²¹ A. Cairncross, *Years of recovery: British economic policy, 1945-51* (1985), p. 22.

²² *Ibid.*, pp. 386-95.

²³ WO 165/59, Summary No. 63, Aug. 1946.

²⁴ See Cairncross, *Recovery*, pp. 386-95 for Polish workers. On the EVW scheme see I. Weber-Newth and J. Steinert, *Labour and Love, Deutsche in Grossbritannien nach den Zweiten Weltkrieg* [Germans in Great Britain after the Second World War] (2001), p. 23.

²⁵ WO 32/13190, Memorandum, Association of Ukrainians in Great Britain, Panchuk, 31 May 1948, p. 3; Home Office Circular No. 170/1948, 28 July 1948.

²⁶ R. J. Moore-Colyer, 'The call to the land: British and European adult voluntary farm labour', *Rural Hist.* 17 (2006), p. 98.

²⁷ *Ibid.*, p. 83.

²⁸ Paul Brassley, 'Wartime productivity and innovation, 1939-45', in B. Short, C. Watkins and J. Martin (eds), *The front line of freedom. British farming in the Second World War* (2007), p. 40.

cultivation and performance targets and achieved these through their control of labour, machine and fertilizer inputs. They monitored the execution of their orders via officers on the ground and their sub-committees.²⁹

The recent literature on British wartime agriculture challenges Murray's standard work (published as a volume in the official history of the War) on agriculture's wartime role and output growth as over-optimistic. Brassley and Martin both revise Murray's official government statistics downwards and find contemporaries exaggerated the contribution of farming to the war.³⁰ Brassley conducts an analysis of the sources of output growth to determine whether technological change or a rise in inputs was responsible for rural output growth. He uses Crafts' methodology to measure Total Factor Productivity (TFP), a variable that indicates to what extent output growth is explained by technological change. Brassley concludes that agricultural output 'did not increase much during the war'.³¹ TFP growth was negative during the period examined at a startling minus 30 per cent. The negative residual implies that labour and capital inputs rose more than output while technological change contributed little. Data problems impede detailed calculations on wartime labour productivity, but all authors agree that increased labour inputs played an important role. The only government labour force statistics are returns for June and September and they only distinguish the contribution of POWs and the Women Land's Army (WLA) from 1944 onwards.³²

These supplementary labour groups play a key role in this discussion on agricultural labour productivity. Murray admits that the figures available from June and September returns do not adequately reflect the rural labour force as these months are peak harvest times. Also, different worker groups have different productivities in relation to civilians. Williams has produced the most detailed labour productivity figures using the relative efficiency of different worker groups and converting them to an index of agricultural employment in terms of man-years.³³ Brassley finds that, based on Williams's figures, rural output growth exceeded input growth in 1940 and 1943, was on par in 1941 and below input growth in 1942, 1944 and 1945. Labour productivity therefore remained roughly constant during the war. However, Martin and Clarke both find Williams underestimated the contribution of the WLA and POWs.³⁴ Brassley adjusts for this by raising the labour input growth from 8.5 to 12.5 per cent. Still, these adjustments do not alter the results of his TFP calculations. The use of higher labour input growth or alternative depreciation figures only produces positive TFP estimates under very extreme assumptions. This confirms his conclusion that higher input growth and not technological change drove wartime expansion in agriculture.³⁵ However, Brassley's adjustments for labour input growth are interesting for another important reason. The inclusion of POWs and the

²⁹ Moore-Colyer, 'Call to the land', pp. 84–6.

³⁰ John Martin, *The development of modern agriculture: British farming since 1931* (2000), p. 54.

³¹ Brassley, 'Wartime productivity', p. 38.

³² The WLA was the revival of a civilian organisation that had been established during the First World War to replace male rural labour drafted to the front line. Angus Calder, 'UK 2. Domestic life, war effort and economy, b) manpower and war production', in B. Dear

and D. Foot (eds), *The Oxford companion to World War II* (2001), p. 883.

³³ K. A. H. Murray, *Agriculture* (History of the Second World War, 1955), p. 273.

³⁴ Jill Clarke, 'The Women's Land Army and its recruits', in Short, Watkins and Martin (eds), *Front line*, p. 104.

³⁵ Brassley, 'Wartime productivity', p. 48.

WLA would raise input growth by half in his sensitivity analysis. These supplementary labour groups therefore could have impacted on the aggregate rural labour force quite significantly. Recent writing on British agriculture has therefore revised Murray's output figures downward, but at the same time revealed that POWs and the WLA played a more important role than previously acknowledged.

III

Wartime agricultural labour was a constant problem for the MAF. Call-ups, worker drafts to other industries and the failure to secure sufficient labour allocations from the War Cabinet created substantial rural manpower shortages.³⁶ POWs initially played a minor role as one of many supplementary labour groups. Beginning in 1943, they were increasingly tapped as a substitute for the WLA and schoolchildren. After the war, the reluctance of de-mobilized farm workers to return to agriculture and meagre WLA recruitment resulted in ever-growing demands for Germans on the land.³⁷

These persistent rural manpower gaps were filled by a great variety of supplementary labour groups. Apart from POWs, pensioners, schoolchildren, part-time male and female labour, the WLA, army personnel, urban voluntary labour, Irish labour and unemployed dockers were used. The literature on these supplementary groups agrees on their vital role for rural production, but is uncertain about their relative contribution. Murray claims that without the supply of 20,000 Italian POW labourers from Libya for the 1942 harvest, it might not have been collected in time.³⁸ Clarke finds that the WLA played a 'vital part' in supplementing the rural labour force, especially during 1943. The WLA provided an essential 'hand on the land' and contributed to raising the net rural output and reducing the dependence on imported foodstuffs. Clarke claims that the WLA was considered more flexible than POW labour since the 'Land Girls' did not require guarding and were perfectly mobile.³⁹ The WLA suffered from prioritization of more war-relevant industries. WLA recruitment was suspended in August 1943 to release women into the aircraft and munitions industries and re-opened in early 1944, peaking in July 1944 at 80,000.⁴⁰ Given the suspension, WLA membership stagnated and civilian volunteers and POWs became more important for British food production.⁴¹

Moore-Colyer concludes that while civilian voluntary labour was drawn upon throughout the war, its scale was small and relative productivity low. Urban civilians were not used to hard physical labour and mostly volunteered for the summer harvests as other seasonal work was not attractive to them. However, he praises the value of schoolchildren. Murray concurs; noting that without them one million acres of potatoes would not have been lifted.⁴² Their contribution declined after 1944, when POWs became increasingly available and replaced them.⁴² Italian and German POW employment grew rapidly in 1944 and 1945 and the Germans not only replaced

³⁶ Murray, *Agriculture*, p. 272.

³⁷ *Ibid.*, pp. 120, 122, 128.

³⁸ *Ibid.*, p. 347.

³⁹ Clarke, 'WLA', pp. 104, 114, 116.

⁴⁰ *Ibid.*, p. 104, Calder in Dear and Foot, *Oxford companion*, p. 883.

⁴¹ R. Moore-Colyer, 'POWs and the struggle for food production, 1939-49', in Short, Watkins and Martin (eds), *Front line*, pp. 120 and 122.

⁴² Murray, *Agriculture*, p. 258.

⁴³ Moore-Colyer, 'Call to the land', p. 87.

repatriated Italians from late 1945 onwards, but even became more prominent in agriculture post-war. By August 1946 for instance, around 180,000 German POWs were working on British farms.⁴⁴ Moore-Colyer describes the post-war period as one of 'muddling through' in the light of adverse weather conditions and of persistent labour shortages met by miscellaneous groups.⁴⁵

According to Murray, there were some 130,000 POWs in agricultural employment in the post-war years, half of whom regular workers, for whom substitutes had to be found on their repatriation in 1948.⁴⁶ For this purpose, Polish ex-soldiers, displaced Ukrainians and most importantly EVWs were brought to Britain. By 1948, 23,000 displaced Ukrainians were working in British agriculture in addition to 23,700 or a third of the 75,000 EVWs in the country.⁴⁷ The 8,000 Ukrainian POWs also eventually joined this EVW pool. Like the German POWs, they were released from POW status in summer 1948 and assumed civilian status, many of them as agricultural workers. In contrast to the Germans however, the civilianized Ukrainians continued to be considered as EVWs. Also, the government attempted to allocate those Ukrainian ex-POWs considered unemployable in agriculture to areas such as construction or bomb disposal as it was difficult to repatriate them to Germany.⁴⁸

Moore-Colyer presents a mixed view of the value of German and Italian POWs. He argues that the Germans were 'indispensable' in 1946 when only half of the 85,000 de-mobilized farm workers wanted to return to farming and when recruitment for the WLA for a two-year assignment to agriculture only yielded meagre results.⁴⁹ At the peak of the 1946 potato harvest, out of a total of 890,000 workers, 70,000 were civilian volunteers, 30,000 WLA and 180,000 German POWs and Polish ex-service personnel. He also notes the persistent criticism of POW labour in the farming press and the 'myth' that Italians were much less productive than Germans, but left open the question of the POWs' contribution as he lacked hard evidence. 'In terms of the success of British farming in fulfilling the demands placed upon it during the critical wartime and post-war years, the role of POWs is, in the final analysis, hard to quantify'. He nevertheless acknowledges their contribution and the efforts of the government authorities in assuring that the jobs were done by the POWs:

The simple fact remains that the ditches were dug, the land was drained and in one way or another, the wartime harvests were earned. That this was so was in no small measure due to the success of wartime authorities in marshalling and co-ordinating the labour of POWs under their command.⁵⁰

This paper sheds more light on the details of rural POW employment and complements Moore-Colyer's work by examining the relative contribution of POWs in qualitative and quantitative terms. The agricultural POW workforce in Britain developed from being small and mostly Italian in 1941 to a sizeable and exclusively German workforce after the war (see Figure 2). At its peak in March 1947, 170,000 German POWs worked in agriculture. Most POWs

⁴⁴ *Farmers Weekly*, 6 Sept. 1946, p. 19, 'German POWs to go home'.

⁴⁵ Moore-Colyer, 'POWs', p. 130.

⁴⁶ Murray, *Agriculture*, p. 352.

⁴⁷ Moore-Colyer, 'Call to the land', p. 98.

⁴⁸ WO 32/13190, 'Ukrainian POWs', Vale, Department

of Prisoners of War, 29 May 1948; Secretary, Ministry of Labour to Col. Chandler, Directorate of POW, 27 Aug. 1948; WO Memorandum, 'Employment of Foreign Labour in Military Installations', 28 July 1948.

⁴⁹ Moore-Colyer, 'POWs', p. 128.

⁵⁰ *Ibid.*, pp. 130–1.

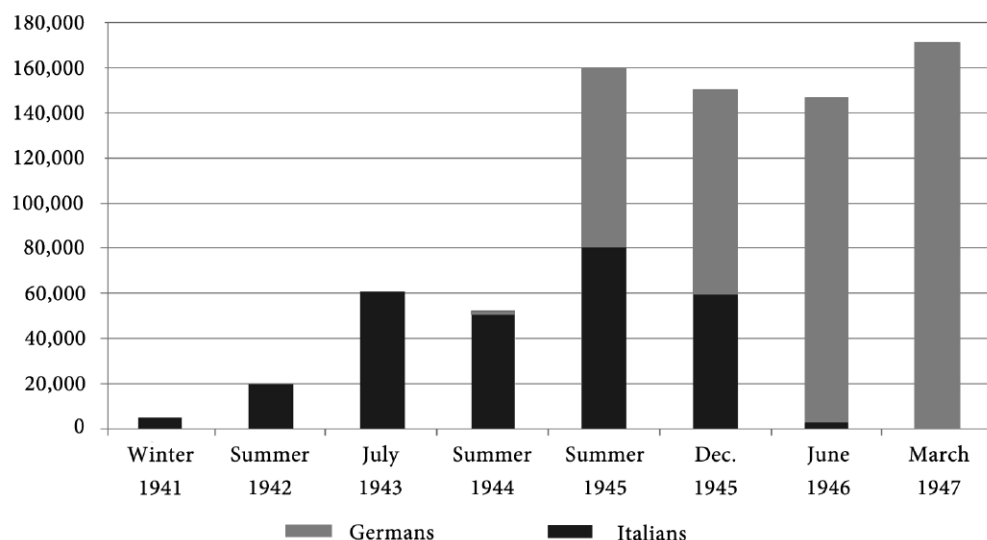


FIGURE 2. POW employment in British agriculture, 1941–47

Sources: MAF 47/132, LAB 13/257, CAB 114/26, WO 165/59.

worked on farms during the day and returned to camps in the evening. Those with records of good behaviour could be lodged at ‘hostels’, guarded houses near employment sites or ‘live in’ individually on the farm as ‘billetees’. The first Italian POWs working in agriculture were deployed from camps when they arrived in Britain in July 1941, but hostel employment and billeting quickly followed.

Hostel and billetee employment grew rapidly given their advantages over camp employment. The government favoured billeting because it saved the costs of guarding, accommodation, transportation and food, shifted responsibility to the farmer, and increased net working time.⁵¹ The War Office (WO) gave permission for billeting in October 1941, but it appears to have started only six months later, in March 1942, when it noted that ‘24 billetees have been employed with individual farmers’ and ‘reports of their work are satisfactory’.⁵² This number had risen to 358 billeted Italians three months later.⁵³ From then onwards, billeting of Italians steadily rose, peaking at 23,000 in August 1945 and dropping thereafter with their repatriation. Hostels were primarily used for agricultural employment and their operation began in January 1942 as an experiment, but their usage exceeded that of billeting in scale and scope. While in July 1942, only 23 hostels were in operation, this figure had doubled to 45 by April 1943.⁵⁴ The expansion accelerated even further during the following months, reaching 112 hostels by June 1943 and 270 hostels by October.⁵⁵ At peak in March 1945, 500 hostels were in operation, housing 65,684 prisoners by June 1945. Hostels were originally built to accommodate 30 to 50 Italian

⁵¹ MAF 47/56, ‘Agricultural labour supply, Great Britain, June 1944’.

⁵² HO 144/22653, ‘Security Executive, Italian POWs for agriculture, proposed transfer of selected POWs to agricultural hostels’, MAF note, 8 Nov. 1941, point 2;

WO 165/59, Summary No. 10, Mar. 1942, point 10b.

⁵³ WO 165/59, Summary No. 13, June 1942, point 9c.

⁵⁴ WO 165/59, Summary No. 14, July 1942, point 7a.

⁵⁵ WO 165/59, Summary No. 29, Oct. 1943, point 9a.

POWs,⁵⁶ but the actual numbers of POWs per hostel over time far exceeded this intended capacity, indicating the maximization of this employment type. The average occupancy per hostel effectively doubled from 49 in April 1943 to 100 in March 1945.⁵⁷

Germans were employed from 1944 onwards as a replacement for Italians. They replaced them only gradually as they were initially considered more security-intensive, but given the scheme's success, German POW employment rapidly expanded. German POW employment in agriculture had first been considered 'as an experiment' in October 1943.⁵⁸ The project was approved and 969 German POWs were selected in north-west Africa for their rural skills and compliance and shipped to Britain in January 1944 where they were dispatched to two experimental agricultural camps in Cumberland and Warwickshire.⁵⁹ Feedback by the MAF was positive, so it was decided to extend German POW employment to a further 17 camps.⁶⁰ By the end of October 1944, already 16,000 German POWs were working under the MAF in 22 camps which previously had been occupied by Italians and the Ministry of Supply.⁶¹ However, this scheme ran into bottlenecks by November 1944. German POW employment required armed escorts and these could only be supplied for groups of twelve prisoners or more.⁶² Thus, in December 1944, the government announced the commencement of unescorted German POW employment in agriculture and forestry as an experiment on a small scale.⁶³ The experiment was a success. In July 1945, 55,700 Germans had been placed in working camps for unescorted employment in agriculture and forestry.⁶⁴ German POW hostel employment is first mentioned in June 1945 with 1,700 and by July had already doubled to 3,659 accommodated in 46 hostels.⁶⁵ Billeting was initially forbidden for security reasons, but it started as an experiment on a small scale in November 1945. The Minister of Labour called the experiment a success in March 1946 with 5,463 German and 9,155 Italian billetees.⁶⁶ German POW employment in agriculture expanded even further in 1946 as more and more Italians had to be replaced because of repatriation. By September 1946, 145,000 Germans were working in agriculture.⁶⁷ The process of replacing Italians by Germans was more or less complete by the spring of 1946 and by June 1946 Italian POW employment had ended according to the War Office reports.

The relation between the German POWs, the local population and the farmers in general seems to have been friendly. One German POW who worked in agriculture in Newton Stewart in south-west Scotland in 1946 and 1947 recalled the mutual help the prisoners and the local

⁵⁶ WO 165/59, Summary No. 13, June 1942, point 9b.

⁵⁷ WO 165/59, Directorate of Prisoners of War Monthly Directorate Letter No. 18, Apr. 1943, point 7a; Summary No. 46, Mar. 1945, point 9b.

⁵⁸ MAF 47/132, Tame (MAF) to Chandler (WO), 19 Oct. 1943.

⁵⁹ Archives du Comité International de la Croix Rouge (ACICR), Geneva, C SC, Service des camps Grande-Bretagne, RT, report on camp 103, file H/FPD/MBG, 14 Mar. 1944.

⁶⁰ MAF 47/132, MAF report, 14 July 1944.

⁶¹ MAF 47/132, report on WO proposal to stop changeovers, 26 Oct. 1944.

⁶² MAF 47/132, Inter-departmental Committee for the allocation of POWs, WO proposals report, point 4, 26 Oct. 1944.

⁶³ CAB 114/27, clipping from *The Times*, 15 Dec. 1945, 'German prisoners to work on land – unguarded parties for farmers'.

⁶⁴ WO 165/59, Summary No. 50, July 1945, point III bi.

⁶⁵ Ibid. and Summary No. 49, June 1945, point 8.

⁶⁶ Minister Lawson in *Parliamentary Debates (PD) (Commons)*, fifth ser., 421, col. 204–5, 26 Mar. 1946.

⁶⁷ Minister Williams in *PD (Commons)*, fifth ser., 434, col. 29, 3 Mar. 1947.

population gave each other. As the Germans had given the village 'emergency help' in the winter of 1946–47, in return the local population successfully pleaded for the concession that the prisoners should be able to move freely within five miles of the camp during the day. This prisoner ate with the farmer's family during the breaks and helped him on his farm voluntarily on Sundays. Inevitably, friendships were formed.⁶⁸

In terms of security considerations, camps were more secure than hostels and hostels more secure than billeting. From an economic perspective, camps were more expensive than hostels and billeting cheaper than hostels. The primacy of economic considerations concerning the utilization of POWs in agriculture is demonstrated by the fact that within a mere six months of their arrival in Britain, Italian POWs were being placed in hostels and were billeted within nine months. Perhaps even more revealing is the German experience, where security considerations were initially even stronger. The evidence clearly shows that once the initial camp-based scheme and employment in gangs of twelve had reached its limits, economic considerations came first and security concerns evaporated.

IV

Qualitative assessments of POW labour productivity varied substantially. While one farmer claimed in 1941 that his two Italians were worth ten casual civilian workers,⁶⁹ Lord Somerleyton stated in 1944 that two boys could do the job of 30 Italians.⁷⁰ Such disparate assessments arose because POW productivity changed significantly over time and differed by POW sub-group. In addition, the British press biased Italian POW productivity downwards but the newspaper reports also reveal high volatility in productivity.

Italians were most productive in small groups and as billetees. Shirking reduced Italian productivity in 1942⁷¹ and both German and Italian productivity responded negatively to ration and clothing cuts and adverse war events. In August 1943 for instance, a Home Intelligence report claimed that Italians in the north Midlands had become less productive following the bombing of Rome while Italians in the south-western region were delighted by Mussolini's downfall.⁷² The co-operator status for Italians introduced in April 1944 entailed a wider use of Italians. Co-operators could be used more extensively without the constraints of the Geneva Convention, were more productive than non-co-operators, more versatile in their use and sometimes more eager to work than British civilians.⁷³

Nevertheless, the switch to the co-operator status was not as successful as anticipated by the government. While it was expected at the inception of the scheme in April 1944 that 75 to 90 per cent of the Italians would quickly volunteer to become co-operators, actual conversion rates were much lower. Less than 60 per cent had converted by July 1944 and only 75 per cent by the end of the year. The separation also triggered a wave of opposition from the non-co-operators. They were now more concentrated in non-co-operator camps and subsequently in

⁶⁸ Overmans, *Soldaten*, pp. 82–3.

⁶⁹ Sponza, *Loyalties*, p. 198.

⁷⁰ *Farmers Weekly*, 15 Dec. 1944.

⁷¹ Moore and Fedorowich, *Empire*, p. 148.

⁷² CAB 114/26, extract from Home intelligence report No. 150, 19 Aug. 1943.

⁷³ Sponza, *Loyalties*, p. 284.

a better position to organise strikes. Sponza alleges that from July 1944 onwards, a 'hardening of attitudes by non-co-operators became apparent through pro-fascist demonstrations and antagonism towards co-operators'.⁷⁴ In response, the government introduced a new package of privileges in August 1944 to encourage Italians to switch status. They would now be able to remit some of their wages to their families, have more freedom of movement, earn more money and could exchange half of it into British pounds. Co-operator rates did increase after August 1944, but the Italian armistice in the beginning of September also played a role in the rise. Moore and Fedorowich find that conversion rates remained low despite these new work incentives. Of the 154,000 Italian POWs in Britain by April 1945, over 40,000 or 37 per cent remained non-co-operators despite the new work incentives.⁷⁵ The co-operator share actually fell in 1946 because of preferred repatriation of co-operators.⁷⁶

In spite of these problems, Moore and Fedorowich claim that the general impression of 'the Italians as a docile, if slightly less than efficient, workforce may have been generally true'. They argue that problems did exist, referring to work refusals by co-operators in January 1945. Like Sponza, they also highlight the low turnout of co-operator conversions by 1945. Only at the end of 1945 had 90 per cent of the Italians become co-operators. But they also concede that non-economic reasons such as the loss of protection by the Geneva Convention and the fear of reprisals by the Germans against their families back home constituted the main reasons for the prisoners' refusal to convert to 'co-operator' status.⁷⁷ They therefore concur with Sponza that Italians did cause problems until the end of their employment in Britain in 1946, but also confirm the general stereotype of the docile, slightly inefficient Italian.

Both Italian and German POW productivity increased if repatriation appeared imminent, for example, after the German armistice in May 1945, and it subsequently fell if repatriation was postponed or became uncertain. However, a lack of adequate supervision and excessive reward systems could also reduce productivity. MAF reported in January 1946 that German POW productivity had fallen recently because of slack supervision. There also was a tendency to 'go slow' because farmers 'spoiled' prisoners by giving them cigarettes and food as work incentives. Consequently, prisoners would now only work when adequately rewarded with these gifts.⁷⁸ Given the various different economic and non-economic factors impacting POW productivity, the following section will examine German versus Italian productivity and subsequently present aggregate quantitative results to form a clearer picture of POW productivity in agriculture.

V

Moore-Colyer asserts that the 'widely publicised myth' of the lazy Italian and hard-working German requires closer investigation, but he found no conclusive evidence on which to arrive at a clear verdict.⁷⁹ New evidence from government sources demonstrates that Germans were more productive than Italians. Costs associated with German POW labour were higher because they required more supervision and discipline, but they were more willing to work.

⁷⁴ Ibid., pp. 257, 271.

⁷⁵ Moore and Fedorowich, *Empire*, pp. 159–60.

⁷⁶ Ibid., p. 214.

⁷⁷ Moore and Fedorowich, *Empire*, pp. 159–60, 263.

⁷⁸ MAF 47/150, Williams to Cookman, 29 Jan. 1946.

⁷⁹ Moore-Colyer, 'POWs', p. 131.

As soon as security restrictions constraining their use were relaxed after VE-Day in May 1945, employment increased rapidly. German billetees were most productive, but unescorted Germans in large groups also showed good results.

A draft War Cabinet paper from the spring of 1945 on the employment of POWs post-VE day stated that despite higher guarding ratios for Germans compared to Italians, experience showed that 'the output of German prisoners greatly exceeds that of the Italians whilst if "technical" personnel' and extreme Nazis are excluded, the security risk should be greatly diminished once the war in Europe is over'.⁸⁰ Similarly, an article from *The Times* from mid-May 1945 praised the contribution of additional farm labourers and contrasted slacking Italians with industrious Germans. Discipline among the Italians 'sent out from some camps to work on farms has been poor in recent months. They have done as much work or as little as they pleased, and the guards have let them have their way'. Conversely, the Germans 'have a reputation for being good workmen, but they expect to receive orders that must be obeyed'. They required strict supervision in order to prevent them from idleness and becoming a 'nuisance'. With soldiers not yet returning home, farmers expected the War Office and MAF to supply them with more Germans in order to 'relieve the strain on manpower in the next few months'.⁸¹

Such views are also borne out by internal MAF correspondence. MAF had reviewed the wages payable by farmers for POWs periodically since 1941. As part of these reviews, it asked its Labour Advisory Officers (LAOs) liaising with the CWAECs for their views. In the summer of 1945, several LAO reports suggested that farmers preferred German to Italian POW labour as it was more productive and the ministry subsequently enquired whether the wages payable by farmers should be changed. LAO Purkis responded that almost all the committees he talked to rejected a change in the POW rate. Kent, Sussex, Hampshire, Wiltshire, Berkshire, Oxford and Surrey stated that instituting different wage rates for Italians and Germans was politically impossible and that a wage increase would reduce employment of Italians. Italian billetee productivity was good, but ordinary Italian POW labour was 'doing less and less'. Two ration cuts, recent clothing cuts and the uncertainty of repatriation appeared to be the main reasons for slacking. This being said, Purkis found that Italians worked well if incentives in the form of money and cigarettes were given.⁸² LAO Williams claimed that Germans were better than Italians because they were capable of more sustained effort and better disciplined. He also pointed out that farmers preferred German POW labour to WLA and civilian labour because it was cheaper. The Nottinghamshire Executive Officer argued that Italians were only worth 6d. per hour, but that Germans were not worth more than 1s. per hour, the current wage rate.⁸³ Finally, quantitative evidence drawn from two different agricultural hostels in Carmarthenshire in Wales, Llandeilo (Germans) and Llandovery (Italians) also confirms this view. While during the period October 1945 to January 1946 Italians earned £1.32 per week, Germans earned £2. They worked 32 hours per week compared to an average of only 21 hours

⁸⁰ MT 39/568, Draft paper for the War Cabinet: 'Employment of German POWs in the UK after the cessation of hostilities in Europe', undated, but most probably Apr. 1945, p. 4, point 6b. Technical personnel' refers to Luftwaffe and U-Boat crews who were considered to have more fascist attitudes than other

German Army personnel and therefore were less desirable for employment from a security standpoint.

⁸¹ *The Times*, 14 May 1945, 'Farm labour – more German prisoners needed'.

⁸² MAF 47/138, Purkis to Cookman, 25 June 1945.

⁸³ MAF 47/138, Williams to Cookman, 23 June 1945.

for Italians.⁸⁴ The Germans on average worked 50 per cent more than Italians. This confirms the conclusion from the qualitative results above: that in 1945 and 1946, Germans were working harder than Italians.

Qualitative evidence on the productivity of a third POW worker group, the Ukrainians, is very scarce. A month after their arrival in July 1947 a MAF representative noted that the 8,000 Ukrainian POWs working in agriculture 'worked well'. A Ministry of Labour representative added that they were 'essentially of an agricultural type' and that they should look forward to their transfer from POW to civilian status.⁸⁵ The Ukrainians were thus regarded as useful rural workers and it was expected to increase their utilization after their transfer. However, this picture had changed by March 1948. MAF at this point employed 7,200 Ukrainian POWs, 5,800 in England and Wales and 1,400 in Scotland, but would only agree to retain 4,800 of these as civilian rural workers as the remainder displayed 'poor standards' or caused trouble. While in Scotland ten per cent of the Ukrainian POW workers were rejected as 'trouble makers' or 'misfits', in England and Wales almost 40 per cent were considered to be not 'up to standard'. Apart from their 'low mental capacity', 'failure to work without strict supervision and living habits which made their accommodation in agricultural hostels impossible' were listed as reasons for their unsuitability for work.⁸⁶ More than a third (2,450, or 34 per cent) of the Ukrainian POWs working in agriculture in Britain in March 1948 were therefore considered to be unsuitable for rural employment. This implies that the Ukrainian workers were not as much of an asset as MAF had initially hoped. The problems of low productivity if supervision was not supplied and trouble making were nothing new; they had also been observed with German and Italian POWs as discussed before, but they had abated by the time the Ukrainians arrived in 1947. Apart from rebellious Italian non-co-operators and ardent Nazis, the Italians and the Germans showed reasonable compliance with rural work in the post-war period.

VI

Quantitative evidence on POW productivity in agriculture is taken from three different sources. First, MAF and its manpower division provide POW productivity estimates which mostly appear constant. Information relayed to Canada in 1942 on Italian POW productivity in Britain shows that the MAF considered a productivity of 75 per cent of civilian workers a fair average.⁸⁷ The same figure of 75 per cent was also used in 1944,⁸⁸ 1945 and 1946. MAF's manpower division estimated relative productivities in terms of 'man-equivalents' which were calculated to forecast rural labour requirements. For instance, 71,000 POWs in 1945 were worth 54,000 'man-equivalents', implying a productivity of 76 per cent compared to civilians. However, the manpower division's assessment seems somewhat arbitrary because all

⁸⁴ MAF 47/150, Lewis to Cookman, Carmarthenshire WAEC, 'Comparison of German and Italian POW earnings at hostels', 28 Jan. 1946.

⁸⁵ MAF 47/165, Note of a meeting of 8 July 1947 to discuss labour supply prospects in agriculture.

⁸⁶ LAB 8/98, undated note on meeting at Home Office on Ukrainian surrendered enemy personnel, 3 Mar.

1948; Note of a Home Office meeting to consider the disposal of Ukrainian POWs in the UK, 3 Mar. 1948.

⁸⁷ Library and Archives Canada, RG24/6577, 1-2-10, Memorandum from Col. Streight for Dr Coleman, 13 Nov. 1942.

⁸⁸ MAF 47/56, Hudson to Anderson, 13 Jan. 1944.

TABLE 1. POW and rural civilian wages, 1941–46

<i>Date</i>	<i>Min. wage/week (s.) (1)</i>	<i>Minimum wage/hour (2)</i>	<i>POW wage/hour (3)</i>	<i>POW wage share (%) (4)</i>	<i>Productivity/wage ratio (5)</i>
July 1941	48	1s. 0d.	9½d.	79	0.95
Dec. 1941	60	1s. 3d.	1s. 0d.	80	0.94
Dec. 1943	65	1s. 4¼d.	1s. 0d.	74	1.01
Aug. 1945	70	1s. 5½d.	1s. 0d.	69	1.09
Oct. 1945	70	1s. 5½d.	1s. 3d.	86	0.87
Feb. 1946	70	1s. 5½d.	1s. 3d.	86	0.87
Apr. 1946	70	1s. 6d.	1s. 6d.	100	0.75

Note: POW productivity is set at 75 per cent of civilians', see text.

Source: *Ministry of Labour Gazette*, 1943–46 for civilian wages, MAF 47/138 for POW wages.

supplementary labour groups in these 'man-equivalent' calculations were valued at 75 per cent and because the proxies employed did not change over time whilst POW productivity did.

Second, the difference between POW and minimum civilian wages presents a more dynamic POW productivity measure. Evidence comes from the Agricultural Wages Board (AWB) which set and regularly reviewed rural civilian minimum and POW wages. The first of these wage-setting procedures occurred in the summer of 1941 when the wages payable by farmers for POW labour had to be decided prior to the arrival of the first batches of Italian POW workers. The AWB acknowledged that farmers could not be charged the full wage as POW productivity was expected to be lower than that of civilians. However, POW labour could not be seen as a hidden subsidy to the farmer and it was stressed in internal discussions that the trade unions would object to forced labour undercutting the standard wages. Eventually, the AWB agreed on a 'four-fifth assessment', i.e. it considered Italians to be 80 per cent as productive as civilians. Farmers would pay 38s. a week for POW labour, 79 per cent of the civilian minimum wage in agriculture of 48s. at the time, subject to review after a few months.⁸⁹ In hindsight, the AWB noted that the four-fifths assessment was 'fully justified by experience in the case of billeted prisoners'; however gang labour was considered 'to be a little less efficient'.⁹⁰ This assessment confirms the earlier observation that billeted Italian POW labour was significantly more productive than gang labour. It also implies that the AWB advance estimate was reasonably accurate but that actual average Italian POW productivity was lower than 80 per cent in 1941.

POW wages were raised over time to account for rising POW productivity. Table 1 compares the civilian minimum wages and POW wage set by the AWB over time. Assuming the wage shares also present relative productivity, POWs were 74 per cent as productive as civilians in 1943 but less than 70 per cent in summer 1945 (column 4 in Table 1). POW wages were increased in October 1945 to account for POW productivity exceeding wages. The share of POW relative

⁸⁹ Sponza, *Loyalties*, p. 192.

⁹⁰ MAF 47/138, 'Charges for the supply of POW labour to farmers', AWB, Sept. 1945.

to civilian wages fell from 80 per cent in 1941 to 70 per cent in 1944 and then rose from August 1945 to 100 per cent in April 1946. The AWB considered POWs as productive as civilians from this date despite protests from farmers: wages remained at that level afterwards. The productivity/wage ratio in column (5) in Table 1 compares the POW wage share in column (4) with MAF's 75 per cent estimate. If the ratio is above 1.0, then productivity expressed by the MAF estimate exceeded the relative wages paid by farmers. If we assume the wage share measure to be more realistic overall than the constant MAF estimate, then the ratio captures a rise in POW productivity from 1941 to 1945 and implies that the MAF's 75 per cent proxy initially overstated and eventually understated POW productivity.

Third, Williams has provided another alternative dynamic POW productivity proxy. He assumes that relative weekly earnings in 1944–45 and 1947–48 reflect productivity to attain conversion factors and relative productivities. He finds billeted POWs more productive than non-billeted. POW productivity relative to full-time regular civilian workers rose over time from 40 per cent for non-billeted and 65 per cent for billeted in 1944–45 to 70 and 80 per cent respectively in 1947–48. Williams explains the variation with growing experience and declining hostility and irresponsibility.⁹¹ The comparison of POW productivity to that of other civilian supplementary rural labour groups reveals that POWs changed from one of the least productive supplementary labour groups to the most productive post-war. Williams did not determine varying factors for all labour groups and did not distinguish between Germans or Italians or co-operators or non-co-operators. Moreover, he himself finds his measures arbitrary and various authors have criticised them as excessively low.⁹² Still, Murray considered William's figures to be a good overall approximation.⁹³

The productivity estimates from Williams and other productivity proxies are used to yield new POW productivity estimates adjusted for the billetee share. This methodology takes into account the higher productivity of billeted versus non-billeted POWs. For instance, had the entire POW labour force in 1944 been billeted, it would on average have been 65 per cent as productive as British male rural labour. Table 2 presents the billetee share of the total rural POW labour force from 1941 to 1947 for those dates where German and Italian total rural employment and billetee employment is known. It shows that at peak in summer 1944, almost a third of all rural POW workers were billetees and that from 1945 to 1947 the share varied between 12 and 14 per cent. These shares are then adjusted by the relative billetee and non-billetee productivity proxies over time to factor in the increasing POW productivity. The billetee shares are multiplied by 40 and 65 per cent for non-billets and billeted until 1944, by 50 to 75 per cent in 1945 to incorporate the MAF's view and by 70 and 80 per cent for 1946–47.

The productivity results are summarized in column 2 of Table 2. The annual productivity averages derived from these results in Table 3 show that POW prisoners were between 50 and 70 per cent as productive as civilian workers in British agriculture and that their productivity increased most significantly in 1946 and 1947. Productivity apparently fell slightly during

⁹¹ H. T. Williams, 'Changes in the productivity of labour in British agriculture', *J. Agricultural Economics* 10 (1954), pp. 333–4.

⁹² Brassley, 'Wartime productivity', pp. 36–7; Clarke, 'WLA', pp. 113–14.

⁹³ Murray, *Agriculture*, pp. 272–3.

TABLE 2. Billettee shares and POW productivity relative to British rural workers

<i>Date</i>	<i>Billettee share (%)</i>	<i>Relative POW productivity (%)</i>
(1) Winter 1941	0	40.0
(2) Summer 1942	5.0	41.2
(3) July 1943	9.2	42.3
(4) Summer 1944	28.6	47.1
(5) Summer 1945	14.0	53.5
(6) December 1945	12.0	53.3
(7) June 1946	12.9	71.9
(8) March 1947	9.2	71.0

Note: Billettee share of rural POW employment. Relative productivities used as follows: rows 1–4: non-billeted 40 per cent, billeted 65 per cent; rows 5–6: non-billeted 50 per cent, billeted 75 per cent; and rows 7 to 8: non-billeted 70 per cent, billeted 80 per cent.

Source: Billettee share: WO 165/59, various monthly reports.

TABLE 3. POW relative productivity proxy, 1944–47

<i>Year</i>	<i>Productivity average (%)</i>
1944	47.0
1945	53.5
1946	62.25
1947	71.0

Source: See Table 2 and text.

1945 because of a fall in the billettee share. However, the increasing use of co-operators and unescorted Germans in March 1945 suggests an increase in productivity during 1945. The Italian POW repatriation in November 1945 and the related camp changeovers may have reduced productivity as time was lost with POW logistics. Nevertheless, the 53.5 per cent figure should be taken as a minimum and higher productivity should be assumed for 1946. As a sudden jump in productivity from 1945 to 1946 was unlikely, we interpolate the 1946 average from the 1945 and 1947 figures to attain a more smooth and realistic estimate of 62.25 per cent for 1946. These new estimates present minimum figures to counter any upward bias. They are lower than the figures from MAF and AWB but appear more plausible as they account for smooth productivity increases over time.

VII

These revised aggregate annual POW productivity figures now allow us to compute the prisoners' economic contribution to British agriculture. Applying the relative productivities to

TABLE 4. POW and civilian employment in British agriculture, 1941–47

<i>Date</i>	<i>New POW figures (1)</i>	<i>Official MAF POW figures (2)</i>	<i>Civilian rural workers (3)</i>	<i>New POW share (%) (4)</i>	<i>MAF POW share (%) (5)</i>
December 1941	5,000	n/a	729,000	0.70	n/a
Summer 1942	20,000	n/a	824,000	2.43	n/a
July 1943	61,000	n/a	843,000	7.24	n/a
Summer 1944	52,157	25,273	862,958	6.04	2.93
Summer 1945	100,683	57,763	886,686	11.35	6.51
June 1946	146,677	91,366	888,864	16.50	10.28
March 1947	170,880	88,324	891,479	19.17	9.91
Average, 1941–47	79,485	n/a	846,570	9.40	n/a
Average, 1944–47	117,599	65,682	882,497	13.32	7.44

Note: (2) is not available before 1944 and is for England and Wales only up until 1945. Column (4) is the result of column (3) divided by column (1) and column (5) is derived by dividing column (3) by column (2). Figures in column (2) and (3) refer to employment at the end of June each year. Averages added by the author.

Sources: (1) MAF 47/132; (2) and (3) MAF, *Agricultural statistics, 1939–44* (1947), 1945 (1948), 1946–47 (1950).

rural POW employment numbers will give us the real contribution to the rural labour force adjusted for productivity. In order to pursue this exercise, we have compiled new evidence on German and Italian POW employment figures in British agriculture from government sources and compared it with civilian data. Table 4 presents these results. It shows that civilian rural employment (column 3) gradually increased from 730,000 in 1941 to 890,000 in March 1947. This is then compared with the new evidence on combined German and Italian POW rural employment (column 1). The rural POW labour force developed from a minuscule size of 1,000 in 1941 to almost 171,000 in 1947. Based on these numbers, the new share of POW workers of the total British rural labour force is calculated and shown in column 4. The new POW share in column 4 is therefore the share of the total POW rural labour force in column 1 of the aggregate rural civilian labour force in column 3. The POWs initially only made up 6 per cent of the British rural labour force but at their peak in the summer of 1946 and March 1947 represented one fifth. On average, every tenth worker in British agriculture was a POW during the wartime and post-war period (1941–47) but from D-Day up until mid-1947, one in eight workers was a POW. The MAF's own official statistics on POW employment are taken and also expressed as a share of the rural civilian workforce (column 5). A comparison of columns 4 and 5 shows that the new POW employment shares are twice as high as the official government estimates for the entire period of 1944–47. The MAF figures suggest an average share of 7 per cent 1944–47 while my new figures for the same period are nearly twice as high at 13 per cent, even if averages are taken into account. Also, June and September are peak harvest dates, so civilian rural employment is inflated. By contrast, the new figures denote summer averages and thus avoid upward bias.

TABLE 5. Man-equivalent adjustments to British rural labour, 1941–47

<i>Date</i>	<i>Total workforce adjusted</i>	<i>Adjusted POW workforce</i>	<i>Adjusted relative POW share (%)</i>
December 1941	601,061	2,350	0.39
Summer 1942	679,388	9,400	1.38
July 1943	695,054	28,670	4.12
Summer 1944	711,509	24,514	3.44
Summer 1945	731,073	53,880	7.37
June 1946	732,868	91,673	12.51
March 1947	735,024	121,205	16.49
Average 1941–47	697,997	47,369	6.53
Average 1944–47	721,694	72,755	10.0

Source: See Table 3 above for relative average annual POW productivities.

Following the revision of POW rural employment shares, we can obtain the net contribution to the rural labour force by adjusting these shares by the relative productivity of POWs. This methodology follows the ‘man-equivalent’ assumption used by the MAF. The ministry based its calculations for labour requirements on ‘man-equivalents’ where the most productive male farm worker was equal to one man-equivalent. For instance, if POW workers in agriculture were 75 per cent as productive as the most productive British civilian male farm worker, then 100,000 POW workers would be worth 75,000 man-equivalents. MAF used these estimates in order to determine labour requirements to fulfil food production targets. One million acres of cereals for example required 30,000 ‘man-equivalents’. Civilian worker figures are adjusted by an average productivity of 82.45 per cent compared to the most able civilian farm worker to consider the varying productivity of groups such as the WLA or juveniles. This average is taken from MAF man-equivalent and labour requirement calculations on the entire British rural labour force from summer 1945.⁹⁴ POW employment figures are adjusted by the relative productivity averages from Table 3. The average POW productivity from 1941 until 1944 is set at 47 per cent, the 1944 result. It then increases to 53.5 per cent (1945), 62.5 per cent (1946) and 71 per cent (1947). Table 5 presents the adjusted total rural civilian and POW workforce and the resulting net rural POW labour share. The prisoners’ net contribution to the rural labour force did not exceed 4 per cent until 1944 but increased steadily thereafter, with a peak contribution of 16.5 per cent in 1947.

The figures from Table 5 would imply that POWs on average produced a tenth of Britain’s agricultural output in 1944–47. However, there are some qualifications to this assumption. Brassley finds that agricultural output growth exceeded input growth in 1940 and 1943, was on par in 1941 and below input growth in 1942, 1944 and 1945. Agricultural productivity during the war therefore was subject to considerable volatility, rendering the assumption of a constant

⁹⁴ MAF 47/56, ‘Labour requirements for agriculture, 1946’, point D, ‘labour on farms, June 1945’.

aggregate agricultural productivity 1944–47 doubtful. Also, the preceding calculations assumed the average productivity of 82.45 per cent of the aggregate workforce from summer 1945 to hold for the entire period 1944–47. This might not be the case given seasonal variations in labour demand and supply. Nevertheless, my new estimates provide a first proxy for the POW output share. These shares can be converted into monetary contributions using MAF data on the UK net agricultural output in 1946 prices. For example, POW rural labour shares from 1945 and 1946 translate into a monetary contribution of £38.9 and £68.0 million in 1945 and 1946 respectively.⁹⁵ This expression in monetary terms illustrates once more that the prisoners' contribution was most significant post-war.

VIII

Physical values of output might reflect the wartime and post-war contribution of POW labour more adequately, but in their absence, monetary values seem a plausible substitute. This section uses data on the monetary value of POW labour to construct the first estimate of the prisoners' contribution to British GDP. Evidence on the contribution to the post-war construction sector will be analysed and will be combined with the monetary estimates of rural contribution above to calculate the prisoners' aggregate contribution.

The Ministry of Works (MOW) furnished statistics on the British construction industry which reveal the monetary contribution of POW labour for the post-war period from 1946 to 1948 (Table 6). German POWs contributed £26 million to British building and civil engineering during that period. Their relative contribution to output in these industries peaked in 1946 at almost two per cent or £16 million. Then it declined rapidly, mainly because of German POW repatriation in 1947–48. Output is minuscule in 1948 because all German POWs had been repatriated by mid-year. The MOW was an important user of POW labour. In November 1945 for instance, roughly 10 per cent of all Italian and German POW workers in Britain were employed by MOW⁹⁶ and in February 1946 it employed almost a quarter (23 per cent) of all German POW workers.⁹⁷ The work done by the prisoners was very broad, including military and industrial construction, residential buildings, roads and street maintenance, public buildings and air raid damage repairs.⁹⁸ Most prisoners working for MOW were engaged in housing, but some worked in cement and brick production and 300 German POWs were also used for the maintenance of London Parks in 1946.⁹⁹

The MOW data and the rural estimates can now shed light on the relative value of POW labour. Table 7 compares the monetary contribution of net rural output from the previous section for the entire POW employment period 1941–47 to British GDP. POW employment in agriculture alone contributed almost one per cent to British GDP at peak in 1947. While the

⁹⁵ Net UK rural output was £528.671 million in 1944–45 and £543.621 million in 1945–46. MAF, *Agricultural statistics, UK [Years] (1949)*, pt II, 'Output and utilisation of farm produce', pp. 30–1.

⁹⁶ 27,000 Germans and 4,500 Italians were employed by the MOW at the time, CAB 114/33, 26 Nov. 1945.

⁹⁷ 29,412 of 123,831 Germans worked for the MOW at

the time. BT 64/2891, Consolidated employment return – German base and work camps, 28 Feb. 1946.

⁹⁸ Fleming and Rowden, *Statistics*, p. 533.

⁹⁹ See MAF 47/132, weekly employment sheets, June–Aug. 1945 for brick production employment statistics and WORK 16/1804, handwritten note, 29 May 1946 for park employment details.

TABLE 6. POW output of building and civil engineering work in Great Britain, 1946–48

	1946	1947	1948	Total 1946–48
Total output (£ m)	884.7	1,047.2	1,181.3	3,113.2
POW output (£ m)	16.0	8.2	0.9 ^a	26.0
POW share (per cent)	1.81	0.78	0.07	0.84

Note: ^a POWs were only employed during the first two quarters of 1948.

Source: M. C. Fleming and S. R. Rowden, *Statistics collected by the Ministry of Works, 1941–56* (1980), p. 533, Table C1.1.

TABLE 7. Contribution of rural POW labour to British GDP, 1941–47

Year	POW output (£ m)	Contribution to British GDP (%)
1941	1.9	0.03
1942	6.4	0.08
1943	21.7	0.26
1944	18.9	0.22
1945	38.9	0.44
1946	68.0	0.78
1947	85.2	0.92
Average 1941–47	34.5	0.40
Average 1944–47	52.8	0.60

Note: Feinstein's figures are at 1938 factor costs and MAF figures at 1945–46 prices.

Sources: British GDP figures 1941–47 taken from C. H. Feinstein, *National income, expenditure and output of the UK* (1972), Table 6. UK net rural output: MAF, *Agricultural statistics, part II*, (1949), pp. 30–1.

absolute contribution of £34.5 million p.a. 1941–47 appears impressive, the GDP figures reveal that the rural contribution remained minuscule until 1943 and only reached the 0.5 per cent mark in 1945, when hostilities ceased. The average contribution between 1944 and 1947 of 0.6 per cent was significantly higher than the average contribution between 1941 and 1947 of 0.4 per cent, reinforcing the impression of a higher post-war contribution. Adding the POW building sector output to POW agricultural output yields a contribution to GDP of 0.96 per cent in 1946 and 1.0 per cent in 1947, so in both post-war years German POWs contributed at least one per cent to British GDP.

The results reflect the rising productivity over time and higher average productivity and employment numbers in the immediate post-war period. However, some qualifications have to be made. Firstly, the estimates understate the aggregate POW contribution because several sectors using POW labour, including the food processing, paper, canned food and fertilizer industries have been omitted for lack of adequate data. Agriculture however was by far the most important employment sector accounting in the summer of 1945 for 60 per cent and

TABLE 8. Contribution of POW labour in agriculture and construction to British GDP, 1946–47

<i>Year</i>	<i>POW output (£m)</i>	<i>Contribution to British GDP (%)</i>
1946	84.0	0.96
1947	93.4	1.00

Sources: See text and Tables 6 and 7.

in the following summer for 53 per cent of all German POW employment.¹⁰⁰ Assuming that construction employed at least another 10 per cent as shown above, this means that the output of at least a third of the POW workforce has not been accounted for in the 1946 and 1947 aggregate contribution estimates. Following this logic, the prisoners' aggregate economic contribution for the years 1941–45 is probably even more significantly understated as we lack data on the output of the construction sector. Third, the aggregate GDP figure is given at constant 1938 prices while my results are based on rural output with constant 1945–46 prices. The difference in base year may understate GDP figures, so GDP contributions may be slightly overstated. One way to solve the compatibility problem is to use market prices for the national income estimate. A figure from the United Nations statistical series for net national expenditure at market prices yields a minimum contribution of German POWs to British national income in 1946 of 0.65 per cent.¹⁰¹ While this figure is lower than the previous result, it indicates a POW contribution of similar magnitude. Fourth, the German POW output figures depend on the assumptions discussed earlier. Finally, expressions of contributions in monetary terms for a war economy might actually understate the real contribution. My results above therefore are minimum figures and the actual contribution may have been higher. The peak result of one per cent for 1946–47 for agriculture and construction underscores the prisoners' value in the immediate post-war period in sectors with severe labour shortages.

IX

This paper has provided the first consistent quantitative economic estimates for German and Italian POW employment and productivity in British agriculture and by doing so, has revised existing estimates significantly upwards. It has also shown how the economic contribution, composition and scale of POW labour in British agriculture evolved over time. The POW workforce was both small and Italian in 1941 but became exclusively German post-war and at its peak in 1946 made up 20 per cent of the rural British labour force. It was used as a substitute from 1944 onwards to relieve schoolchildren from rural labour and to compensate the loss of WLA members reassigned to the munitions industries. The prisoners' employment enabled Britain to employ civilians in war-relevant industries such as munitions rather than on the wheat fields and they filled a significant manpower gap, both during and after the war, in a

¹⁰⁰ MAF 47/132, weekly employment sheets, 30 June to 8 Sept. 1945; employment of POWs in Great Britain as at the end of June 1946.

¹⁰¹ Net national expenditure at market prices for the United Kingdom for 1946 is given at £9,362 million.

sector that was notoriously short of labour. They could be compelled to work in agriculture while civilians and even former farmers returning from the front were reluctant to work in the industry.

POWs could have been a severe net burden to British agriculture: they required escorts, might have been unskilled, fascist and prone to slacking and shirking. They could not be induced via penalties to work harder. On the other hand, experiments with skilled, compliant POWs illustrated that their productivity could be very high, especially in small unescorted groups, and that it could be similar to other supplementary labour groups such as the WLA. On average POWs were between 47 and 71 per cent as productive as regular male farm workers. This analysis revealed that their contribution to British agriculture *after* the war was much more significant than *during* the war. They were employed on a much larger scale. By this time, the POW workforce consisted mostly of Germans who were more productive than Italians, could be employed unguarded but were more mobile and controllable than civilian workers.

Davis, in his work on POW employment during both World Wars around the globe, claims that POW workers were inefficient, unmotivated and ill-suited to their tasks.¹⁰² This assertion does not apply to the British case. His analysis neglects the dynamics, as well as the scale, scope and changing composition of POW labour encountered in British agriculture. New calculations show that they were at least 47 per cent as productive as regular male farm workers and constituted 13 per cent of the rural labour force in Britain from 1944 to 1947. Adjusting for productivity, they seem to have contributed on average 10 per cent to net rural output during the same period. The conversion of these figures into monetary estimates reveals a peak annual contribution in agriculture of £85 million in 1947 and an average annual contribution of £53 million in 1944–47. The prisoners' relative contribution to the British economy remained below 0.5 per cent until 1944 but reached 0.8 and 0.9 per cent of GDP in 1946 and 1947. The addition of German POW output for the construction sector raises the contribution above the one per cent mark. However, this figure still understates the POW contribution because output in sectors other than agriculture and construction is missing. While scholars almost unanimously concede the crucial role that POWs played in British agriculture, official government sources appear more cautious.

POWs were not a liability for British agriculture. Farmers initially viewed POW labour with scepticism, but towards the end of the war and after it, their demand for it appeared insatiable. Productivity varied by region, POW type, period and depended on many other factors such as supervision and war events. Initially, language difficulties, inexperience, and reluctance to work limited POW productivity, but over time language barriers fell, prisoners became more skilled and were used in a more productive and less costly manner, for example in smaller groups or as billetees. The new estimates have shown that POW labour productivity increased significantly over time. POWs, in particular the Germans, were a net asset for British agriculture in the wartime and immediate post-war period.

¹⁰² Davis, 'POWs', p. 630.