



ORIGINAL ARTICLE

The United Kingdom's disappearing wartime imports 1939–45: A statistical, ideological, and historiographical accounting

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Abstract

In this paper I show inter alia that, by one barely known but official measure, imports of goods into the United Kingdom towards the end of the Second World War were more than twice the best-known measure. The lower measure is that found in the historical British national accounts and in the Bank of England's *A millennium of macroeconomic data*. That invaluable compendium in fact has both these measures, and indeed another one also, but this is not clear, and there is no proper explanation of the differences between these series. The differences matter. What I will show to be the most obvious, though not the only legitimate, measure of wartime goods imports suggests that real imports were higher at the end of the war than in the 1930s, and higher as a proportion of gross domestic product (GDP). By contrast the national accounts figures show an absolute real-terms fall, and a larger still fall as a proportion of GDP. This really mattered in an economy already exceptional for its high imports. In this paper I clarify the nature of the different measures of imports and how they have resulted in a radically different understanding of the British war effort.

KEYWORDS

British Empire, historiography, imports, Lend-Lease, statistics, Second World War, United Kingdom

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In this paper I show that, by the value of goods delivered to the United Kingdom, in constant prices, imports were higher at the end of the war than in the 1930s, and higher as a proportion of gross domestic product (GDP). The data found in most statistical compilations, most histories, the historical British national accounts, and the headline import series in the Bank of England’s *A millennium of macroeconomic data* tell a different story. They suggest, by two different measures, that there were absolute real-terms falls in imports, and a larger still fall as a proportion of GDP, in an economy exceptional for its high imports. I show that three different measures of wartime goods imports exist: total imports, non-munition imports, and non-Lend-Lease imports. The first, whilst in public realm since the 1940s, and present without proper description in *A millennium of macroeconomic data*, does not appear to have been noticed by most historians or economists. The second and third are the widely reported series, but typically without an adequate description of what they measure. The differences between them are huge, as can be seen in table 1, and recognizing this has a very significant impact on how we understand the nature of the British war economy.

TABLE 1 Three different measures of goods imports, 1938–45, in British pounds in thousands.

Year	1938	1939	1940	1941	1942	1943	1944	1945
Total imports (including Lend-Lease)	919 509	885 513	1 152 121	1 145 108	1 206 163	1 886 096	2 362 181	1 516 899
Imports excluding munitions (1942–5)	920 000	886 000	1 152 000	1 145 000	997 000	1 234 000	1 309 000	1 104 000
Imports excluding Lend-Lease (Feinstein)	849 000	800 000	1 000 000	1 100 000	800 000	800 000	900 000	700 000

Source: Table 2.

The falling-imports picture is congruent with the wider older historiography of the war. This stresses increased national productive effort within a context of difficulties in importing goods (the language of siege and blockade was much used), and notes, correctly, that the physical quantity of imports fell. A decade ago, this account was challenged by a new framing which stressed the imperial and global nature of the British war effort and was supported by evidence that towards the end of war the value of United Kingdom imports, in real terms, was at least as high as prewar, and that quantities of some imports increased.¹ This paper supports and extends this high-import value story.

There are four general points worth highlighting before we proceed. The first is that British public life, and indeed British historiography more generally, often has a problem not so much with war as with the military and armaments.² This is the context for the development of, and acceptance without demur of, a standard import series excluding wartime munitions imports. Second, the new national accounts of the 1940s had, for good reasons, difficulty with Lend-Lease. Lend-Lease was neither a loan nor a gift of money, as many historians assume, nor was anything leased. Most were effectively a transfer of goods, though ownership was retained by the United States. Lend-Lease supplies were, as this paper clarifies, excluded from the national accounts, which thus underestimate the resources that the United Kingdom could devote to the war. Third,

¹ Edgerton, *Britain’s war machine*, pp. 159–60, 179–80.

² This is not to say that armaments production is left out of GDP totals. It is to point out that the specificities of armaments are glossed over, and that institutions concerned with arms production, even in wartime, are not given the attention they deserve. On the treatment of the military and armaments in British historical thinking, see Edgerton, *Warfare state*.



TABLE 2 Different measures of goods imports into the United Kingdom, 1938–45, in British pounds in thousands.

Source	1938	1939	1940	1941	1942	1943	1944	1945
<i>Annual statement of the trade of the United Kingdom 1945</i> (1947)				1 145 108	1 206 163	1 886 096	2 362 181	1 516 899
Total imports								
Munitions only				158 989	209 423	652 168	1 052 860	413 205
Foreign munitions only (non-Empire)				132 769	183 252	568 695	859 077	289 532
<i>Statistical abstract</i> (1947)								
Total imports	919 509	885 513	1 152 121	1 145 108	1 206 163	1 885 421	2 359 801	1 103 693^a
<i>Statement relating</i> (1944)								
Total imports	919 500	885 500	1 152 100	1 145 100	1 205 600	1 874 700		
Excluding munitions (1942–)	919 500	885 500	1 152 100	1 145 100	1 003 100	1 216 800		
<i>Annual abstract</i> (1948)/ <i>Statistical digest</i> (1951)	920 000	886 000	1 152 000	1 145 000	997 000	1 234 000	1 309 000	1 104 000
<i>Annual statement minus Annual abstract/Statistical digest</i>								
Implied munitions	na	na	na	na	209 200	651 400	105 080	412 900
Lend-Lease munitions for the United Kingdom	na	na	na	21 500	246 750	699 250	951 750	242 750
Lend-Lease other goods (excluding ships) for the United Kingdom	na	na	na	144 000	351 000	445 500	601 250	318 750
Total Lend-Lease for the British Empire	na	na	na	270 500	1 189 250	2 257 750	2 691 500	1 109 250

(Continues)



TABLE 2 (Continued)

Source	1938	1939	1940	1941	1942	1943	1944	1945
Feinstein								
‘Cash only’ goods imports	849 000	800 000	1 000 000	1 100 000	800 000	800 000	900 000	700 000
Sefton and Weale (p. 200), based on Feinstein. Also A millennium, ‘A36. Trade values and the balance of payments’	850 000	799 000	1 003 000	1 101 000	800 000	800 000	900 000	700 000

Notes: The table shows the relationship of different measures of imports into the United Kingdom: **total imports**, **non-munition imports**, and **non-Lend-Lease imports**. The table is rather full, but it enables the reader to establish the connections between the series. Thus the figures for total imports are consistent between different series. The totals for non-munitions are also consistent across series (thus, the implied munitions role is consistent with the munitions role in the Annual Statement series). The table also shows that the munitions imports, as recorded in the *Annual statement*, and implied in the *Annual abstract/Statistical digest* figures, correspond roughly to the Lend-Lease munitions imports to the United Kingdom. Lastly, by inspection one can see that the Feinstein figures are roughly the total imports minus munition and non-munition Lend-Lease to the United Kingdom. For the method of calculation used by Feinstein, see section III and table 4.

^aIt seems very likely that this figure excludes munitions, as it corresponds to the non-munition imports in the *Annual abstract/Statistical digest* figure for the same year.
Sources: *Annual statement of the trade of the United Kingdom 1945* (London: HMSO 1947), Vol. 1, table 1, p. 1, and table 8, pp. 3–5 (for munitions). <https://babel.hathitrust.org/cgi/pt?id=umn.31951002271453z&view=lup&seq=304&skin=2021>. The *Annual statement* figures are also in B.R. Mitchell, *European historical statistics, 1750–1975 second edn.* (1980), pp. 517, 521, and B.R. Mitchell, *British historical statistics* (Cambridge, 1988), p. 453.
Statistical abstract for the British Commonwealth for each of the year, 1936 to 1945, (1947) Cmd 7224, pp. 2–3.
Statistics relating to the war effort of the United Kingdom Cmd. 6564 (1944), Appendix E.
Central Statistical Office, *Annual abstract of statistics*, No 85, 1937–47 (HMSO, 1948) table 195, p. 166.
Central Statistical Office, *Statistical digest of the war* (HMSO, 1951), table 142, p. 162.
R. G. D. Allen, ‘Mutual aid between the U.S. and The British Empire, 1941–5’, *Journal of the Royal Statistical Society*, Vol. 109, No. 3 (1946), pp. 243–77.
C. H. Feinstein, *National income, expenditure and output of the United Kingdom 1855–1965* (Cambridge 1972), table 15, p. T38, and table 37, p. T82; see also table 4 p. 113.
J. Sefton and M. Weale, *The reconciliation of national income and expenditure: balanced estimates of United Kingdom national accounts, 1920–90*, Volume 7, in *Studies in national income and expenditure of the United Kingdom* (Cambridge, 1995), pp. 199–200.
Bank of England, *A millennium of macroeconomic data*, A36. ‘Trade values and the balance of payments’.



TABLE 3 Indices of UK goods imports (real, 1935 and 1938 prices), 1938 = 100.

		1938	1939	1940	1941	1942	1943	1944	1945
<i>Statistics relating</i> (1944)	All imports	100	97	94	83	84	118		
1935 prices	Excluding munitions	100	97	94	83	72	79		
<i>Annual abstract</i> (1948)/ <i>Statistical</i> <i>digest</i> (1951) 1938 prices	Retained goods imports excluding munitions	100	97	94	82	70	77	80	61.9
<i>Statistical digest</i> retained imports 1938 prices	Food, drink, and tobacco	100	94	78	72	73	78	74	60
	Raw materials and articles mainly unmanufactured	100	98	105	62	63	59	61	60
	Articles wholly or mainly manufactured (munitions excluded, 1942–5)	100	100	112	121	72	94	102	62
New estimate, (1938 prices of non-munition goods imports)	All imports, based on <i>Annual statement</i> total	100	97	94	82	85	118	144	85
Feinstein/Sefton and Weale imports of non-Lend-Lease goods and services at 1938 prices	Goods and services, non-Lend-Lease	100	110	114	97	82	82	91	85

Notes: **All goods imports**, **imports excluding munitions**, and **non-Lend-Lease**. The new estimate was calculated by assuming the price deflator for all imports was the same as the one for retained imports (excluding munitions, 1942–5) series, and applying that to all imports series in table 1.

Sources: *Statistics relating to the war effort of the United Kingdom*, Cmd. 6564 (1944), Appendix E.

Central Statistical Office, *Annual abstract of statistics*, No 85, 1937–47 (1948) table 195, p. 166.

Central Statistical Office, *Statistical digest of the war* (1951), table 142, p. 162.

J. Sefton and M. Weale, *The reconciliation of national income and expenditure: balanced estimates of United Kingdom national accounts, 1920–90*. Volume 7, in *Studies in national income and expenditure of the United Kingdom*. (Cambridge, 1995), p. 189.

many influential postwar historians were prone to thinking too nationally and indeed nationalistically about the Second World War and failed to recognize the extent to which the wartime United Kingdom elite thought of itself as part of an empire and operated in material terms as a combined Anglo-American force: the history of the war was nationalized.³ They embraced and reproduced the low measures of imports without fully appreciating their meaning. Fourth, we need to recognize that there was a lack of candour about Lend-Lease (and overseas supply generally) in statistical compilations which made British wartime imports difficult to understand, as indeed there was a downplaying of empire and alliance even in official documents after the war.⁴

This paper aims to put some of the complex realities of British wartime import data into the record so that future studies distinguish clearly between measures of total imports, non-munitions only, and non-Lend-Lease imports, and between empire and nation and indeed alliances as

³ See Edgerton, ‘The nationalisation of British history’. It is no part of my argument that the economists who drew up national accounts were nationalists; indeed, they generally were not.

⁴ See, for example, Ministry of Information, *What Britain has done*, and the introduction by Richard Overly, and Edgerton, *Britain's war machine*, pp. 272–3.



TABLE 4 Total goods imports into the United Kingdom, by source, 1936–44.

	1936	1937	1938	1939	1940	1941	1942	1943	1944
Total imports in British pounds in thousands	847 752	1 027 824	919 509	885 513	1 152 121	1 145 108	1 206 163	1 885 421	2 359 801
British countries (%)	39.21	39.43	40.41	40.44	47.61	44.97	40.01	29.85	30.10
Foreign countries (%)	60.79	60.57	59.59	59.56	52.39	55.03	59.99	70.15	69.90

Notes: NB, excluding munitions, the British countries percentage for 1944 is 39.50% (calculated from *Statistical digest*, table 145, p. 165).

Source: Board of Trade, *Statistical Abstract for the British Commonwealth* for each of the years, 1936 to 1945, 1947, Cmd. 7224, pp. 2–3.

TABLE 5 Sayers, Feinstein, and Sefton and Weale data on British goods imports, 1940–5, in millions of British pounds.

	1940	1941	1942	1943	1944	1945
Sayers total goods imports including ships	1000	1300	1800	2700	3200	1900
Of which munitions	200	500	800	1400	1700	700
Grants, etc., from the United States	–	300	1000	2000	2400	1000
Implied non-Lend-Lease	1000	1000	800	700	800	900
Feinstein ‘cash only’ goods imports	1000	1100	800	800	900	700
Sefton and Weale goods imports	1003	1101	800	800	900	700

Notes: This table shows the likely derivation of the Feinstein/Sefton and Weale data for wartime imports. Note that Sayers’ total imports and munitions imports are considerably higher than the *Annual statement* figures in table 1 and that his grants, etc., from the United States correspond to total Lend-Lease to the British Empire, as set out in table 1.

Sources: R.S. Sayers, *Financial policy 1939–45* (1956), Appendix I, Table 10, p. 499.

C. H. Feinstein, *National income, expenditure and output of the United Kingdom 1855–1965* (1972), table 15, p. T38, and table 37, p. T82; see also p. 113.

J. Sefton and M. Weale, *The reconciliation of national income and expenditure: balanced estimates of United Kingdom national accounts, 1920–90*. Volume 7, in *Studies in national income and expenditure of the United Kingdom* (Cambridge, 1995), pp. 199–200.

accounting and fighting units. It also serves to lay out the different measures side by side and the twisted historical path that was taken to producing histories assuming low wartime imports. In understanding the different series, and indeed retrieving a crucial one from obscurity, it relies on statistical detective work, for the original published tables and notes are not, as I show, self-explanatory. It is not a story of errors corrected but rather one of showing the creation of different kinds of statistical knowledge, consistent with each other, embodying very different statistical and ideological, assumptions, and of historians making very particular assumptions about the nature of the war economy.

For simplicity and clarity, I focus on the gross imports of goods (merchandise), which the data focus on, not services (though they are part of the broader story, they are only a small part). It also allows me to avoid the question of reverse Lend-Lease, which was largely a matter of providing goods and services in the United Kingdom and is not relevant to the overall story I want to tell. ‘British countries’ is a description used in trade statistics for all parts of the British Empire, which included the United Kingdom, to distinguish them from ‘foreign countries’.

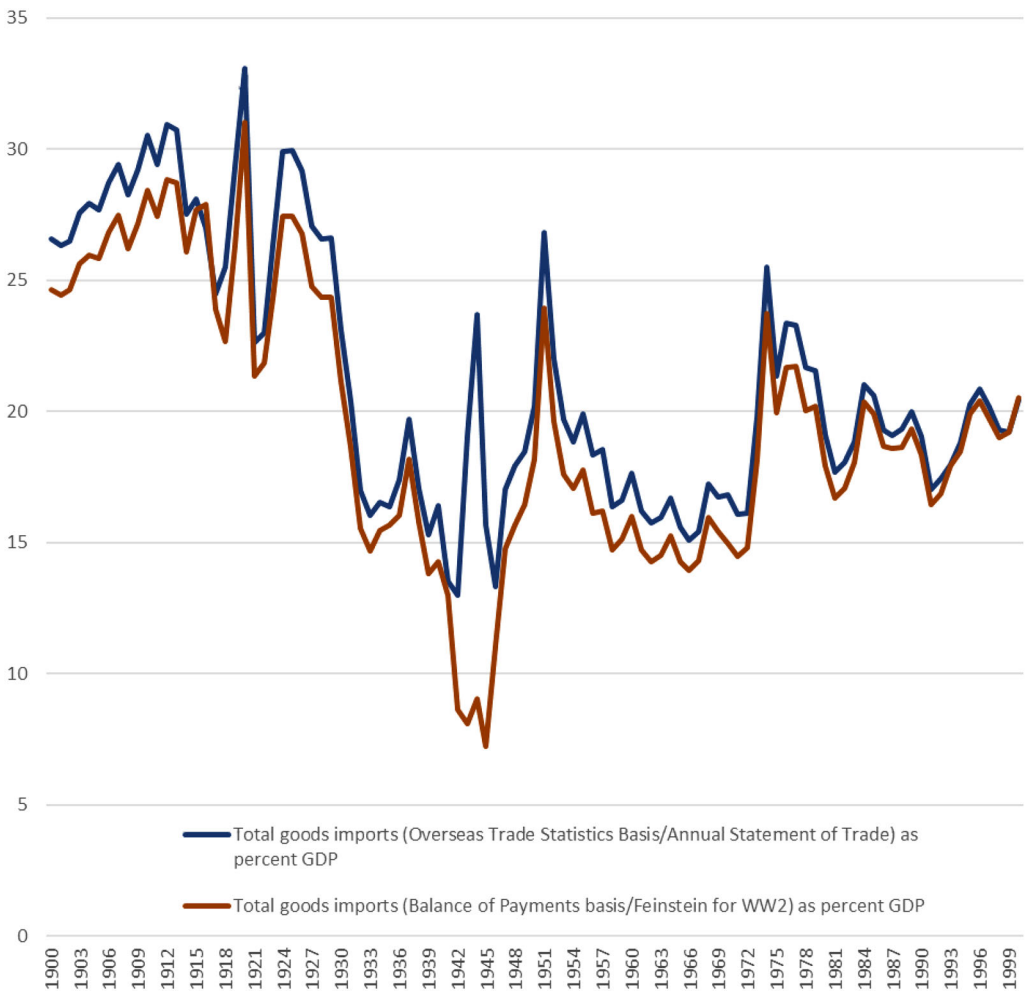


FIGURE 1 Imports of goods into the United Kingdom for UK use as per cent GDP, 1900–2000. *Notes:* The overseas trade basis data is derived from customs data and includes carriage, insurance, and freight. The balance of payments basis is free on board and excludes imports which, for example, do not change ownership. For the war years, the main difference between the two measures is Lend-Lease imports, which were not paid for. *Source:* Bank of England, *A millennium of macroeconomic data*. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/ehr.13234)]

I | INTERPRETING THE NUMBERS

Two datasets have been commonly used by historians in their treatments of the value of wartime imports. The first is found in the *Annual abstract of statistics* and the *Statistical digest of the war* (which both exclude munitions from 1942); the second is Charles Feinstein's 'cash-only' figures (which exclude Lend-Lease) from his national accounts.⁵ Both suggest that UK imports fell in value in real terms, and thus as a proportion of GDP, quite radically (see figure 1 and table 3 below). For example, Sidney Pollard, in his rich and important textbook on the British economy,

⁵ See below for references and detailed discussion of these sources.



reported the *Statistical digest* figures, showing imports roughly constant in current prices, without noting the exclusion of munitions. He seems to recognize that they are incomplete because of the lack of Lend-Lease but gives no hint of the level of Lend-Lease.⁶ Harrison, in a well-known paper on Second World War economies, shows British net imports higher as a proportion of national income than before the war but falling during it (17 per cent in 1940 and 9 per cent in 1944).⁷ This wartime shrinkage is due to falling imports as a proportion of national income, rather than a significant change in exports. Harrison used Feinstein's series for imports of goods and services without noting that they exclude Lend-Lease.

Part of the reason why Lend-Lease supplies are not noted to be missing could be the way Lend-Lease is understood. Pollard described Lend-Lease sometimes as a 'gift' or 'free deliveries' from the dollar area or 'the supply free of charge' or that something that solved 'the dollar import problem'. All are accurate summaries, but mostly not precise enough to avoid misunderstanding.⁸ But he also interpreted Lend-Lease as a grant.⁹ That view is common. Thus, drawing explicitly on Sayers, Howlett treated Lend-Lease as a grant, covering part of the balance of payment deficit, and indeed at one point implies that Lend-Lease was a loan.¹⁰ Harrison has described Lend-Lease as 'a source of credit'.¹¹ If it was thought of as a source of credit, whether a loan or gift of money, it would have been quite natural to assume that this money was used to buy imports, that imports were all paid for, and that any tabulation of imports would include all imports purchased, unless otherwise stated, including Lend-Lease.

But there are other powerful reasons why historians would accept the falling value of imports figures without enquiring too much into what they measured. It is that they are strongly consistent with the more common observation that the tonnage of imports fell, and specifically dry cargo imports, to one-half prewar levels. A crucial component of such imports, food, also halved, we were very commonly told.¹² This is not all: the low-import understanding went along with a celebration of the new high levels of domestic production, not least of food, that was at the heart of the postwar social and economic history of the war. Historians of the 1960s established a paradigm celebrating national mobilization and planning through what A. J. P. Taylor called war socialism.¹³ It was a story of 'Britain alone' fighting a 'people's war'. These nationalist works, as they have been recently characterized, were written at a time, the 1960s, when imports were at a low of around 15 per cent of GDP (figure 1).¹⁴ Some later critical work on the war economy took the view that the war economy had remained far too non-national, as is very clear in the work of Correlli Barnett, but this had no impact on the import story.¹⁵

⁶ Pollard, *The development of the British economy*, p. 331.

⁷ Harrison, 'Resource mobilization', table 6, p. 189. The sources are given in table 3, p. 184.

⁸ Pollard, *The development of the British economy*, pp. 341, 345, 351.

⁹ Pollard, *The development of the British economy*, pp. 331–2.

¹⁰ Howlett, 'The war-time economy, 1939–45', pp. 15–7. On Sayers, see below.

¹¹ Harrison, 'Resource mobilization', pp. 171–9, 189.

¹² Pollard, *The development of the British economy*; Olson, *The economics of the wartime shortage*, ch. 5; Calder, *The people's war*, p. 276; Milward, *War, economy and society*, p. 253; Zweiniger-Bargielowska, *Austerity in Britain*, p. 36; Wilt, *Food for war*, p. 224.

¹³ See Taylor, *English history*; Hobsbawm, *Industry and empire*; Calder, *The people's war*; Addison, *The road to 1945*.

¹⁴ Edgerton, 'The nationalisation of British history'.

¹⁵ Barnett, *The audit of war*.



In 2011 I presented a high-import account of the war, criticizing the nationalist historiography and noting the omission of munitions imports from the *Statistical digest/Annual abstract* numbers and its importance.¹⁶ Using wartime data and Lend-Lease data, I argued cautiously that wartime imports by value were at least as high as prewar.¹⁷ I cited Lend-Lease figures from Sayers, not noting the crucial empire/nation distinction that needed to be made, and concluded that at peak, and in effect net of reciprocal aid, the United Kingdom had an additional 20 per cent added to GDP at the peak of Lend-Lease supplies in 1944.¹⁸

My book also challenged the low-import story in terms of quantities. It showed that, whilst overall import tonnage fell, the standard story focused on dry cargo only and ignored the hugely increased tanker tonnages. It also challenged the standard idea that the United Kingdom halved its food imports, showing that human food imports fell by much less, and indeed that imports of meat and cheese increased, as part of a general policy of shifting to less bulky and typically more expensive imports.¹⁹ But the bigger point was that, even as import quantities fell, unit values of overall imports increased. It thus reasserted a point well known to economists and statisticians during and just after the war: overall value per ton shot up as the country shifted from food and raw materials to importing manufactures, and denser foods.²⁰ The central point of this analysis was that the British war effort should not be thought of in national terms: it was supplied from overseas, and what was being supplied was not just the nation.²¹ This was a war fought, rhetorically and in reality, by ‘the empire’ and by ‘the United Nations’. Indeed, the very mobilization of the United Kingdom, and the empire as a whole – the troops it could field and the forces it could send out – depended on very high overseas supply.

This new account posited a new post-national, imperial, and global view of the war, including of its economics.²² Recent work has emphasized not only the very economical way of thinking about war which was typical of UK grand strategy but how deep and international it was. Thus Thomas Bottelier shows how a prewar military–economic alliance was forming between the United Kingdom, France, and the United States, and how the war needs to be understood as having a vital inter-allied economic side managed from Washington.²³ Jamie Martin also emphasizes the importance of UK management of the global economy, increasingly jointly with the United States, in keeping it going in war conditions and in maintaining essential supplies.²⁴

II | THE FIRST STATISTICS

In 1944 the British government presented to the United States and to the world an economic account of its war effort. *Statistics relating to the war effort of the United Kingdom* aimed to show

¹⁶ Edgerton, *Britain's war machine*; *idem.*, *Warfare state*.

¹⁷ Edgerton, *Britain's war machine*, pp. 159–61.

¹⁸ *ibid.*, p. 279.

¹⁹ Edgerton, *Britain's war machine*, ch. 6.

²⁰ Noted by Maizels, ‘Sources and nature of statistical information’.

²¹ Edgerton, *Britain's war machine*, ch.6 and pp. 273–83.

²² Tooze, *Wages of destruction*; Geyer and Tooze, eds., *The Cambridge history of the Second World War*, III: *Total war*; Buchanan, ‘Globalizing the Second World War’.

²³ Bottelier, ‘Associated Powers’, and *idem.*, ‘“Not on a Purely Nationalistic Basis”’, pp. 152–75.

²⁴ Martin, ‘The global crisis of commodity glut’. See also Martin, *Meddlers*.



just how much the United Kingdom had sacrificed and mobilized. An appendix contained a series for imports into the United Kingdom to 1943, distinguishing (starting with the 1942 data) between total imports and non-munitions imports, and made a real-terms comparison of wartime imports with 1938 imports.²⁵ In 1947 the *Annual statement of the trade of the United Kingdom 1945*, that is, the detailed trade statistics, included a series, for total goods imports between 1941 and 1945, in which it was made explicit that the totals included munitions, with the same total figures as *Statistics relating* for the relevant years.²⁶ In the same year the *Statistical abstract for the British Commonwealth for each of the years, 1936 to 1945*, published a series for goods imports for all these years, all the same as the *Annual statement* numbers, except for a very different figure for 1945. Here no reference was made to munitions, their inclusion, or exclusion.²⁷ These figures, with others, are set out in table 2.

The story these publications tell is striking. *Statistics relating* shows that to 1942 real-terms total imports fell 16 per cent compared with 1938 before shooting up: real-terms 1943 total imports were 18 per cent higher than in 1938. My own further analysis on the basis of the *Annual statement/ Statistical abstract* data suggests that for 1944 the level was over 40 per cent above 1938 levels in real terms (table 3). These publications reveal that munitions made up some 35 per cent of imports in 1943, and 45 per cent in 1944. Additional data from these sources show total imports first shifted to the rest of the empire, as the major sources of imports in Europe were lost, and then away from empire as the United States stepped in on a huge scale (table 4). By 1944, 70 per cent of imports came from what were called ‘foreign countries’, up from 60 per cent in 1938. Taking the total goods import figures and comparing them with standard GDP totals shows that goods imports increased from about 17 per cent to 24 per cent between 1938 and 1944 (figure 1).

What did these figures for total goods imports represent? The numbers refer to physical imports into the territory of the United Kingdom, excluding flows avoiding the United Kingdom to British entities overseas. It is also clear from the notes to the *Annual statement* that all materials imported into the United Kingdom for the use of the United States and other allied forces (including from the dominions) were not included in the total import data. That is, there were flows through British ports, and to British entities overseas, not recorded in these tables.²⁸

But there is something very remarkable about these official publications. Nowhere is Lend-Lease mentioned, an omission which was, as we will see, a continuing feature of official trade statistics. However, we can be confident that these totals do in fact include Lend-Lease and related Canadian supplies. We can be sure because we have details of Lend-Lease from Allen’s ‘Mutual aid between the U.S. and the British Empire, 1941–45’, published in the *Journal of the Royal Statistical Society* in 1946. This gave figures for Lend-Lease deliveries, expressed in dollars, and divided Lend-Lease deliveries into munitions and non-munitions, and for the United Kingdom, and for the British Empire as a whole.²⁹ A straightforward inspection reveals, not unexpectedly, that the munitions import figures are very close to the Lend-Lease munitions supply to the United Kingdom at the official exchange rate (table 2). For reasons discussed below we can also be certain

²⁵ *Statistics relating to the war effort of the United Kingdom* (1944), Cmd. 6564, Appendix E.

²⁶ *Annual statement of the trade of the United Kingdom 1945* (1947), Vol. 1, table 1, p. 1, and table 8, pp. 3–5.

²⁷ *Statistical abstract for the British Commonwealth for each of the year, 1936 to 1945* (1947), Cmd. 7224, pp. 2–3. The subsequent edition, no. 70, does not have wartime data.

²⁸ Maizels, ‘The source and nature of statistical information’, is clear on the point.

²⁹ Allen, ‘Mutual aid between the U.S. and the British Empire, 1941–45’.



that Lend-Lease non-munitions are also included in the totals. Total Lend-Lease supplies (at the official exchange rate) to the United Kingdom alone peaked at some 15 per cent of GDP in 1944.³⁰

In short, after first falling in real terms, by 1944 total goods imports were, according to these figures, well above prewar levels, and more than half were Lend-Lease supplies.

III | POSTWAR ACCOUNTING OF THE WAR

Clearly the picture given above is radically different from that found in most histories. Part of the reason is that from 1948 the figures discussed above disappeared from new printings of statistical series covering the war years and were very largely forgotten. A new, very different set of numbers took their place in the more general collections of statistics. Import series were published in the 1948 *Annual abstract of statistics* no. 84, covering the years 1936–46, and no. 85 of the same year, covering 1937–47. They were also published in the 1951 *Statistical digest of the war*, a kind of statistical annex to the national civil official histories, which was to become the standard reference for wartime statistics.³¹ Both publications had identical statistical series for imports (though covering a different range of years).³² They were series for goods imports into the United Kingdom, which, from 1942, excluded munitions. Both provided the same volume measures of imports, also excluding munitions from 1942, showing a 20 per cent fall in real imports between 1938 and 1944 (table 3).³³

The absence of munitions is noted only in notes, not in the labels on the tables. The notes do not define munitions, give no explanation for their exclusion, and no indication of the huge implications of this omission.³⁴ They excluded, we should recall, more than 40 per cent of peak (1944) imports. The omission of munitions imports is particularly noteworthy in the case of the *Statistical digest* in that it was the most comprehensive tabulation of, among other things, weapons production. However, weapons appeared in the section on production and were confined to UK production (rather than production for British forces – a crucial difference), in physical not value terms, although in two important cases – tanks and aircraft – deliveries from overseas were tabulated (as numbers, not values).³⁵

Lend-Lease is thoroughly obscured in these statistical sources. The *Annual abstract* contained no information at all on Lend-Lease whilst the *Statistical digest* provided only a small table (in dollars) in the section on public finance, covering the British Empire, breaking down supplies by nation and theatre, and by munitions, other goods and services, saying nothing on Lend-Lease in relation to trade.³⁶ However, although this is nowhere indicated, this import series included non-munition Lend-Lease supplies to the United Kingdom. How can we know this is the case? First, the total they are derived from (as noted above) included Lend-Lease, and the labelled deduction

³⁰ Using GDP estimates from Feinstein, *National income, expenditure and output of the United Kingdom 1855–1965*, T. 11.

³¹ For example, Butler, *British political facts* (in its many editions).

³² Hancock and Gowing, *British war economy*, the overarching official economic history of the war does not include import data for the last years of the war, substituting data for Lend-Lease only in its data sections.

³³ *Statistical digest*, table 195, p. 166.

³⁴ There is a definition of munitions in the Lend-Lease case (which is almost certainly the operative one) – it includes all arms except large warships, so essentially all the military equipment imported. *Statistical digest*, p. 232.

³⁵ *Statistical digest*, tables 126, 134–6, pp. 148, 155–7,

³⁶ *Statistical digest*, table 178, p. 198.



is of munitions only. Second, the lack of mention of Lend-Lease is an indication in itself that non-munitions Lend-Lease supplies are included. Another way to be sure is by analysis of the detailed information by commodity of the non-munitions imports given in these sources, whose totals correspond to the non-munitions import series. These detailed figures include large quantities of goods that we know came very largely through Lend-Lease, notably oil products, which look to be included.³⁷ It is worth noting that, by ignoring munitions, these tables (the standard ones for the breakdown of imports by category), give a very distorted image of what as well as how much the United Kingdom was importing, and under what regime they were imported.

Strikingly, no reason was given in any of these documents for the exclusion of (Lend-Lease) munitions. There might have been a rationale for the purely economic statistics in that weapons were not productive in some sense – at least they did not enter into the economy in the same way food or steel or machine tools did (although imports via Lend-Lease were productive in that they released resources for other production). There might have been an argument that the value of these imports was from the British point of view arbitrary, in that no money changed hands. But in that case why include non-munition Lend-Lease? One could argue in both cases that the real value in a market or arrived at through negotiation would have been different. I suspect what was operating was a sense that munitions were in some sense apart from the economy, and that imports should be confined to (roughly) inputs into UK production and consumption.

The elimination of (largely Lend-Lease) munitions represented the first great transformation of the import picture. The second was the elimination by stages of the rest of Lend-Lease imports. Netting out or deducting Lend-Lease was necessary for the creation of consistent balancing national accounts. Estimates of gross domestic product required a measure of net imports paid for to deduct from total income and expenditure estimates. The national income and expenditure estimates do not include Lend-Lease.³⁸ As it was put in 1948 in notes to the national expenditure tables: ‘The series of government expenditures given here is not a consistent measure of the value of the total amount of goods and services currently at the disposal of public authorities since it includes resources obtained by borrowing from, or the sale of assets to other countries but not, except in 1945, those obtained under Lend-Lease’.³⁹ The notes in the *Statistical digest* of 1951 state (of public authorities’ expenditure) that ‘It is not, however, a consistent measure of the value of resources at the disposal of public authorities since lend-lease assistance has been excluded throughout with the one exception that the 1945 figure includes an amount of £161m ... to cover the final settlement with the Government of the United States’.⁴⁰ Thus we can confirm that Lend-Lease is to be understood as additional to, and not, or not mainly, counted in existing national income and expenditure estimates. It is possible that some is captured in consumers’ expenditure on say Lend-Lease food; however, we do not know this because it may be that Lend-Lease food simply reduced the average price of food.

³⁷ See for example, *Statistical digest*, tables 142, 143, 147, 148, and 149, pp. 162–70.

³⁸ Harrison, ‘Resource mobilization’, assumed that Lend-Lease was included; Edgerton, *Britain’s war machine*, p. 279 and n. 18 on p. 378, assumed that it was not.

³⁹ *National income and expenditure of the United Kingdom 1947* Cmd. 7371 (1948), p. 21, confirmed p. 22 and p. 34. This document is given as the reference for the definitions used in the national income and expenditure tables covering the war in *Annual abstract of statistics* No. 85 1937–47 (1948), p. 219.

⁴⁰ *Statistical digest* notes to table 180, p. 234. The final settlement referred to payment for goods arriving after the end of the war.



Two different approaches to dealing with Lend-Lease imports are evident in R. S. Sayers' official history of financial policy, and Charles Feinstein's national accounts. Both wanted, in effect, to estimate the value of non-Lend-Lease imports. Both were clearly aware that the standard published figures included non-munition Lend-Lease but had no information on how much was Lend-Lease. Neither, given the way they calculated their numbers, seemed to be aware of the existence of the total import figures discussed above, which would have allowed a simple deduction of the known Lend-Lease total. Sayers found a roundabout route to net out Lend-Lease, whilst Feinstein used Sayers' figures to deal with the issue in a different way.

R.S. Sayers' official history *Financial policy*, published in 1956, calculated a figure for the wartime balance of payments, excluding Lend-Lease, not imports or exports as such.⁴¹ He added a figure for munitions derived from the Allen Lend-Lease data to the UK non-munitions imports, giving a rounded and clearly approximate figure. He added an approximation of like British Empire, rather than United Kingdom, munitions Lend-Lease imports (table 5). The result is that Sayers' own import total is astonishing large, greater than the *Annual statement* total figures. On the income side of the equation, he has British exports and a second source of funds he identifies as grants of money to the United Kingdom to pay for imports. This figure is close to the valuation of Lend-Lease for the empire as a whole, both munitions and non-munitions. For 1944 it amounts to £2.4 billion whilst Allen (converted at \$4) gives £1.5 billion for UK-only Lend-Lease. He was reproducing, or perhaps creating, what became, as we have noted, a quite common means of conceptualizing Lend-Lease as a grant of money. But although Lend-Lease was accounted for in dollars, supplies were never actually paid for by the United Kingdom. Sayers had no need to get into these details, since he was only aiming to net out Lend-Lease. His interest was in getting a munitions import figure consistent with a total Lend-Lease figure, not in working out imports into the United Kingdom as such. He was interested in the balance of payments, not imports and exports per se.

Charles Feinstein took a different approach in compiling his historical national accounts. Feinstein wanted to calculate GDP, which requires an estimate of imports (and of course exports, but these were known). Feinstein wanted a figure for non-Lend-Lease imports, which implies that he was aware (he does not make the point) that the national income and expenditure data excluded Lend-Lease supplies. Rather than including Lend-Lease imports, and then netting them out, as Sayers did, he sought to eliminate them from his imports directly and explicitly. He aimed at what he called 'Cash only transactions' for imports, that is, an estimate of paid-for imports. Feinstein correctly noted that there were no data for non-Lend-Lease imports and had spotted (as had Sayers) that the *Statistical digest* figures included non-munition Lend-Lease. He estimated non-Lend-Lease goods imports from Sayers' balance of payments calculation, recognizing that they were very approximate.⁴² He does not explain how he calculated his figures, but they look like Sayers' total imports subtracting Sayers' Lend-Lease grant figure.⁴³ He would have got a much cleaner (both statistically and conceptually) result by using the total imports from the *Annual statement* and the UK Lend-Lease numbers from Allen. To be clear, Feinstein was strictly following the logic of the national accounting, aware of the complication of Lend-Lease, and eliminating it for very good technical reasons. That is, since the figures for domestic expenditures did not include uses

⁴¹ Sayers, *Financial policy*, appendix I, T. 10, p. 499. Sayers reprinted the whole Allen article (also the source of figures in the *Statistical digest*) as an appendix, and used figures based on it in a key table.

⁴² Feinstein, *National income*, tables 15 and 37 and p. 112.

⁴³ Feinstein, *National income*, also calculated, giving a little more information how he did it, a figure for imports of goods and services (pp. 112–3).



of Lend-Lease, to get GDP one had to subtract only net imports not of Lend-Lease origin.

$$\begin{aligned} \text{GDP} &= \text{total domestic expenditure (excluding uses of Lend-Lease)} \\ &\quad - \text{net imports (excluding Lend-Lease supplies).} \end{aligned}$$

Had the figures for domestic expenditures *included* uses of Lend-Lease, then subtracting total net imports (including Lend-Lease supplies) would have done the trick.

Feinstein's calculation of imports net of Lend-Lease shows a fall in imports in current prices, not just constant prices, in other words, an even more drastic fall in imports than the *Statistical digest* figures, as one would expect (tables 1–3, 5). These 'cash only' imports – and the figures are very deliberately rounded and approximate – account for only 38 per cent of the flow of goods into the United Kingdom for UK purposes in 1944 as measured by the *Annual statement*. Put another way, as shown in table 1, for that year total UK imports were some 250 per cent of the Feinstein figure.

Feinstein's approximations are much cited, as are his related figures for goods and services. Notably they were used in Sefton and Weale's updated national accounts (which also use *Statistical digest* sources for imports for this period).⁴⁴ They also use a series from Feinstein for goods and services, showing a fall over 1938–44 in constant prices (table 2).⁴⁵ The Feinstein (via Sefton and Weale) data find themselves in the Bank of England's *A millennium of macroeconomic data for the United Kingdom*. In this, the main series for goods imports [free on board (FOB)] are the Feinstein data. There is also a series of 2013-prices imports of goods and services showing a wartime fall, also derived from the Feinstein data.⁴⁶

Whilst the Feinstein numbers are the most visible in the *Millennium* dataset, it has two other series covering the war years without adequate discussion of the differences. First, there is a breakdown of imports into three categories, using the *Annual abstract* data, that is, excluding munitions.⁴⁷ Second, *Millennium* has a series for goods imports it calls 'Goods (c.i.f.)', 'based on recorded Overseas Trade Statistics' quoted from Mitchell's *British historical statistics* (1988 edition). These are the *Annual statement* totals which also appear in Mitchell's earlier *European historical statistics*, the only publications I know which use these figures.⁴⁸ *Millennium* gives two correction differences between these 'Overseas Trade Statistics basis' and 'Balance of Payment basis' numbers and a small cost, insurance, and freight (CIF) to FOB adjustment. The overall correction is a small one for most years, but for the war, it is huge and driven by the former (figure 1). (We can understand the main difference is coverage in wartime as the difference between the value of goods imported and the value of goods paid for, that is, having a change of ownership). An Excel note to the first correction tells us that in wartime years the first correction includes Lend-Lease, which is correct, as Lend-Lease is essentially the difference between the *Annual Statement* and the Feinstein figures.⁴⁹ Some other statistics from the *Annual statement* appear in the figures for import by country, for it records, for example, imports from the United States in 1944 of £1391

⁴⁴ Sefton and Weale, *The reconciliation of national income and expenditure*, p. 68.

⁴⁵ *ibid.*, p. 189.

⁴⁶ *A millennium of macroeconomic data*, A35. 'Trade volumes and Prices, 1280–2016'.

⁴⁷ *A millennium of macroeconomic data*, A39. 'Goods exports and import values by commodity'.

⁴⁸ Mitchell, *European historical statistics*; *idem.*, *British historical statistics*, p. 453.

⁴⁹ *A millennium of macroeconomic data*, A36. 'Trade values and the balance of payments'.



million, which is more than total imports according to the non-munitions series.⁵⁰ In other words very different figures for imports are used through the tables without the crucial differences being fully noted or explained.

The economic historian looking at the Feinstein national accounts, or Sefton and Weale, or the *Millennium* database, would quite rightly take away as the obvious import figure the Feinstein numbers. An extremely careful reader of the *Millennium* figures would note by the existence of effectively three series of numbers for imports which remain undefined and their differences unexplained, except for the note to the column citing the adjustments between the trade statistics and balance of payments figures and noting that the correction includes Lend-Lease. Anyone who tracked back through Sefton and Weale to Feinstein and read Feinstein's notes carefully would become aware that his figures were specifically estimates of non-Lend-Lease imports. But they could not be made aware of what the other numbers are, for the very good reason that they are not part of Feinstein's calculations, except in as much he is aware that the import figures he started from were non-munition, including Lend-Lease. We can now be clear what the three sets are. They represent three radically different measures: total goods; civilian non-munitions goods, including non-munition Lend-Lease; and non-Lend-Lease goods. The very great difference between them is shown in different ways in table 1 and figure 1, summing up the argument of this paper. The value of imports in the latter years of the war was vastly greater than the sum paid for imports, essentially because Lend-Lease imports came in free and were and remained the property of the United States.

IV | CONCLUSION

The picture of the national accounts and balance of payments of the United Kingdom's wartime imports, that is, the imports it paid for itself, is of course conceptually sound and correctly measures what they set out to measure. It also presents, in practice, a story of continuity, in which the United Kingdom was forced to cut back on its imports, given the wartime context. Within a wider conceptualization of the war common in the postwar United Kingdom, this made perfect sense. But an economic history of the war needs to recognize that the war changed the very nature of the economy, not least the arrangements for the flow of goods over national and imperial boundaries, which these accounts could not capture. We need a history which also understands that, as Karl Polanyi was one of the very few to point out, Lend-Lease was a powerful example of the importance of the reciprocal gift in a world now dominated by markets and exchanges, for him a striking confirmation that stage theories of history mislead.⁵¹ Lend-Lease (precisely what the national accounts left out, for sound reasons) was of stupendous importance to the British war effort. Indeed, we need a modern history of Lend-Lease and how it affected the United Kingdom and the British Empire. The best work on the impact on the United Kingdom, by Alan Dobson, was concerned not with the economic impact of Lend-Lease but rather its political implications. These were very significant – they included restrictions of British wartime exports and a promise to liberalize the British and imperial economies after the

⁵⁰ *A millennium of macroeconomic data*, A44. 'Geographical breakdown of UK trade with selected countries'. It notes *Annual statement of trade* as a general source, and that the figures are on an 'Overseas Trade Basis' rather than a 'Balance of Payments basis'.

⁵¹ Polanyi, 'The economy as instituted process'. Thanks to Gabriel Mesevage.



war.⁵² We also need to incorporate something else into our picture of what came into the United Kingdom: the supplies brought in for US and other allied forces in the United Kingdom, which are not captured in the import data, nor more obviously in the national income calculations, and neither were they Lend-Lease (with some exceptions). In other words, we must not conflate the conceptualization found in national accounting, or the particular definitions of the published import data, with the real flow of goods in wartime, which included government-to-government transfers without payment or ownership change, and intra-military transfers across national boundaries, on a huge scale. We need a transnational accounting of these flows to supplement national economic accounts.

The issue is not merely one of quantities. The non-munitions and non-Lend-Lease import numbers carry with them the implication (no more than that) that wartime imports were less of the same type of goods. But a full accounting of what entered the United Kingdom in wartime tells a very different story: one of a radical change in value, in value per ton, which resulted from a shift to manufactures from primary products, whether in the case of metal goods, food, or fuel, and of the shift from Europe to rest of Empire and then from rest of Empire to the United States – all in a context of first a fall and then an astonishing rise caused by Lend-Lease. War did not remove the United Kingdom from the world economy but rather radically changed its place in it and the nature of its interactions with it. It was the combination of postwar nationalization of historiography, the barely acknowledged absence of munitions/Lend-Lease from the standard import statistics, along with the proper technical requirements of national accounting, which have led to a lack of appreciation, until recently, of the dependence of the wartime United Kingdom on vast quantities of imports. Put another way, the quantity of resources available in the United Kingdom, both to the United Kingdom and to resident forces, has been severely underestimated.

DATA AVAILABILITY STATEMENT

All the data used in this paper is published in the sources indicated.

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⁵² Dobson, *US wartime aid to Britain*.



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