G. C. Peden, *Arms, Economics and British Strategy: From Dreadnoughts to Hydrogen Bombs*. Cambridge: Cambridge University Press, 2007. Cambridge Military Histories. Xiii + 384 pp. £55.00 (cloth). ISBN 978-0-521-86748-1.

Reviewed for EH.net by Mark Harrison (Department of Economics, University of Warwick).

George Peden is Professor of History at the University of Stirling and the author of several influential studies of British public and military policy at various times in the twentieth century. *Arms, Economics, and British Strategy* brings it all together into a detailed reinterpretation of the period starting in 1904, the year that saw the launching of the Dreadnought, the world's first armour-clad battleship, and finishing in 1969, when the British government committed its independent thermonuclear deterrent to Polaris submarines.

The book is divided chronologically into six chapters, devoted respectively to the periods before and during World War I, the interwar period, World War II, and the nuclear and thermonuclear periods of the atomic age. Each chapter discusses the policy makers of the time, the technological shocks affecting the supply and demand for military equipment, considerations arising from the state of the economy, and the strategic context and repercussions. The common theme is the choices that had to be made given "the tendency for the costs of new weapons systems to rise more rapidly than the national income" (p. 1).

In every society planning for the contingency of war is conducted under conditions of great uncertainty, and requires competing interests to overcome mutual suspicion and resistance. Without hindsight it is rarely clear what distinguishes the national interest from special pleading and conversely. One pleasing aspect of the book is the care with which Peden exploits the knowledge gained from knowing what happened next without using it to criticise unfairly the choices made by those who lacked the benefit of experiences that still lay in the future. Not accidentally, given this, the most difficult chapters are the last two; unlike the periods ending in 1914 and 1939, the Cold War did not end in the finality of an all-out conflict that proved the worth or otherwise of the insurance policies taken out against it.

Peden keeps a range of targets in his sights. At the centre is the conventional wisdom on British military decline over the twentieth century. This parallels (and takes some inspiration from) outmoded stereotypes of Britain's relative economic decline in portraying the British armed forces as led by amateurs and equipped by conservatives who failed to lift their eyes above the short term horizon. In successive chapters Peden refutes the latter description, attributed in various aspects to Corelli Barnett, Michael Howard, Mary Kaldor, and Paul

Kennedy, among others. In making his case he draws on official statistics and documents in the national archives, the memoirs and personal archives of the political and military actors, a vast secondary literature, recent studies by his comrades-in-arms David French (on military matters) and David Edgerton (on industry and science), and his own previous research.

A theme of the interwar years that Peden rescues from undeserved obscurity is that of economic stability as the "fourth arm of defence" (p. 132). In the late 1930s, Treasury officials argued that price stability and the competitiveness of traded goods were an essential element of the country's capacity to wage war without external assistance. This resonates to some extent with Mançur Olson's finding (in *The Economics of the Wartime Shortage*, 1963), based on the experience of 150 years of warfare, that the best peacetime preparation for war was to trade and specialise on the basis of comparative advantage.

The book is economically written, with an intimidating range of reference. Beyond a clear division into parts, there is little help for the reader in the way of signposting or other coordinates.

The context might have been enriched and simplified at the same time by more explicit analysis of the rising cost of new weapons. Peden demonstrates that the real unit cost of the major weapon systems – airplanes, tanks, and vessels – was increasing monotonically, implying a rising share of national income required to build a given array of units. This was one factor that drove successive British peacetime administrations to shrink the numerical size of the armed forces. As Peden points out, this does not mean that the armed forces became less powerful militarily; the destructive power, and so military value, of each unit also rose at a dizzying pace. The advent of the atomic bomb did not mean more destruction, but it meant that the same destruction that previously required mass bomber formations could now be achieved by one plane and one bomb.

So, rising costs were not the sole factor in the evolution of public choice in this field. A confounding factor was that ratios of military value to the economic cost of weapon systems were also on an upward trend. To complicate matters, value-to-cost ratios of different weapon systems most likely rose at different rates, implying incentives to substitute among them. Substitution would have been limited, however, by further factors. One (to which Peden gives considerable attention) was the changing patterns of complementarity amongst weaponry in different uses. Another was the remorseless rise in the minimum efficient scales of both production and use of military equipment. Finally, different periods offered varying scope for mitigation of increasingly difficult national choices through international trade and military collaboration.

To conclude, this is a rich, profound, sometimes difficult work of historical scholarship that deserves to make a lasting impact in its field.

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