

Alan S. Milward
WAR, ECONOMY
AND SOCIETY
1939~1945



War, Economy and Society

1939–1945

Alan S. Milward

University of California Press
Berkeley and Los Angeles

University of California Press
Berkeley and Los Angeles

First Paperback Printing 1979
ISBN 0-520-03942-4

Library of Congress Catalog Card Number: 76-40823

Copyright © 1977 by Alan S. Milward

Printed in the United States of America

1 2 3 4 5 6 7 8 9

Preface to the English Edition

When Professor Fischer asked me to write this book I decided at first against it because I was not sure that it was as yet possible to write an economic history of the Second World War. Having changed my mind and written it I think my first opinion was probably correct. Very little is known of the economic history of the Soviet Union or of Italy in this period. The history of other combatant powers often has to be culled from 'official' histories which could not be described as frank. Worst of all the Second World War is still the greatest statistical gap in the twentieth century. When considering the history of a long period the fact that for many countries there are four years of blanks in most important series is not crucial. But it means that for a history of the war itself the basic statistical information is missing more often than not. I chose my own way out of this situation by writing at greater length about the subjects which have been explored in more depth. And in those areas where it is still only possible to purvey half-truths because so little scholarly research has been done I have purveyed them as quietly and unobtrusively as permissible.

In surrendering, Germany and Japan bared all their secrets. The victors exposed theirs in a more discreetly titillating way in a great many volumes of official publications. Although the quality of these volumes is occasionally high the more usual style is to

combine intellectual blandness with a frenzied interest in the details of civil and military administration. There remains therefore a considerable task of research, for the Second World War was a war over the future nature of the European economy and body politic and perhaps over those of Asia too. We still live in the long shadow cast by these decisions and we ought to try to take its measure. I hope this book will stimulate more research into its darker patches.

If there are any as infuriated as myself by the seemingly countless works on military history in which armies and navies come and go, commanded by greater or lesser figures deciding momentous historical issues, and nothing is said of the real productive forces which alone give such events meaning or, indeed, make them possible, they will surely sympathize with my attempt to simplify history by looking at the war as an economic event. But it has meant that two major combatant powers, the Soviet Union and Italy, get far less than their fair share of the book. There are now, it seems, 15,000 Russian volumes on the Second World War; never were so many questions left unasked and unanswered by so many. But this book, however imperfect, must now take the field against the huge and ponderous armies of all other kinds of histories of the war. Faced with such numerous opposing forces the only sane tactic was to ignore most of them, and this book does that.

The English edition has been considerably altered from the original German edition. Delay in publishing in English has allowed me in several places to incorporate some of the latest research. The last chapter has been almost completely changed, partly to fit in with the suggestions made by the publishers and partly because my own ideas changed.

Most of those whose work I have drawn on are still young enough to see where I have followed their trails. There is no space in such a work for the just number of footnotes and rather than overload the text with references I have simply tried to indicate to the reader firstly the places where I have been most dependent on the work of others and secondly where the themes handled are developed further in other books. I hope that those who recognize their own research will be content with what is often one solitary acknowledgement. That or a large number of footnotes on almost every page were the only fair alternatives.

My wife made the book less pompous and mediocre than the original draft, but the influence of universities on the author was too much to overcome. One other person made the book possible, Mrs Christine Clarke, whose patient humour and qualities of organization meant that it was finished and typed. The final version would have been much less satisfactory without the wise editorial help of Professor Wolfram Fischer. Those who deserve the greatest acknowledgement, however, are those who deserved so much more of me while I was escaping into these abstractions. My warmest thanks go to all my friends who did not write me off as lost, and above all it is to you, Claudine, Ada and Maya, that this book is especially offered, a poor recompense.

Les batailles gagnées où l'on ne tue que des hommes, sans causer d'autres dommages, affaiblissent peu l'ennemi, si le salaire des hommes qu'il a perdu lui reste, et s'il est suffisant pour attirer d'autres hommes. Une armée de cent mille hommes bien payés est une armée d'un million d'hommes; car toute armée où la solde attire des hommes ne peut être détruite: c'est alors aux soldats à se défendre courageusement; ce sont eux qui ont le plus à perdre, car ils ne manqueront pas de successeurs bien déterminés à affronter les dangers de la guerre. C'est donc la richesse qui soutient l'honneur des armes. Le héros qui gagne des batailles, qui prend des villes, qui acquiert de la gloire, et qui est le plus tôt épuisé, n'est pas le conquérant. L'historien, qui se borne au merveilleux dans le récit des exploits militaires, instruit peu la postérité sur les succès des événements décisifs des guerres, s'il lui laisse ignorer l'état des forces fondamentales et de la politique des nations dont il écrit l'histoire; car c'est dans l'aisance permanente de la partie contribuable des nations et non dans les vertus patriotiques que consiste la puissance permanente des États.

[Those victorious battles in which only men are killed without causing any other damage weaken the enemy little if the pay of the men he has lost remains and is sufficient to attract other men. An army of one hundred thousand well-paid men is an army a million strong, for an army to which men are attracted by pay cannot be destroyed: it is then up to the soldiers to defend themselves bravely; it is they who have most to lose for there will be no lack of replacements determined to face the perils of war. It is therefore wealth which upholds the honour of armies. The hero who wins battles, captures towns, acquires glory and is soonest exhausted is not the conqueror. The historian who limits himself to relating the wonders of military feats does little to inform posterity of the issue of decisive events in wars if he keeps it in ignorance of the state of the fundamental forces and of the politics of the nations the history of which he writes; for it is in the constant affluence of a country's taxpayers, not in patriotic virtues that the permanent power of the state is to be found.]

F. Quesnay, *Maximes générales du gouvernement économique d'un royaume agricole et notes sur ces maximes*, xxvi, 1758

Contents

	Preface to the English Edition	xiv
1	War as Policy	1
2	The Economy in a Strategic Synthesis	18
3	The Productive Effort	55
4	The Direction of the Economy	99
5	The Economics of Occupation	132
6	War, Technology and Economic Change	169
7	War, Population and Labour	208
8	War, Agriculture and Food	245
9	Economic Warfare	294
10	Reconstruction of the International Economy	329
	Bibliography	366
	Index	389

List of Tables

- 1 Military expenditure of the combatant powers in the Second World War, 1933-8 25
- 2 Japanese estimates of supply and demand of certain commodities from 1940 33
- 3 The percentage increase in the real value of armaments expenditure, 1934-8 47
- 4 Estimated value of the United States war programme, 1940-45 64
- 5 Output of certain manufacturing industries in the United States, 1939-44 69
- 6 Output of certain raw materials in the United States, 1939-45 69
- 7 United States lend-lease supplies to the British Commonwealth, 1942-5 72
- 8 War expenditure and consumer expenditure in Germany, 1939-43 76
- 9 Share of different industrial groups in production in Germany, 1939-44 78
- 10 Output of certain goods in Greater Germany, 1939-44 79
- 11 Indices of production of certain armaments in Germany, 1939-41 80
- 12 Gross National Product of Japan, 1940-44 85

- 13 Output of certain goods in Japan proper, 1939-44 85
- 14 Japanese armaments production, 1941-5 86
- 15 Italian imports of coal from Germany, 1937-43 88
- 16 Output of certain goods in Britain, 1939-45 91
- 17 Economic performance in the Soviet Union, 1940-44 92
- 18 Changes in the Soviet Union budget, 1939-45 93
- 19 Production of certain goods in the Soviet Union,
1940-45 95
- 20 Gross Domestic Product and Net National Income in
Italy 97
- 21 Occupation costs and other payments from France in
relation to Germany's Gross National Product 140
- 22 Payments to Germany from France as a proportion of
French resources, 1940-44 140
- 23 Imports of strategic materials into Japan, 1941-4 167
- 24 Machine-tool output in the United States and Germany,
1939-44 190
- 25 Number of foreign workers employed in Germany,
1939-44 223
- 26 Changes in the area devoted to crops in Britain,
1939-44 254
- 27 Domestic production and imports of rice in Japan,
1939-45 257
- 28 Net imports of foodstuffs into Germany, 1936-44 262
- 29 Calorific value of normal consumers' rations, 1941-4 288
- 30 Agricultural machinery in Japan, 1937-45 291
- 31 Agricultural machinery in New Zealand, 1939-46 292
- 32 Germany's supply of iron ore, 1940-44 311
- 33 Machine-tool inventory of some combatant countries,
1938-45 334
- 34 Size of the world's merchant fleets, 1939-47 346
- 35 Size and geographical distribution of United States export
and import balances, 1938 and 1946 358
- 36 German trading balances by groups of countries,
1936-44 360

Figure

- 1 Indices of German armaments production, 1941-5 81

1 War as Policy

For Warre, consisteth not in Battell onely, or the act of fighting; but in a tract of time, wherein the will to contend by Battell is sufficiently known: and therefore the notion of Time, is to be considered in the nature of Warre; as it is in the nature of Weather. For as the nature of Foule weather, lyeth not in a showre or two of rain; but in an inclination thereto of many days together: So the nature of Warre, consisteth not in actuall fighting; but in the known disposition thereto, during all the time there is no assurance to the contrary. All other time is Peace.

Thomas Hobbes,
Leviathan, 1651

There are two commonly accepted ideas about war which have little foundation in history. One is that war is an abnormality. The other is that with the passage of time warfare has become costlier and deadlier. The first of these ideas established itself in the eighteenth century, when the theory of natural law was used to demonstrate that peace was a logical deduction from the material laws governing the universe or, sometimes, from the psychological laws governing mankind. The second of these ideas came to reinforce the first, which might otherwise have been weakened by the weight of contrary evidence, towards the end of the nineteenth century. The historical record of that century had not been such as to substantiate the logical deductions of eighteenth-century philosophy, for it was a century of unremitting warfare. But after 1850 a large body of economic literature began to reconcile agreeable predictions with unpleasant facts by demonstrating that in spite of the prevalence of warfare it would eventually cease to be a viable economic policy because it would price itself out of the market, a process which, it was agreed, had already begun.

Neither of these ideas has ever been completely accepted by economists but their influence on economic theory has been so powerful as to focus the operation of a substantial body of that theory on to the workings of a peacetime economy only. In spite

of the fact that the world has practically never been at peace since the eighteenth century peace has usually been seen as the state of affairs most conducive to the achievement of economic aims and the one which economic theory seeks to analyse and illuminate. In the early nineteenth century, indeed, it was seen as the goal to which economic theory tended.

The frequency of war is in itself the best argument against accepting the idea of its abnormality. The second idea, that war has become more costly, is based less on a refusal to consider history than on a mistaken simplification of it. It was an idea which first gained wide credence with the development of more complicated technologies. War itself was an important stimulus to technological development in many industries in the late nineteenth century such as shipbuilding, the manufacture of steel plate and the development of machine tools. The construction of complex weapons which could only be manufactured by states at a high level of economic development seemed to change the economic possibilities of war. The first heavily armed steel battleships only narrowly preceded the adaptation of the internal combustion engine to military and then to aerial use, and these new armaments coincided with a period of enormous and growing standing armies. The productive capacities which economic development had placed in the hands of developed economies raised prospects of warfare on an absolute scale of cost and deadliness never before conceived. And these prospects in themselves seemed to indicate the economic mechanism by which war would disappear after its rather disappointing persistence in the nineteenth century. These ideas were succinctly expressed by de Molinari, one of the few economists who tried to integrate the existence of war into classical economic theory.

Can the profits of war still cover its cost? The history of all wars which have occurred between civilized peoples for a number of centuries attests that these costs have progressively grown, and, finally that any war between members of the civilized community today costs the victorious nation more than it can possibly yield it.¹

In the half century after de Molinari so firmly expressed his opinion there were two world wars, each of a far higher absolute

1. M. G. de Molinari, *Comment se résoudra la question sociale?*, Guillaumin, Paris, 1896, p. 126.

cost and each responsible for greater destruction than any previous war. There is, to say the least, circumstantial evidence that de Molinari's judgement was a superficial one and that nations did not continue to go to war merely because they were ignorant of what had become its real economic consequences. War not only continued to meet the social, political and economic circumstances of states but, furthermore, as an instrument of policy, it remained, in some circumstances, economically viable. War remains a policy and investment decision by the state and there seem to be numerous modern examples of its having been a correct and successful decision. The most destructive of modern technologies have not changed this state of affairs. Their deployment by those states sufficiently highly developed economically to possess them is limited by the rarity of satisfactory strategic opportunity. The strategic synthesis by which the Vietnam war was conducted on the American side, for example, is very like the rational decisions frequently taken by all combatants in the First World War against the use of poison gas. The existence of the most costly and murderous armaments does not mean that they will be appropriate or even usable in any particular war, much less that all combinations of combatants will possess them.

The question of the economic cost of war is not one of absolutes. The cost and the effectiveness of a long-range bomber at the present time must be seen in relation to that of a long-range warship in the eighteenth century and both seen in relation to the growth of national product since the eighteenth century. In each case we are dealing with the summation of many different technological developments, and the armament itself is in each of these cases pre-eminently the expression of an extremely high relative level of economic development. The meaningful question is whether the cost of war has absorbed an increasing proportion of the increasing Gross National Products of the combatants. As an economic choice war, measured in this way, has not shown any discernible long-term trend towards greater costliness. As for its deadliness, the loss of human life is but one element in the estimation of cost. There are no humane wars, and where the economic cost of the war can be lowered by substituting labour for capital on the battlefield such a choice would be a rational one. It has been often made. The size of the Russian armies in the First World War reflected the low cost of obtaining and maintaining

4 WAR, ECONOMY AND SOCIETY

a Russian soldier and was intended to remedy the Russian deficiencies in more expensive capital equipment. It may be argued that modern technology changes the analysis because it offers the possibility of near-to-total destruction of the complete human and capital stock of the enemy. But numerous societies were so destroyed in the past by sword, fire and pillage and, more appositely, by primitive guns and gunpowder. The possibility of making a deliberate choice of war as economic policy has existed since the late eighteenth century and exists still.

The origins of the Second World War lay in the deliberate choice of warfare as an instrument of policy by two of the most economically developed states. Far from having economic reservations about warfare as policy, both the German and Japanese governments were influenced in their decisions for war by the conviction that war might be an instrument of economic gain. Although economic considerations were in neither case prime reasons in the decision to fight, both governments held a firmly optimistic conviction that war could be used to solve some of their more long-term economic difficulties. Instead of shouldering the economic burden of war with the leaden and apprehensive reluctance of necessity, like their opponents, both governments kept their eyes firmly fixed on the short-term social and economic benefits which might accrue from a successful war while it was being fought, as well as on the long-term benefits of victory. In making such a choice the ruling élites in both countries were governed by the difference between their own political and economic ideas and those of their opponents. The government of Italy had already made a similar choice when it had attacked Ethiopia.

This difference in economic attitudes to warfare was partly attributable to the influence of fascist political ideas. Because these ideas were also of some importance in the formulation of Axis strategy and in the economic and social policies pursued by the German occupying forces it is necessary briefly to consider some of their aspects here in so far as they relate to the themes considered in this book. Whether the National Socialist government in Germany and the Italian Fascist party are properly to be bracketed together as fascist governments and indeed whether the word fascist itself has any accurate meaning as a definition of a set of precise political and economic attitudes are complicated

questions which cannot be discussed here.² Although the Japanese government had few hesitations in using war as an instrument of political and economic policy there is no meaningful definition of the word fascist which can include the ruling élites in Japan. There was a small political group in that country whose political ideas resembled those of the Fascists and the National Socialists but they had practically no influence in the Home Islands although they did influence the policy of the Japanese military government in Manchuria.³ But for the German and Italian rulers war had a deeper and more positive social purpose and this was related to certain shared ideas. Whether the word fascism is a useful description of the affinities of political outlook between the Italian and German governments is less important than the fact that this affinity existed and extended into many areas of political and economic life. The differences between National Socialism in Germany and Fascism in Italy partly consisted, in fact, of the more unhesitating acceptance of the ideas of Italian Fascism by the National Socialist party and the linking of these ideas to conceptions of racial purity.

The basis of Fascist and National Socialist political and economic thought was the rejection of the ideas of the eighteenth-century Enlightenment. In the submergence of the individual will in common instinctive action, which warfare represented, rational doubts and vacillations, which were regarded as a trauma on human society produced by the Enlightenment, could be suppressed. War was seen as an instrument for the healing of this trauma and for the restoration of human society to its pristine state. Both Hitler and Mussolini, whose writings in general not only subscribed to but advanced the political ideas of fascism, referred to war constantly in this vein, seeing it as a powerful instrument for forging a new and more wholesome political society. 'Fascism', wrote Mussolini,

the more it considers and observes the future and the development of humanity, quite apart from the political considerations

2. The reader is referred for a recent, short and relatively unbiased discussion of these issues to W. Wippermann, *Faschismustheorien. Zum Stand der gegenwärtigen Diskussion*, Wissenschaftliche Buchgesellschaft, Darmstadt, 1972.

3. G. M. Wilson, 'A New Look at the Problem of "Japanese Fascism"', in *Comparative Studies in Society and History*, no. 10, 1968.

of the moment, believes neither in the possibility nor the utility of perpetual peace. . . . War alone brings up to its highest tension all human energy and puts the stamp of nobility upon the peoples who have the courage to meet it.⁴

Hitler similarly wrote and spoke of war and preparation for war as an instrument for the spiritual renewal of the German people, a device for eliminating the corrupting egotistical self-seeking which he saw as the concomitant of false ideas of human liberty, progress and democracy. The basis of existence in Hitler's view was a struggle of the strong for mastery and war was thus an inescapable, necessary aspect of the human condition.⁵

What made this not uncommon viewpoint especially dangerous and what gave to the Second World War its unique characteristic of a war for the political and economic destiny of the whole European continent was the way in which the ideas of fascism were developed by Hitler and the theorists of the National Socialist party. The wound that had been inflicted on European civilization could, they argued, only be healed by a process of spiritual regeneration. That process of regeneration must begin from the small surviving still uncorrupted élite. But politics was not a matter of debate and persuasion but of the instinctive recognition of social obligations, community ideas which were held to be carried not in the brain but in the blood. The élite was also a racial élite and the restoration of the lost European civilization was also a search for a lost racial purity. The nationalist conceptions of race had been derived from the rational mainstream of European politics. What now replaced them was an irrational concept of racial purity as the last hope for the salvation of European society.⁶

Within Germany, the National Socialist party from its earliest days had identified those of Jewish race as the source of corrup-

4. Quoted in W. G. Welk, *Fascist Economic Policy. An Analysis of Italy's Economic Experiment* (Harvard Economic Studies, no. 62), Harvard University Press, Cambridge, Mass., 1938, p. 190.

5. The connections between Hitler's political thought and his strategy are developed in an interesting way by E. Jäckel, *Hitlers Weltanschauung. Entwurf einer Herrschaft*, Rainer Wunderlich Verlag Hermann Leins, Tübingen, 1969.

6. The most comprehensive discussion remains A. Kolnai's *The War against the West* (Gollancz, London, 1938), but E. Weber, in *Varieties of Fascism, Doctrines of Revolution in the Twentieth Century* (Van Nostrand, Princeton, 1964), draws out the further implications of these ideas.

tion and racial pollution. But it was scarcely possible that the 'problem' of the German Jews could be solved as an entirely domestic issue. The spiritual regeneration of Germany and, through Germany, the continent, also required a great extension of Germany's territorial area – *Lebensraum*. This area had to be sufficiently large to enable Germany militarily to play the role of a great power and to impose her will on the rest of the continent and perhaps on an even wider front. This expansion could also take the form of the destruction of what was seen as the last and most dangerous of all the European political heresies, communism and the Soviet state. The need to achieve these goals and the messianic urgency of the political programme of National Socialism meant that war was an unavoidable part of Hitler's plans.

But it was not the intellectual antagonism to communism which determined that the ultimate target of Germany's territorial expansion should be the Ukraine. That choice was more determined by economic considerations. The task of materially and spiritually rearming the German people had meant that Germany after 1933 pursued an economic policy radically different from that of other European states. A high level of state expenditure, of which military expenditure, before 1936, was a minor part, had sharply differentiated the behaviour of the German economy from that of the other major powers. The maintenance of high levels of production and full employment in a depressed international environment had necessitated an extensive battery of economic controls which had increasingly isolated the economy. After 1936 when expenditure for military purposes was increased to still higher levels there was no longer any possibility that the German economy might come back, by means of a devaluation, into a more liberal international payments and trading system. Rather, the political decisions of 1936 made it certain that trade, exchange, price and wage controls would become more drastic and more comprehensive, and the German economy more insulated from the influence of the other major economies. This was particularly so because of the large volume of investment allocated in the Four-Year Plan to the production, at prices well above prevailing world prices, of materials of vital strategic importance, such as synthetic fuel, rubber and aluminium.⁷

7. The best account is D. Petzina's *Autarkiepolitik im Dritten Reich*. Der