

## war finance\*

The financial aspect of modern war is of special interest only to the extent that two conditions are present simultaneously and interact. First, the war must be of sufficient scale and duration that the share of real resources claimed by government is hugely increased, with accompanying trends towards a rising budget deficit, generalized excess demand for goods and services, and the extension of nonprice controls over resource allocation. The second condition is a threatened loss of public confidence in the value of domestic money and government securities, at the same time as the need arises to persuade the public at home and abroad to hold much more of these assets than would have been normal in the prewar period.

In modern history such conditions have only been present in combination during the two World Wars, the purely financial aspects of more limited conflicts being no different in kind from those of any other source of pressure on government to spend.

**World War I.** A century ago it was widely believed that, in a world of increasing economic integration, the rising costs of commercial disruption and loss of confidence had become sufficient to rule out a Great War among the industrial countries. In both concept and practice war finance meant deficit finance, confined to brief episodes of limited national strain, with the anticipated costs of redeeming the increased national debt to be laid upon the defeated adversary after the war's victorious conclusion.

The traditional mode of paying for war was tested to the limit in World War I. Few special measures of financial control were at first contemplated. Deficit finance was successful in allowing a prolonged mobilisation of the main industrial economies, but at the price of an inflationary destabilisation which was most marked in Germany, Russia and the east-central European belligerents. Moreover none of the belligerents, regardless of military success or failure, was subsequently able to recoup the costs of the war from the adversary to any significant degree.

The evidence of World War I suggests strongly that the most important determinant of a country's success or failure in war finance was its level of development, measured by GDP per head. Other things being equal, higher GDP per head was associated with three things: a more elaborate fiscal structure and revenue service, allowing government to meet more of its wartime expenditure needs from higher tax rates and new taxes; a more highly developed financial infrastructure, enhancing the capacity of the monetary authorities to control the direction of financial flows; and a larger, more sophisticated

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money market, ready to absorb more government war debt of longer maturity in preference (voluntary or constrained) to the usual peacetime securities.

These things in combination were decisive conditions for restricting the wartime growth of liquidity. Thus, a relative ranking of the United States, United Kingdom, Germany and Russia by prewar GDP per head corresponds with their ranking both by the proportion of wartime spending met from taxation, and by the proportion of the remaining deficit covered by bond sales (see comparable data assembled by Fisk 1924: 330, 339). As a result, the money stock doubled in the UK, but trebled or quadrupled in Germany (Balderston 1989: 237).

In the British case a further factor contributing to financial stability was the ability to borrow from abroad against the huge prewar accumulation of UK overseas assets. In terms of net resource implications, however, British borrowing was largely offset by lending to the French and Russian Allies.

**World War II.** Although the British record of war finance in World War I had been reasonable by contemporary standards, interwar critics would identify a number of weaknesses which ought to be avoided in the next Great War – delayed introduction of direct controls over the real economy, the domestic money market and the market for foreign exchange (later Friedman and Schwartz 1982: 116 would suggest that in World War I price controls had been ineffective in the aggregate); failure to exploit fully the remaining possibilities of increased taxation; acquiescence in steadily rising interest rates which contributed neither to asset holders' confidence nor to the mobilisation of resources, but significantly increased the cost of deficit finance to the Treasury.

In 1939-40 Keynes circulated his view of the financial needs of another Great War, at first within government (Sayers 1956: 154-5), then to a wider public (Keynes [1939, 1940] 1978: 40-155). These views contributed largely to the subsequent British practice of war finance. The starting point was the absolute priority of government spending on supply of war, which was to be raised to the maximum allowed by physical resource constraints at home and abroad. A modest increase in retail prices at the outset (money wages being allowed to lag behind) was inevitable and would help to repress nonwar consumption. But an unrestrained inflationary spiral would shift the distribution of war burdens in unpredictable ways damaging to social stability and national unity, and would divert productive effort into speculative activity. Instead it was necessary (and to Keynes personally, if not to all others, the necessity was bitter) to ration resources to industry and the consumer, strictly limiting the total of nonwar expenditures, and distributing civilian resources according to accepted notions of social justice. Taxation of war incomes (both higher money wages and excess profits) could be pursued more vigorously than in World War I, but advice to levy taxes in "heroic" proportions (e.g. Durbin 1939: 78) was rejected. To rely too heavily on taxation would cause too much damage to labour incentives and morale, and would also incur prohibitive costs of policing. However, some objections to heavier taxation would be overcome by introducing postwar credits (i.e. deferred pay), as a

halfway house between pure taxation and voluntary lending to government.

All agreed that, even if so augmented, tax revenues would never suffice to cover expenditure requirements. Deficit finance would play an irreducible role. Here the term of government borrowing had to be kept as long as possible. To limit inflationary repercussions, firms and households had to be kept illiquid by making available a wider than usual variety of medium and long term government financial assets to both small and institutional investors, to take the place of the real resources and private debt which they would otherwise have sought to acquire; at the same time nongovernment borrowers were to be largely excluded from the market. Physical supply restrictions and the offer of large quantities of government debt were therefore combined with direct controls on private domestic borrowing, limiting new and bonus issues on the stock market, bank advances, and so forth, in order to limit liquidity in private hands. Exchange controls did the same for restriction of purchasing power in foreign currency.

Like other prices, the rate of interest was also controlled. Since demands for goods, for domestic lending and for foreign cash were all controlled directly, the rate of interest had become redundant as a regulator either of domestic demand or of the exchange rate. Instead, interest rates were stabilized at a low level in order to cheapen deficit finance. In *The Economist's* phrase (20 January, 1940), this was a "three per cent war."

Control of the money multiplier also played a part. Bond finance of the deficit kept the issue of high-powered money to a minimum. At the same time, firms and households were persuaded to hold as much high-powered money as possible in bank deposits; meanwhile, the commercial banks were both persuaded and constrained to create as little credit with it as possible.

The results of the strategy were generally successful. During World War II, government spending averaged 70% of GDP, and half of it was financed out of general taxation. Of the cumulative deficit, only one third was financed by short-term borrowing, and high-powered money accounted for little more than 5% of overall deficit finance (Sayers 1956: 223). The cash stock no more than doubled; the aim of a "three per cent war" was realized, and the costs of borrowing to the Treasury were correspondingly low. Some inflation was successfully repressed but, even without price controls, the price level would have been only fractionally higher at the peak of the war effort (Friedman and Schwartz 1982: 119).

However, the story would have been very different without Britain's ability to draw upon overseas assets and Allied credits. In fact, domestic finance alone was insufficient, and in 1940-1 up to one third of the budget deficit was financed by net imports (in later years the proportion stabilized at one quarter).

While precise comparisons have not been attempted, it appears that Germany, where wartime government spending averaged more than 80% of national income, relied more on deficit finance to cover wartime expenditures, and more on short-term borrowing at higher interest rates, and on monetary emission, for finance of the deficit

(Klein 1959: 153, Sommariva and Tullio 1986). Like Britain, Germany too relied heavily on foreign transfers (in this case, from the occupied territories).

**Keynesian and Alternative Views.** The view of war finance developed by Keynes and the Keynesians stands in contrast to new classical views of public finance based on the Ricardian theorem of equivalence of bond sales with taxation under rational expectations. Keynes ([1939] 1978: 45-6) himself was explicit in the view that the effects of taxation and bond sales were not equivalent and that bonds were net wealth to the individual holder.

The inflationary consequences of wartime bond-financed deficits may be accounted for within a new classical framework on the basis that the wartime deficits were transitory, minimising the associated negative wealth effects (Ahmed 1986). However, some objections to Ricardian equivalence are still stronger in a wartime context than under more normal circumstances. Writing on war finance during World War I, Pigou (1916: 66-83) had already rejected the equivalence theorem on distributional grounds. Other grounds for scepticism concern the strength of necessary assumptions concerning individual time preference and the utility of provision for heirs, under wartime circumstances of reduced life chances and levels of natality.

In summary, in western economics there is little or no pure theory of war finance, which remains a topic within limits defined by the applied economics of the mid-twentieth century.

In contrast, the official Marxist-Leninist ideology of the former state-socialist countries paid considerable attention to the public finance aspect of wars; the postulated tendency of war spending to be associated with budgetary deficit under capitalism and balance or surplus under socialism was attributed to the superior properties of a centralized allocation system under public ownership (Tamarchenko 1967: 6, 30). But this theory should now be generally recognized as apologetic in character.

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See also *Burden of Debt; Crowding Out; Deficit Financing; Deficit Spending; National Debt; Ricardian Equivalence Theorem.*

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