

---

This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google™ books

<https://books.google.com>







Documents Dept.







**HISTORY OF  
THE SECOND WORLD WAR  
UNITED KINGDOM CIVIL SERIES**

**Edited by W. K. HANCOCK**

**WAR PRODUCTION SERIES**

**Directed by M. M. POSTAN**

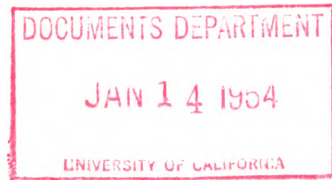
**The authors of the Civil Histories have been given  
free access to official documents. They and the editor  
are alone responsible for the statements made  
and the views expressed.**

# CONTRACTS AND FINANCE

BY

WILLIAM ASHWORTH

*Lecturer in Economic History at the London School  
of Economics and Political Science*



LONDON: 1953

HER MAJESTY'S STATIONERY OFFICE  
AND  
LONGMANS, GREEN AND CO.



Documents Dept.

*First published 1953*

*Crown Copyright Reserved*

**HER MAJESTY'S STATIONERY OFFICE**

London: York House, Kingsway, W.C.2 & 423 Oxford Street, W.1  
Edinburgh: 13a Castle Street      Cardiff: 1 St. Andrews Crescent  
Manchester: 39 King Street      Bristol: Tower Lane  
Birmingham: 2 Edmund Street      Belfast: 80 Chichester Street

**LONGMANS, GREEN AND CO LTD**  
6 and 7 Clifford Street, London, W.1  
also at Melbourne and Cape Town

**LONGMANS, GREEN AND CO INC**  
55 Fifth Avenue, New York, 3

**LONGMANS, GREEN AND CO**  
215 Victoria Street, Toronto, 1

**ORIENT LONGMANS, LTD**  
Bombay, Calcutta, Madras

Price £1 2s. 6d. net

*file  
dept P.*

Printed in Great Britain under the authority of H.M. Stationery Office  
by Sanders Phillips & Co. Ltd., London, S.W.9

HG 186  
G7A68  
Docu-  
ments  
Dept. Page

# CONTENTS

PREFACE . . . . .	ix
CHAPTER I: THE FUNCTIONS OF CONTRACTS AND FINANCE IN PRODUCTION . . . . .	1
CHAPTER II: FINANCIAL CONTROL AND THE CO-ORDINA- TION OF CONTRACT POLICY . . . . .	5
CHAPTER III: CONTRACTUAL PROCEDURE IN ITS ECONOMIC SETTING. . . . .	34
CHAPTER IV: SOME CONTRACTUAL PROBLEMS . . . . .	44
CHAPTER V: TYPES OF CONTRACT AND METHODS OF PRICE-FIXING . . . . .	66
CHAPTER VI: THE LEVEL OF PROFITS ON CONTRACTS	82
CHAPTER VII: SUB-CONTRACT PRICES AND PROFITS .	95
CHAPTER VIII: THE APPLICATION OF CONTRACT PRICE POLICY TO PARTICULAR FIELDS . . . . .	106
CHAPTER IX: REMUNERATION FOR AGENCY WORK .	142
CHAPTER X: CONTROLLED PRICES, PROFIT POOLING SCHEMES, SUBSIDIES, AND REBATES . . . . .	157
CHAPTER XI: THE PROVISION OF WORKING CAPITAL	180
CHAPTER XII: THE PROVISION OF FIXED CAPITAL .	197
CHAPTER XIII: THE COURSE OF POLICY: SOME CAUSES AND EFFECTS . . . . .	229

## APPENDICES

I. Tables . . . . .	247
A. Admiralty. Actual Expenditure on Fixed Capital for War Production. 1st April 1936 to 31st March 1945 . . . . .	249
B. Air Ministry and M.A.P. Actual Expenditure on Fixed Capital for War Production. 1st April 1936 to 31st March 1945 . . . . .	250
C. War Office and M.O.S. Actual Expenditure on Fixed Capital for War Production. 1st April 1936 to 31st March 1945 . . . . .	251

	<i>Page</i>
D. Summary of the Government's Actual Expenditure on Fixed Capital for War Production. 1st April 1936 to 31st March 1945 . . . . .	
(a) Annual . . . . .	252
(b) Cumulative . . . . .	253
E. Admiralty. Distribution of Actual Expenditure on Fixed Capital among various types of financial arrangement . . . . .	254
F. Air Ministry and M.A.P. Authorised Expenditure on Fixed Capital, 1936-45 . . . . .	255
G. Air Ministry and M.A.P. Authorised Expenditure on Fixed Capital, 1936-45. Proportionate division of total at various dates among different types of financial arrangement . . . . .	256
H. Ministry of Supply. Authorised Expenditure on Fixed Capital, 1936-45 . . . . .	257
J. Ministry of Supply. Authorised Expenditure on Fixed Capital, 1936-45. Proportionate division of total at various dates among different types of financial arrangement . . . . .	258
K. War-time Movement of Wholesale Prices . . . . .	259
L. London Clearing Banks. Distribution of assets . . . . .	260
M. Net war-time Government expenditure on war production in relation to other war expenditure and total expenditure . . . . .	261
2. Compulsory powers of Supply Departments in war-time . . . . .	
A. Extracts from Ministry of Supply Act, 1939 . . . . .	263
B. Extracts from Defence Regulations as amended up to May 1945 . . . . .	265
3. Some standard contract clauses for particular purposes . . . . .	
A. Price-fixing clauses . . . . .	267
(i) Air Ministry and Ministry of Aircraft Production . . . . .	267
(ii) Admiralty (instruction to contractors) . . . . .	268
(iii) Ministry of Supply costings clause in maximum price contracts . . . . .	268
B. King's Enemy Risks clause as revised in 1941 for general use . . . . .	268
C. Patent Rights clauses . . . . .	272
(i) Clause agreed inter-departmentally in 1942 for use when no indemnity was required from the contractor . . . . .	272
(ii) Clause agreed inter-departmentally in 1942 for use when the contractor was required to indemnify a department against claims . . . . .	273
(iii) Collaboration clauses . . . . .	273
D. Break clause as revised in November 1940 for general use . . . . .	274
4. Specimen Capital Assistance Licence Agreement, Ministry of Aircraft Production . . . . .	277
5. Specimen Agency Agreement, Admiralty . . . . .	287
INDEX . . . . .	299

## LIST OF TABLES IN THE TEXT

	<i>Page</i>
TABLE 1	Number and value of contracts placed by Ministry of Aircraft Production . . . . . 37
TABLE 2	Average profits of a group of aircraft firms . . . . . 91
TABLE 3	Profits on a sample of warship contracts . . . . . 108
TABLE 4	Operation of formulae for merchant ship prices . . . . . 115
TABLE 5	Analysis of costs of the ' Lancaster ' bomber . . . . . 121
TABLE 6	Trading results of Raw Materials Department to 31st March 1945 . . . . . 161
TABLE 7	Trading results of a cross-section of the drop-forging industry . . . . . 175
TABLE 8	Trading results of principal tube manufacturers . . . . . 176
TABLE 9	Results of rebate scheme for cold-drawn tubes . . . . . 177
TABLE 10	Value of stocks held by Raw Materials Department . . . . . 193
TABLE 11	Estimated cost of schemes covered by the Capital Clause . . . . . 203
TABLE 12	Annual capital issues of companies . . . . . 228

## GLOSSARY

- A.D.G.B. Air Defence of Great Britain.  
 A.F.V. Armoured Fighting Vehicles.  
 A.R.P. Air Raid Precautions.  
 A.T.S. Auxiliary Territorial Service.  
 C. & A.G. Comptroller and Auditor General.  
 C.C.C. Contracts Co-ordinating Committee.  
 C.E.B. Central Electricity Board.  
 C.I.D. Committee of Imperial Defence.  
 E.P.T. Excess Profits Tax.  
 E.R.C. Exchange Requirements Committee.  
 F.B.I. Federation of British Industries  
 G.P.S.C. General Purposes Sub-Committee.  
 H.C. Deb. House of Commons Debates (Official Report).  
 I.C.I. Imperial Chemical Industries.  
 I.D.A.C. Import Duties Advisory Committee.  
 I.T.P. Instruction(s) to Proceed.  
 M.A.P. Ministry of Aircraft Production.  
 M.O.S. Ministry of Supply.  
 N.F.S. National Fire Service.  
 P.A.C. Public Accounts Committee.  
 R.A.F. Royal Air Force.  
 R.A.O.C. Royal Army Ordnance Corps.  
 R.E.M.E. Royal Electrical and Mechanical Engineers.  
 R.O.F. Royal Ordnance Factory (Factories).  
 S.B.A.C. Society of British Aircraft Constructors.  
 S.C. Select Committee.  
 S.C.N.E. Select Committee on National Expenditure.  
 S.R. & O. Statutory Rules and Orders.  
 T.I.S.C. Treasury Inter-Service Committee.  
 W.A.A.F. Women's Auxiliary Air Force.  
 W.L.A. Women's Land Army.  
 W.R.N.S. Women's Royal Naval Service.

## PREFACE

**T**HIS book deals with three topics which, though they can for convenience be considered separately, are closely related. They are: the operation of financial control over the procurement of war supplies; the devising of suitable types of war contract which would, among other things, make possible a consistent price policy; and the provision of capital for firms engaged in war production. The extent of change was by no means the same in each of these three branches of policy, nor (except for the clear division in the summer of 1940) did the principal changes coincide at all closely with the main military turning-points of the war. I have therefore not divided the book chronologically, but have treated each topic in turn and tried in the final chapter to summarise briefly those developments that greatly affected all of them.

It will be clear from the table of contents that this is in no sense a comprehensive history of war-time financial policy. A general history of financial policy would be centred on the activities of the Treasury. In the present book the Treasury comes repeatedly into the story, especially in the account of financial control, but the main concern is with the financial and contractual work of the Admiralty, the Ministry of Supply, and the Ministry of Aircraft Production. The records of these three departments and of inter-departmental committees on which they and the Treasury were represented have been the principal sources used.

The history of war contracts and of the finance of war production could be presented in various ways. There is material for a much longer work which would trace out in great detail each successive step in the procedure for obtaining particular stores and might do this separately for a very large number of commodities, and which would also describe the negotiations conducted with many different contractors. But this is not the approach that has been used here. Instead, the description of executive procedures has been kept down to the minimum that is necessary to show how decisions of policy could be translated into practice, and the book is concerned primarily with questions of policy: What was its content? How did it come to be just this and not something else? What were the results of its application? It seemed likely that a book written on these lines would be of more general interest and could present the most important issues more clearly than one using any other approach. The method chosen has its dangers, particularly that of undue abstraction, but I have tried to avoid this by giving plenty of specific illustrations of the general problems. In Chapter VIII, especially, I have sought to show how general decisions of policy (expressed in such abstract terms as

'price', 'profit', 'turnover-capital ratio', and so on) were made compatible in practice with dealings (in the most diverse conditions of supply) in such concrete items as ships and guns and uniforms.

The range of activities affected by the policies whose development is here discussed is a wide one. The study is presented as a contribution to the history of war production in its broadest sense, covering not merely munitions, as this term is commonly understood, but the whole immense variety of articles needed to equip the navy, army, and air force. The reader will find references to things ranging in size from battleships to buttons, and in destructiveness from bombers to chaplains' demobilisation outfits. Policies affecting the receipts of producers of so many types of goods throughout the war could not fail to have an important influence on the economic structure of the whole nation. To discover what that influence was and to try to put it in quantitative terms would be a major investigation in itself and lies beyond the scope of the present book. Yet the weighing of that influence is relevant to any final estimate of the efficiency of war-time contract policy. It is for this reason that in the concluding pages a few small tentative explorations—they are no more—have been made into the financial repercussions of the Government's activity as a purchaser of war supplies.

Any historian working on war-time policies that have left a huge unsifted deposit of material behind them stands in need, at many points, of guidance and elucidation, and I have had much generous assistance both from officials and from some who occupied high positions during the war and who, though they had returned to their own peace-time occupations, still gave up their time to assist me. But the writing of this book has involved exceptional obligations to others. The first investigations into the subjects with which it deals were made in 1943 by the late R. A. L. Smith. While the war was still in progress Mr. J. L. Thorne prepared short histories of contracts in each of the three departments, Admiralty, Ministry of Supply and Ministry of Aircraft Production. Other calls prevented him from continuing this work, but further material for it was subsequently collected by Mr. D. R. Stephens. When I began work on this book in 1947 I fell heir to all that these three predecessors had already achieved and my labours were thereby immensely lightened. The first draft of the book was written in 1948 and comprehensively revised in the following year. Since then I have been able to revise many passages in detail, though I have made no fundamental changes in the structure of the book. In Chapter IV and in the sections on shipbuilding and ship repair in Chapter VIII I have drawn heavily on the work of Mr. Thorne, while Chapter VII and the section on textiles in Chapter VIII owe much to Mr. Stephens. But the presentation and the views expressed are everywhere my own.

W. ASHWORTH.

*London, 20th October 1952.*

# CHAPTER I

## THE FUNCTIONS OF CONTRACTS AND FINANCE IN PRODUCTION

**T**HE present volume is concerned with the contribution which two branches of policy made to the overriding task of providing adequate war supplies. Just what their scope was can perhaps best be indicated by looking very briefly at some of the administrative arrangements. A useful definition made by the Select Committee on National Expenditure in 1941 may be taken as a starting point. It ran thus:

It is the duty of Supply to provide what the consuming departments require; of Finance to provide and account for the necessary funds; and of Contracts to secure that supplies are bought on the most favourable terms. . . . Finance is charged with criticising demands for expenditure and with defending them when they have been sanctioned, but it would pass into a difficult field if it were required to criticise individual prices.<sup>1</sup>

This description was, and remained, broadly true, though its expansion into detail would make necessary some qualifications. In particular the placing of contracts inevitably involved important financial questions, and the line between what was done by the Contracts Directorate and what by the Finance Division was differently placed in different departments. The Admiralty, the War Office, the Air Ministry, the Ministry of Supply, and the Ministry of Aircraft Production were all concerned with the purchase of war supplies. Administrative arrangements and practice were not the same in all of them, but an attempt can be made to indicate the common elements in the financial and contractual work of these departments.

The main work of Contracts Directorates, which were divided into numerous branches, each concerned with a particular group of stores, was to arrange for the buying and selling of goods, which had been respectively requisitioned or certified as surplus by the appropriate Supply Branches. The most difficult and controversial part of that task, the negotiation of prices for each contract, was their sole responsibility, but the total expenditure on the programmes which Supply Branches required Contracts Directorates to implement had to receive prior sanction from Finance Branches. Responsibility for

---

<sup>1</sup> S.C.N.E., 1940-41, 4th Report (18th Report of series), Part 1, para. 95.



obtaining this financial sanction rested with the requisitioning branch, not with the Contracts Directorate. In peace-time, however, Contracts Branches were required to consult Finance Branches before they placed contracts which contained unusual financial terms, such as advance payments or the payment of cost plus profit; and financial control over some aspects of contracts continued during the war. Where it appeared likely that, because of the prices negotiated, total expenditure would be appreciably above the approved amount shown on the requisition, Contracts Branches also had to notify Finance Branches of the extra amount involved, so that financial sanction might be obtained. Copies of completed contract documents were sent to Finance Branches to enable contractors' bills to be checked and payment authorised.

The work of Contracts Directorates in purchasing stores continued throughout the war on the same general lines as immediately before it, though with some incidental modifications in procedure.<sup>1</sup> This work was of wide scope. Not only did they negotiate contracts with private firms, but they also acted as the channel through which orders (known as 'extracts') were placed with the Royal Ordnance Factories. There were, however, some important changes in the other duties of Contracts Directorates. Arranging the sale of stores was normally only a minor part of their work, but at the end of the war there was a formidable task, especially for the Ministry of Supply, in arranging for the disposal of enormous quantities of surplus material and stores. Contractual arrangements were only part of the work involved, and the Ministry of Supply created for the task a separate Directorate of Disposals. Similarly, the Admiralty set up a special organisation to deal with the disposal of surplus small craft at the end of the war.<sup>2</sup>

In one other way the position of Contracts Directorates changed fundamentally in the pre-war rearmament period and was not subsequently restored. They had previously had the important duty of reviewing industrial capacity, in order to ensure that, in an emergency, orders could be placed and executed for all the stores which would be required. In order to explain the change that took place it is necessary to point out how Contracts Directorates fitted into the peace-time hierarchy of defence planning. At the highest level, responsibility for ensuring that there was adequate productive capacity rested with the Principal Supply Officers' Committee of the Committee of Imperial Defence. When this body was reorganised in 1927 the functions allotted to it included:

Preparing plans for increasing supplies in emergency, whether by special purchase arrangements at home or abroad, or by opening up

---

<sup>1</sup> Chapter III below.

<sup>2</sup> P.A.C., 1946-47, Q. 1252.

new sources of supply. These plans would include various alternatives to meet the possibility of normal sources of supply being cut off by the nature of the war.

Maintaining lists of contractors, additional to those employed by the Services, who could be directed to war work, and for adding to the available output, if necessary, by the erection of National Factories.

The Principal Supply Officers' Committee delegated most of its functions to two bodies, one of them the Board of Trade Supply Organisation, the other known as the Supply Board. The second of these in turn delegated most of its tasks to seven Supply Committees, on all of which the Contracts Directorates of all three Services were represented. In 1929 the C.I.D. agreed that the Contracts Directorates of the three Services should be the agents of the Supply Committees in the investigations into productive capacity for stores of which the supply was likely to present difficulty in time of war. The beginning of rearmament, however, made it much more urgent to seek extra productive capacity, and in 1936 the War Office created a new Department of Munitions Production, the head of which was a member of the Army Council. In respect at first only of munitions and later of clothing and general stores as well, the Director of Contracts became subordinate to him instead of to the Finance Member of the Army Council as formerly. The Contracts Directorate continued to maintain 'trade lists' of firms which desired invitations to tender for Government contracts. Such firms had to be of sound financial standing and able to offer a definite manufacturing capacity; proof was also required of their technical ability in the manufacture of the stores for which they wished to be noted. The Contracts Directorate thus knew what orders it could currently hope to place, but henceforward part of the Department of Munitions Production, known initially as the Directorate of Industrial Planning, was responsible for the initiation of schemes to increase industrial capacity and for advising the Contracts Directorate about the allocation of munitions orders. In the same year a somewhat similar development took place within the Air Ministry, which established a Directorate of Aircraft Production to deal with the creation and utilisation of productive capacity.<sup>1</sup>

Contracts Directorates were thus not only relieved of a major responsibility but also found their remaining work affected; for the power of Production Branches (which were not concerned with prices) to allocate orders naturally tended to weaken the negotiating position of the Contracts Branch which had subsequently to arrange a price for the work. But this was not so much the effect of a faulty administrative scheme as the inevitable corollary of shortage of pro-

<sup>1</sup> A fuller account of the development of this administrative machinery is given in M. M. Postan, *British War Production*, pp. 35-37, in this series.

ductive capacity and absence of competition, which would have hampered the Contracts Directorates in any case, and to which many references will be necessary in subsequent pages.

The main work of Contracts Directorates, throughout the rearmament period and the war, may be summarised as the framing of contracts for the purchase of supplies and the negotiation of prices. This last function had a significance similar to that of much of the work of Finance Branches. Some of the relations between Contracts and Finance Branches have already been mentioned. The main tasks of the latter were to examine and criticise all proposed programmes of production and purchase in the light of the expenditure likely to be involved, to ensure that expenditure fell within the sums voted by Parliament, and to account for it after it had been incurred. Financial approval was necessary before a project could be put into effect. As later chapters will show, these functions were modified more than those of Contracts Branches, because parliamentary control over expenditure was relaxed, and because it was impracticable to make other than informal arrangements for the financial criticism of many schemes proposed by Production Branches in war-time. But the traditional financial functions never disappeared.

There were also important problems in the financing of production, in particular the need to ensure that ample funds for both fixed and working capital were available to Government contractors. The administrative arrangements for dealing with these problems differed somewhat between different departments and between different periods within the same department. In some cases a Contracts Branch was responsible, in others a Finance Branch. There were comparable variations in the arrangements for costing contracts. This was done in some cases within and in others outside the Contracts Directorate. Thus the division of work between Contracts and other branches differed according to circumstances of time and place. Consequently, in a generalised account of finance and contracts, it is impossible to take the administrative arrangements as a complete guide in tracing the way in which the various functions were carried out.

These functions, and the public circumstances in which they were exercised, gave rise to all the various problems whose treatment forms the subject matter of the rest of this volume. The topics discussed show the incidence of the contractual and financial functions on all stages and aspects of production except one: the reward of labour. Wage policy was in some ways analogous to profits policy, which is one of the major subjects included, but its detailed treatment is left for the war-time history of labour. Otherwise the succeeding chapters try to cover all the various ways in which contracts and finance played their part in war production.

## CHAPTER II

# FINANCIAL CONTROL AND THE CO-ORDINATION OF CONTRACT POLICY

**W**HEN the general functions of financial and contractual work have been explained, the topic most immediately calling for description is the general framework in which those functions were exercised. The influence of the setting on the manner in which the work was done could vary enormously, and in this respect a great distinction appears between finance and contracts. The system of financial control, to which reference was made in the previous chapter, was a central feature of the whole administration of Government: it was the principal means by which the limits of an approved general policy were enforced in practice. No arrangements directed solely to the supervision or co-ordination of contract policy had similar significance. They were very necessary, but were more comparable to the devices to ensure unity of aim and regularity of methods which any large undertaking needed in order to maintain efficiency. But despite this, financial control and contract co-ordination were functions that inevitably overlapped, because of the important financial aspects of contract policy. The financial outcome of any scheme was liable to vary according to the contractual arrangements for its execution, and a contractual system which unnecessarily duplicated its demands on contractors or its methods of approach to them would be an important source of wasteful expenditure, which financial control sought to eliminate. Thus the co-ordination of contract policy not only served the efficiency of a particular branch of administration, but to some extent was also a necessary supplement to financial control; and for this reason it used some of the same administrative machinery as financial control. It is this situation which makes it suitable to treat the two topics together, while retaining a distinction between them.

### (a) THE OPERATION OF FINANCIAL CONTROL

The peace-time system of financial control, which was rooted in the necessity of obtaining parliamentary sanction in advance of departmental expenditure and of accounting retrospectively to Parliament, involved extensive scrutiny at several different levels and elaborate recording. It was based on a fairly standardised practice.

Normally, after the Cabinet had reached a decision, the Chancellor of the Exchequer agreed with the departments concerned on the totals of their financial provision. The departments then allocated these sums among various Votes, which were submitted to the Treasury for approval. According to established doctrine, the Treasury had the right to reserve any part for further consideration and the departments could not proceed with any service until the Treasury had approved the Vote. Once it had given that approval the departments had the responsibility of seeing that expenditure remained within the authorised limits, and the scrutiny made by their Finance Branches was close.

- ✓ Much of the detailed practice of financial control before the rearmament period rested on oral rather than written tradition, and it is no longer clear how rigid in fact it was. But it is certain that all proposals for expenditure were scrutinised with great care and that thorough justification of them was demanded. Since attention had to be paid to the views of so many bodies and persons, ranging from the Public Accounts Committee to the financial officers of departments, the whole system was inevitably accompanied by caution and delay.
- ✓ When any project had been decided upon, it had to be justified first to a Finance Branch of the department concerned and then to the Treasury, both of which might be quite likely to ask that possible modifications should be investigated. The discussions and inquiries might occupy weeks or months before any steps could be taken to put the proposal into effect. All estimates required Treasury approval before they were presented to Parliament and the Treasury tried to anticipate parliamentary criticism, which was a further inducement to caution. The Treasury tended therefore to refuse financial approval of projects of which the necessity or outcome was uncertain and to be chary of permitting much expenditure on promising but unproved schemes, although it was often willing to compromise. Thus the system was well adapted to secure the economical and effective execution of a long-period policy on firmly established lines. It was not so well fitted to deal with a rapid increase of activity in some particular field or to accelerate the introduction of the many innovations which a revised defence or industrial policy might require.

The decision in 1935 to undertake a rearmament programme, involving greatly increased defence expenditure and a rapid expansion of the productive capacity for munitions, created new circumstances which called for new methods. The difficulties imposed by the existing system of control were realised from the outset and both legislative and administrative changes were made in an attempt to avoid delay in carrying out the programme without sacrificing any essential feature of financial control.

- ✓ The legislative change was that made by the Defence Loans Act

1937,<sup>1</sup> which authorised the issue to the Defence Services of £400 million from the Consolidated Fund as appropriations in aid during the five years ending 31st March 1942. In 1939, before the outbreak of war, the sum was increased to £800 million.<sup>2</sup> This measure gave only slight and indirect assistance in securing speedy action; it meant that more money was available for defence purposes and therefore more proposals for expenditure could be readily approved, but it did nothing to lighten the burden of the existing control procedure. In this respect the Government deliberately abandoned the precedent set in a somewhat similar situation at the turn of the century by the Naval and Military Works Acts (1895-1905). Under that procedure the Chancellor would have introduced a Bill authorising the expenditure on armaments of £400 million out of capital. A schedule in general terms would have been appended to the Bill, giving an estimate of the cost of the armaments, etc., to be financed by borrowing, but Parliament, having once voted the money, would have had no further budgetary control over the way in which it was spent. That procedure had become very unpopular while it was in use and the emphasis was now all on the complete preservation of parliamentary control over expenditure. When announcing the decision to finance part of the defence programme by loan, the Chancellor of the Exchequer, Mr. Chamberlain, declared that at no time had it been more important that the control of the House of Commons and of the Treasury over expenditure should be maintained unimpaired and in its traditional form.<sup>3</sup> In order to secure this object, the Act laid down that the whole of the proposed expenditure on defence would continue to be shown in Estimates laid before the House of Commons. The sums to be issued each year from the Consolidated Fund under the new powers would appear in the Estimates as appropriations in aid of Votes for the Navy, Army and Air Force, and the Royal Ordnance Factories, the sums being allocated to those Votes for each Service which were principally affected. Furthermore, the sums which might be appropriated in aid under the Act must not, in the course of any financial year, exceed the sums shown in the Estimates which the House of Commons had approved.<sup>4</sup>

As no effective change was made in the arrangements for parliamentary control, decision and action could be accelerated only by changing the administrative procedure. The most important innovation had already been made before the Defence Loans Bill was presented. This was the creation, in March 1936, of the Treasury Inter-Service Committee, which consisted of representatives of the

<sup>1</sup> 1 Edw. 8 & 1 Geo. 6 c.13.

<sup>2</sup> By the Defence Loans Act 1939 (2 & 3 Geo. 6 c.8).

<sup>3</sup> 320 H.C. Deb., 5th series, Cols. 596-97 (11th February 1937).

<sup>4</sup> *Defence Loans, Memorandum on the Proposed Resolution* [Cmd. 5368], para. 4.

Treasury and the three Defence Departments with a chairman, deputy chairman, and secretary all drawn from the Treasury. When questions affecting the work of other departments, e.g. the Office of Works or the Post Office, were under discussion, those departments were represented at meetings of the Committee. The principal functions of the Committee were the consideration of

(a) Urgent proposals for expenditure which required the prior sanction of the Treasury: the Committee was empowered to authorise such expenditure where it thought fit, formal Treasury sanction being conveyed subsequently to the department concerned, in confirmation of the Committee's authority;

(b) Proposals to depart from the principles which normally governed the placing of contracts for the supply of stores, etc., to the Defence Departments: the Committee had power when it thought fit to signify approval of groups of contracts which fell within the scope of any general arrangements which it had approved.<sup>1</sup>

These powers given to the Committee were considerable and enabled it to be from its inception, as it was intended to be, the principal instrument by which proposals for defence expenditure were discussed and authority given for their execution. They implied that the Treasury might allow departments to incur expenditure in advance of parliamentary authority, which would not be obtained until later by Supplementary Estimates. The Treasury insisted, in accordance with declared Government policy, that, in these abnormal circumstances, it was the more important that its control should be maintained unimpaired. It therefore recommended that departments should go through a process corresponding to the submission of Votes for Treasury approval. They should supply such information as they would have done in the ordinary course, indicating when any head of expenditure was the first instalment of a commitment lasting over several years. The Treasury could then give or reserve sanction, as in the case of ordinary Votes. This was the first approach to a problem which was without precedent, viz. to devise a form of control which would not interfere with the execution of the programme and would at the same time satisfy Parliament and the Public Accounts Committee that parliamentary approval had not been anticipated without proper safeguards. The Treasury very soon laid down more definitely that at least the same amount of detail should be submitted for approval, before commitments were made, as would have been done in connexion with the Treasury's approval of Votes, if it had been possible to follow the normal course and present a Supplementary Estimate to Parliament before entering into commitments. This was the practice which was fairly consistently followed. The Committee usually met once a week and particulars of each proposal to be

---

<sup>1</sup> *Treasury Minute on Defence Expenditure, 4th March 1936.* [Cmd. 5114.]

considered were the subject of a separate memorandum which was circulated to members some days, if possible, before the meeting. In addition it was usual, though not invariable, for the proposals to be discussed between the department initiating them and the Treasury before the Committee met. If, on the basis of the information thus provided, the Committee considered that a proposal was justified, it gave authority for expenditure upon it to be incurred immediately. If a proposal appeared to be justified in principle but needed modification in detail, then expenditure was usually sanctioned on the preliminary stages while the complete project was the subject of further discussion. After projects had been approved by the Committee, the estimated expenditure to be incurred on them in the following financial year was allocated to the appropriate sub-heads and included in the Estimates submitted to Parliament. Thus Parliament received Estimates in the usual form but with the difference that some of the moneys already granted had been devoted to schemes of which the cost now appeared in the Estimates for the first time.

It should not be assumed that, because the Treasury Inter-Service Committee had power to authorise expenditure, the Treasury was choosing, as far as defence was concerned, to share its powers of financial control with the Defence Departments. That was not so. The Committee did not reach decisions by majorities, and approval for expenditure could not be given over the heads of the Treasury representatives, whereas in cases of great urgency expenditure might be sanctioned by the Treasury and merely reported to the Committee afterwards. If there was any doubt about approving a scheme, either because of its magnitude or because of some major innovation of principle, it was referred for the decision of the Chancellor of the Exchequer. The question of whether such a reference should be made was within the discretion of the chairman who, as has already been stated, was a Treasury officer. The reason for the existence of the Committee was not to reduce the operation of Treasury control but to enable it to operate more quickly and effectively. Part of the purpose of Treasury control was to ensure that departments did not come to cross-purposes in their work, that they did not make overlapping arrangements for the provision of identical stores, that they did not unnecessarily compete with one another for the use of the same resources in the same area, that they did not embarrass each other by negotiating in mutual ignorance on contrary principles with the same contractor. This meant that a great many proposals of one department must be discussed by the Treasury with other departments before financial sanction could be given and much the quickest method of doing this was to hold regular committee meetings to which the members came primed with the relevant information.

The Committee thus made it easier for the Treasury to carry out



its task of ensuring that the measures of rearmament formed as nearly as possible a self-contained programme. The Cabinet had laid down as a first principle that the normal industry of the country (particularly its export side) must not be disturbed by the rearmament programme. Financial methods were sometimes used to ensure this; for example, authority was often refused if a department sought to incur expenditure on schemes or in places where there would be competition with private industry for labour and materials. But, though, even in 1936, there were serious shortages of capacity for the manufacture of some important munitions, the lack of productive resources only gradually became a major problem for the rearmament programme as a whole. By 1938, however, particular shortages were becoming more serious, and the Treasury considered them very carefully before deciding whether to approve proposed schemes of capital outlay. Early in 1939 it delayed approval of expenditure on several new factories until enquiries had been made about the labour supply.

More constant, and more in keeping with the traditional role of the Chancellor of the Exchequer, was the preoccupation with the cost of rearmament and the attempt to keep down Government expenditure on munitions. As long as this preoccupation influenced the policy of the Government, finance was bound to limit the scale and the pace of rearmament. Thus in 1936 and 1937 the schemes of expansion proposed by the Services were considerably whittled down in order to save money. Only in the course of 1938 did the government come round to the view that other aspects of defence must outweigh considerations of financial economy. After the German occupation of Austria a scheme for a large expansion of the Air Force was approved, although it called for expenditure to an amount which until then had been treated as impracticable. After the Munich Agreement the Government at last decided that Britain should prepare an army for continental service and expand munitions production to meet its needs, despite the heavy cost involved.<sup>1</sup>

As long as these financial limits were thought necessary it fell to the Chancellor of the Exchequer to defend them in the Cabinet and in Parliament, and to the Treasury to enforce them in detail. But even after 1938, when the general financial limitations had gone or were going, some financial obstacles to rearmament still remained. With the general expansion of the munitions programmes in 1938 and 1939 the Government was becoming anxious lest the rearmament programme should make excessive demands for foreign exchange. In May 1939, for instance, expenditure on the extension of the airscrew shadow factory was approved only on condition that dollar purchases of machinery were limited, and in July a draft contract for the supply

<sup>1</sup> The influence of financial limitations on rearmament is discussed in Postan, *op. cit.*, pp. 12-18, 23-32, 81-82.

of guns by a Swiss firm was rejected out of hand because the price was quoted in terms of gold.

In addition, the Treasury could be expected always to watch over industrial items of expenditure in the interests of economy. Individual items were pruned just as the general programmes had been. Throughout the rearmament period, for instance, the Treasury insisted on reducing the size of new R.O.F. which were to be built (though the reductions were so made that the original plans could be executed fairly quickly if war broke out). Even so late as April 1939 the Treasury expressed doubts about the provision in peace-time of capacity to meet needs which were not expected to be felt until after the first year of a war.

Financial considerations thus had an important part in keeping down the volume of rearmament and the amount of new productive capacity; and the detailed financial scrutiny occasionally caused delay in the execution even of the limited programmes that had been authorised. But, in general, the creation of the Treasury Inter-Service Committee produced a very marked improvement in this respect. There were still delays in obtaining Treasury approval in some cases which had to be referred for decision by the Chancellor or where one department submitted its proposals before those of another department in the same field were ready, but on the other hand the majority of considerable projects were sanctioned at the first meeting to which they were submitted.

The exercise of financial control, however, was still a possible source of delay within the Defence Departments themselves, where Finance Branches required to be thoroughly satisfied about the probable cost and practicability of proposals before submitting them to the T.I.S.C. The problem, however, was more difficult in some departments than others. In the case of the aircraft programme, the difficulty was reduced incidentally in the course of dealing with other problems. When, early in 1938, an Air Council Committee on Supply was set up in order to accelerate aircraft production and the creation of capacity, a Treasury official was made a member of it. When this Committee was considering any proposal that involved expenditure, it did not take majority decisions, but if the Treasury representative considered that there was a plain case for sanction, he had authority to signify the Treasury's concurrence. The Air Ministry could then take action immediately, but had to report to the T.I.S.C. and obtain its formal approval *ex post facto*. If, on the other hand, the Treasury representative considered that the proposal had not been clearly justified, it was then submitted to the T.I.S.C. in the usual way and required the latter's prior approval before any action was taken. This arrangement proved to be a most effective means of obtaining prompt decisions at a time when the adoption of an in-

creased scale of expansion made this particularly necessary. But speed was achieved only through some weakening of financial control, as financial scrutiny of proposals was left mainly to the Treasury representative, who was not in a position to give them the same detailed attention as Air Ministry Finance Branches would otherwise have done. Consequently, in the autumn of 1938, by which time many of the decisions essential to implement the new aircraft programme were already in effect, the Treasury representative withdrew from the Committee which continued, however, to facilitate effective financial decisions within the Air Ministry by providing a means of readily mobilising and considering all the information relevant to proposals for expenditure. Its main functions, however, were of a non-financial character.

Apart from such exceptional modifications as this, the formal arrangements for financial control within the departments continued very much as before the rearmament period, though the actual manner of their operation underwent greater change. Finance Branches examined proposals to ensure that they conformed to the approved general policy of the department and if they were satisfied of that, they prepared details of the required expenditure for submission to the Treasury. After Treasury approval had been obtained the Finance Branches had the task of authorising the financial aspects of the execution of the programme and watching cash expenditure to ensure that as far as possible it kept within the limits of the approved estimate. Proposals to make purchases to implement the authorised programme each required the approval of a Finance Branch before they were the subject of contract action and this approval was not given automatically. Every demand was examined in order to confirm that financial provision had been made for it in the approved programme, that it was necessary in order to supply the needs of the force concerned, that the expenditure was so disposed as most efficiently to achieve its object, and that money was available within the Vote to cover the expenditure involved.<sup>1</sup> These functions of Finance Branches were common to all the Service Departments, though the administrative arrangements for their exercise differed somewhat between one and another. The War Office, for example, considerably simplified its methods of financial control well before the outbreak of war.

Whatever the administrative detail, it is clear that Finance Divisions continued up to the outbreak of war to exercise close control over the execution of policy at all stages, both in general and in detail. This was in accordance with the wish of both Government and Parliament, and even isolated cases where a Finance Division in-

---

<sup>1</sup> This description relates specifically to Air Ministry practice, but the general lines were similar in all three Service Departments.

advertently failed to prevent excessive expenditure on a particular scheme were the subject of strongly adverse comment. On two or three occasions during the nineteen-thirties the Public Accounts Committee singled out for comment instances where the actual cost of Admiralty services had considerably exceeded the approved estimates. It expressed particular misgivings in 1938 when it was inquiring into the excessive discrepancy between the original estimate for and the final cost of the conversion of the *Majestic* for use as a training ship. The Committee declared that it had received no clear picture as to how financial control over professional and technical officers directing work was exercised, and recommended that the existing arrangements for financial criticism and control at the Admiralty should be carefully examined.<sup>1</sup> This recommendation implied no reflexion on persons, but was prompted by a wish to be assured that the system of financial control was, in fact, generally working satisfactorily. A departmental committee was appointed and, though its report in 1940 suggested several minor improvements which were adopted, it concluded that on the whole the financial machinery of the Admiralty was well adapted to its purpose. With this view the Treasury concurred. The Public Accounts Committee accepted this verdict, but at the same time made it plain that any weakening of internal financial control would be a serious matter which ought to be carefully avoided.<sup>2</sup>

Although the chain of financial control which has now been described was an essential element of the administration and had the highest official prestige, it was subject to strong criticism. A few weeks after resigning the position of First Lord of the Admiralty, Mr. Duff Cooper published in the press an outspoken attack on Treasury control.<sup>3</sup> His theme was that rearmament was being delayed by the Treasury, not through any fault of its officials, but because of the existing system of control. He declared that Service officers knew very well what they required and why, but were unable to match in negotiation the trained officials of the Treasury or immediately to answer questions which they had not considered in advance because they were unaware that they had any relevance to the proposals under discussion. At the same time he attacked the Treasury policy

---

<sup>1</sup> P.A.C., 1938, 2nd Report, para. 19.

<sup>2</sup> *Ibid.*, 1940, 2nd Report, paras. 23-25. The P.A.C. suggested that, as soon as circumstances permitted, it should make a comparative inquiry into the system of financial control in the Admiralty and the War Office, and the Treasury promised to supply the necessary information. This undertaking was confirmed in 1944 (*ibid.*, 1944, Appendix 2). In 1948 the Treasury said that the matter did not appear to be urgent and that such an inquiry would be extraordinarily inconvenient then. The P.A.C. agreed that the inquiry should be postponed indefinitely until there was evidence of some weakness of financial control under normal conditions in one of the Service Departments. (*Ibid.*, 1947-48, 2nd Report, paras. 87-88.)

<sup>3</sup> Rt. Hon. A. Duff Cooper, 'Spend to Arm!' in the *Evening Standard*, 26th October 1938.

of always seeking to limit expenditure, claiming that it was paralysing to initiative. Although most of the criticisms were formally directed at the administrative system, they appear fundamentally to have sprung from an objection to the policy of limited commitments. It was such a policy that financial control had to supervise before the war and it was bound to observe the limitations just as much as to uphold the commitments. On the whole it succeeded in doing both.

But, though the modifications in the system of financial control enabled it to work satisfactorily in the rearmament period, it was plain that in the event of war much greater changes and some relaxation would be needed. The international crisis in the autumn of 1938 made it necessary to plan what the initial changes should be. The T.I.S.C. decided that it would meet daily instead of weekly, and that, as far as possible, authority for expenditure should continue to be sought *before* commitments were incurred; as soon as circumstances allowed, procedure would be simplified by the submission to the Committee of classes of expenditure with financial estimates for each class. Each department would receive a block allotment to cover miscellaneous items of expenditure of small amount, and would report to the Committee the details of the way in which it had spent the allotment at the same time that it asked for a further grant. Where, in cases of great emergency, services had to be authorised without the submission of prior estimates of cost, departments might give instructions for the work to proceed, provided that they notified the case to the Treasury as early as possible, reported expenditure *ex post facto*, and made every effort to ascertain (and seek authority for) the full financial commitment involved, as soon as this could be done.

As the immediate emergency passed, this procedure was never put into practice, but discussions about the most suitable arrangements continued in the next year. The Air Ministry considered that the dislocation of services and the need for rapid action would make detailed Treasury control impossible and asked for the delegation to departments of powers to authorise expenditure, both on production orders and on capital projects. The Treasury replied that such a system might lead to competition among the various Services for labour, materials, and productive capacity. No final decision was made until the outbreak of war. A policy of limiting financial commitments was still in favour and the obvious intention was to relax control as little as possible. The Treasury stated that as long as departments remained in London the procedure of submitting proposals for emergency war expenditure to committees with Treasury chairmen should continue, and if departments were evacuated elsewhere they would still be able to refer directly to the Treasury. The limits to the expenditure which departments could incur without prior Treasury approval were to be raised, but the Treasury was

anxious not to abolish them, in spite of the expressed wishes of the War Office. The War Office itself acquiesced in this arrangement and, on the very day before war was declared, its representative volunteered his department's willingness to work to any plan that might be adopted if, for financial reasons, it proved necessary to wage war on a limited scale.

Such a policy of limited expenditure and very close control could not in fact be very long maintained during the war. Finance could not impose limits on the scale of operations when national survival was at stake, but had rather itself to be adapted to the unlimited demands of war. The history of financial control by the Treasury during the war was therefore one of very considerable relaxation. Production had to be expanded as quickly as possible and this necessarily involved the delegation of increased powers of financial approval. The scale of expenditure had also increased so much that items which normally would have been subject to full investigation became scarcely worth troubling about, especially as the volume of business had grown too great for the available staff to be able to exercise the usual detailed checks in every case. All these considerations made it impossible for financial control to be maintained in the same detailed form as in peace-time.

The procedure by which departments sought approval for expenditure on major productive schemes continued throughout the war to be the same as during the rearmament period, i.e. they worked through the Treasury Inter-Service Committee. Increasingly, however, this procedure was nominal rather than actual, and in the last three years or so of the war a large proportion of the schemes was discussed only between the initiating department and the Treasury; the decision was then recorded in the minutes of the T.I.S.C. for the information of other departments. At this stage, only questions of wide general implication received detailed discussion by the Committee. But, though the procedure remained nominally the same, the authority of the Treasury was exercised much more lightly, at any rate from the summer of 1940 onwards. A good illustration of this is provided by its changed attitude to the R.O.F. programme. When, in July 1940, the Ministry of Supply sought authority to build ten small new filling factories, the Treasury wished to defer consideration of half the proposed programme, in order to ascertain whether the shell output on which the programme was based was not greater than the requirements of the number of guns available. It would, however, press the objection only if it was clear that this course would not involve delay. The Treasury continued throughout the war to make such concessions to the urgency of the situation.

The main change in procedure, in order to lighten Treasury control, was the raising of the limits within which departments were

given full authority to sanction their own expenditure. The arrangements made were not uniform for all departments nor for all classes of expenditure. Most of them were reached empirically as circumstances required, the maintenance of reasonable harmony being the responsibility of the Treasury. In the first week of the war a system was introduced by which the Treasury made block grants to the Air Ministry. The latter submitted a programme of aircraft production with estimates of expenditure and this was authorised *en bloc*, possibly with modifications by the Treasury, to which no further reference was required until orders on a further programme were contemplated. At first the Air Ministry also used to submit to the T.I.S.C. a memorandum showing the numbers and types of aircraft in the programme, with a request for covering approval, but as programmes grew this was replaced by a general quarterly statement of commitments to the T.I.S.C. This block grant made provision for both capital and current expenditure on the aircraft programmes, and even before the concession was made to other departments, the Air Ministry was allowed to incur capital expenditure on other items up to £50,000 each, the details being subsequently reported to the T.I.S.C. for covering approval, at first weekly and later monthly. The Treasury took care that this authority should not be unduly extended and insisted that all capital items of over £50,000 must be submitted for approval, even when they were to be purchased by instalments which were below that limit. The block grant system was transferred to the Ministry of Aircraft Production when it was set up in May 1940, but it was never either requested by or granted to the other Supply Departments. On the other hand these departments had greater discretionary power in the case of some delegations of authority for expenditure for other purposes. For instance, in September 1940, the Admiralty and the War Office were empowered to sanction works services up to £10,000, but the limit for the Air Ministry was left at £2,500 as it had no wish to raise it. The Ministry of Supply received at different times a number of delegations of authority to approve works services, the limits of its authority at the end of the war in Europe being (a) up to £50,000 on housing for workers, (b) various levels, none of them over £10,000, for different classes of expenditure connected with disposals, and (c) up to £25,000 on alterations to experimental establishments. The most important delegation of all, which was extended to all the Supply Departments from December 1939, was probably the power to approve capital expenditure on individual production items of not more than £50,000 each, provided there were no unusual features. Additions to a scheme authorised by the Treasury could also be approved without further reference to it if they remained within the £50,000 limit and involved no radical change in the project. Increases in cost up to ten per cent. over the

original estimate could also be approved. All schemes estimated to cost over £2,000 and approved under delegated powers were listed in periodical reports to the Treasury.

These delegations of authority were not large when considered in relation to the scale of war expenditure, but they were sufficient to remove the details of proposed expenditure from the prior scrutiny of the Treasury, which was left free to concentrate on the broader issues, and they were most valuable in facilitating an early start on important projects. Even in the case of larger schemes which required Treasury approval in advance, the need to avoid delay led to some weakening of Treasury control, as very approximate estimates of expenditure had to be accepted without time being taken to verify them in detail. Indeed, the Ministry of Supply, when seeking covering authority in November 1943 for expenditure above the approved estimates incurred over several years on a large number of Royal Ordnance Factories, stated explicitly that it had put forward the original estimates only in order to obtain authority for the work to proceed and that it had always expected to submit revised estimates when more exact information was available. The old charge that Treasury control was a major source of delay could not be substantiated during the war.

A special case where flexible arrangements and prompt decisions were essential and remote control impossible was that of the raw materials services, and to meet this need the Treasury in August 1941 delegated authority for limited expenditure relating to raw materials and storage generally. The Ministry of Supply was authorised to purchase in the sterling area or to requisition under lend-lease without prior reference to the Treasury in any case where the estimated f.o.b. value of the goods was less than £50,000. It must, however, report the transaction subsequently to the T.I.S.C. At the same time the Ministry was empowered to remunerate merchants and agents without prior reference to the Treasury, except where a general or standing arrangement was being made. Purchases of raw materials in lots of over £50,000 each came for the most part within the scope of annual or six-monthly purchasing programmes, which were submitted to the T.I.S.C. for approval as a whole.

The new practice, by which a certain measure of financial control was sacrificed in order to remove delay, was carried downwards within the Supply Departments. The general administrative arrangements were basically the same as in peace-time and all proposals for expenditure had to be submitted to the appropriate Finance Division. But it became customary from the summer of 1940 onwards for Production and Finance Branches to consult together from a very early stage in the preparation of any project, and the delays which used to occur while Finance Branches examined a comprehensive scheme



which had been newly submitted to them were thereby removed. In some cases this close relationship was reflected in the formal administrative pattern; in the Ministry of Supply, for example, Finance Branches were associated with particular spheres of production. A similar closer integration of finance with other aspects of the work was also achieved in the trading services. At the beginning of the war a Raw Materials Finance Branch was created in the Ministry of Supply, but early in 1942 it was found more effective to post its officers to the Commodity Branches of the Raw Materials Department. This arrangement continued throughout the rest of the war. Changes of this kind did not necessarily involve any weakening of financial control, but they did imply that Finance had been brought into more nearly equal partnership with Production, instead of remaining a superior and final arbiter, with power to grant or to withhold. They were supplemented by increased delegations of financial authority within the departments. Within the Ministry of Aircraft Production, for example, the highest authority with power to give financial approval to schemes was the Air Supply Board (the body which had originally been called the Air Council Committee on Supply), but minor schemes were sanctioned within the Capital Finance Division and reported in monthly lists to the Air Supply Board. For the first two years of the war the maximum amount within which the heads of Finance Branches might authorise schemes was £20,000, but in October 1941 this limit was raised to £50,000 for cases in which the officer concerned was satisfied that prior reference to the Air Supply Board would cause delay in commencing the project. In February 1942 the procedure was modified slightly, so that while schemes of between £20,000 and £50,000 continued to be sanctioned within Finance Branches, they were reported in detail to the Air Supply Board for covering approval as soon as departmental authority had been given, i.e., before the usual monthly list was sent in. In this Ministry the powers of financial agreement given to various grades of finance officer in respect of expenditure on schemes already approved were also greatly extended, viz. up to £10,000 by a higher clerical officer, up to £50,000 by a staff officer, up to £250,000 by a principal, and over £250,000 by an assistant secretary.

By measures such as these, delays were removed, yet financial control, though made rather less detailed, was not abolished. Its effectiveness was potentially, however, somewhat weakened by the arrangements for payment to firms for work done for Government Departments. It was an important rule that no firm must incur commitments on behalf of a Government Department without that department's prior sanction. This was not an innovation, but a permanent provision which, however, had been explicitly reaffirmed

as a result of infringements before the outbreak of war. Early in 1939, for example, when the T.I.S.C. gave approval for the Admiralty to repay additional expenditure incurred by one of its contractors on an extension scheme for gun mountings, it suggested that in future no further claims for reimbursement would be met if the prior approval of the department had not been obtained. The multiplication of contracts during the war made it more difficult to ensure that this condition was in all cases fulfilled, but the great majority of firms fully and correctly observed the obligation. The insistent need to maintain output, however, weakened the position of the departments in dealing with the very small minority which disregarded the instruction. When any case was brought to light there was usually little that a department could do except point out the position to the firm and order it not to offend again. It might refuse to reimburse small items, but could not carry this to the point of causing such a loss as would injure the firm's capacity to produce the maximum output. Such cases, however, were so few that they did not present a serious problem.

Firms which were managing factories as agents for the Government had to be allowed a certain limited discretion in making commitments. As the managing director of one such firm pointed out to the Ministry of Aircraft Production, the Government had to choose between the sacrifice of speed to control and vice versa.

A more serious weakening of the position of Government Departments *vis-à-vis* contractors came from the methods by which claims for expenditure on work already approved were met, though the weakening proved to be more potential than actual. In the summer of 1940 war production had an urgency never known before, and, in order to ensure that contractors were not held up for lack of working capital, all the Supply Departments arranged to speed up progress payments.<sup>1</sup> This was achieved by reducing the checking of claims to the minimum, which simply meant deciding that the claims were not, *prima facie*, completely unreasonable. At the same time detailed examination of the costs of contractors and agency factories was substantially reduced in some departments. It was recognised that this relaxation of control threatened to remove the financial incentive to avoid extravagance and waste, and that it ought therefore to be regarded as a temporary measure. It was pointed out in the Ministry of Aircraft Production that, though in many cases subsequent investigation might ultimately be considered to serve no useful purpose, there should be no public indication of this, as the fact that a future investigation might take place would be the only remaining deterrent from inefficiency and waste. This was a useful possibility to have in

---

<sup>1</sup> This topic is further considered on pp. 186-188.

the background, but at this period financial control at this level depended very much on the willing co-operation of agent and contracting firms, since there was neither time nor staff to spare for the supervision of detailed expenditure on small items. The situation was, in fact, that, although they had been informed that an order had been placed with a particular contractor, Accounts Branches had for the time being virtually no knowledge whether the bills they were paying were reasonably related to the work done. The weakness of the position was occasionally exploited, but on the whole the necessary co-operation was given in full measure. When, in the later years of the war, it was possible to revert to a fuller examination of costs and of claims for payment, no serious damage was found to have been done by the interim relaxation.

The foregoing account shows that while the administrative arrangements for financial control were formally preserved there was brought into them a flexibility and a discretionary element which would never have been contemplated in peace-time. Such modifications could not have been effected without a great reduction in the extent of parliamentary control over expenditure. The essential alteration was made at the very beginning of the war when the Government decided that the Defence and Supply Departments and all special war services should be financed out of a Vote of Credit. This decision was based to a large extent on security grounds, but it was also needed in order to permit flexibility in war expenditure. It meant that detailed Estimates did not have to be prepared in advance and approved by the House of Commons.<sup>1</sup> Instead the Treasury was able to make issues from the vote of credit as required. Thus the available money could be switched from one department to another and from one scheme to another without constitutional or administrative difficulty. This was essential in order to meet the requirements of rapid changes in technique and in the course of the war. If Parliament had not relinquished its *ex ante* control over expenditure in this way the whole machinery of war administration would have been fatally clogged.

Parliamentary control as a whole was not abandoned since, although departments were freed from the necessity of announcing a programme in advance and sticking to it, every item of expenditure had to be capable of justification retrospectively. The details were not published in the usual form until after the end of hostilities, but they were available to the Public Accounts Committee. This body pursued its inquiries just as in peace-time and had a real, if remote, effect on departmental financial policy. Its extreme sensitivity to possible cases of high rates of profit was particularly influential. The

---

<sup>1</sup> The Admiralty continued to present detailed estimates to the Treasury for scrutiny and approval, though they did not have to be put before the House of Commons.

House of Commons also attempted to provide some counterpoise to the loss of its control over the Estimates by appointing in each session a Select Committee to 'examine the current expenditure defrayed out of moneys provided by Parliament for the Defence Services, for Civil Defence, and for other Services directly connected with the war, and to report what, if any, economies consistent with the execution of the policy decided by the Government may be effected therein'. The Select Committee on National Expenditure was, however, an instrument less of control than of influence. Unfortunately, the scope of its inquiries made great demands on already overworked departments and occasionally led to friction, which may have reduced its influence. It interpreted its powers so widely as to lead to a general protest to the War Cabinet in 1943 by the departments affected and a subsequent agreement that its inquiries should in future be pursued with more restraint and consideration. What the Select Committee was able to achieve was to keep Parliament and the public informed of the general lines on which administration was being conducted. It also made many criticisms in detail to which departments had to supply answers, but it did not fundamentally affect the structure of financial control. The flexibility permitted by the Vote of Credit was not altered by this changed form of parliamentary inquiry.

An examination of the war-time arrangements for financial control, while revealing relaxations at every stage from Parliament downwards, nevertheless shows, as has already been remarked, that the chain was formally intact. When attention is also directed to the grounds on which financial approval was given, it appears that the fundamental nature of control had itself changed. Not only was financial control reduced, but it was to some extent replaced by other more direct controls over the allocation of resources. Although authority to proceed with any project was still given in the form of approval of the necessary expenditure, that approval was useless unless the necessary labour, materials, and factory space could be made available. Thus, although controlling decisions in the execution of policy were still given a financial form, the financial approval was to some extent governed by decisions outside the scope of financial authority. The direct controls over resources were developed empirically as a result of critical shortages in particular fields, e.g. foreign exchange, machine tools, manpower, and certain raw materials.

One of these, the allocation of foreign exchange, must be briefly discussed here as it was a specialised financial control. Even before the war the expenditure of foreign exchange for purposes of war production was being carefully scrutinised and during the war it was an increasingly acute problem. An Exchange Requirements Committee

with a Treasury chairman was set up at the beginning of the war and all proposals for expenditure in foreign currency had to be submitted for its approval. Where any project involving purchases in foreign currency was placed before the T.I.S.C., the authorisation of the scheme by the latter was invariably made contingent on the E.R.C. agreeing to the release of the necessary foreign currency. As a matter of convenience such projects were often considered at joint meetings of the T.I.S.C. and the E.R.C., which could easily be arranged as there was considerable overlapping in the membership of the two committees. This arrangement, which originally was quite informal, was adopted as the regular procedure from February 1944 onwards. This was a sign of the increasing attention which the Treasury was giving to the foreign exchange position. In 1944 and 1945 Treasury representatives repeatedly urged on the Supply Departments the growing difficulties caused by a shortage of foreign currency, difficulties which by then had spread to parts of the sterling area, and they tried to adjust purchasing programmes so as to cause the least possible injury to the balance of trade. This was not so much a new policy as a change of emphasis within an existing one. Throughout the war the Treasury had given priority to the purchase of machine tools and equipment for immediately productive schemes and readily released foreign currency for that purpose. The closer attention of the E.R.C. and the efforts of the Treasury to economise in the use of exchange reserves had always been directed mainly to the large import programmes of food and raw materials.

In the case of productive schemes the controls which supplemented, and in part replaced, the traditional financial control were almost entirely concerned with resources directly used in production. All departments recognised that they must try to achieve a wise and effective expenditure of resources. At a lower level this was achieved mainly by calling financial officers into consultation at an early stage in the development of plans for production. There was one exceptional instance: from August 1940, when the Aluminium Control was brought into the Ministry of Aircraft Production, responsibility for both production and finance was concentrated in the same branch. This remained the case until June 1941. Even at a very high level much of the co-operation between finance and production officers was achieved informally rather than through administrative machinery designed for the purpose. The organisational changes which were made were *ad hoc* expedients and not systematic attempts to adapt the machinery of government to new needs. Significant of the change of emphasis was the creation of the Ministry of Production which, through its control over the allocation of materials and productive capacity, was able to take over some of the work of co-ordinating the activities of various departments, which hitherto had been the task

of the Treasury through the medium of financial control. The division of function between the Treasury and the Ministry of Production was never clearly defined and it was always possible that one might make an important decision without considering the requirements of the other. For instance, in November 1943 the Minister of Production announced an increase in the allotment of paper for periodicals and books without having consulted the Treasury, which, however, while taking note of the fact, made no difficulty about subsequently approving the programme of pulp purchases on which the announcement was based. In spite of the lack of demarcation the two departments were able to work without mutual friction.

In the last three years of the war the system of financial control changed much more in fact than in appearance. The Treasury was still responsible for central control over the expenditure of the other departments and its authority was still expressed in financial terms, but that authority was in several ways more restricted than formerly. In the first place, the Treasury was sometimes only concurring in decisions of other authorities, which were not primarily made on financial grounds. In the second place, in order to ensure that its approvals would lead to effective action, it had to ascertain in advance that complementary decisions to provide the necessary resources would be made by some or all of the Ministry of Labour and National Service, the Ministry of Production, and the Machine Tool Department of the Ministry of Supply. Even in one purely financial matter, the prescription of a general price policy for basic materials, responsibility rested less with the Treasury than with the Lord President's Committee, strongly influenced by the advice of the Economic Section of the Cabinet Office. Treasury control and financial control both still existed, but they no longer coincided completely, nor did either possess the same supremacy as in peacetime.

The Treasury recognised the limitations of its position both in these respects and in its relations with the Supply Departments. At the end of hostilities in Europe these departments joined in a discussion on the subject of Treasury control over their expenditure and the Treasury readily admitted that its direct control had to a great extent lapsed and that, as far as expenditure directly devoted to the Far Eastern War was concerned, there was little scope for its reintroduction. This question of the limitation of Treasury control over Supply expenditure was one which troubled the Select Committee on National Expenditure in the middle of the war. The Committee reported that the influence of the Treasury was exerted first by requiring departments to obtain sanction for any large or exceptional items of expenditure, and secondly by co-ordination of contract policy, but that its functions did not extend to the exercise of any

real measure of supra-departmental control.<sup>1</sup> On the other hand, it pointed out that the Treasury was responsible for the provision and allocation of the nation's financial resources and that it was necessary not merely to see that expenditure was confined to authorised items justified by actual costs, but also to ensure that the methods of controlling expenditure were so devised and utilised as fully to encourage enterprise and efficiency.<sup>2</sup> The Committee implied that Treasury control ought to be more closely enforced, in order to secure greater uniformity of practice among different departments and to ensure that methods which one department found favourable to enterprise and efficiency should be used in others. The Treasury replied that it was not practicable to exercise day-to-day control over the activities of the departments if points of detail were to be settled quickly, which was essential to real economy. Consequently, once general principles had been established, the responsibility for directing the execution of the work should rest with the department concerned and that responsibility was bound to be impaired if the Treasury were to attempt to interfere by direction in any particular case.<sup>3</sup>

The position reached during the war was that the volume of work and the urgency of decision were such that any form of central control could be exercised only in the most general way. Nor could the control which was still retained continue to be entirely financial in form. What had happened was that the margin of unemployed resources had disappeared and it was therefore less possible to regulate the volume and distribution of production by offering the payment necessary to call out something from this reserve. This did not mean that financial control was forced to disappear entirely. There still remained the important financial problems of fixing the level of remuneration for work done and for the use of resources, without the guidance of a free market. As the Treasury pointed out,<sup>4</sup> it had become the vital interest of Production Branches to secure efficiency as well as quantity of output, while on the other hand it was contract policy to interpret price as much as possible in terms of expenditure on labour and materials, so that there was an interaction of interest between the two branches. In these circumstances a measure of financial control persisted as one form of control among several.

#### (b) THE CO-ORDINATION OF CONTRACT POLICY

The co-ordination of contract policy necessarily extended to other aspects besides the financial, and consequently required other machinery. Within each department the Director of Contracts was

<sup>1</sup> S.C.N.E., 1942-43, 14th Report (75th Report of the series), para. 19.

<sup>2</sup> *Ibid.*, para. 66.

<sup>3</sup> S.C.N.E., 1943-44, 12th Report (91st Report of the series), Appendix 2.

<sup>4</sup> *Ibid.*, *loc. cit.*

responsible for maintaining consistent methods and each Contracts Directorate developed its own system of central records, its standard conditions and instructions which were circulated to and put into practice by all its branches. But in order to promote efficient administration and to preserve harmonious relations with the public, it was also desirable that there should be a framework of broad general principles, applicable to Government contract policy as a whole and embodied in the working of every department. The formulation of such principles and the exchange of information necessary to put them into practice were achieved by inter-departmental committees and the preparation of regular returns circulated among all the departments concerned.

The most important of the committees was the Contracts Co-ordinating Committee which was set up in December 1920, as a result of a Cabinet decision which stated that the object was 'to secure economy and eliminate the forcing up of prices by competition' among the three Service Departments. Membership was originally limited to the Directors of Contracts of the Service Departments,<sup>1</sup> who took the chair in rotation, but in 1927, at the suggestion of the Estimates Committee of the previous year, it was extended to representatives of the Treasury, the Post Office, and the Office of Works. Matters affecting only the Service Departments were remitted to a panel composed of the representatives of those departments. The Committee, which met about five times a year and prepared an annual report of its proceedings, defined its functions in detail as

- (1) to obviate undue departmental competition and overlapping and to secure economy by co-ordination of purchase;
- (2) to co-ordinate contract policy and procedure, i.e. consideration of such questions as standard conditions of contract, black-listing of unsatisfactory firms, technical costs investigation, etc.;
- (3) to take a comprehensive view of all available markets and sources of supply;
- (4) to initiate suggestions for modifying service patterns in order to secure the utmost possible standardisation of articles in common use.

A special part of its work was delegated to an Accountants' Sub-Committee which was created at the end of 1921 to ensure in respect of accounting investigations,

- (1) a minimum of inconvenience to contractors from overlapping of inquiries;

---

<sup>1</sup> Representatives of the demanding and technical branches of the three Service Departments attended when the nature of the questions under discussion made their presence desirable.



- (2) that full advantage might be taken of the experience of each department in its dealings with any particular firm.

The Committee and its Sub-Committee were, however, only advisory bodies and, although they helped to eliminate a considerable amount of competition between departments and to secure much greater co-ordination of policy and practice, this work was by no means complete before the war. The Estimates Committee of 1938 discovered wide divergences of contract policy among departments<sup>1</sup> and, as a result, the Contracts Co-ordinating Committee circulated to all purchasing departments a list of its decisions on matters of principle and the Treasury instructed departments to consult the Committee whenever they wanted advice on principle or procedure.

By this time the T.I.S.C. was regularly considering the financial aspects of contracts. Because it dealt with individual proposals for expenditure from all the Service Departments, it was in a position to eliminate competition between them much more thoroughly than had been possible before. Moreover, departments had to submit all abnormal contracts to it individually, except that, where they were of a type which the Committee had approved in earlier cases and the amount involved was small, the contracts might be concluded and reported *ex post facto*. The Committee could thus ensure that the forms of contract and special clauses which were adopted were not of a type likely to involve wasteful expenditure and could recommend for general use innovations promoted by particular departments. In this way it could develop empirically a body of contractual principle which, while of a very general nature, was specifically intended to aid a wise outlay of resources and which was therefore a valuable supplement to detailed financial control.

The T.I.S.C., however, was not mainly concerned with general contractual principles except as they were reflected in particular schemes submitted to it. Early in the war, the S.C.N.E., which made several inquiries into contract policy, felt that something more was required and in 1941 recommended that an officer of high standing and experience should be appointed to consider the principles and practice of contract procedure in war-time and that he should be permanent chairman of the Contracts Co-ordinating Committee.<sup>2</sup> The Treasury rejected this suggestion on the ground that responsibility for bringing forward problems needing co-ordinated action rested with individual Directors of Contracts, but in order to strengthen the C.C.C. it agreed that the chairman of the T.I.S.C. should also become permanent chairman of the former Committee.<sup>3</sup>

In fact, the co-ordination of contract policy did not present great

<sup>1</sup> S.C. on Estimates, 1938, Q. 341 *et seq.*, and Report, paras. 11-15.

<sup>2</sup> S.C.N.E., 1940-41, 2nd Report (16th Report of series), para. 21.

<sup>3</sup> *Ibid.*, 1940-41, 11th Report (25th Report of series), Appendix 2.

new problems during the war. The problems were much the same as before; they were merely repeated more frequently and on a larger scale. Consequently they could be dealt with by similar means. The C.C.C. continued to be the main instrument of co-ordination, but dealt with the increased amount of work by forming more sub-committees. On 5th April 1940 a General Purposes Sub-Committee was set up to deal with matters of detail which had previously occupied the main Committee, and at the same time a Works Sub-Committee was created to consider questions affecting building contracts. These sub-committees met more frequently than had been possible for the main body and removed much of the burden from the Directors of Contracts. The Accountants' Sub-Committee continued to function and, among other contributions, devised an important scheme which provided that all cost investigations of Government contracts held by any one contractor should be carried out by the department that had placed most contracts with him. It also improved co-ordination by agreeing on a standard code of instructions to cost accountants. The main Committee tried to consider afresh how it could best improve itself and in 1941 redefined its functions thus:

To secure economy in purchases and in particular to consider and make recommendations to Government purchasing departments:—

- (a) To promote uniformity between such departments on the principles of contracting, including forms of contract and the determination of price.
- (b) To eliminate overlapping and competition between such departments in the purchasing of supplies and the administration of contracts.
- (c) To review from time to time the action taken on the Committee's recommendations.

(N.B.—During the war the Committee's functions on (b) will be exercised only so far as they do not encroach on the functions of Production Departments and the priority machinery.)

The result of these modifications was that further progress towards uniformity was achieved, although it was a gradual process; a common form of stores contract, for instance, was under discussion for three years before it was adopted in its entirety in April 1944, but much of the co-ordinated practice involved was put into operation long before that date. In general, there was a considerable degree of co-ordination of contractual policy which was very helpful to the relations between industry and the Supply Departments. If the S.C.N.E. remained dissatisfied it was because, in its own words, 'mere co-ordination, as hitherto interpreted, is not enough'.<sup>1</sup> It regarded the co-ordination of contract policy as being ideally a positive

<sup>1</sup> *Ibid.*, 1942-43, 14th Report, para. 65.

measure directed, just as was financial control, to securing that expenditure was so disposed as to secure the most valuable return. The Treasury reply on the impracticability of central supervision going beyond the prescription of broad principles and entering into departmental detail applied to both aspects and perhaps more to co-ordination of contract policy than to financial control, because the former, in its financial aspects, was in its nature always something applicable to general classes rather than individual cases.

(c) PERMANENT OBJECTS AND CHANGING METHODS

The foregoing account inevitably raises questions about the principles which were followed in applying this system of co-ordination and control, and the significance to be attached to war-time changes in its form.

The ultimate object of the system was the promotion and maintenance of efficient and economical administration, treating as equitably as possible all whom it affected. More immediately, it sought to apply certain principles conducive to that end. The clearest of these was probably the insistence on strict departmental accountability for the amount and manner of expenditure. This had been maintained for many years under the provisions of the Exchequer and Audit Departments Acts 1866 and 1921<sup>1</sup> and was in no way changed during the war. Its persistence was implicit in the maintenance of the normal activity of the Public Accounts Committee, and it was explicitly reiterated more than once by the Treasury.<sup>2</sup>

Another fundamental principle which the Treasury laid down as a guide to all departments in their financial and contractual work, both in peace and war, calls for rather fuller discussion. This was that the terms arranged for the supply of stores to and the performance of services for the State should be fair and reasonable. In this respect the Treasury suggested that the State was acting as any other prudent purchaser would do.<sup>3</sup> Whether this was so or not depends on what is a prudent purchaser. The maintenance of the principle involved three considerations. In the first place, the Treasury was in the position of a trustee with a duty to ensure that the public's money was spent productively and not squandered. Secondly, both management and labour must be offered remuneration sufficient to ensure that they would try to produce as much as possible of what was required. In addition, the State was expected to provide a good example of business morality, restraint and absence of undue pressure in its activities as employer or customer. It was this last consideration which somewhat distinguished its position from that of a prudent

<sup>1</sup> 29 & 30 Vict. c.39 and 11 & 12 Geo. 5 c.52.

<sup>2</sup> e.g., S.C.N.E., 1942-43, 16th Report (77th Report of series), Appendix.

<sup>3</sup> P.A.C., 1942, 1st Report, Appendix, para. 4.

private purchaser. It meant that Government Departments, while refraining from meeting extortionate demands from contractors, were not entirely free to take advantage of favourable legal or market circumstances. This point was important when requests were made for *ex gratia* payments. These could never be automatically refused out of hand, but had always to be considered in the light of all the relevant circumstances.<sup>1</sup> During the war the same consideration also particularly affected the extent to which departments used the very wide compulsory powers which they received. The Treasury's view of the exercise of powers of compulsion was made clear in June 1940, at the end of protracted negotiations by the Office of Works about the price and profit margins to be allowed to suppliers of canvas fire hose. The chairman of the T.I.S.C. then said,

It appears that the terms now prepared are reasonable, even if they are not so favourable to the Exchequer as they might be if compulsory powers were used; . . . it will be agreed that compulsory powers should not be used when the differences between the Government and contractors are as small as in this case, but reserved for cases of major differences.

This attitude remained unchanged throughout the war. Departments were always very reluctant to invoke their compulsory powers and even ran the risk of arousing strong criticism by the extent of their delay in applying them.<sup>2</sup>

Fair and reasonable payment was not something which could be accurately defined. Where no competitive prices existed as a guide, it had inevitably to be framed with respect to some of the same fundamental features of human nature as had governed the medieval idea of the just price. The Treasury doctrine arose from its obligation to be able to account to Parliament for the details of all transactions. It had to be able to demonstrate that the public money was not being used to swell the profits of greedy monopolists in return for inadequate services, and equally that the power of the State was not being used to injure the interests of those who were honestly serving it. This could be done only by reference to a vague and undefined standard of fair dealing in matters of payment, which, despite the vagueness, is widely accepted as existing.

These first two principles were of long standing and were unaltered by the war. During the war, two other important principles were developed. The first of these was a steadfast refusal by the Government to accept liability for compensation in cases where the needs of

---

<sup>1</sup> *Ibid.*, 1944, Q. 4252.

<sup>2</sup> See e.g. *ibid.*, 1945-46, 2nd Report, *passim*, which deals with the relations between M.A.P. and Simmonds Aerocessories Ltd. and the delay in using compulsory price determination for certain products of this firm.

war closed a particular type of employment or source of income. This is quite a distinct case from that in which a person or institution continuing in some pursuit that was not redundant received war damage to his possessions; to meet the latter case a system of compensation was gradually developed. But the Government expected everyone to adapt himself to the existence of the war and insisted that payment for services rendered to the State must relate to the value of the service and not to the amount which the person or organisation responsible might have been earning if there had been no war. This was a more drastic attitude than had previously prevailed. An example from February 1939 shows the change that had occurred. At that time the Air Ministry wished to acquire the premises of a firm in order to extend the works of one of its contractors. Instead of paying only the value of the premises which it bought, the Air Ministry, with Treasury approval, paid the full cost of a newer and considerably more expensive factory to which the firm in question moved. The clearest statement of the new war-time principle came at the end of 1941. At that time the Ministry of Supply decided to turn the whole resources of three large automobile concerns to the production of Liberty engines for tanks and the firms asked for an additional order of at least 3,000 engines, in consideration of the disturbance and cancellation of orders which the decision involved. The Treasury pointed out to the T.I.S.C., when this question came up,

It has been stated quite clearly that the Treasury cannot accept the argument that the additional order should be placed in order to compensate the contractors for the disturbance of their normal production and the cancellation of previous orders. The diversion of industry from its peace-time activities, or from production akin to its peace-time activities, has taken place over a wide field without any question of compensation arising.

As the war progressed, further reorganisation of industry was less needed and questions of this kind became infrequent. So far as it was required, however, this principle was maintained throughout, though it was not often explicitly stated, but was revealed rather in what was not done. It was ignored only when strong and quite distinct circumstances made this expedient. For instance, the Government continued to insure raw materials and foodstuffs against marine risks and fire although deriving no direct advantage from doing so; the object was to preserve the insurance market, not as a special favour to one interest, but because it was an important means of earning foreign exchange.<sup>1</sup>

The remaining principle was that production of supplies must not

---

<sup>1</sup> *Ibid.*, 1941, Q. 3181

be hindered by failure to make available the necessary finance. To some extent this contrasted with pre-war practice when the plea that a project could not be afforded on financial grounds was regarded as both normal and legitimate. Finance came during the war to be considered no longer as an independent power but as a convenient expression of the value of productive resources. If these were available, then it was admitted that it was not impossible to obtain or create the corresponding finance, and since this was not impossible it had to be done. Although finance remained nominally the controlling element in administration there is no case on record during the war in which a project which was approved as being of value to the war effort, and for which the necessary productive resources could be released, was vetoed or reduced on the ground that it was impossible or inexpedient to finance it.

During the war, nothing of principle was abandoned, though additions were introduced. But the account of the operation of financial control showed that the detailed methods of applying it changed very considerably, though the co-ordination of contract policy, being concerned on its financial side only with the more general aspects of the same issues, was less affected. The changes which took place in methods were not due to changes of aim or principle, but they can be to some extent related to the introduction of additional principles, since these in part arose from the same external circumstances as made necessary the changes in method. Financial control had to adapt itself to circumstances and was most strongly conditioned by two developments which were themselves connected. There was the transition from the position where the State treated itself as something supplementary to and, in many directions, clearly marked off from the rest of the national economy to one where, at least for the time being, it was the centre and controller of the entire national economy. It was only because the needs and powers of the State had become of overriding importance that the new principle of compensation was both generally acceptable and easily enforceable. Secondly, there was the disappearance of the pre-war reserve of unemployed resources and the development of a situation in which, irrespective of price, the demand for all important factors of production exceeded the supply. This inevitably diverted attention from finance, the common denominator, to the physical resources themselves and led naturally to the view that a productive scheme must not be vetoed on financial grounds alone.

The way in which these changing circumstances brought about changes in methods of control can readily be traced. When in war-time the demand for innumerable products outran the immediate possibilities of supply, prices, if left to the action of a free market, would have ceased to be an accurate guide to the relative priority of

requirements, and the distribution of factors of production would have been unlikely to conform to the needs of the war effort. In these circumstances the traditional mechanism was altered in two ways: the Government took powers to allocate productive resources directly in accordance with approved priorities, and then negotiated prices which offered the owners of those resources some inducement to keep them employed at full capacity in conformity with the pre-determined economic pattern. And all this was possible only because the State had become the overwhelming influence on all economic activity, whether as customer or financier. It was this situation and not any preconceived policy which led to the decline of the influence of finance.

Not that this influence disappeared. Since money remained the universal means of payment, finance continued to exert a strong influence, and throughout the war, though its potency was diminished, it was too great to be ignored. Contract policy, in fact, continued just as in peace-time to be concerned mainly with the important financial function of arranging terms of payment. Hence it showed much less change than appeared in the general system of financial control within which it was partially included. In the main, however, the story of financial influence during the war is one of descent from pre-eminence to participation among equals, an unavoidable decline but not a collapse.

The fact that there was this decline, that the nature of control changed while the traditional chain of authority headed by the Treasury was formally preserved, poses the question whether the arrangements in operation conformed to the realities of the situation. Treasury control arose out of the fact that the Treasury was the central financial department and that administration could most conveniently and effectively be controlled by financial decisions. But, during the war, administration was guided not by finance alone but by economic controls of all kinds, for most of which the Treasury was not directly responsible. The Treasury was in an intermediate position in which, though it still exercised a very general supervision over the activities of Supply Departments, it was often not prescribing policy but translating into financial terms decisions reached elsewhere and on other grounds. The S.C.N.E. in 1943 described the position in these terms:

Economic policy is in fact indivisible. The existing instruments of Government have not been designed to take account of this condition and seem to be proving inadequate. The conclusion, for example, to which your Committee's investigation points appears to be that the instrument of financial control hitherto provided by the functions of the Treasury does not meet the need for watching all the reactions of the methods employed for controlling expenditure or for seeing that

the activities of each department fit in with each other as well as with the total economic effort.<sup>1</sup>

Nevertheless an attempt was made to make the most effective use of the existing system. Responsibility for the various economic influences which determined the execution of policy in the Supply Departments was divided among numerous authorities, but the Treasury tried to keep in touch with all of them and in the light of the information so obtained to offer to the Supply Departments not rigid directions but useful guidance. The system was not fully adapted to the changed circumstances which developed during the war, but it continued to function fairly effectively because of the informal efforts of the officers conducting it.

---

<sup>1</sup> S.C.N.E., 1942-43, 14th Report, para. 71.



## CHAPTER III

# CONTRACTUAL PROCEDURE IN ITS ECONOMIC SETTING

**A**CTION to purchase stores normally began with the dispatch of a requisition to a Contracts Branch by a Provisioning Branch, which was also responsible for obtaining approval of the proposed expenditure from the Finance Division. The Contracts Branch then arranged for the purchase.

The method of purchase preferred whenever possible was open competition, which was secured by inviting tenders from firms on the department's trades list for the particular supply. The possibility of using this method depended on the adequacy of available productive capacity and on the structure of industry, but both Parliament and Government Departments attached great importance to it. This was chiefly because it enabled keen, fixed prices to be settled before work began. It also had the advantages that it prevented Government servants being exposed to any allegations of corrupt patronage and that it reduced interference with civil trade to a minimum, as it gave no priority or undue advantage to Government orders. Some idea of the emphasis placed upon competition is given by the meagreness of the powers delegated by the Treasury to departments to dispense with it where it was practicable. These powers varied between different departments. In the Air Ministry in the immediate pre-war period, if such a decision concerned a contract of more than £500 in value, it had to have the approval of the Secretary of State or the Under-Secretary of State. Contracts placed as a result of competitive tender were usually awarded to the lowest satisfactory tenderer, unless there was considerable doubt about his ability to fulfil his undertakings. Where, however, it was necessary to widen the field of supply, trial orders for part of the requirements were sometimes placed with untried firms, even though their price was above that of the lowest tenderer. During the rearmament period, preference was given, other things being equal, to firms whose works were in distressed areas.

Competition was never available for every type of store which the Supply Departments needed. In particular, the field of purchase for highly specialised munitions, such as aircraft, aero-engines and heavy guns, was very limited. Proprietary articles and experimental work could also be ordered from only one source. In such cases the usual peace-time procedure was either to invite a tender from the sole firm

known to be able to supply the stores or to negotiate directly with the firm without the formality of tendering.

In peace-time, competition existed for most of the supplies which were needed. In the financial year 1934-35, for instance, only 6·7 per cent. (by number) of the War Office's contracts were placed by single tender, while the Air Ministry placed sixty per cent. of its contracts by competition. It was for the more specialised and expensive stores, however, that sources of supply were most restricted, and if the Air Ministry contracts are considered by value instead of by number, only thirty-five per cent. were placed by competition.<sup>1</sup> The same state of affairs continued during the rearmament period, when competitive tender remained the general rule, but an increasing proportion of total expenditure was devoted to complicated munitions which could not be obtained by competition. In the last full year of peace, 1938-39, sixty-three per cent. of Air Ministry contracts were still placed by competitive tender, but they represented only twenty-six per cent. of the total value.<sup>2</sup> In the sphere of munitions, even where limited competition had formerly existed, it was being eliminated, largely because the demand was outstripping the existing capacity. Another factor working in the same direction was the increase of industrial combination and the formation of price-fixing associations. A very notable example was the shipbuilding industry, where competition had been extremely keen, but ceased to be effective during the rearmament period, apparently as a result of the formation of the Shipbuilding Conference about 1935.<sup>3</sup>

Increased volume was not the only new feature of Government demand which affected contractual procedure during the expansion period. In order that rearmament should be as effective as possible, the delivery of many stores was required more quickly than before. To obtain and consider competitive tenders sometimes took up time which could be ill afforded, and in such cases departments frequently sought to dispense with this procedure, although it was still possible to use it. The Admiralty, in particular, dispensed with competition in this way. In June 1936 it sought permission from the Treasury to order the *King George V* and *Prince of Wales* before receiving tenders, in order that these ships might be ready for delivery in July 1940 instead of January 1941. After the question had been submitted to the Chancellor of the Exchequer the permission was granted, on

---

<sup>1</sup> 5,327 contracts worth £10,643,096 were placed. Competition was obtained in respect of 3,207 contracts worth £3,780,152.

<sup>2</sup> The figures were—total: 12,442 contracts, value £152,910,954; competitive: 7,816 contracts, value £40,202,801.

<sup>3</sup> The actual date is unknown. Suggestions for such an organisation appeared in the trade journal *Fairplay* in January 1935. The issue of 14th January 1937 reported that in 1936 much headway had been made in the internal organisation of the industry to eliminate uneconomical price-cutting.

condition that the firms concerned should give the Admiralty access to all the information needed for checking costs.<sup>1</sup> In November 1936 the Admiralty sought to order a number of destroyers by the same method and for the same reason. The desire to do so was also encouraged by the fact that the Admiralty already believed that the apparent competition available was a façade rather than a reality.

Even where competitive tender was not used, price negotiations with a supplier were sometimes protracted and thus tended to delay delivery. In order to meet this difficulty during the expansion period, departments made increasing use of the practice of issuing an 'instruction to proceed' (I.T.P.) in cases where a price could not immediately be negotiated. This authorised the supplier to proceed with the work required, on the understanding that a fair and reasonable price, not exceeding his quotation, would subsequently be negotiated. If the supplier accepted the I.T.P. it had the same binding force as an ordinary contract. Towards the end of the expansion period, in order to reduce delays still further, the stage of calling for a single tender where competition was not available was frequently omitted and as soon as a Contracts Branch received a requisition it issued an I.T.P. to a selected supplier.

During the war the economic situation which had affected a small but increasing part of the field of purchases of the Supply Departments became general. Delivery of most types of store was a matter of urgency; in many more cases than before, existing capacity was insufficient to meet demands and competitive supply was therefore impossible; even where competition would still have remained, it was sometimes reduced by a deliberate Government policy of industrial concentration and transfer of spare capacity to more urgently needed uses. Contractual procedure had to be adapted to prevailing conditions, and consequently the methods which had applied to a limited field during the rearmament period became usual throughout the war. The majority of stores were ordered without competition or tendering, by placing I.T.P. Some idea of the sheer bulk of the work is given by the number of contracts placed. From 1st April 1939 to 31st March 1945 the Ministry of Supply placed 463,337, the annual figure rising from 39,000 in 1939-40 to a peak of 99,437 in 1943-44; the Ministry of Aircraft Production, which reached a maximum of 61,493 in 1942-43, altogether placed 234,645.<sup>2</sup> The comparable figure for the Admiralty is not known, but the amount of its payments to contractors from the outbreak of war to 31st March 1945 was £1,707 million, which may be compared with £5,110 million by the Ministry of Supply and £3,890,500,000 by the Ministry of Aircraft Production (both from 1st April 1939).

<sup>1</sup> P.A.C., 1943, Q. 3991.

<sup>2</sup> This figure includes 19,082 contracts placed in 1939-40 by the Air Ministry.

Competition was still available for a small number of relatively cheap items, such as some textile stores,<sup>1</sup> and it was used where possible, except when the need to train more firms, so as to have further capacity ready for future needs, made this inadvisable. It was, however, comparatively unimportant. Only for the Ministry of Aircraft Production have complete figures been compiled of the numbers and value of war-time contracts placed by competition, but their trend is significant, especially when they are compared with the pre-war figures for the Air Ministry, already mentioned. They are shown in Table 1.

*Number and value of contracts placed by Ministry of Aircraft Production<sup>1</sup>*

TABLE 1

Financial year	Total contracts		Competitive contracts			
	No.	Value (£ million)	No.	Percentage of total number	Value (£ million)	Percentage of total value
1939-40 <sup>2</sup>	19,082	398.6	10,308	54.0	58.6	14.7
1940-41	16,623	514.5	4,080	24.5	24.1	4.7
1941-42	49,366	657.1	3,284	6.7	9.6	1.5
1942-43	61,493	1,109.7	3,421	5.7	14.2	1.3
1943-44	47,726	745.0	1,446	3.0	7.7	1.0
1944-45	40,355	465.6	1,145	2.8	5.6	1.2

Source: Ministry of Aircraft Production

<sup>1</sup> These figures do not include orders placed on agency factories which from 1st April 1939 to 31st March 1945 totalled 2,581 to the value of £557 million and which, if included, would further reduce the proportion of competitive contracts.

<sup>2</sup> Figures for 1939-40 refer to contracts placed by the Air Ministry.

The changed situation which is obvious from such figures made it necessary to delegate much greater powers to dispense with competitive tendering. In the Ministry of Aircraft Production the following limits of authority for this purpose were laid down in April 1942, and remained unchanged for the rest of the war:

- Contracts over £500,000                      Second Secretary or Deputy Secretary
- Contracts £100,000 to £500,000      Director of Contracts
- Contracts £50,000 to £100,000        Principal Deputy Director of Contracts
- Contracts £10,000 to £50,000         Deputy Directors of Contracts
- Contracts under £10,000                 Assistant Directors of Contracts

Comparable changes were made where necessary in other departments. The Admiralty found that its existing powers were adequate and the War Office was able to carry on with smaller relaxations of

<sup>1</sup> e.g. uniform clothing for the women's services was obtained by competitive tender throughout the war.

the limits: the Director of Army Contracts had authority to dispense with competition on contracts up to £10,000, the Assistant Directors on contracts up to £2,500.

The general shortage of capacity in relation to demand during the war had a further importance because it inevitably tended to strengthen the position of any rings or price-fixing associations with which the Government had to deal, though there was no necessary presumption that they would try to exploit this situation to their advantage. At first no special steps were taken, beyond what were in force in peace-time, to safeguard the position of departments in their negotiations with such associations or their members, but early in 1942 the General Purposes Sub-Committee of the C.C.C. decided to survey the dealings of departments with them.

A brief preliminary examination of the information in the possession of departments revealed that they were concerned with about 135 known associations and suggested that about forty of these needed urgent attention, as there was no adequate check that their prices were reasonable. The examination also showed that concessions made by an association to one department were not always the same as those obtained by another. For instance, the Electric Lamp Manufacturers' Association, a body which had refused to accept costing of its Government contracts, allowed the Ministry of Aircraft Production a uniform thirty to thirty-five per cent. discount off retail prices, but had a variety of discount terms for Ministry of Supply contracts. Consequently it appeared desirable that negotiations to settle prices with associations should be conducted centrally.

The Ministry of Supply prepared a preliminary report on the subject, which was considered by the G.P.S.C. in July 1942. In this report it proposed that all negotiations with an association should be conducted by the department most concerned, and prepared detailed proposals of allocations for this purpose. It also suggested a number of propositions as a reasonable expression of the attitude of departments, viz.:

(a) The existence of an association should not interfere with the general policy of departments in seeking to obtain fair and reasonable prices for their purchases, and to arrange fixed prices as far as possible.

(b) The volume of work, together with the department's policy which emphasises fair prices, may provide reasons for accepting any particular advantages obtainable from negotiations with associations.

(c) When associations are used for negotiations, they should be used as the easiest means of applying departmental price policy fairly to the members as a whole, but it should not be possible for associations to obtain from departments advantages not given to non-associated companies in respect of the same supplies to departments.

(d) In negotiating with associations regard will be paid to the prices obtainable from non-associated firms.

Investigations continued and by the middle of August it was possible to produce a list of 155 associations with over 1,600 known member firms, although departments were aware that their information was still by no means complete. Final decisions on policy and procedure were reached late in the year. The main lines of policy laid down were:

(1) Negotiations should take place with associations or other bodies representing a trade or industry

(a) when the manufacturers desired it and there was no good reason to the contrary;

(b) where such negotiations offered practical advantages in

- (i) reducing costing work,
- (ii) reducing the number of negotiations,
- (iii) obtaining fixed prices,
- (iv) obtaining arrangements covering indirect supplies to contractors and agency factories as well as direct purchases by departments and R.O.F.

(2) The Ministry of Supply's earlier proposals should be adopted regarding fair and reasonable and, as far as possible, fixed prices, the denial to associations of advantages not obtainable by non-associated companies, and attention to prices obtainable from non-associated firms.

(3) Wherever possible, negotiations with an association should cover all supplies, direct and indirect, for all departments. In cases where there were specialised products prices could be negotiated by the department specially interested. In other cases, i.e. of standard or common or similar stores, prices for all departments should be negotiated by the major user-department, to which the association would be allocated. In all cases, whether for specialised products or not, there should be agreement by all the departments as to profit rates and other common matters and, wherever possible, these should be negotiated for all departments by the major user, with the proviso that there might be specialised rates for specialised articles.

(4) When, for any substantial reason, the association desired that the manufacturers' price of supplies to their customers should not be upset, the system of direct rebate to the department would be acceptable.<sup>1</sup>

In order to centralise negotiations with associations, 170 of them were allocated for this purpose as follows: Ministry of Supply 101, Ministry of Works and Planning 20, Post Office 19, Ministry of Aircraft Pro-

---

<sup>1</sup> On the acceptance of rebates see pp. 102-104 and 170-177.

duction 11, Admiralty 8, Ministry of Fuel and Power 4, War Office 4, and Air Ministry 3.

Not all these associations were price-fixing bodies, but one of the advantages of the scheme was that it initiated a regular procedure to ensure that ring prices should not be unreasonable and that all available information about them should be exchanged between the departments interested. Action was usually instigated by the departments responsible. They tried, however, not only to protect themselves in their own direct purchases, but also to secure that their contractors and sub-contractors should obtain reasonable terms. Thus it was usual to obtain from main contractors particulars of the value of their annual purchases from members of an association before the latter were asked to negotiate some general agreement on prices. For the remainder of the war the same procedure remained in force and was a source of appreciable economies.

On the whole, despite individual exceptions, there were few major innovations in contractual procedure during the war. What did happen was that methods which had formerly applied only to a substantial minority of cases became customary, but once they had been generally adopted little change was made in them from beginning to end of the war.

Such novelties as there were, arose mainly where the Government began to trade in fields which it had not hitherto entered. One feature was a great increase in the use of experts and specialist organisations as purchasing agents. The possibility of employing them was recognised in peace-time practice for the purchase of unusual supplies, but this procedure was extremely rare and required specific authority, in the Air Ministry of a Deputy Director of Contracts, in the War Office of the Director of Army Contracts and of the Finance Division. During the war it became important where departments were making bulk purchases of ordinary commercial articles, especially in foreign countries, and was particularly used by the Raw Materials Department of the Ministry of Supply. There were other unusual features which were peculiar to such overseas purchases and, in the sphere of munitions production, practically confined to the Raw Materials Department. One was the negotiation at a very high level of agreements to purchase the entire national surplus of some commodity, either for a single season or for a period of years. This was something quite outside the normal scope of contracts work, but during the war it was an important means of obtaining valuable supplies, though in some cases it was influenced by considerations of economic warfare as well as those of our own war production. A lesser matter of procedure, which arose on overseas contracts, concerned the point of purchase. The Raw Materials Department was able to abandon the usual practice of commercial importers and purchased

f.o.b. instead of c.i.f., so as to ensure the advantage of insurance and freight payments for the United Kingdom.

All these changes were connected with the chief innovation in the field of raw materials purchase: the introduction of State buying where previously nearly all transactions had been conducted by commercial firms on their own account. Before the war, State purchase of raw materials had been small in amount, but it grew very rapidly in the first few months after the outbreak of hostilities, and as early as November 1939 four-fifths of the imports of the major raw material items were being obtained by State purchase. By the end of 1941 there was hardly any important raw material item which could still be imported on private account. The need not only to ensure a minimum of essential supplies but also to build up stocks, for military reasons, beyond what was commercially necessary, or, because of increased demand, beyond what private importers could comfortably finance; the financial difficulties caused by rising overseas prices and shipping freights; the need to integrate raw material movements with the planned use of shipping; and the need to ensure the greatest national benefit from the expenditure of scarce foreign currency, all contributed to this development.

The purchase of wool illustrates the speed of the change. Before the war, negotiations had been almost completed for the Governments of Australia and New Zealand to requisition all wool and sheepskins in their countries, and to sell all the exportable surplus to the United Kingdom at prices to be agreed. This arrangement came into force as soon as war broke out, and by November 1939 full agreements had been signed, under which the United Kingdom Government would buy all the exportable surpluses for the duration of the war and one year afterwards. In South Africa wool auctions continued as usual, but the United Kingdom Government undertook to purchase all wool, within a defined maximum, which did not reach a specified average price at the sales, and in August 1940 it made an agreement with the South African Government which, except that it excluded requisition, was very similar to those made with Australia and New Zealand. Other important materials which were subject to State purchase from the beginning of the war included all the most extensively used metals except tin, which was privately purchased until Japan entered the war.

Cotton came more slowly than most other major materials to be completely subject to State purchase. Though the first examples of Government purchase of cotton came at the beginning of 1940, it was not until April 1941 that the Government became the sole importer. But cotton illustrates perhaps better than anything else the variety of purchasing procedures within the scope of State buying. A report made at the end of 1944 showed that cotton was obtained from



different sources in these various ways: from the United States supplies were obtained by lend-lease; in the British West Indies, British West Africa, and the Anglo-Egyptian Sudan the Ministry of Supply purchased the entire crop under long-term agreements; with British East Africa the Ministry had agreements under which it reserved a specified amount from each year's crop and also undertook to buy any more of the crop which remained unsold at the end of the season; in Brazil, Peru, and Egypt purchases were made in the open market by agents or representatives of the Ministry; Indian cotton was bought from Liverpool merchants acting on behalf of Indian shippers.<sup>1</sup>

An arrangement that concerned a greater number of departments, though it was useful only in a limited range of circumstances, was the negotiation of running contracts. These provided for stores to be supplied or work done, at a stated price, as and when ordered during an agreed period. They were generally used for services, such as standard repairs, which could be priced in advance but which were needed only intermittently, and for the supply of articles of a commercial type, requirements of which could not be estimated far ahead, or for which storage was impracticable or not available. In peace-time they were, on grounds of price, appropriate only where an alternative commercial market enabled the supplier to maintain continuous production, and they had the nominal disadvantage (though this never proved important in practice) that they were not legally binding unless they included 'consideration', i.e. unless they gave the contractor a monopoly of the supply to the department of the particular article or service. During the war the position changed because even where Government demands were irregular they were usually sufficient *in toto* to absorb the full output of any munitions producer. Running contracts were used for various items of standard pattern or relatively simple construction. Throughout the war, for example, the Ministry of Supply obtained nearly all its spare parts and accessories for motor vehicles by means of running contracts. They were also occasionally adopted in a deliberate effort to increase the flexibility of a production programme. Running contracts were also appropriate where work was necessarily irregular owing to difficulties at an earlier stage in the chain of production. Thus lengthy running contracts were placed for the impregnation of Service uniforms to render them proof against certain gases: difficulties of production of the powder used in the process made it impossible to give orders for definite quantities of proofing work in any given period.

Another factor affecting war-time contractual procedure was the introduction of certain compulsory powers. In 1939 the Ministry of

---

<sup>1</sup> Bulk purchase of raw materials is discussed more fully in Chapter X of the volume on *The Control of Raw Materials*, by J. Hurstfield, in this series. The foregoing paragraphs are based on Mr. Hurstfield's researches.

Supply received powers to direct a producer to carry out work for the Government if he had refused the offer of a contract on reasonable terms,<sup>1</sup> and to compel contractors to give priority to their Government work.<sup>2</sup> It was also authorised to order any available storage to be put at the Government's disposal, and to require contractors to keep records sufficient for the determination of fair and reasonable prices; the department was to have powers of access to any records of a business supplying the public service.<sup>3</sup> Immediately after the outbreak of war other compulsory powers were added and were also bestowed on other departments, chiefly by Defence Regulation 55, which, among other provisions, conferred powers of regulating businesses engaged in essential work and of prescribing the price of classes of work.<sup>4</sup> The existence of these powers did not lead to marked changes in contractual procedure. The Supply Departments continued their policy of arranging contracts by negotiation and invoked their compulsory powers only as a last resort. But the fact that these powers existed was a thorough safeguard against difficulty in placing contracts in any circumstances, and the knowledge of both sides that other methods were available in reserve doubtless assisted the smooth working of the existing system throughout the war.

---

<sup>1</sup> Ministry of Supply Act 1939 (2 & 3 Geo. 6 c.38), section 7(3).

<sup>2</sup> *Ibid.*, section 7(1) and (2).

<sup>3</sup> *Ibid.*, sections 8 and 9.

<sup>4</sup> These regulations in their original form did not clearly permit a department unilaterally to fix the price on an individual contract.

## CHAPTER IV

### SOME CONTRACTUAL PROBLEMS

**T**HE negotiation of contracts involved several important problems which were common to the entire field. Of these, the choice of a criterion of reasonable prices and the attempt to ensure that practice conformed to it will be considered later. They formed the central problem of contractual work and provided in themselves a homogeneous topic. But there were three other questions of principle, to a great extent legal in their nature, to which much consideration had to be given during the war. These were the insurance of Government property held by contractors, the use of patents and payment of royalties, and the breaking of contracts. Something must be said of each in turn.

#### (a) INSURANCE OF GOVERNMENT PROPERTY HELD BY CONTRACTORS

Contractors came into possession of Government property in two ways. In the first place, it was the normal peace-time practice of Supply Departments to purchase some items of equipment directly from the suppliers and to issue them, either free or on repayment, to main contractors for embodiment in items to be supplied under their contracts. Secondly, where part of the contract price was paid in advance while production was in progress, it was a usual safeguard that all materials acquired by the contractor or allocated for incorporation in items to be supplied under the contract should vest in the department. This provision sometimes existed even where the department was not granting progress payments. Towards the end of the rearmament period and during the war, as the volume of orders grew, the amount of issues on embodiment loan and the amount of progress payments increased in greater proportion, so that there was always much Government property in the hands of contractors.

It was the settled policy of the Government to carry its own direct risks without insurance wherever this was practicable, as its commitments were both large and widely dispersed. But in peace-time it was the normal practice to make contractors responsible for any loss of or damage to Government property which was in their possession for the purposes of the contract. Exceptions to this practice occurred where it was impracticable to assess the insurable value, where it was undesirable on security grounds to disclose information, or where only a minor amount of work on expensive equipment was involved.

The premiums paid by contractors to insure against this liability were included in their overheads as normal business expenses and recovered through contract prices.

It was clear in advance that, in the event of war, it would be impracticable to make contractors responsible for King's Enemy Risks, and in March 1937 the Treasury agreed that the Government should accept liability for them and for Civil Disturbance Risks; but it would not offer a formal indemnity until the occasion arose. A year later it was decided that the Government should bear the risk of sabotage without requiring contractors to insure against it and that it should determine in each case as it arose whether damage was in fact due to sabotage.

At the outbreak of war the policy previously agreed about King's Enemy Risks was put into effect. The general position, in civilian business as well as on Government contracts, was controlled by the War Risks Insurance Act 1939.<sup>1</sup> This compelled any person carrying on business as a supplier or seller of goods to insure against King's Enemy Risks goods for sale and materials from which such goods were manufactured, *provided that they were his property*. A contractor could not reasonably be held responsible for war damage to Government property in his possession, as he was unable to insure against it and he was, in fact, protected from liability by section 1 of the Liability for War Damage (Miscellaneous Provisions) Act 1939.<sup>2</sup> His liability, under the War Risks Insurance Act 1939, to insure goods which he was supplying under Government contracts ceased when the property in the goods passed to the department; i.e. normally on delivery, but, where the contract contained a vesting clause, either immediately or at the date of the first progress payment, according to the terms of the particular vesting clause in the contract. In order to reduce contractors' war risk liabilities, vesting rights were slightly extended. From 23rd November 1939 all Admiralty contracts providing for progress payments contained a clause to the effect that materials acquired and allocated should vest in the Admiralty from the beginning of the contract instead of only from the date of the first payment. On 28th December 1939 the Admiralty extended the use of this new clause to every type of contract which had included provision for vesting. At the same time it adopted another new clause for inclusion in future contracts which did not make this provision. This latter clause declared that property in the articles to be supplied would pass to the department on delivery or approval, whichever was the earlier; it would pass on approval even though the goods were not then in a state fit for delivery.

---

<sup>1</sup> 2 & 3 Geo. 6 c.57.

<sup>2</sup> 2 & 3 Geo. 6 c.102.

To make the extent of contractors' liability quite clear, departments began to amend their clauses so as to specify that a contractor would not be held responsible for loss or damage by war in respect of articles the property in which was vested in the department. The Ministry of Supply did so from December 1939, the Air Ministry from January 1940, and the Admiralty from March 1940. But the question of responsibility was not confined to the actual articles to be supplied and the materials provided for their manufacture. There was the further problem of reimbursing the contractor for any work he had done on Government material subsequently damaged or destroyed, as he could not insure this under the Commodity Insurance Scheme. The choice before the Government was between two courses. On the one hand it might tell contractors that their redress was in the compensation which they would receive after the war under the compensation scheme of the War Risks Insurance Act 1939. Alternatively, it might include in contracts an undertaking that the department concerned would act as though it were the insurer under the Commodity Insurance Scheme of that Act and would repay loss or damage when it occurred. The latter alternative was contrary to the principle that no compensation should be paid before the end of the war in respect of private property in so far as it was not legally subject to war risks insurance when the loss was incurred. Nevertheless, the Treasury decided to adopt it because, if redress were delayed until after the war, contractors would undoubtedly increase their prices to meet the risk, and because contractors' inability to insure in the cases in question was partly due to the Government practice of issuing, for processing, materials which remained its own property.

The General Purposes Sub-Committee of the Contracts Co-ordinating Committee agreed on a new clause to give effect to this decision. This clause gave a department the right to terminate the contract in the event of damage to Government property, in which case the contractor would be paid the net cost to him of the goods lost or damaged and the work done on them. Its effect was to give him exactly the same compensation as he would have received if the damaged articles had been non-vested goods compulsorily insurable under the War Risks Insurance Act 1939. It was adopted by the Admiralty in August 1940, by the Ministry of Supply in October, and by the Ministry of Aircraft Production in November.

The new clause did not long remain in use. The Ministry of Aircraft Production experienced, for several reasons, much difficulty in applying it. The power of termination, which was equally needed whether damage occurred to goods owned by the Government or to the contractor's plant and materials, was confined to cases where Government property was damaged. Moreover, by providing for payment of the net cost of production, the clause implied that the

department would accept all damaged vested materials, including those only very slightly damaged. This was an obligation that logically it should not undertake unless it were also willing to take over any undamaged materials which, owing to the termination of the contract, were surplus to the contractor's needs. But the greatest difficulty of all lay in the fact that the department was bound to take delivery and pay the production costs of a damaged article, even though it could be repaired and used to complete the contract, a step which required further contract action.

The Ministry of Aircraft Production therefore pressed for a revision of the clause. The first main change that it wanted was a provision that departments could cancel or reduce outstanding quantities if the contractor could not deliver them because of damage arising from King's Enemy Risks either to his own or to Government property. Secondly, it sought to provide that they could take over surplus materials damaged or undamaged, vested or non-vested, which the contractor was unable to use owing to the termination. Thirdly, it wanted to provide for the repair of damaged goods, the contractor being reimbursed the net cost of the repair. An amended clause covering all these points was approved by the General Purposes Sub-Committee in May 1941, and brought into use by the Ministry of Aircraft Production in the next month and the Admiralty in July, but by the Ministry of Supply not until January 1942. It proved adequate to meet the difficulties and continued in use throughout the war.<sup>1</sup>

Apart from King's Enemy Risks there were no major changes during the war in the Government's general policy on the subject of insurance by contractors. The latter remained responsible for damage from any other cause to Government property in their possession, except when it was impossible to assess the value for insurance purposes or when goods of high value were undergoing processes relatively so cheap that the cost of insurance would have been disproportionately high. A few minor alterations were made. For instance, in August 1941 it was decided that contractors engaged on work at Government establishments should be relieved of liability for damage to Government property by fire. This was done because there were often several contractors working simultaneously on the same property, so that the cost of fire insurance was multiplied.

Much more important was the deliberate exemption of a few major stores from the ordinary practice of the Government. Of these, warships were the outstanding example. Even in peace-time, contractors building warships were not always made liable for damage or loss. The Admiralty normally obtained alternative quotations, one on the basis of the contractor receiving an indemnity against all risks and the other on the basis of his being responsible for them and

---

<sup>1</sup> This clause is reproduced at Appendix 3B.

therefore insuring against them. It decided according to the circumstances of each case which alternative it should accept, subject to the general rule that not more than one-third of the total value of new construction should be insured and that as much as possible of this should be destroyers. On the outbreak of war the Admiralty proposed to the Treasury that, for the period of hostilities, contractors should not insure any warships undergoing construction, fitting out, conversion, refit or repair at home or in the Dominions, but should be indemnified by the Admiralty against all claims for loss or damage. The reasons for this proposal were that it was expected to save considerable expense, that it would allow the Admiralty complete freedom of action (whereas an insurance policy might impose impracticable and undesirable restrictions, such as requiring the removal of all ammunition from a ship), and that it would avoid the great difficulty of estimating a proper figure of insurance. In order to reduce risks to a minimum, the Admiralty intended as far as possible to employ only firms of proved reliability and to supervise work closely and effectively. Insurances already taken out for current contracts would not be cancelled, but future prices would be checked to make certain that they included no allowance for insurance. When ships of special design were under construction or when any difficult work was to be executed on a ship, the possibility of insurance would be considered on its merits as a special case. The Treasury agreed very promptly to this plan, which was in force before the end of September 1939. Early in October it was decided to extend the indemnity to sub-contractors for main machinery and boilers in all cases in which the Admiralty knew who these were.

In April 1940 the Admiralty suggested that the same conditions should be extended to merchant ships built or repaired for it at home or in the Dominions, except that ships already insured should remain insured until the policy lapsed, and that the arrangement should be without prejudice to the Ministry of Shipping's repair contracts. The Treasury suggested that it might be necessary to continue some insurance so as to preserve an insurance business which was essential to the national economy, but agreed that this difficulty was met by the fact that the Admiralty was encouraging private shipbuilding to the maximum extent and that this would continue to be insured as usual. A more serious objection was that non-insurance would compel the Admiralty to deal with all claims without the services of an expert organisation. The Treasury therefore suggested that the Admiralty should insure merchant ships to the minimum extent sufficient to retain the assistance of the underwriters in settling claims. This minimum was found to be fifty per cent., and in future each merchant ship built to Admiralty account was insured for fifty per cent. of its value, the other fifty per cent. being covered by an Admiralty

indemnity. The Admiralty undertook to pay to the shipbuilders a sum equal to that paid by the underwriters in respect of any claim, but left the detailed negotiations entirely to the underwriters.

This arrangement came into force in May 1940 and was intended to be reviewed after a year, but no report was made until March 1942. The Admiralty then stated that the value of merchant ships ordered and built or building in the United Kingdom, under orders which it had placed by 31st December 1941, was about £56 million; the premium income of the underwriters for the fifty per cent. risk was approximately £98,000; and the claims for indemnity so far made to the Admiralty totalled about £9,000. In view of these figures the Admiralty proposed to discontinue insurance and substitute 100 per cent. indemnity. The War Risks Insurance Office had assured the Admiralty that it need not be deterred from this plan by consideration for the future of the insurance market and the proposal was therefore adopted with Treasury approval. The services of the London Salvage Association were retained by the payment of an agency fee for the examination of all future claims.

The other item which became the subject of special insurance arrangements was aircraft. In 1941 both the Society of British Aircraft Constructors and some individual firms suggested to the Ministry of Aircraft Production that the policy of making contractors liable for risks was uneconomic in view of the enormous proportion of materials and components issued by the Ministry on loan. The industry was paying about £300,000 a year in premiums, and claims were negligible. The Ministry therefore proposed that, in the case of a selected group of aircraft contractors who were working exclusively on its behalf, it should give a complete indemnity for all risks, including damage caused by negligence and misconduct. The latter was normally covered by insurance but, owing to lack of clear evidence, it was frequently difficult to press home a claim in respect of it. The Treasury raised no objection and the scheme began on 1st August 1941, for an experimental period. The indemnity extended to all Government property issued on contract or embodiment loan, all property vested in the department under the terms of individual contracts, and all jigs and tools over which it had obtained disposal rights; the risks which it covered included all those arising during flight or taxi-ing trials.

This departure from previous arrangements caused strong opposition from the insurance interests, which eventually gained support from the Treasury and the Board of Trade. They admitted that Ministry of Aircraft Production policy regarding embodiment and contract loan items was correct, but pressed for the resumption of insurance against damage to aircraft accepted for flight trials and lying in the open, and against damage to third party property during



flight trials. The Ministry of Aircraft Production objected that this would be uneconomic and would give contractors extra paper work, for which they could ill spare the labour. It pointed out that, in the previous two years, claims under the suggested heads totalled only £5,000 and £500 respectively. The Ministry, however, had to give way and so, while continuing to give the contractors a full indemnity, it insured directly with the insurance firms against the two risks in question. The premium of £20,000 negotiated for the first year was subject to upward revision if it proved inadequate, but downward revision was not possible until subsequent years. It was thus less a genuine insurance arrangement than a concealed subsidy to cover loss of normal business.<sup>1</sup> The general policy of granting an indemnity to aircraft and engine contractors working entirely for the Ministry continued throughout the war and was extended to rather more firms than at first.

One other exceptional feature existed during the rearmament and war periods. This concerned the insurance of the large amount of Government-owned capital assets provided for the use of contractors or agents. The general principle was that contractors and agents were not liable for damage to such assets unless it was caused by their neglect or misconduct. In 1940, however, the indemnity was extended in the case of agency factories to cover also the risk of damage arising from neglect and misconduct. In some specific instances this concession had already been made to contractors using Government-owned capital assets. A few of the largest firms were accustomed to carry their own risks of this type without insurance. They were unwilling to extend their liability to Government assets unless they insured, and as it seemed unreasonable to make them depart from their settled policy, they were given an indemnity against damage caused by their neglect or misconduct.<sup>2</sup> Whenever a department gave to either a contractor or an agent an indemnity against the risk of damage to its capital assets by his neglect or misconduct, it sought to safeguard itself by obtaining from him a written undertaking to take all possible steps to secure the safety of the equipment. It also made provision in all cases for the possibility of some important change in conditions or in policy, by including in capital assistance and agency agreements a clause compelling the other party to effect such insurances as the department might require.

#### (b) PATENTS AND ROYALTIES

There were three distinct subjects which were part of the Government's policy on the subject of patents and royalties and which it is

<sup>1</sup> Cf. the insurance of Government cargoes (p. 30) which was another example of how the Treasury relaxed its settled policy in order to preserve the insurance business.

<sup>2</sup> The decision to allow this concession in suitable cases arose from the discussion of agreements to be made with Vickers-Armstrongs Ltd. and I.C.I. Ltd.

convenient to discuss successively rather than together. These were the use of existing inventions and designs of which the right of free user had not been obtained contractually, the rights in new inventions and designs evolved in the course of work under Government development contracts, and the war-time arrangements for free interchange of patents between allied nations.

(i) *Existing inventions and designs which could not be used freely*

The rights of a patentee in relation to a Government Department and a department's right to use patented inventions derived from section 29 of the Patents and Designs Acts 1907 to 1939. This section specified that, although a patentee was entitled to payment for the use of a valid patent by a contractor on behalf of a department (unless the patented invention had been recorded in or tried by any Government Department before the date of the patent), the department could give to its contractors written authorisation for such use for the service of the Crown, without the consent of the patentee or prior agreement about terms. Furthermore, the terms of any licence or agreement with any party, other than a Government Department, were inoperative as far as concerned this use.<sup>1</sup> The provisions of section 29 were extended to registered designs by section 58A and, from the beginning of the war, Defence Regulation 6(5) made licences inoperative as far as the authorised use of drawings, models, etc., was concerned.<sup>2</sup>

In the absence of any stipulation in the contract that the price excluded royalty it was the practice of all departments not specifically to concede royalties to patentee contractors, although they recognised that they had sometimes to agree to a higher contract price than would have been normal if no patent was involved. Consequently, the payment of royalties was largely restricted to third parties. The policy of the various departments in this matter followed the same general lines, but differed somewhat in detail. In contracts for simple stores, in which it was unlikely that patents would be involved, none of them normally inserted any reference to liability for infringement of patent rights. For more complex stores, or in other cases where patents were known or believed to be involved, it was the general rule for departments to indemnify a contractor against patent infringements when he was working to the department's specification, and to obtain a corresponding indemnity from him when he was producing stores of his own design. When neither the department nor the con-

---

<sup>1</sup> It was most important that the Government should be able to use any inventions existing; otherwise it was bound to be difficult to provide the Services with the most modern and effective equipment. It is interesting to note that, even under Nazi rule, German law did not concede equivalent rights to the State, with consequent difficulty for armament design.

<sup>2</sup> Defence Regulation 6(5) subsequently became Regulation 3(5) of the Defence (Patents, Trade Marks, etc.) Regulations 1941.

tractor had any special responsibility for the design the decisions as to which party should take the risk for patent infringements varied; the factors taken into account included the value of the store, the number and ownership of the patents likely to be involved, and the extent of competition among suppliers. It was, however, more usual for the liability to be placed on the contractor than for a department to accept it.

The clauses by which indemnity was given to or obtained from contractors were not standardised inter-departmentally. Those used by the Admiralty may be quoted as examples. Where the Admiralty granted an indemnity, the wording was as follows:

**Royalties on Patents.**—For the purposes of this contract only the Contractor is authorised to use any patented inventions that may be involved in the design as exhibited.

The Admiralty take responsibility for any claims that may be raised based on the use of such patented inventions in the manufacture and supply of the articles ordered under this contract.

The clause used to place the liability on the contractor was:

**Patent Rights.**—Having regard to the provisions of Section 29 of the Patents and Designs Acts 1907 to 1939 the Contractors shall be and they are hereby appointed the agents of the Admiralty for the purpose of dealing on behalf of the Admiralty with all claims that may arise in respect of the making for or supplying to or using by the Admiralty any patented invention in connection with the work to be performed and articles to be supplied under this contract.

The Contractors shall at their own cost discharge and settle such claims.

In the event of any such claims being enforced against the Admiralty the Contractors will on demand repay to the Admiralty any sum which the Admiralty may pay or incur in respect of the claim or claims.<sup>1</sup>

<sup>1</sup> Before the war the Air Ministry included a patents clause only in aircraft contracts. It ran as follows: 'Royalty.—The Contractor hereby agrees to indemnify the Minister against any action, claim or proceeding relating to infringement of any patent or design, or any alleged patent or design rights, and to pay any royalties which may be payable in respect of any article or any part thereof included in the contract, the design whereof shall have been supplied by the Contractor to the Minister. And in like manner, the Minister hereby agrees to indemnify the Contractor against any such action, claim or proceeding for infringement or alleged infringement in respect of any article or any part thereof supplied to the order of the Minister under this Contract the design whereof shall have been supplied by the Minister to the contractor but this indemnity shall apply to this contract only, and any permission or request to manufacture to the order of the Minister shall not relieve the Contractor from liability should he manufacture for, or supply to, other buyers.' In March 1940 the Air Ministry adopted a different clause for use in contracts for other stores. This new clause invoked the provisions of sections 29 and 58A of the Patents and Designs Acts and, where it obtained an indemnity from the contractor, appointed him the agent of the Minister for the purpose of dealing with claims arising out of patents. This provision in effect gave the stores contractor *carte blanche* to make settlements which the department could not reopen. On the other hand, it was assumed that under the clause for aircraft contracts, if the department found that the contractor proposed to include in his price a royalty under licence, it could refuse to allow it and instead deal directly with the patentee.

The clause used by the War Office and afterwards by the Ministry of Supply did not appoint the contractor to be the agent of the Minister nor did it enable him to invoke the provisions of section 29 of the Patents and Designs Acts.

Pre-war policy continued with little change for more than two years after the outbreak of war, but in October 1941 the Ministry of Supply suggested to the G.P.S.C. that the practice of requiring an indemnity from a contractor, which it followed almost exclusively and which the other Supply Departments adopted to a great extent, involved the payment of royalties on a commercial scale and gave departments no opportunity to determine whether the royalties included in contract prices were fair and reasonable. The Ministry of Supply had in fact found itself obliged to recognise existing agreements and to acquiesce in the payment of exorbitant royalties. The Admiralty had experienced less difficulty because its clause invoked section 29 of the Patents and Designs Acts. The Ministry of Supply proposed for general adoption a new clause which specifically authorised a contractor under sections 29 and 58A of the Patents and Designs Acts and under Defence Regulation 6(5) to use any invention, design, etc., and stated that no royalty would be allowed as a proper item of cost. All claims for royalties were to be referred to the department.

Neither the Admiralty nor the Ministry of Aircraft Production was satisfied that the proposed clause was suitable for general use without modification, and the Admiralty, in fact, wished to continue its existing practice of relating patent provisions to the circumstances of each contract. In the hope of promoting a uniform policy the Treasury called a special meeting for 25th November 1941 in order to consider further the Ministry of Supply proposal. At this meeting the Admiralty and the Ministry of Aircraft Production stated that their main objections to the suggested clause would be overcome if the statement that no royalty would be allowed as a proper item of cost was qualified by the words 'unless it shall have been specifically agreed by the Minister'. It was agreed that the Treasury Solicitor should redraft the clause, taking account of this qualification, and that departments should consider to what classes of contracts they wished to apply the new clause.

There was, however, the further question of what was to be done about sub-contractors' royalties. Hitherto, contracts had not included any provision requiring these to be disclosed, but both the Ministry of Supply and the Ministry of Aircraft Production had accidentally discovered instances of excessive charges on this account and suspected that this situation might be general. The Ministry of Supply therefore proposed that the new clause should be included automatically in all sub-contracts, but this would have made it necessary to investigate so many claims that the other two Supply Departments feared that the volume of work might be unmanageable. So the addition was modified to provide that the clause should be passed on to any class of sub-contractor specified by the Minister.

After various other minor amendments, agreement was finally reached on the form of the new clause<sup>1</sup> on 20th February 1942. But, though the Ministry of Supply and the Ministry of Aircraft Production intended to adopt it as a standard provision in all stores contracts, the Admiralty wished to include it only in selected contracts where it appeared necessary. The Admiralty believed that it was possible to determine in advance whether a projected contract involved the use of a patented invention or registered design, and in suitable cases, such as warship contracts, where there were many sub-contractors and the main contractor was best able to deal with claims, it still wished to include a clause whereby the contractor indemnified the department. A standard alternative clause<sup>2</sup> to cover such cases was therefore drafted and received approval at the same time as the other new patents clause.

The new clauses made no specific mention of patentee contractors and in September 1942 the Ministry of Supply suggested an amendment in order to make quite clear what was a patentee contractor's position in respect of royalties. The Ministry of Aircraft Production objected strongly, on the ground that this would merely encourage patentee contractors to submit claims which otherwise they would never have contemplated making. It proposed that departments should adopt the general principle that it was not expedient to recognise royalty claims where the patentee was the contractor. But the Admiralty, which was supported by the Ministry of Supply, considered that it was impossible to recognise such a principle. It admitted that if a contractor gave an unconditional quotation and it were accepted, he precluded himself from making a separate royalty claim, but stated that the Royal Commission on Awards to Inventors had envisaged in its conclusions that a patentee contractor might, in certain circumstances, have a claim to separate royalty. The Admiralty thought that departments could not set aside the conclusions of the Commission. As there was no agreement on the question it was referred to the Treasury, which supported the Ministry of Aircraft Production's proposition as being a reasonable aim for all Contracts Branches but said that it could not be given the status of a general principle. The subject thus remained to some extent an open question and consequently no change was made in the patents clause.

The changes made in 1942 gave departments a stronger control over royalties than before, especially in sub-contracts. But shortages of staff prevented its being as complete as it might have been. In some cases it proved impossible to settle claims by negotiation, and claimants then usually agreed that they should be referred to the special tribunal which, early in the war, it had been decided to

---

<sup>1</sup> A copy of this clause is at Appendix 3C(i).

<sup>2</sup> A copy of this clause is at Appendix 3C(ii).

create, on the lines of the Royal Commission on Awards to Inventors after the First World War. A few claimants, however, reserved their right to apply to the courts under the provisions of section 29 of the Acts.

(ii) *New inventions and designs evolved on development contracts*

All departments adopted the general principle that they should, as far as they considered necessary, have ownership of designs and inventions produced or developed at their expense. The general effect of Common Law, if not modified by contract, was that if a department ordered work to be done, inventions and designs (including developments and improvements) accessory to and for the purpose of carrying out the work would be held to be its own property. Nevertheless, departments did not rely on Common Law but dealt with these rights by contractual conditions.

The conditions used for this purpose were known as 'collaboration clauses' and had three objects, viz. to ensure that the department concerned should have the right of free user of a design made wholly at its expense, or of the developments and improvements of the contractor's or other person's invention or design made at its expense; to ensure secrecy if necessary; and to safeguard the patent rights of officers of the department and others who might have contributed to the final result. The clauses were not usually inserted in production contracts unless it was expected that substantial modifications would be an essential part of the execution of the contract, but they were included in most development contracts. There was, however, always a distinct possibility that their inclusion would cause the contractor to raise his price on the ground that the normal contract price did not cover the full cost of design. For this reason the collaboration clauses were sometimes omitted if there were no strong considerations to compel the contrary. But if secrecy was important or it was probable that officers of the department would contribute to the design or development the clauses were included.

The clauses defined the rights both of the department concerned and of the contractor in respect of inventions arising from a contract. The Government obtained free user of such inventions for its own purposes in all circumstances. The contractor's rights varied according to circumstances, but he was at liberty to use commercially without payment inventions which were not deemed to belong to the Government, provided that the rights of the Government or its nominee as joint patentee were respected.

The policy on the subject of new inventions and developments in the course of Government contracts remained the same throughout the war and no changes of substance were made in the collaboration clauses.<sup>1</sup>

---

<sup>1</sup> The clauses are reproduced at Appendix 3C(iii).

(iii) *Interchange of patent rights and information with the United States*

A series of patent problems of peculiar difficulty arose as orders for stores of British design were placed with overseas contractors (usually American). In the immediate pre-war period and until the passage of the Lend-Lease Act<sup>1</sup> in March 1941, whenever equipment of British design or to British specification was ordered from manufacturers in the United States, the latter insisted on being indemnified against claims for the infringement of patents. In certain cases the United States Government also wished to order equipment of British design, and its own contractors similarly asked for indemnities from the American Government. The latter was unwilling to bear the risk of heavy patent claims, particularly as after the First World War it had had to pay large sums to British claimants. Consequently the purchasing missions in the United States found themselves obliged to indemnify the United States Government in certain instances. The most important example was the Rolls-Royce 'Merlin' engine, for which orders were placed with the Packard Co. by both the British and United States Governments. A complete indemnity was given to the United States Government to cover any claim by Rolls-Royce Ltd. or others.

In the autumn of 1940 the position was further complicated when, as a result of the Tizard mission, there was disclosed to the United States Government a mass of highly secret information about British armament research and development, of which radar development was of the greatest immediate importance. The United States Government sought permission to disclose this information to its contractors, and thus raised the questions of safeguarding the interests of the owners of the inventions and of their compensation. These matters were dealt with in correspondence between the heads of the British Air Commission and the British Purchasing Commission on the one hand and the American Secretary of the Navy (Col. Knox) on the other. It was proposed that patent rights should be safeguarded by special legislation and that compensation should be determined by a joint commission similar to that set up after the First World War.

Before any progress had been made with the second proposal the situation was changed by the passage of the Lend-Lease Act. Clearly, this obliged the British Government to prevent claims by British owners of American patents in respect of manufacture in the United States for lend-lease supply to the British Government. The American authorities were not prepared to rely on a general indemnity from the British Government but preferred specific licences under the American patents, which would enable them to grant sub-licences to their contractors and thus relieve them of any fear of being sued. Continued

---

<sup>1</sup> Public 11, 77th Congress.

discussions and negotiations in Washington resulted in the Patent Interchange Agreement which was signed on 24th August 1942.<sup>1</sup> This provided that, until hostilities ended, each Government would, on request, make available to the other, for use in war production, patent rights, information, inventions, designs or processes, and that each would settle royalty payments with its own nationals. All such payments were to be accounted for as aid extended and benefits received by the Government of the United States in accordance with the Lend-Lease Act.

Article I of the agreement, which provided that each Government should make patents, etc., available to the other, qualified this provision by the words 'in so far as it may lawfully do so'. In order to implement the agreement, the British Government took powers<sup>2</sup> to compel British owners of patent rights to make them available to American contractors. It also drafted legislation empowering the Board of Trade to make rules to extend the period of convention priority in favour of American applicants for patents in the United Kingdom who had been prevented by reasons of secrecy from filing applications within the normal period.<sup>3</sup> The American administration was unable to obtain parallel powers and consequently the object of safeguarding British interests in communicated inventions was never achieved. Nor was complete freedom of interchange realised, as in several cases the American authorities were unable to obtain the disclosure of information desired by the British Government. Nevertheless the arrangement was of immense importance to the United Kingdom. It permitted the unhampered disclosure of British discoveries and inventions to the United States for immediate incorporation in equipment under development, as no negotiations of any kind were necessary between the British owner and the ultimate American user. And since the United States was much better equipped than the United Kingdom to develop equipment rapidly to the production stage, the war effort was enormously benefited. There were thus the strongest reasons for maintaining the agreement and, in fact, it remained in force until the end of the war without modification, although there were protracted difficulties in settling the interpretation of some passages in it. That it did not fully protect British interests was mainly because it was impracticable to take prompt patent action in the United Kingdom itself when the inventions were made or even soon after communication. This situation was due both to security considerations and to the shortage of specialist patent agents, and in many cases made it impossible to

---

<sup>1</sup> Cmd. 6392.

<sup>2</sup> Mainly by S.R. & O. 1882 dated 17th September 1942, which added Regulation 3A to the Defence (Patents, Trade Marks, etc.) Regulations 1941.

<sup>3</sup> Patents and Designs Act 1942 (5 & 6 Geo. 6 c.6), section 3.



protect British war-time inventions in the United States after the war. Nearly all unpatented information had in the end to be written off without payment, and where no payment was involved there was, of course, no corresponding entry in the account of mutual aid.

The interchange of information between the United Kingdom and the United States on developments in radio pulse technique was mainly conducted outside the general Patent Interchange Agreement and, as far as industrial firms were concerned, under the terms of an informal agreement, made in August 1942, known as the A/B plan. This agreement was made between the United States Office of Scientific Research and Development and the British Government departments concerned with the development and production of radar equipment. It provided that all firms who accepted its terms would supply to the relevant authority (which in the United Kingdom was the Central Radio Bureau of the Ministry of Aircraft Production) all appropriate reports, memoranda, research information, etc., on radar equipments and components; all such information would be passed to the central authority of the other country, which would communicate to the firms subscribing to the plan in its own country any items likely to assist them in their work; the scheme also covered work done in Government establishments.<sup>1</sup> All questions of patent rights were ignored for the time being so as to prevent any delay in development and production, but the Central Radio Bureau kept a complete record of all the information passed and the date of its transmission, so that the material would be available for the post-war settlement of patent claims. The position about patents was dealt with by the following provisions:

(i) With regard to any conflicts on priority or originality resulting from the flow of information through this channel, co-operating firms must rely on future inter-Governmental settlement regarding patent rights in the receiving country.

(ii) Since there already exists the necessary licensing machinery through which British inventors may file patent applications in the U.S.A. and conversely for American inventors to file in the United Kingdom, it is understood that information flowing through the channel here proposed is not to serve as the basis for patent applications in the receiving country.

(iii) Nothing in these 'General Conditions' is intended to deny or abridge the rights of inventors in the respective countries to utilise the established channels and procedures for filing patent applications outside the inventor's own country.

---

<sup>1</sup> Much information was freely exchanged between establishments of the British and U.S. Governments before this plan was adopted, but it had usually been impossible to communicate it to commercial firms without prior reference back to the Government originally providing it, which caused delay and thereby often made the information of little value.

(iv) No financial obligations are assumed either now or later for information furnished to the Company or received from the Company, nor does the British Government in receiving such information from the Company and transmitting it to the U.S. Government, assume any obligation to secure licences under patent rights which may be involved.

In the event, post-war patent claims were much fewer than had been expected and a general disentanglement of mutual claims was not necessary.

The adherence of firms to the agreement was by invitation from the respective Governments and was entirely voluntary. Originally five American and nine British firms were concerned but two other American firms and one British firm participated later.<sup>1</sup> As the firms were voluntary parties to the agreement, it was free from the difficulties of enforcement in the United States which affected the general Patent Interchange Agreement, and it worked to great mutual advantage without friction.<sup>2</sup>

#### (c) THE BREAKING OF CONTRACTS

Experience in the First World War showed how desirable it was to include a break clause in all lengthy contracts, so as to provide a contractual basis for a rapid curtailment of production at the end of hostilities. Without such a clause the Government would have had either to accept delivery of stores no longer needed or to terminate contracts prematurely, thereby exposing itself to claims for damages, including claims for loss of profit.

In ordinary peace-time conditions a similar provision was unnecessary, but at the beginning of the rearmament programme the Chancellor of the Exchequer requested that all defence contracts of exceptional duration should contain a break clause. The reason for this was not an expectation that the programme could be curtailed but the need to keep it flexible, so that it should be as well adapted as possible to current military needs and technical developments. The T.I.S.C. recognised that this was a counsel of perfection and that it would often be impracticable to apply it to new firms which had to be induced to enter the armaments industry and increase their capacity, but agreed that wherever possible a break clause

---

<sup>1</sup> The original participants were, in the U.S.A., Bell Telephone Laboratories, Western Electric Co., Radio Corporation of America, General Electric Co. Inc., and Westinghouse Electric and Manufacturing Co.; in the U.K., B.T.H. Ltd., A. C. Cossor Ltd., E.M.I. Ltd., Ferranti Radio Ltd., General Electric Co. Ltd., Metropolitan-Vickers Ltd., Murphy Radio Ltd., Pye Radio Ltd., and Standard Telephones and Cables Ltd. To these were later added the Raytheon Manufacturing Co. and the Sperry Co. in the U.S.A. and Marconi's Wireless Telegraph Co. Ltd. in the U.K.

<sup>2</sup> Before the A/B plan was adopted a somewhat similar arrangement had been operated under Admiralty auspices in respect of experimental valves only.

would be included in contracts which extended over a longer period than was normal for the type of store with which they were concerned.

The War Office and the Air Ministry adopted a clause which was a modified version of what the Ministry of Munitions had used. The general practice of the War Office was to insert it in all contracts of more than a year's duration; the Air Ministry at first included it only in aircraft contracts and incorporated it in the First McLintock Agreement,<sup>1</sup> but later extended its use to large contracts for other stores. The clause gave the department the right to terminate the contract by giving three months' notice and to direct the contractor during the period of the notice to take steps to reduce production, to concentrate on completing semi-manufactured articles rather than on commencing new work, and to terminate on the best possible terms uncompleted orders for materials and parts bought out. When the notice expired, the department could order the contractor to stop manufacture entirely, or to complete and deliver all or any articles in course of production. It would pay the contract price for all completed articles, would take at cost plus a reasonable allowance for handling charges all materials made surplus by the termination of the contract, and would pay a fair and reasonable price for articles in the course of manufacture which it did not require to be completed. In addition, it indemnified the contractor against any commitments he had reasonably incurred in respect of the uncompleted portion of the contract, and permitted him to appeal to the Secretary of State if the clause caused hardship.

This clause applied only to main contractors, and although some of these passed on its provisions to sub-contractors, they were not obliged to do so. In February 1939, however, the Air Ministry wished to instruct firms to purchase materials and parts for large numbers of 'Stirlings,' 'Manchesters,' 'Halifaxes,' and 'Whirlwinds' before it could commit itself to ordering complete airframes. As the value of the purchases was so high the Ministry safeguarded itself by requiring the contractors to impose a break clause on their sub-contractors. The success of this measure and the further increase in sub-contracting caused it to adopt, in May 1939, a special break clause, which was thereafter inserted in all aircraft sub-contracts of more than £50,000 in value and more than one year in duration. This clause was similar to that included in direct contracts, except that it provided for a two-month period of notice and a profit of five per cent. on the cost of materials and components taken over by the Ministry, and did not contain a provision that the sub-contractor could be directed to cease manufacture immediately the notice expired.

---

<sup>1</sup> This agreement dealt with numerous problems of price-fixing for aircraft and is discussed on pp. 87, 117-118, and 200-201.

In July 1939, when the Second McLintock Agreement came into operation, the Air Ministry slightly modified its main break clause. The principal changes provided for a possible increase in the contract price for completed articles and for arbitration in the event of a dispute. The Ministry had conceded this last point previously, but it had not been formally embodied in the break clause of the preceding agreement.<sup>1</sup>

Admiralty contracts, except for some long-term agency agreements, contained no break clauses until 1938, when a clause of this type was inserted in a few shipbuilding contracts. The clause provided for the termination of the contract and the stoppage of all work at fourteen days' notice, the dismantling of the vessel, and the payment by the Admiralty of the contractor's net costs and out-of-pocket expenses. It indemnified the contractor against legal claims by sub-contractors and suppliers, and allowed him a profit of five per cent. on costs, though not on out-of-pocket expenses. It provided for arbitration in the event of a dispute and it included the overriding provision that the Admiralty would not be liable to pay under its terms any sum which would make the total payments under the contract exceed the contract price.<sup>2</sup>

The more imminent threat of war in the autumn of 1938 made it necessary to consider a more general inclusion of a break clause, and in September the T.I.S.C. decided that on the outbreak of war initial orders should be based on the volume of production that would be needed when war reserves were exhausted and that the possibility of a change in requirements should be covered by the universal insertion of a break clause in contracts. The C.C.C. in December decided that the necessary safeguard would exist if, in the earlier stages of a war, the inclusion of a break clause were restricted to contracts which would last for more than six months and if the clause provided for termination at three months' notice.

In spite of these decisions, however, the Minister of Supply proposed shortly after the outbreak of war that the break clause should be excluded altogether from contracts, on the ground that, by creating uncertainty about future demands, it reduced contractors' incentive to maximum production. This proposal was considered jointly by the Treasury and the Service Departments and rejected. The Treasury pointed out that it was right to guard from the beginning against the possibility of an early ending to the war and that this was not inconsistent with the Government's declaration that the country must be *prepared* for a war lasting three years. Moreover,

<sup>1</sup> Arbitration was allowed only to the signatories of the McLintock Agreement, not to other firms.

<sup>2</sup> This provision was the outcome of previous experience. In 1919 the Admiralty broke a contract for periscopes and had to pay a claim of £11,910 although the contract price for the complete order was only £10,430.

another object of the break clause was to allow production programmes to be flexible, which was even more important than at the time of the Treasury ruling in 1936. There was general agreement that the Minister of Supply's expectations of contractors' reactions to the break clause were unjustifiably pessimistic.

After this decision in September 1939, inter-departmental discussions took place with the object of devising a standard form of break clause, and agreement was reached at the end of December. The clause adopted was based on that previously used by the War Office and the Air Ministry, but had some important additions. It made clearer provision for material issued on embodiment loan and gave the contractor the right to arbitration. The Air Ministry's recent concession of the possibility of a price increase for completed articles was not included, but the provision that total payments should not exceed the contract price was copied from the Admiralty's shipbuilding break clause.

When the clause was drafted the probable reaction of contractors was considered, but the prior agreement of their representatives was not sought, and immediate opposition from the Federation of British Industries and the British Electrical and Allied Manufacturers' Association led to its revision. Negotiations were protracted, however, and a revised clause was not in use until near the close of 1940. The major change was a provision for a possible increase in price in respect of articles completed after notice of termination had been given. Some minor amendments were made where the wording had been considered ambiguous or too narrow.<sup>1</sup> Further objections were raised on the ground that the period of notice was too short. In the standard clause this period continued to be three months, but in practice it was varied according to the ease with which the branch of industry concerned could return to peace-time production, a subject on which the views of the Government Departments and contractors were not always identical, so that special concessions had sometimes to be made. The break clause continued usually to be inserted in any contract the execution of which was expected to take six months or more from the date when it was placed.

Shipbuilding remained outside the scope of the standard break clause. At the outbreak of war, the warship group of shipbuilding firms protested against several features of the clause then in use. They contended that to cease work completely within fourteen days would have a very serious effect on the industry, as they could not hope to begin alternative work quickly enough to avoid wholesale dismissals of their workmen.<sup>2</sup> As an alternative they suggested that a gradual

<sup>1</sup> A copy of the revised clause appears as Appendix 3D below.

<sup>2</sup> It had in fact been impossible to insist on the fourteen days period of notice after the end of the First World War because of the numbers who would have been thrown out of employment had it been put into operation.

cessation of work should begin within two weeks and that all work should stop within ten weeks. They also asked that they should receive definite instructions about the disposal of the vessel before the end of the ten weeks' interval. In addition they sought compensation for loss of profit if they could not obtain other work and asked for the profit on net cost to be raised from five per cent. to ten per cent. The Admiralty agreed to extend the period of notice as suggested and to give disposal instructions within the ten weeks' interval, but refused to allow compensation for loss of profit as this was one of the main things which the break clause was designed to avoid. Instead of defining the permissible rate of profit it proposed to say that a fair and reasonable price would be paid for work done. It also proposed to include provision for the extension of the clause to large sub-contractors and to give the contractor the right to appeal for more generous terms if he suffered hardship from the operation of the clause. A draft clause revised on this basis was sent to the ship-builders on 10th May 1940. They replied a month later, agreeing to the substance of the clause, but asking that the arbitration provision should apply to the clause as a whole and not merely to matters which were not in the sole discretion of the Admiralty, and suggesting minor amendments of wording. Most of their suggestions were accepted.

The new clause was circulated to the industry in November and raised no opposition, except from associations of sub-contractors, who thought it did not adequately protect them from having stocks of manufactured materials left on their hands. The Admiralty therefore agreed to substitute the provisions of the general break clause in this matter, thereby undertaking to accept at a fair and reasonable price all unused and undamaged materials, bought-out components, and articles in the course of manufacture, which were in the contractor's possession when the notice expired.

The break clauses remained in use throughout the war, but soon after the end of hostilities discussions took place to decide whether, and in what circumstances, their continued inclusion was necessary. In December 1945 the Contracts Co-ordinating Committee decided that during the transition period no major change of policy was needed, but that the rules about the inclusion of a break clause in contracts could safely be relaxed at once. In the immediate future such a clause need normally be inserted only in contracts of over nine months' duration and more than £10,000 in value, although departments at their discretion could, in exceptional cases, include one in contracts of shorter term or less value.

The importance of the break clause was revealed during the war by occasional difficulties arising in rare cases where it had been omitted from substantial contracts. The outstanding example was

that of contracts made by the Ministry of Supply with three copper refiners in 1940, to implement an agreement negotiated before the war by the Board of Trade. These contracts were for the duration of the war and contained no break clause. They yielded such very large profits that in 1942 the Ministry sought to break them and substitute fresh terms, but, of course, it could do so only through a concession *ex gratia* by the firms. As the Ministry's negotiating position was thus so weak, it had to agree to revised terms which, though a great improvement, were still quite at variance with its general policy: the new provisions included the insertion of a break clause and the revision of prices so as to reduce profits by about half. Nevertheless the companies were left with profits of thirty-five per cent., twenty-eight per cent., and eighteen per cent. respectively on the book value of their assets.<sup>1</sup>

This was, however, an isolated case, though there were other instances of unbreakable contracts which did not lead to difficulties, most of them being in the field of non-ferrous metals.<sup>2</sup> In overseas contracts political considerations occasionally dictated the omission of the break clause from contracts. For instance, in 1944, when negotiations were proceeding for the purchase of wood pulp from Sweden, the Ministry of Supply suggested the possibility of inserting a break clause in Canadian contracts, but the Paper Control successfully resisted the proposal on the ground that it would have political repercussions, particularly as the Canadian producers had deliberately reduced their sales to the United States in order to supply the United Kingdom and had refrained from charging the full export price.

It was, of course, at the end of the war, when munitions production had to be rapidly reduced, that the value of the break clause was most clearly displayed. The cancellation of contracts was proceeding on a substantial scale from the autumn of 1944 and continued for many months after hostilities actually ceased. The Admiralty cancelled some 16,000 contracts, the Ministry of Supply 21,200 to the value of £258 million and the Ministry of Aircraft Production approximately 25,000 to the value of £535 million.<sup>3</sup> In the middle of 1947 the last named had settled 22,500 by the payment of sums totalling £93 million; the contractors in 12,000 of these cases had no materials or components on hand in respect of which they wished to claim payment, so that they received no payment apart from the contract price for such articles as they had already completed.<sup>4</sup> The

<sup>1</sup> P.A.C., 1943, Q. 5065-5124.

<sup>2</sup> *Ibid.*, 1943, Q. 5114.

<sup>3</sup> *Ibid.*, 1946-47, Q. 3792.

<sup>4</sup> Payments for articles completed under the contract are not included in the figure of £93 million.

Ministry of Supply had by mid-1948 settled 21,000 of its broken contracts (of a total value of £253 million) by making payments amounting to £62 million; 7,600 of them were settled without payment. These figures do not give an accurate quantitative measurement of the value of any 'saving' which resulted from the use of the break clause, but they do indicate that it was a means of avoiding much wasteful expenditure.



## CHAPTER V

# TYPES OF CONTRACT AND METHODS OF PRICE-FIXING

OF all the aspects of contractual work, that with the most far-reaching influence was the agreement of prices. The fundamental consideration was that these should be 'fair and reasonable', and, in order that this should be achieved and equity preserved between one contractor and another, similar principles and methods had to be applied as systematically as was practicable.

Contracts Directorates conveniently regarded price as consisting of two elements: cost and profit. Consequently, in fixing prices, they were concerned both to keep profits at a reasonable level and to control costs, two objectives which were not always equally served by the same contractual arrangements. In this respect a clear division existed between fixed price and costed contracts, both of which were extensively used by the Government.

A fixed price contract was one for a specific output at a price which should be fixed before production began or at a very early stage in production.<sup>1</sup> This was the type of contract which public and parliamentary opinion regarded as the most satisfactory in ordinary circumstances, because of its stability and the incentive to economical production which it offered. The fixed price included estimated amounts for direct costs (i.e., materials and labour), overheads and profit. The more a contractor reduced his costs and overheads below these estimates, the greater profit he received, and vice versa. If he proved less efficient than had been expected, there was no question of any increase in price. The fixed price contract gave an opportunity to earn a high rate of profit, which was liable to be the target of parliamentary criticism, but that was achieved only by increased economy in the use of resources, which was desirable from every point of view. The essential feature which decided whether this type of contract realised its potentialities was the date when terms were agreed. If a price was fixed at an early stage it gave an incentive to economical production, by offering the chance of a higher profit. On the other hand, in the later stages of the contract, when the contractor had a fairly close knowledge of his actual costs and the department had not, the former was unlikely to agree to a price

---

<sup>1</sup> S.C.N.E., 1940-41, 4th Report, Part II, para. 19.

which did not cover his costs and a substantial profit. In these circumstances a fixed price was quite likely to be higher than a price based on actual costs and yet gave little or no incentive to economy.

The costed contracts which were the alternative were in three main categories: cost-plus, maximum price, and target cost.

A cost-plus contract provided for a contractor to be paid his ascertained costs of production plus a profit, without any attempt to reach a fixed price before or during production, or to limit the total amount of payment. The profit might be a fixed sum or, more usually, a percentage of the ascertained costs,<sup>1</sup> though the War Office was fairly successful in avoiding basing profit on a percentage of cost. The disadvantages of such a contract were obvious and led to strong criticisms almost as often as it was used. Its effect was to make a department completely dependent on the assiduity and integrity of its contractor, while at the same time frequently tempting the latter to be wasteful at its expense, as the commonest arrangement was for his profit to rise in direct proportion to his costs. Even when the profit was a fixed sum, the contractor's only financial incentive to efficiency was that mounting costs were not followed by any corresponding increase in profits and therefore led to a lower percentage profit on turnover. Practically the sole merits of the cost-plus contract were its simplicity and the speed with which agreement could be reached upon it. There was always, however, a certain amount of work for which prices could not be agreed on any other basis, because it was impossible to make any pre-estimate of the cost. Examples of this were repair and experimental work. In addition, it was sometimes necessary to make a cost-plus settlement in cases where it had been intended to negotiate a fixed price during the course of a contract and no agreement had been reached.

Maximum price contracts laid down before production a maximum price which included both costs and profit. The contractor was paid the actual costs ascertained by post-costing, plus a rate of profit prescribed by the department, subject to the maximum price not being exceeded.<sup>2</sup> This type of contract, which was used to some extent by the Ministry of Munitions in the First World War,<sup>3</sup> attempted to preserve the simplicity and the control over the rate of profit of the cost-plus system, while removing its more glaring shortcomings. In order to effect this improvement, however, the maximum price needed to be fixed fairly tightly, which made it seem to contractors a rather one-sided arrangement. They sometimes refused

---

<sup>1</sup> *Ibid.*, *op. cit.*, Part II, para. 26.

<sup>2</sup> *Ibid.*, *op. cit.*, Part II, para. 23.

<sup>3</sup> *History of the Ministry of Munitions*, Vol. III, part II, pp. 23 and 25. In the Ministry of Munitions the maximum price contract also included a bonus on savings, as in the target cost contract described below.

to agree to maximum prices unless these were so generous as to safeguard them against the slightest possibility of loss. In that case, the contract became in fact, though not in name, an unmodified cost-plus settlement.

The target cost contract, which had been much used in the First World War and which was revived when respirators were ordered for the civilians of Aden and Malta during the Italo-Ethiopian War, was intended to improve the costed contract further, by encouraging economy in costs. Normally, except for works services, where the basis of payment differed slightly, it prescribed in advance a target cost of production and provided that if the costs ascertained by post-costing were below this figure then, so long as this saving was due to the contractor's own efforts, a share of it was to be paid to him in addition to ascertained costs and the agreed profit. It also usually provided that, where the ascertained costs exceeded the target figure, only a fraction of the excess costs was paid, up to a certain percentage of excess, after which all payment ceased.<sup>1</sup> For aircraft, however, the Air Ministry made some use of a variant known as a basic cost contract, which gave the contractor a share in any savings below an agreed figure of basic cost, but provided for the payment of actual costs if the basic figures were exceeded. In theory, the target-cost contract promised to retain most of the advantages of both fixed price and costed contracts, but in practice its usefulness was very limited as, if it was impossible to agree on a fixed price, it was usually also impossible to agree on a fair target, both being decided by similar considerations.

The great advantage of the costed contracts was that they made it possible to control the *rate* of profit very closely, but they did not have the same influence on the *amount* of profit if this was expressed merely as a percentage of the cost, though the use of a maximum price meant that if costs rose beyond a certain point both the rate and the amount of the profit would fall. It was also in their favour that, because they made costing necessary, they provided information about actual costs which departments might not otherwise have had and which could be useful in negotiating future prices and, in some cases, in drawing attention to possible economies in productive methods.

Various methods existed of acquiring the information needed for agreement on prices. The final settlement of all costed contracts involved post-costing by an accountant. He examined the books of the firm and summarised the cost of materials and labour, checking them against current market prices or rates. To the figure thus obtained was added a sum in respect of overhead expenses, which

---

<sup>1</sup> S.C.N.E., 1940-41, *op. cit.*, Part II, para. 24.

was normally such that the ratio of overhead to direct labour costs on the particular contract was the same as on the firm's entire business during the most recent period of six months or a year for which information was available. The building up of the price was completed by the addition of an agreed sum for profit. Post-costing was sometimes used as a means of checking, but not reopening, fixed prices already agreed, in order to acquire fuller information for the settlement of fixed prices in future. This was, however, rarely done in peace-time, as departments had then no rights of access to the books of contractors, except where these were specifically conceded in the terms of the contract, as, of course, they had to be when settlement was on the basis of ascertained costs.

For the settlement of prices before work was done, departments relied wherever possible on competitive tender. Unless the genuineness of the competition was doubtful no further action was usually taken to investigate the way in which prices were made up, as the normal operation of the market made it probable that prices and profits would be reasonable.

When departments wished to arrange fixed prices for stores which could not be obtained competitively, they were sometimes confronted with manufacturers' list prices. Occasionally it was difficult to do anything other than agree to these prices, but usually they tried, with varying success, to negotiate a discount or to persuade the contractor to agree to a costing check. A particularly difficult case was provided by the Machine Tool Trades Association, which refused any concession on its normal commercial terms until just before the outbreak of war, when it agreed with the Ministry for Co-ordination of Defence, which was acting for all the Service Departments, that its prices for all items ordered or delivered in the year ending December 1939 should be subject to five per cent. discount.<sup>1</sup>

It was more usual for non-competitive fixed prices to be reached by one of two other methods. One of these was by comparing a firm's quotation with its own or other firms' previous prices for similar articles. Where differences in specification existed, the advice of production experts was sometimes taken about the alteration in cost which this ought to make. The comparative method was not a very precise way of fixing prices, but it shared with the acceptance of competitive tender prices the great merit of simplicity. It was particularly useful for non-technical stores, and could be applied also to those technical items which were partly supplied by Government establishments as well as purchased from contractors.

The much more elaborate alternative was to use technical costing. The procedure was that the technical costing staff obtained detailed

---

<sup>1</sup> P.A.C., 1940, 2nd Report, para. 30.

shop blueprints of the store required and examined the plant available at the contractor's works, to discover how far it was suited to the processes involved. Then they prepared an operational process layout, calculated the time which each operation should occupy, and analysed the requirements of material. By ascertaining the hourly rates of wages, the time element was convertible into wages cost, and thus an estimate of direct costs was completed and discussed between the technical costing staff and the firm's production experts. Together they tried to resolve any divergences between their respective estimates, these often being found to arise from inefficient methods which called for replanning by the firm. In addition, departmental accountants estimated overhead costs for the production period in question, having regard to past knowledge obtained from an examination of the contractor's financial records and to probable trends. The estimated overhead rate for the contract was supplied to the technical costing staff, who added it to their figure of direct costs. The Contracts Directorate then added a rate of profit and used the resultant figure as a basis of negotiation with the firm.

The great value of this method was that it not only enabled a fixed price to be agreed in the absence of competition, but at the same time brought methods of production under examination and was often able to contribute to more efficient working. It also had serious disadvantages in some circumstances. For instance, it could often be applied only with considerable delay when designs were subject to frequent change. But all the Service Departments had the option of using it in cases which they thought suitable. Ever since the First World War a small staff of technical cost experts had been retained in the Admiralty and their services were available to all other departments.<sup>1</sup> In 1935, because of the heavy demands placed on this section by the Air Ministry, it was transferred to the latter department and its staff increased. During the war it became part of the Ministry of Aircraft Production, but continued to serve other departments. Almost all the technical costing was carried out by this one section under the Principal Technical Costs Officer. Exceptions were that the Director of Naval Construction, the Director of Electrical Engineering,<sup>2</sup> and the Engineer-in-Chief in the Admiralty each had his own technical costing staff to deal with the specialised work of his department.

The chief types of contract and methods of price-fixing available to the Service Departments in peace-time have now been described.

---

<sup>1</sup> The Technical Costs Section was originally developed in the Gun Ammunition Department of the Ministry of Munitions in 1915 (*History of the Ministry of Munitions*, Vol. III, part II, p. 12). It was later used for many other classes of stores purchased by that Ministry (*ibid.*, p. 57) and was transferred to the Admiralty in April 1920, when the purchasing functions of the Ministry of Munitions ceased.

<sup>2</sup> P.A.C., 1943, Q. 4216.

It is clear that there was a certain range of choice, and the practice adopted by different departments must be considered. In peace-time, competition existed for the supply of most stores which were not peculiar to the Service Departments, and all three purchased them at fixed prices by competitive tender.

The real problem was in deciding prices for specialised munitions. To some extent the possibilities were restricted by the nature of the particular store and the circumstances in which it was being produced, and some of these individual considerations will be discussed later.<sup>1</sup> But there was a broad distinction of policy between the Admiralty and the Air Ministry on the one hand and the War Office on the other. The two former tried to negotiate fixed prices, using technical costing where practicable and accepting the margin of error involved; the latter, more sensitive to past criticisms of high rates of profit on its contracts, preferred the maximum price contract, settled by post-costing. These policies existed before rearmament began and they continued with little change throughout the expansion period. The circumstances causing the divergence were perhaps slightly accentuated then, as the War Office was employing a higher proportion than the other departments of firms inexperienced in the particular work they were doing; in such conditions it believed that contractors would not agree to fixed prices unless they contained a very substantial margin for contingencies. But these considerations did not apply to all the stores, and it is worthy of note that the R.O.F. used technical costing for guidance in their own production of some of them.<sup>2</sup> In deciding on a suitable maximum price, the War Office first compared, where possible, the results of previous post-costing in R.O.F. and the trade.<sup>3</sup> Where this was not possible, there was inevitably some element of guess-work in determining the maximum. In the relatively few cases in which they could not negotiate fixed prices, neither the Admiralty nor the Air Ministry used the maximum price contract. In such circumstances the Admiralty reached a settlement on the basis of actual ascertained cost, and the Air Ministry, though it placed some basic cost contracts for aircraft, usually placed provisional price contracts which were not necessarily post-costed.

Some minor changes took place in the rearmament period. Effective competition ceased for some items for which it had previously been available, but this did not cause any marked decline in the proportion of fixed price settlements. The Air Ministry, in particular, extended technical estimating to fields where it had previously been

---

<sup>1</sup> Chapter VIII below.

<sup>2</sup> S.C.N.E., 1940-41, 4th Report, Part I, paras. 34-35.

<sup>3</sup> *Ibid.*, *op. cit.*, Part I, para. 80.

unnecessary; the Admiralty relied more on the comparative method: prices in the shipbuilding programme were checked by reference to previous tenders and to contemporary costs in the Royal Dockyards.<sup>1</sup> The chief developments in the use of costed contracts were concerned with the improvement of the maximum price system. The War Office in many cases ceased to allow a percentage profit on cost and replaced it by a fixed sum per unit of output. The target cost system was also introduced. In the original example already cited,<sup>2</sup> some competition existed and the War Office laid down the same target for all the suppliers. Its subsequent practice when the system was extended to other fields, e.g. shell production, was to agree on a separate target with each firm. The Air Ministry also made occasional use of the similar basic cost method for aircraft, when fixed prices could not be negotiated after initial batches had been paid for on a cost-plus basis. The target cost system was, however, not widely used, although the Estimates Committee of 1937 recommended its adoption in all cases where a fixed price could not be accepted;<sup>3</sup> this suggestion proved to be impracticable.

In 1939 a Treasury Committee investigated the prevailing contractual system and concluded that it was generally satisfactory, except for the high profit on aircraft contracts. The Committee expressed no preference between prices fixed by technical estimates and maximum prices subject to post-costing, as either might be the more appropriate in different circumstances. Where competition did not exist for non-armament stores, the Committee suggested that in some cases, in order to secure quick delivery, it would be necessary to fix a standard price for all the suppliers selected, the price being related to the costs of an efficient firm. The most interesting observations of the Committee were those which implied that competitive tender was perhaps rather less perfect than was usually claimed. Suggestions were made that the long delays between submission and acceptance of tenders meant that manufacturers had to lock up capital and possibly lose the opportunity of commercial work, with the result that in some cases the better firms declined to tender and that in others the cost of the work was increased to cover long options on materials and the risk of loss of commercial business. In view of the volume of Government purchases, the Committee therefore recommended that Directors of Contracts should have greater power to dispense with competition.

The outbreak of war changed appreciably the conditions in which contracts had to be arranged. The significant alterations were an enormous increase in the number of contracts, a need for greater

---

<sup>1</sup> P.A.C., 1938, Q. 4149.

<sup>2</sup> Purchase of civilian respirators for Malta and Aden, p. 68 above.

<sup>3</sup> S.C. on Estimates, 1937, 1st Report, para 8.

speed in the delivery of stores, and considerable uncertainty about the future trend of costs. Both the latter points seemed to make it more difficult to continue a fixed price policy. The expectation of rises in costs made it unlikely that contractors would accept fixed prices unless they were very high, and in any case, as agreement on a fixed price usually took considerable time and production had to be pushed ahead as quickly as possible, it was likely that fixed price settlements would often be possible only at such a late stage in the duration of the contract as to destroy their incentive value. When the question was discussed early in the war between the Treasury and the Directors of Contracts of the three Supply Departments, only the Admiralty considered that it would be possible to maintain reasonable fixed prices. The Departments, however, agreed that they would continue to use the same methods as during the rearmament period unless and until experience showed that changes were necessary.

An attempt to preserve the essence of the fixed price contract, while overcoming one of the main obstacles to its employment, was made by the introduction of price variation clauses. These were not entirely novel. Early in 1937, when the English and Scottish Steel Makers' Joint Association announced that from 31st May that year they would raise their basic price, the Treasury agreed to the insertion of a steel variation clause in contracts, by which the departments undertook to pay the increase in cost due to the rise in the price of steel between the date of tendering and the date of delivery. At the outbreak of war, in order to avoid prices being swollen by wide margins for contingencies, provision was made for clauses of the same type, to cover rises in the cost of materials and in wage rates. At the same time the T.I.S.C. decided that departments should not similarly indemnify foreign contractors against variations in exchange rates, but individual exceptions to this ruling were occasionally allowed. In May 1940 the price variation clauses were extended to embrace the net amount of extra wages paid on account of air-raid stoppages. These provisions were inserted in contracts with reserve, and only when the contractor requested them, but they came into fairly general use and were included in most contracts of large value or long duration. Departments preferred if possible to have variation clauses only for wages and not for materials as well, as the volume and difficulty of the costing work required was much less if only wage variations had to be ascertained.

The use of variation clauses also made it possible to fit what was virtually a new field of State purchase, that of raw materials, into the fixed price system to a great extent. Contracts were usually placed at fixed prices, but provision was often made for increases in particular costs, such as wages, transport and fuel.

With this important innovation, all three Supply Departments



succeeded in negotiating a much higher proportion of fixed prices than they had anticipated. The Ministry of Supply, however, had inherited many of the staff and much of the contractual policy of the War Office, and was also purchasing the same stores. The result was that, although nominally it was trying to move to a fixed price basis wherever possible, in practice most of its armaments and many of its non-armament stores were purchased by maximum price contracts, just as they had been by the War Office. In 1941 the Ministry of Supply had reached the point of placing sixty per cent. of its contracts at fixed prices and forty per cent. at maximum prices,<sup>1</sup> but the forty per cent. included most of the larger contracts and those for the more intricate items.<sup>2</sup> The Ministry's experience of fixed prices was mainly in the sphere of textiles,<sup>3</sup> which were comparatively cheap items. In parts of this particular field it adopted the innovation approved by the Treasury Committee on Contract Procedure, and negotiated several agreements for the payment of standard prices for articles of uniform clothing.<sup>4</sup> This was, however, an isolated development, which had few successors and was gradually abandoned. It was always doubtful whether such arrangements produced a keen price for an industry as a whole, as a high-cost producer was naturally not prepared to make a settlement which did not give him a reasonable return, and the more efficient manufacturers therefore received extremely generous profit margins. In view of this, the Supply Departments decided in March 1944 that, though standard prices might be adopted temporarily while the cost structure of an industry was being examined, they should in future be accepted in long-term agreements only after very thorough investigation.

In the early years of the war, price-fixing methods remained essentially the same as in the immediately preceding period, and the old divergence of policy between the Admiralty and the Air Ministry on the one hand and the War Office on the other was repeated, with the substitution of the Ministry of Aircraft Production for the Air Ministry and the Ministry of Supply for the War Office. Despite the change in the economic setting, parliamentary opinion was still firm on the superiority of fixed prices and the importance of using a target cost where the use of a costed contract was unavoidable. In fact, the target cost contract fell into almost complete disuse. The Air Ministry began to use it early in the war for aerodrome construction because,

<sup>1</sup> P.A.C., 1941, Q. 3438.

<sup>2</sup> In 1942-43, when the proportion of fixed price contracts had risen to 72·3 per cent. in number, 81·4 per cent. of the value of all Ministry of Supply contracts was in respect of munitions, while general stores, which provided most of these fixed price contracts, represented only 18·6 per cent. of the total value (S.C.N.E., 1942-43, 14th Report, para. 84 (c) and Appendix I, Section I (i) (d)).

<sup>3</sup> P.A.C., 1943, Q. 3452.

<sup>4</sup> *Ibid.*, 1943, Q. 3693.

for the time being, it was the only alternative to the cost-plus system. But the Air Ministry was aware of its weaknesses and regarded it as only a temporary expedient. For this type of work the target cost contract was replaced by one for a lump sum based on a priced schedule of quantities, as soon as it became possible to prepare the necessary priced schedules.<sup>1</sup>

The Ministry of Supply's reliance on maximum price contracts without a target cost was thus opposed to parliamentary opinion. But the Ministry, though acknowledging that it was desirable to have fixed prices wherever possible, was prepared to defend its policy. It put to the Public Accounts Committee the view that it was impossible to generalise on the question of fixed price versus post-costing because the appropriateness of the method depended on the type of store, whether the contractor had ever made it before, and various other circumstances; that the advantages of the fixed price in offering an incentive to economy might be over-estimated, because the benefit of reduced costs was reaped by the contractor, not the taxpayer, and because it was doubtful whether such an incentive was necessary in a time of great emergency; and that the post-costed contract had the advantage of controlling not only the profit margin but the real profit, as the contractor's overheads were settled on the basis of fact and not beforehand on the basis of guess-work.<sup>2</sup> These arguments, though stated in a rather extreme form, were recognised as strong and accepted by the Treasury, which also approved the policy of using the information gained on costed contracts to negotiate fixed prices for later orders.<sup>3</sup> One feature which has previously been mentioned still persisted: the tendency of maximum prices often to be fixed rather high, as was shown by some of the settlements made after costing. On 6,449 maximum price contracts investigated in the eight months to 20th February 1942, the average final price was nine per cent. below the maximum.<sup>4</sup> Later in the war, when maximum price contracts were being less used, the Ministry of Supply examined the results at other periods. In April 1944, of 1,607 contracts considered, 821 were settled at over eighty-five per cent. of the maximum price, 373 at between seventy-five per cent. and eighty-five per cent., and 413 at less than seventy-five per cent. Of all contracts settled after costing during each of two eight-week periods in the autumn of the same year, only 19.3 per cent. and 16.8 per cent. respectively were finalised at the maximum prices.

In the end, however, it was not the ideal merits or weaknesses of the maximum price contract that determined the course of the

---

<sup>1</sup> S.C.N.E., 1941-42, 19th Report (59th Report of series), para. 4.

<sup>2</sup> P.A.C., 1943, Q. 3438.

<sup>3</sup> *Ibid.*, 1943, Q. 3448.

<sup>4</sup> *Ibid.*, 1942, Q. 7987.

Ministry of Supply's contract policy. It was the enormous increase in the number of contracts which did this. Costed contracts were placed in such quantities that the Ministry's accountants were quite unable to cope with them, their task being increased because many contractors were unaccustomed to detailed costing and did not keep records in a form readily suited to the purpose. Arrears mounted up. In February 1940 there were 4,200 completed contracts awaiting costing. One year later the rate of disposal of costed contracts had reached 17,500 per annum, but in the middle of 1942 41,600 contracts were in progress, so that at that rate it would take over two years to dispose of them.<sup>1</sup> By the end of May 1942 12,800 contracts were completed but still uncosted. The costing staff was then increased but there was no prospect of the arrears being rapidly cleared. A year later, however, the number of outstanding cases had fallen to 7,486,<sup>2</sup> partly because a smaller proportion of contracts had been put on a costed basis, but it was impossible to maintain the improvement, and in May 1944 there were 9,377 completed contracts awaiting costing.

This situation created many difficulties. Not only was the delay in effecting final settlements a source of irritation to contractors, but it carried within it the means of its own prolongation. One of the chief acknowledged uses of post-costing was to provide information on which to base fixed prices; but costing reports were so far out of date when they were received as often to be of little use in fixing current prices, so that further costed contracts were placed, thus adding to the burden. In 1942 the Ministry of Supply made a great effort to extricate itself from this position. With Treasury approval, many of the smaller contracts were settled by agreement with the contractors without costing; sometimes the Ministry paid the maximum price, but in most cases it was able to negotiate a rather lower figure.<sup>3</sup> This procedure undoubtedly ran the risk of allowing contractors to escape with excessive profits, but this appeared to be the lesser evil. After this, the Ministry's policy changed so as to put as many contracts as possible on a fixed price basis.<sup>4</sup> In the financial year 1943-44 eighty per cent. of its contracts were of this type, as compared with sixty per cent. two years earlier.<sup>5</sup> It was still necessary to place many valuable

<sup>1</sup> *Ibid.*, 1943, Q. 8051.

<sup>2</sup> S.C.N.E., 1942-43, 14th Report, paras. 88-89.

<sup>3</sup> P.A.C., 1942, Q. 8067-68.

<sup>4</sup> S.C.N.E., 1942-43, *op. cit.*, para. 90.

<sup>5</sup> No record exists of the division of M.O.S. contracts between the fixed price and the costed basis until the financial year 1941-42. From then on the proportion placed at fixed prices was (according to numbers, not value, of contracts): 1941-42, 60·2 per cent.; 1942-43, 72·3 per cent.; 1943-44, 79·9 per cent.; 1944-45, 83·3 per cent. These figures may be compared with those available for the M.A.P. which were: 1942-43, 95·49 per cent.; 1943-44, 96·27 per cent.; 1944-45, 95·29 per cent. The discrepancy would probably be more marked if the proportions according to value could be compared, but these figures are available only for M.A.P.; they were: 1942-43, 93·08 per cent.; 1943-44, 92·63 per cent.; 1944-45, 88·08 per cent.

munitions contracts on a costed basis and costing arrears persisted, but the situation in that respect was never again as bad as in 1942.

As the Ministry of Supply was forced by circumstances to use increasingly that fixed price system which had originally been expected not long to survive the outbreak of war, it is useful at this point to consider how far and by what means the system had been kept in existence. The importance of the price variation clauses in making it possible to retain the system has already been noted, but other difficulties still remained. Competition became very restricted, but on the other hand it was perhaps easier for departments to obtain full information on which to base reasonable non-competitive prices. The Ministry of Supply Act and the Defence Regulations gave them powers to examine contractors' books and to investigate costs, which previously they could only have obtained contractually; and few manufacturers would have readily agreed to such concessions on fixed price contracts. The changed situation in this respect enabled the Ministry of Aircraft Production to devise, in December 1940, a price clause for use in non-competitive contracts. This provided that fair and reasonable prices would be agreed or in default of agreement would be determined by the Minister. Until a price was fixed, provisional prices were to be paid and the Minister was given the right to visit the contractor's works for the purpose of making technical estimates and to examine the contractor's books in order to ascertain costs.<sup>1</sup> The placing of a contract subject to this clause was conditional on the agreement of the contractor, but in practice little difficulty was experienced on this account.

Of the methods of fixing non-competitive prices, technical costing continued to be the most important used by both the Admiralty and the Ministry of Aircraft Production. The only important innovation in it was an attempt by the latter to exercise closer control over labour cost, which until mid-1942, was calculated as the number of hours which would reasonably be spent on the work by an employee of average ability, multiplied by the average actual hourly earnings of the workmen. Of the three elements composing earnings, viz. a basic hourly wage, cost-of-living bonus and piecework rates, the two former were settled on a national basis, but the only general agreement about the latter was one between the Engineering Federation and the trade unions concerned, stipulating that piecework rates should be such as to enable a workman of average ability to earn a bonus of at least twenty-five per cent. of his basic hourly wage, excluding cost-of-living bonus. No maximum was laid down, and early in the war many firms paid extravagant bonuses which bore no real relation to productive efficiency. As long as actual rates of pay were incorporated

---

<sup>1</sup> A copy of this clause appears as Appendix 3A(i), below.

in technical estimates there was no effective deterrent from this practice.

It was a task of some delicacy to attempt a remedy, as this was bound to reduce workers' earnings. In June 1942 the Ministry tentatively approached the problem by instructing technical cost officers to allow, in addition to the appropriate cost-of-living bonus, a bonus of not more than fifty per cent. above the basic hourly rate. This allowance was twenty-five per cent. more than the minimum payable under the agreement, and the Ministry could justifiably argue that, if contractors paid a higher bonus than was allowed in the estimates, they presumably did so in order to achieve quicker and cheaper production. In March 1943, when the National Arbitration Tribunal increased the minimum bonus to  $27\frac{1}{2}$  per cent.,<sup>1</sup> the Ministry took the opportunity to bring its estimates into line and reduced the allowance from 50 per cent. to  $27\frac{1}{2}$  per cent. It is impossible to know whether this scheme produced a reduction in costs because its effect cannot be isolated from that of other contemporaneous factors, but it was undoubtedly a serious attempt to cope with a difficult and delicate problem which was otherwise untouched.

The fact that, with this one exception, technical costing continued on much the same lines as before the war did not mean that no new problems arose. One of great importance was the frequent delay in completing estimates, which was due partly to the difficulty of being accurate when designs were frequently changing and new methods of production were in use, and partly, as in the case of post-costing, to the volume of work, with which repeated increases of staff were unable to keep pace.<sup>2</sup> These delays applied not only to the actual technical costing, but also, still more, to the estimation of overheads. Their effect was frequently to postpone the settlement of a price until a late stage in the contract, sometimes until after the work had been completed, thus destroying the essential virtues of the fixed price contract. At 31st March 1942, work to an estimated value of £3,405,000 by the main aircraft firms and £5,585,000 by other firms had been performed for the Ministry of Aircraft Production and was still unpriced. In the financial year 1943-44 prices were agreed after delivery for 3,823 aircraft and 6,062 engines, of a total value between £40 million and £50 million; but that was out of a total of price settlements for 24,000 aircraft valued at £252 million and 37,450 engines valued at £56,500,000.<sup>3</sup> Delays also occurred in the Admiralty, and in November 1942 that department set up a committee to advise on the earlier agreement of prices. As a result it was arranged that, if the accountants were unable to furnish an agreed estimated

---

<sup>1</sup> Award No. 326, dated 20th March 1943.

<sup>2</sup> S.C.N.E., 1942-43, *op. cit.*, para. 98.

<sup>3</sup> P.A.C., 1944, Q. 3948-53.

rate of overhead charges, they should report an approximate estimated rate. This procedure expedited the settlement of prices in some cases. If no estimated rate of overhead charges could be given, the technical costs staff were to report to the Director of Contracts their recommendations and agreements on material and wages as soon as they had finished their investigation. Thus, although the price could not be settled, the contractor knew at an early stage approximately what his direct costs were expected to be.

The shortage of technical costing staff in relation to the volume of work not only caused delays in investigation but made it impossible to use technical costing at all on many contracts. Special efforts were therefore made, particularly in the Admiralty, to ensure that it was employed in those cases where it was most likely to reveal scope for improvements in manufacturing methods. The main alternative to technical costing was still comparison with prices or ascertained costs of other orders for the same or similar stores. The Air Ministry had never employed this method very much, nor did the Ministry of Aircraft Production do so at first. But circumstances compelled its use more and more, and by January 1944 it was being applied to sixty per cent. in number and twenty per cent. in value of Ministry of Aircraft Production contracts for miscellaneous stores. The Admiralty had used comparison more freely in the past and continued to use it increasingly for many stores, but in the most important field in which it had been customary, that of shipbuilding, it was found necessary in 1941 to abandon it because of its proved inaccuracy. The Raw Materials Department of the Ministry of Supply also based prices as far as possible on pre-war competitive market rates. But in some cases it had to make rather arbitrary, 'uneconomic' additions, so as to provide special incentives for the transfer of workers or other resources from one activity to another, or as a political concession to some foreign countries, or to ensure that important foreign supplies were not sold to the enemy.

The fact that it was only an approximation and therefore sometimes made it easy for contractors to gain high profits was always the greatest weakness of the comparative method. The war-time powers of departments to investigate costs affected this in two ways. On the one hand, the investigation of actual costs provided a body of reliable information, which often made it possible in future to fix prices by the comparative method with a reduced margin for error. The Ministry of Aircraft Production frequently paid for the first batch of a store on the basis of ascertained costs and used the information so gained in fixing prices for further production, and where the Ministry of Supply arranged fixed prices on the basis of information from previous maximum price contracts the same process was in operation. On the other hand, investigation of the outcome of contracts priced by the

comparative method sometimes revealed that serious errors had been made. This was what happened in the case of a large sample of ship-building contracts and led to the change just mentioned. After this investigation, no price settlements were made on warship contracts for two years and then settlements were based on actual ascertained costs.<sup>1</sup> Thus, over part of their fields of activity, the contract policies of the Admiralty and the Ministry of Supply developed in exactly opposite directions, because each had found serious difficulties in the method which it had initially preferred.

The power to investigate costs made it possible to use another method of reaching fixed prices, viz. current costing. An accountant examined the books of a firm during the course of a contract and ascertained the cost of a specific quantity. His figures could then be used as a basis for a fixed price for the total quantity. This method had the advantage that it did not make large demands on the time of accountants, but it suffered because, in order to be the basis of a fixed price, it needed to be carried out fairly early in the course of a contract, when initial production difficulties frequently raised costs above the average. It was used by all three departments, but the Ministry of Aircraft Production could not find much scope for it, owing to the complexity of most of its stores.<sup>2</sup> By contrast, when the Ministry of Supply adopted a fixed price policy from 1942 onwards, current costing was one of the methods on which it placed greatest reliance.<sup>3</sup> In the year ended 31st March 1944, it carried out approximately 9,000 current costings.<sup>4</sup>

The increased use of current costing also made it possible to obtain greater knowledge of the comparative costs of different establishments making the same stores. This was desirable, not merely as a guide in price-fixing, but also to assist Production Branches to discover how existing resources might be most efficiently used. In 1943 the Ministry of Supply was paying great attention to the place of comparative costing in this work and instituted, wherever possible, regular returns of costs in a standardised form from the R.O.F. and agency factories and from commercial manufacturers, those of the latter being obtained by spot costing. The Munitions Production Divisions already had their own administrative arrangements to collate and interpret technical efficiency returns, and liaison between officers engaged on this work and the costing branches was now effected by a new Special Adviser to the Director of Finance (Pro-

---

<sup>1</sup> See pp. 109-111.

<sup>2</sup> P.A.C., 1943, Q. 5216-18.

<sup>3</sup> *Ibid.*, 1944, Q. 4184-85.

<sup>4</sup> *Ibid.*, 1944, Q. 4239. This large figure was achieved although current costing was only a minor part of the work of the Ministry of Supply Costing Branch; only two of the branch's thirty-six sections dealt with current costs. In the calendar year 1943 the branch cleared 28,494 contracts altogether.

duction) who was particularly concerned with the co-ordination and standardisation of cost returns and the use of comparative costing. Several new committees were also created: one to examine differences in costing methods at the R.O.F. and the agency factories and to make recommendations for their standardisation; one to examine quarterly the costs of the explosive and chemical factories; and one to examine monthly the costs of contracting firms and to compare them, where applicable, with those of the R.O.F. and agency factories. The comparisons thus facilitated led to numerous reductions in costs and prices.

One further rough means of checking the accuracy of fixed prices existed during the war: the scrutiny of firms' overall trading results. While firms were producing almost entirely for the Government, this gave a ready indication of the general effect of the prices paid, without the necessity of large numbers of detailed investigations of particular contracts, and was extensively used by all three Supply Departments, especially after 1942. The purpose of overall scrutinies was not usually to reopen fixed price settlements, at any rate on main contracts, but to provide information for future negotiations. Their most widespread use was, however, in connexion with sub-contracts, where they provided a practicable alternative to the impossible task of making a multitude of separate cost investigations, and where they often led to suggestions of a rebate on account of excessive prices which were revealed.<sup>1</sup>

The examination of overall trading results was essentially a check on the level of profits; it was concerned with costs only in that the emergence of a higher rate of profit than a department had intended was evidence that costs had been lower than it had expected. It is thus necessary to know how departments measured profits, what criterion of fairness they adopted, and in what manner their intentions were realised. These topics will be discussed in the next chapter.

---

<sup>1</sup> See pp. 100-105.



## CHAPTER VI

# THE LEVEL OF PROFITS ON CONTRACTS

**I**N the preceding chapter the various types of contract were discussed in relation to the extent of control over costs and profits, the two constituents of price, which they made possible. There was a fundamental difference in the nature of control over costs and over profits. Many elements in the former were predetermined by circumstances which the contractor could not change; it was rarely possible for him to achieve any reduction, for example, in the cost of his materials, or in his wages bill. There were often some economies which he could achieve, particularly in overheads, and which the use of costing helped to disclose, but at any particular time there was an irreducible minimum to costs (including overheads) and no form of contract and no application of costing were capable of lowering them further. What was required of the contract was that, as far as possible, it should encourage the contractor to seek that minimum; but contractual policy alone could not be a complete control over costs. Profits were in a different position. It was possible to lay down some rough general criterion of what the level of profits should be and to direct policy with that in view. Where this was done, it is necessary, in order to complete the study of the effects of different types of contract, to consider how far intended levels of profit were realised in practice.

But the level of profits was significant not only in relation to contractual methods. It was a major financial question also, specially bound up with the problem of incentive. The essential purpose of finance was to ensure that people had both the means and the incentive to produce what the Government required. The means involved the provision of working capital, while production was in progress, and fixed capital, both of which will be considered later. The incentive also depended partly on the ready availability of both fixed and working capital, since any producer would be deterred from giving of his best if he were involved in a hard struggle to obtain them. But the strongest financial influence on it was the level of remuneration and, for contractors, this depended on the level of profits. Profits policy was thus the essential link between contracts and finance.

The problem of profit-determination hardly arose where competitive prices existed. It was assumed that in such conditions market factors kept profits to a reasonable level, and departments did not

normally investigate the amount of profits obtained by competitive tender. Even in peace-time, however, they had to decide what to do about profits when negotiating prices for stores which they could not obtain in that way, especially those for which there were no other consumers. They had then to decide or discover what payment was sufficient to secure the satisfactory fulfilment of their requirements. To do this it was desirable to have approximate knowledge both of the costs of production and of the rate of profit which contractors regarded as equitable. But, in fact, in peace-time the settlement of non-competitive prices was generally the outcome of hard bargaining in which departments often had to participate with no clear knowledge of the main elements of cost and overheads, though they had some idea of what was regarded as a reasonable rate of profit.

During the war this problem of deciding on a price without there being a free market price to serve as a guide became general, as a result of the use of direct controls over the level of production and the allocation of resources, and prices ceased to be the instantaneous indicators of a perpetually moving process. Prices, that is, became less dependent on the supply of and demand for different commodities, and instead were settled mainly with the object of giving producers a reasonable reward for their work. The level of that reward was usually the outcome of individual negotiations. But the aim of keeping remuneration within reasonable bounds was always in mind, and as profits were both more obvious and frequent targets of public and parliamentary criticism and more susceptible of rapid adjustment than costs, attention was primarily directed to the control of profits. The association of war contracts with excessive profits is one of long standing in the public mind. Excessive profits were undesirable for political reasons and on grounds of productive efficiency and monetary policy. That had been so in the past, but now limitation of profit had become so strongly desired that it had to be made practicable. On a long view, the most significant feature of the Government's profits policy is probably neither its methods nor the extent of its success, but the novelty of its thoroughness.

Profits could be regulated in two ways: either directly by means of taxation, or indirectly through the level of prices. Regulation through prices could also be effected by two methods: individually through the prices paid to the producer in respect of each separate Government order, or by overall arrangements of various types, which fixed prices in respect of all sales of a particular commodity, and which might also take into account the average profitability to a firm of its total sales of a large number of different products. This last distinction broadly corresponds to the war-time division between contract prices and controlled prices, which will be discussed separately.<sup>1</sup>

---

<sup>1</sup> Chapter X below.

All three approaches to the question of remuneration and profit were used. Taxation of profits was universal, but control of profits was never left entirely to the operation of taxation. To a great many producers it appeared that, by raising to 100 per cent. taxation of profits above a certain level, the Government had obtained complete control over their remuneration and that, consequently, the hard negotiation of prices which departments continued to insist on was mere wasteful duplication of effort. It will be convenient, before considering the treatment of the profit element in contract prices, to examine excess profits taxation in the light of this attitude.

The first attempt to impose by taxation a special restriction on the profits of firms engaged in the rearmament programme was made in 1939, when the Armaments Profits Duty was introduced.<sup>1</sup> By the time it was in operation, however, war had broken out and it was clear that circumstances which had been peculiar to the armament firms applied equally to other industries. The Armaments Profits Duty was therefore replaced by an Excess Profits Tax modelled upon it and levied at the rate of sixty per cent. on all businesses.<sup>2</sup> In 1940 the rate was increased to 100 per cent.,<sup>3</sup> at which level it remained throughout the war.

The main features of E.P.T. can be summarised briefly. It was levied on all profits in excess of a standard fixed for each taxpayer, in the choice of which the latter was normally allowed some discretion. He could choose as his standard the profits of 1935 or 1936 or the average of either of these years with 1937, whichever was the highest. In addition, the standard was increased by an allowance of eight per cent. on the value of capital employed in excess of that employed in the standard period. Firms which had come into existence since 1936 were simply allowed the eight per cent. on the value of capital employed. This value was calculated at book value as written down at Inland Revenue rates and borrowed capital was included. Not all that he paid in E.P.T. was permanently lost to the taxpayer. His contributions made a fund available to make up subsequent deficiencies on his standard profit, or to write off exceptional depreciation of fixed assets arising from war conditions, or for the eventual repayment of twenty per cent. of any remaining net liability which resulted from the application of the 100 per cent. rate; the E.P.T. fund would be applied to these various purposes in that order.

Business men were, however, less impressed by these prospective refunds than by the drastic rate of taxation imposed, which, they considered, was of itself sufficient to dispose completely and finally of the question of excessive profit. A number of contractors gave evi-

<sup>1</sup> Finance Act, 1939 (2 & 3 Geo. 6 c.41).

<sup>2</sup> Finance No. 2 Act, 1939 (2 & 3 Geo. 6 c.109).

<sup>3</sup> Finance Act, 1940 (3 & 4 Geo. 6 c.29).

dence to the Public Accounts Committee in 1942 and most of them expressed the view that the departmental efforts to bring contract prices closely into line with current costs had been rendered unnecessary by E.P.T.<sup>1</sup> The Treasury replied to this view by pointing out that E.P.T. had never been intended to provide a standard of fair and reasonable profit on Government contracts, but was designed as a reserve measure to deal with increased profits generally;<sup>2</sup> that E.P.T. standards varied widely, and could not justify the State in paying a higher price for a store to a contractor who had had a high peace-time standard of prosperity than to one who, though now equally or more efficient in the production of that store, had been less fortunately placed in peace;<sup>3</sup> and that contract prices were concerned not only with profit but with encouraging economical production, a purpose to which E.P.T. was not adapted.<sup>4</sup> The last of these arguments could have been extended to emphasise the necessity of maintaining the maximum volume of war production, which was possible only if there were an effective deterrent from unwarranted rises in costs. Price policy and remuneration policy had to be something wider than mere profits policy, although that was the constituent in them which publicly received most emphasis.

Although the Treasury logically refuted the suggestion that the prices of Government stores could be left to the sole care of E.P.T., it seems probable that many contractors remained unaware of or unconvinced by the reply. To them, E.P.T. was the most prominent feature of the Government's financial policy, because it appeared to have a greater influence on their earnings than anything else. In one respect its existence was very helpful to Contracts Branches, because it made contractors much less interested in prolonging negotiations in order to secure higher prices. But the general effects of its continuance at 100 per cent. caused many misgivings within the Supply Departments. The Ministry of Aircraft Production suggested in 1940 that 100 per cent. E.P.T. was deterring firms from financing any part of their own expansion and causing some to consider that commercial production was not worth-while, so that they asked to be relieved of risk by operating as Government agents. It also suggested that contractors' enthusiasm was being damped and that their attitude to costs was being affected. The first point certainly appears to have remained true throughout the war; the last contention would be more difficult to substantiate. E.P.T. became familiar and most contractors did their best in spite of it. But it was an element which, to a limited extent, seemed to conflict with the Government's general policy of

<sup>1</sup> P.A.C., 1942, 1st Report, para. 4.

<sup>2</sup> *Ibid.*, *op. cit.*, Appendix, para. 8.

<sup>3</sup> *Ibid.*, *op. cit.*, Appendix, para. 14.

<sup>4</sup> *Ibid.*, *op. cit.*, Appendix, paras. 12-13.

relying for munitions as much as possible on private firms operating commercially. The Government still offered familiar incentives, but contractors did not always realise it. They took much more interest in current receipts than in the prospect of an ultimate twenty per cent. refund and, although considerable benefits were available under the taxation arrangements, they lost much of their incentive force because, by being related to a hypothetical future, they were widely under-estimated. Moreover, E.P.T. offered only very rough justice between one firm and another. Some were permitted a substantial income, while those which had been only in the development stage at the time of the standard period were subject to unfair discrimination. For all these reasons, there were complaints from various quarters that, though E.P.T. was necessary, its existing form was not the best, and some suggestions that production might have been helped if the tax had been suitably modified.

E.P.T. was thus not by itself a complete and satisfactory instrument for regulating profits. It was an important element in a task which was in progress before E.P.T. was introduced, and in which other methods were used simultaneously with taxation. The history of the attempt to achieve through prices a satisfactory regulation of the level of profit has a continuity which was in no way broken by the introduction of E.P.T.

Two points had to be decided about the profit element to be aimed at in negotiating prices, viz. what was a reasonable rate of profit, and how was it to be calculated. On the outcome of any contract, profit would plainly appear as a proportion of cost or of sales turnover, and it was as a rate on turnover that business men were accustomed to regard it. But the rapidity of turnover differed so widely between one industry and another and between different firms in the same industry, often without any difference in efficiency and, in war-time, for reasons beyond the control of the firms, that a rate on turnover did not provide an equitable standard on which to base a roughly uniform profit formula. From the end of the First World War the Government therefore tried, as far as was practicable, to judge the suitability of a profit margin by reference to the ratio of profit to the capital employed on the contract.<sup>1</sup> This policy was not given an official quantitative expression until 1935, when a sub-committee of the Contracts Co-ordinating Committee suggested that in an emergency, when wages and raw material prices were also controlled, profit should be limited to a standard of ten per cent. and a maximum of fifteen per cent. on employed capital. A year later, the Defence Departments told a Treasury sub-committee that armament firms had a general understanding that, on non-competitive contracts, ten per cent. on the combined cost of labour, materials and overheads

<sup>1</sup> *Ibid.*, 1943, Q. 5843.

was a reasonable rate of profit. The sub-committee suggested that in suitable cases an attempt should be made to negotiate a lower rate, as armament capacity was being more fully utilised. Its conclusion that a percentage on capital employed was the most equitable criterion of reasonable profit was accepted by the T.I.S.C., which adopted it as an expression of policy.

In the rearmament period, though increasing attention was paid to the calculation of profit as a rate on capital employed, this method was still not in use universally. An important exception to it was the First McLintock Agreement between the Air Ministry and the members of the S.B.A.C., the provisions of which were applied from 1936 onwards, although it was not formally signed until 1938. This agreement related to aircraft contracts and provided that profit would be agreed on each contract but would never be less than five per cent. on the ascertained cost, except where, on basic cost contracts, the ascertained cost exceeded the basic cost by a substantial amount. At the end of 1938, the T.I.S.C. also recommended that, when War Office Commands placed target price works contracts for A.D.G.B. services, they should not normally allow, in respect of overheads and profit, more than ten per cent. of prime cost, a limit which, after representations by the War Office, was raised a few weeks later to fifteen per cent. in cases where prime cost was under £50,000. This was at no time, however, a rule of general application since a higher overhead rate was essential for most contracts, and it applied only for a few months to the A.D.G.B. programme.

By 1939 it was clear to departments that the expansion of Government orders had made inappropriate a profit allowance calculated only in relation to turnover. The turnover of the aircraft industry, for instance, had increased from £5½ million in 1934 to £8½ million in 1935, £17½ million in 1936, £25½ million in 1937 and £42 million in 1938, without an equivalent increase in its own capital. The profit on contractors' capital had also been increased by the provision of Government capital and by a rise in the proportion of sub-contracted work. When, in 1939, the Second McLintock Agreement was negotiated an attempt was made to allow for the resultant increase in the ratio of turnover to contractors' capital employed, by reducing the rate of profit on turnover as turnover itself increased. The rate of profit on target cost contracts for the year ending 31st March 1940, and each subsequent year, was to be calculated by the following formula:

- (a) On average yearly receipts from Air Ministry contracts for years ending 31st March 1937 and 31st March 1938 . . . . . 6 per cent.  
 (b) On such receipts in year ending 31st March 1939 in excess of the average under (a) . . . . . 4½ per cent.

(c) On the amount by which such receipts estimated for the financial year under review exceeded the aggregate of the sums on which the allowances under (a) and (b) were calculated . . . . . 3 per cent.

The total profits arrived at by this calculation, expressed as a percentage of the total estimated receipts from Air Ministry contracts for the year under review, were to be the percentage of profit allowed. The S.C.N.E. declared that this formula was not recognisably related to anything but the volume of turnover,<sup>1</sup> but in fact there was a rough linkage with capital employed, although it received only indirect expression and its quantitative value was uncertain and must have differed considerably between one firm and another.

Henceforward, except for works services, the return on capital employed was used throughout the Supply Departments as a guide to the profit rate to be allowed in prices, though some weight was still given to other factors, including turnover. Ten per cent. continued to be regarded as a fair rate on capital, and was reapproved in the summer of 1940. Numerous influences were, however, tending to make a reduction possible. Gilt-edged rates had fallen since the ten per cent. standard had been laid down in 1935, and for E.P.T. purposes only eight per cent. was being allowed on capital employed in excess of that in the standard period. In the summer of 1941 a standard rate of  $7\frac{1}{2}$  per cent. on capital was recommended for Government contracts and generally adopted in September. This remained the basic rate throughout the war.

There was never any intention that this should be a uniform rate applicable in all circumstances, but in some quarters there was apparently a view that it ought to be a maximum at which to aim, although an efficient producer on a fixed price contract might succeed in making a higher profit by reducing his costs.<sup>2</sup> Sir Bernard Gilbert of the Treasury informed the P.A.C. in 1943:

If there has been the impression that  $7\frac{1}{2}$  per cent. was the standard, and that that applied more or less to the great majority of cases, I think there has definitely been a misunderstanding, because no such thought has been in our minds. We have been challenged on this from many quarters. The Chancellor of the Exchequer is attacked by the Federation of British Industries and by the Chambers of Commerce, all on the general theme. They have the impression that there is a fixed profit irrespective of the turnover or anything else, and they say that that is grossly unfair because if a man doubles his turnover it merely means that he gets no more profit. He takes his profit in terms of turnover. We have explained to them that there is

<sup>1</sup> S.C.N.E., 1940-41, 4th Report, Appendix 3, para. 3.

<sup>2</sup> See e.g. questions put by Mr. (now Sir Francis) Douglas, P.A.C. 1943, Q. 5886-92.

no fixed standard applicable to every case. There is a standard starting point, but the efficiency and risk can both be judged and the profit margin adjusted accordingly.<sup>1</sup>

Efficiency and risk were always considered in deciding the appropriate rate of profit. This was not a new development. In 1937 the P.A.C. stated that the profit rate should be reduced wherever risk was reduced by the payment of actual costs plus a profit or by the guarantee of compensation in the event of fixed assets becoming redundant,<sup>2</sup> and the statement was adopted as a principle by the T.I.S.C. The principle was explicitly recognised in the Second McLintock Agreement which laid down that on fixed price contracts the profit rate should be two per cent. (on turnover) above that calculated by the formula for target cost contracts. Efficiency was worth rewarding because it meant lower costs and hence the release of resources for additional production. The P.A.C. never appeared to be much concerned with this point, but the S.C.N.E. was well aware of it and declared that 'so far as concerns the *public interest*, looseness about costs must be much more damaging than looseness about profit margins'.<sup>3</sup>

The manner in which the additional profit allowances for risk and efficiency were calculated was never made very clear to contractors during the war, and indeed departments had considerable discretion in this matter. The method most used was one suggested by the Ministry of Supply and approved by the Treasury in April 1941. This gave an allowance of up to 2 per cent. to cover contingent risks and a further 0.5 per cent. to 2 per cent. to efficient contractors, whose quotations were favourable when compared with those made by other contractors for the same or analogous articles. Both additions were percentages on cost, not on capital employed. This formula was known to all the Supply Departments and influenced their price-fixing, although it was not by any means strictly applied to all their contracts. The Ministry of Aircraft Production, in particular, made considerable departures from it. Whatever method of calculation was adopted, departments were instructed that the total profit should normally lie between certain prescribed limits. These were, for costed contracts, 7½ per cent. to 10 per cent. on capital employed, and for fixed price contracts, 7½ per cent. to 15 per cent. on capital employed. The Ministry of Aircraft Production, which made the greatest use of fixed price contracts, expected the profit that it paid to fully efficient firms accepting risk to be between 10 per cent. and 15 per cent. on capital employed.<sup>4</sup> The Admiralty tried as far as

<sup>1</sup> P.A.C., 1943, Q. 5892.

<sup>2</sup> *Ibid.*, 1937, Report, paras. 27-30.

<sup>3</sup> S.C.N.E., 1942-43, 14th Report, para. 35.

<sup>4</sup> P.A.C., 1943, Q. 5305.



possible to work within a maximum of 10 per cent. on capital employed. But, though all departments did their best to keep profits within the prescribed limits, the grant of risk and efficiency bonuses frequently made it impossible to do so.

One further question was of growing importance as the war progressed: the rate of profit to be allowed in respect of Government-owned assets. The increase in the amount of Government capital was one of the chief reasons why a reduction of the rate of profit on turnover was sought towards the end of the rearmament period, and it was decided that only very low rates of return on Government capital ought to be allowed to contractors. In the Ministry of Supply the maximum basic rate in war-time was at first  $3\frac{1}{2}$  per cent. instead of the  $7\frac{1}{2}$  per cent. applicable to contractors' own capital; later it was reduced to 2 per cent. for a short time. In the Ministry of Aircraft Production an attempt was made in the profit formula of the Second McLintock Agreement to allow for the element of Government capital. Later in the war, when individual agreements were made with each firm, the rate allowed on Government capital varied widely, but the average allowance was about 2 per cent. The variations were partly due to the fact that, in building up an estimated price, the allocation of profit between a firm's assets and those owned by the Government was somewhat arbitrary, since, although it was calculated in relation to the value of capital, profit had to be converted for contractual purposes to a single rate on cost-turnover. This was done by dividing the rate on capital by the turnover/capital ratio. The usual practice where State assets were provided free of interest was to allow a rate of profit on the firm's capital only, but, in converting that to a rate on cost-turnover, to add one-eighth of the value of the Government's assets to that of the firm's capital when calculating the turnover/capital ratio. This method was in general use in the Supply Departments by 1942 after earlier practices of allowing directly a specific rate of profit on Government capital had been abandoned. In effect a small profit allowance was thus still made for work done with Government assets, but only indirectly.<sup>1</sup>

The main features of the Government's policy on contractors' profits may be summarised as an attempt to lower the rate during the war; the grant of much higher rates on firms' own capital than on Government capital; increased allowances where the contractor's capital was at some risk; a readiness to pay a higher rate to the more efficient; and, overriding everything else, a determination that, as far as possible, no contractor should make unreasonably high profits. There remains the question how far the aims of this policy were realised in practice.

---

<sup>1</sup> S.C.N.E., 1942-43, 14th Report, Appendix 2, Annexe C.

The essential point is whether the policy prevented unreasonably high profits. The other matters were of such a nature that their outcome could usually be easily made to correspond to the intention behind them, although it is impossible to prove that efficiency and profit were accurately related; that is a question bound up with the fairness of the method of calculating profit, which will be discussed later.

The closeness of control over profit necessarily depended very much on the type of contract. Where costed contracts were used there was no great difficulty in ensuring that intentions regarding the rate of profit were realised, as the amount of profit was calculated after the work had been completed. The Ministry of Supply, which made the greatest use of this form of contract, made an analysis in 1943 of the costed contracts which it had placed over one period of five months. This survey covered 733 firms with a total capital employed of about £240 million and a total production cost of £350 million; the average rate of profit was found to be 9.68 per cent. on capital employed,<sup>1</sup> which both the Ministry and the Public Accounts Committee considered reasonable in relation to the standards adopted.

By contrast, where fixed price contracts were in use there was no certainty that the actual or emergent profit rate would be the same as that estimated in fixing the contract price; the outcome depended on the closeness with which it was possible to estimate costs. In cases where there was no recent knowledge of actual costs, some inaccuracy in price-fixing, with resultant high profits, was not unlikely. Mention has already been made of the high profits on a number of fixed price contracts for building warships in the rearmament and early war periods. Even where recent costs were known and taken into account, steadily increasing efficiency often resulted in their reduction and, therefore, a higher rate of profit than had been expected. The figures in Table 2 are significant.

TABLE 2 *Average profits of a group of aircraft firms* Percentages

Profit	1941	1942	1943	1944
Estimated percentage on cost	4.41	3.73	3.19	2.88
Actual percentage on cost .	6.38	5.66	4.90	5.74
Estimated percentage on company's capital . . .	12.82	14.38	12.61	14.92
Actual percentage on company's capital . . . .	18.51	20.40 (on same basis as 1941)	21.61 (on same basis as 1943)	19.08
				29.74

Source: Figures for 1941-43 inclusive from P.A.C., 1944, 2nd Report, Appendix 15, and Ministry of Aircraft Production; figures for 1944 from P.A.C., 1945-46, Q. 5322-24.

<sup>1</sup> P.A.C., 1943, Q. 5844-45.

The situation revealed by these figures displeased the P.A.C., which considered that the profits were too high. In 1943 it declared that the fifteen per cent. limit aimed at on aircraft fixed price contracts was excessive in comparison with the rates of profit on costed contracts,<sup>1</sup> and later it complained that the aircraft industry had made profits far above the rate envisaged by Government policy.<sup>2</sup> The Committee took no account of differences in the rate of turnover. When it made its comparison of profits on fixed price and costed contracts, the latest Ministry of Aircraft Production figures available were those for 1941, and it ignored the fact that the actual rate of profit on cost in that year was practically the same as that for the Ministry of Supply's sample of costed contracts, which it simultaneously approved.

The existence of high turnover/capital ratios and of progressive reductions in cost, which were the most vital need of war production, were the main reasons why it was difficult to keep down aircraft profits. Prices for aircraft were negotiated with a knowledge of the latest available figures of cost and it was found that, on an average, manufacturers were able each year so to reduce costs as to earn about  $1\frac{1}{2}$  per cent. more on turnover than they could have done on the basis of the previous figures. The rate of turnover was so high that this was enough to increase the average rate of profit on capital by nearly one-half,<sup>3</sup> which explains most of the discrepancies between the estimated and actual results shown in the foregoing table. It might be contended that the difficulty could have been avoided by allowing the maximum fifteen per cent. on capital, converting it to a rate on turnover, and subtracting  $1\frac{1}{2}$  per cent. to allow for expected reductions in cost. But the effect of this would have been to produce great divergence of profit rates between different firms and, where the turnover/capital ratio was over 10 : 1, as it was in at least one important firm, to offer a loss instead of a profit. It would, in fact, have been difficult for the Ministry of Aircraft Production to achieve much reduction in actual profits and at the same time to maintain fixed prices, so long as the existing profit standards were maintained. The decision as to whether the actual profits of the aircraft industry were unreasonable must depend on what sort of increase in remuneration is considered permissible as an accompaniment to increased efficiency. It appears rather illogical to demand a policy of fixed price contracts, on the ground that this is the most effective method of keeping down costs, and then to complain if the primary object has been so well achieved that profits have increased, particularly when it is remembered that all the profit rates under discussion were those before taxation. There is no doubt that the aircraft industry did

---

<sup>1</sup> P.A.C., 1943, Report, para. 66.

<sup>2</sup> *Ibid.*, 1945-46, 1st Report, para. 8.

<sup>3</sup> *Ibid.*, 1945-46, *loc. cit.*

achieve considerable reductions in cost, though, of course, it cannot be proved that this was directly attributable to a policy of fixed prices. On the other hand, no discussion of the merits of fixed prices can ignore the wide and persistent divergence between the estimated rates of profit allowed in building up prices and the rates actually earned. These brought into relief the great difficulties of accurately fixing prices for a large volume of production, difficulties which long experience could not overcome.<sup>1</sup>

There were undoubtedly individual cases of excessive profits and whole industries where the general level of profit was on the high side, but flagrant instances were rare, and in general, where there were direct contractual arrangements between a department and a firm, the profit situation was fairly well under control. Some manufacturers, indeed, complained that the effect of relating profit to capital employed was often to reduce the rate on turnover to a very low level, so that very little remained after provision had been made for War Damage Contributions, development expenditure, depreciation, and other necessary contingencies. But if attention were concentrated on the amount rather than the rate of profit it would be difficult to substantiate this contention.

Business men were, however, reluctant to accept the Government policy of relating profit to the value of capital employed, which was contrary to their normal practice of regarding it as a rate on turnover. One of their arguments against it was that, when profit was related only to capital, the lower the output the higher the profit, so that a premium was placed on inefficiency. This argument was valid on its own premises and applied to the war-time situation to the extent that profit was restricted to the basic rate on capital employed. But it cannot be fully accepted because, whatever the original intention, additional profit related to turnover was, in fact, fairly frequently allowed, according to departmental estimates of efficiency, and also because comparative rate of turnover is not always or necessarily an accurate indication of relative efficiency.

A stronger objection, which also related to the question whether the Government's profit policy did in fact permit more efficient firms to make higher profits and vice versa, was that the method of calculating capital employed was both unfair to all firms and much more unfair to some than others. When a firm was engaged on both

---

<sup>1</sup> The Treasury views on this important topic are stated in the following extract from a minute to the P.A.C. (P.A.C., 1944, Appendix 2): 'My Lords have frequently stressed that it is the essence of a fixed price that it should be a good price, i.e., one which is likely to produce for the contractor a reasonable profit, but not more than a reasonable profit, if he executes the contract with due care and diligence. They still hold this view, though they regard the desirability of extending the scope of the fixed price contract as justifying the taking of greater risks as regards price than were formerly thought desirable. But the difference between the envisaged profit and the emergent profit cannot be regarded as necessarily indicating that the price was too high.'

Government and civil work it was often very difficult to estimate how much capital was actually employed on the Government work, and this was one reason why, before the war, profit was usually related to costs, even on Government contracts. But during the war this difficulty largely disappeared; practically all work was directly or indirectly for the Government and the amount of capital employed on each contract could be determined by using the average turnover/capital ratio of the firm as a whole in a particular period. In valuing capital employed, however, ordinary business practice was not followed. Assets were valued at cost written down at Inland Revenue rates, although current and replacement values were rising, and goodwill was usually excluded.<sup>1</sup> It could be strongly argued that most items of goodwill were of value only in ordinary commercial work and that there was no reason why the Government should make any allowance for them. But it appeared to firms that, as depreciation was allowed only at Inland Revenue rates, the deductions made from total income in order to calculate the actual amount of profit were too small, and that, by the exclusion of goodwill, their capital employed was arbitrarily undervalued. Thus they considered that the latter practice tended to make the estimated amount allowed for profit too low and the former meant that the amount treated by the Government as actual profit emerging from the contract was higher than would be shown by their own methods of accounting. The further contention that the method of calculating capital employed created anomalies, by over-emphasising high capitalisation, so that a firm which had purchased fixed assets at high prices was benefited and a firm which had financed its expansion or replacements more prudently was penalised, undoubtedly had substance. But the Government could reply that, even so, no more satisfactory alternative over the whole field had been suggested.

---

<sup>1</sup> Early in the war an attempt was made to include in the value of capital employed an item for goodwill, in so far as it was of value in production for the Government. But this proved impracticable and goodwill was usually excluded altogether. If goodwill items contributed to increased productive efficiency, this was taken into account in assessing the extra profit allowance for efficiency.

## CHAPTER VII

# SUB-CONTRACT PRICES AND PROFITS

**S**UB-CONTRACTING not only repeated the problems of direct contracts but also involved difficulties of its own, which were chiefly due to its being a stage further removed from the control of Government Departments. It is these special difficulties which will be considered in this chapter.

Sub-contracts fell into two broad categories, viz., those for the supply to a main contractor of materials or specialised components or the performance of a particular process in manufacture; and those by which a main contractor sub-let part of an order for which he had not sufficient capacity immediately available. Before the rearmament period sub-contracting of the latter type was greatly restricted by a provision included in all direct contracts that the contractor should not sub-let more work than was customary in the trade concerned, unless the department expressly authorised him to do so. Apart from this, departments interfered very little with the allocation or price-fixing of sub-contracts, taking the view that, by exercising close control of prices on direct contracts, they gave the main contractor every incentive to seek economy in placing his sub-contracts. In order to ensure efficient work, however, the Admiralty, in the case of highly complex stores such as ships, armour and torpedoes, required its main contractors to submit for prior approval by departmental overseers the names of the sub-contractors whom they proposed to employ. But even then the settlement of prices and conditions was left entirely to the main contractor.

The rearmament period was marked by a considerable increase in the amount of sub-contracting, which was to some extent deliberately fostered by departments, particularly the Air Ministry, in order to increase the capacity available for specialised work. In some cases the Air Ministry nominated firms with whom their main contractors should place sub-contracts.<sup>1</sup> In addition, the increased volume of work led to a decline of competition in some trades, which sometimes made it more difficult for main contractors to obtain reasonable quotations from sub-contractors. The possibility of such difficulties had been foreseen by the Treasury Sub-Committee on Contract

---

<sup>1</sup> S.C. on Estimates, 1938, Q. 2979.

Procedure in 1936, and the T.I.S.C., after considering its report, stated that departments should check, as far as possible, that the cost of sub-contracted items was reasonable and should review sub-contractors' profits. If they found that main contractors tended to allow excessive prices to sub-contractors, they should extend the direct purchase of components for re-issue to main contractors.

All departments continued to rely on their main contractors to pay only reasonable prices to sub-contractors, but they gradually developed a number of general instructions for their guidance. The Air Ministry began to pay serious attention to the subject in 1938, by which time 30 per cent. of its expenditure on aircraft was being absorbed by sub-contractors, and in May 1939 it issued Circular Letter 99, which codified its instructions to aircraft contractors. The contractors were to place sub-contracts by competitive tender if practicable and to check tendered prices by an independent estimate of their own. Where competition was impracticable, they were to invite single tenders and make a similar independent check. If neither of these methods produced a satisfactory agreement on prices, they were to seek supplies elsewhere or, if no other source existed, to place the sub-contract on a basis which provided for subsequent negotiation of the price by the Ministry. The profit rates to be used by contractors in framing their estimates were seven per cent. on the estimated value of the sub-contractor's own work and five per cent. on the cost of his bought-out parts and materials. Where prices on direct contracts were reached by technical costing, the department's investigators examined the invoices from sub-contractors and thus became aware of charges which seemed too high. The Admiralty was more specific in its rules about competition, and stipulated that in certain cases, e.g. the purchase of capstan gear, distilling machinery, and other expensive marine equipment, shipbuilding contractors should obtain at least three competitive tenders before placing the order, which would be subject to scrutiny by the department. The decline of competition and the urgency of requirements, however, made it impossible for this rule to be continued after the outbreak of war. The War Office was making much use of costed contracts and, under the terms of the costings clause which governed all such contracts, the main contractor was required to insert a similar clause in all sub-contracts with any one firm which aggregated over £1,000 in value.

A device developed during the rearmament period was the negotiation of price agreements between a department and the original suppliers of articles much in demand by contractors. List prices minus a discount for quantity production were usually settled after a costings investigation and applied to purchases by any of the department's contractors. In 1938 the Air Ministry adopted a variant known as the

overriding order. This was a request by the Ministry to a sub-contractor to manufacture certain products at a price agreed or to be agreed with the Ministry, on the understanding that a main contractor would place a confirmatory order and that the Ministry would itself accept any surplus over main contractors' requirements. It was, however, difficult to use these methods extensively as firms were often reluctant to grant preferential prices to their normal commercial customers, particularly as they were often unaware whether an order they received from a Government contractor was in respect of his Government or his private work.

Departments also adopted to some extent the recommendation of the T.I.S.C. that they should purchase directly items which would normally be sub-contracted and issue them on 'embodiment-loan' to main contractors. This system had the dual advantage that, by bringing departments into direct contact with suppliers, it gave them greater control over prices, and also enabled them to regulate the volume of orders so as to ensure adequate supplies of essential parts and assist quick production of the complete equipment. After the outbreak of war it was greatly extended, chiefly for the latter reason. An example of its importance was revealed by the analysis in 1943 of the costs of the 'Lancaster' bomber, which revealed that 49.88 per cent. was accounted for by items issued on embodiment loan.

The extension of the embodiment loan system was representative of the general evolution of policy during the early years of the war. The problems presented by sub-contracting were approached by extensions of existing methods, because they were not new in kind but were old features magnified by the increased scale of activity. Departments themselves promoted much of the increase in sub-contracting. Contractors were often unable to obtain supplies of material or bought-out parts or were unfamiliar with the channels of supply in a type of manufacture to which they had been transferred from civilian work. Co-ordinated planning and allocation of production of the chief components and sub-assemblies for major stores, such as tanks and aero-engines, became essential; established trade connexions had to be broken and new ones formed in order to maintain a high rate of continuous production. Both the Ministry of Supply and the Ministry of Aircraft Production arranged a number of group schemes in which they placed contracts for a complete equipment with a 'parent firm' and the production of parts and sub-assemblies was distributed among the member firms according to their capacities.

A special device adopted by the Ministry of Supply was the 'Production Agreement', covering supplies to other than direct contractors. This type of agreement was used to regulate the production of machine-tools and of building and road-making plant, which



would not normally have been manufactured, in advance of orders, in the quantities likely to be needed at short notice in war-time. It provided for the manufacture of these stores in anticipation of orders and indemnified the makers against any consequent loss. In many cases the extent of the indemnity was limited to the excess over stocks which contractors could reasonably be required to carry. The amount of the indemnity was usually the sum by which the price realised for the stock and work in progress fell short of their cost of manufacture; in the case of machine tools only, the prices of which were statutorily controlled, a sum was added for profit on work done. In return the manufacturers agreed to retain (and to exclude from the indemnity) such part of the stock and work in progress as was within their reasonable requirements for the twelve months immediately after the period covered by the indemnity. For supplies other than machine tools, the prices charged to customers were restricted by a requirement that the prices operating on a specified date before the date of the agreement should not be exceeded, except to an extent which might be approved by the department to cover increases in the cost of materials and labour.

Whatever contractual and other devices were adopted, the demands on sub-contractors were so great that in most fields competition among them disappeared, and the speed with which their products were needed further strengthened their bargaining position. In this situation departments kept to established methods of dealing with sub-contract prices. Besides increasing the volume of embodiment-loan issues they made many more price agreements to cover both direct and indirect supplies. The practicability of the latter method had greatly increased in the many cases where production for civilian purposes had virtually ceased. Previous instructions to main contractors were continued and revised from time to time, and by means of them departments hoped to keep sub-contract prices and profits within reasonable bounds, although circumstances made it impossible for them to enforce their earlier requirements about the use of competitive tendering. In the case of aircraft contracts, the Ministry of Aircraft Production continued to apply Circular Letter 99, which was several times revised. In August 1941 it laid down that sub-contractors' profit rates of seven per cent. on the value of their own work and five per cent. on bought-out parts should apply only where fixed prices were agreed, and that where a costed settlement was made the rate should be five per cent. It also made provision for price variation clauses to be included in sub-contracts and ordered main contractors to secure for the Ministry the right of access to sub-contractors' works and books, for the purpose of estimating or ascertaining costs, in all cases where sub-contracts exceeded £1,000 in value. In 1943 it reduced the rate of profit on sub-contractors'

bought-out parts from 5 per cent. to  $2\frac{1}{2}$  per cent., but the relation of profit to cost was to apply only to small sub-contracts; as far as possible, main contractors were to relate their sub-contractors' profits to capital employed, keeping in mind the basic standard of  $7\frac{1}{2}$  per cent. on capital. Where payment was made on a cost-plus basis the profit was to be a fixed sum not exceeding five per cent. of the estimated cost. Outside the aircraft industry, the Ministry of Aircraft Production did not prescribe specific rates of profit to be allowed to sub-contractors, but, wherever a contract was likely to involve a large amount of sub-contracting, it required the concession of rights to investigate costs on all sub-contracts over £1,000 in value, and obtained from the main contractor an undertaking that, if so requested, he would refrain from agreeing on the prices to be paid by him to a sub-contractor until he had the approval of the Minister. Departments also continued to require the inclusion of a costings clause in all sub-contracts over £1,000 placed in connexion with a costed main contract.

Departments thus had ample powers to investigate sub-contract prices, but they were kept too busy to be able to use them very fully. Direct contracts alone stretched the resources of their staffs to the utmost and it was impossible for them to examine the majority of the far more numerous sub-contracts. Nevertheless, some selected sub-contracts were investigated and, in order to make this possible in more cases, the Ministry of Aircraft Production adopted in 1941 a scheme by which it accepted certificates of costs prepared by sub-contractors' own auditors.<sup>1</sup> Some investigations by technical cost experts led to important reductions in price. For instance, when production of all component units of the 'Wellington' bomber had been sub-contracted for final assembly by Vickers-Armstrongs Ltd., the departmental experts and the parent firm collaborated in examining tenders totalling about £3 million, and obtained reductions of over £500,000.

On the whole, however, despite their legal powers, departments relied chiefly on their main contractors to allow only a reasonable level of sub-contract prices. But contractors' ideas of what was a reasonable price were often more generous than those of Government Departments, even though they were working on a fixed price contract, which was believed to give them every incentive to keep down their outgoings to sub-contractors. It might well be that the fixed price included too large an allowance for expenditure on sub-contracting, and while main contractors were allowed the same rate of profit on the cost of their sub-contracted work as on their own work, as many were at the beginning of the war, they had a definite induce-

---

<sup>1</sup> P.A.C., 1941, Q. 2301.

ment to over-estimate sub-contractors' costs. In 1941 the Contracts Co-ordinating Committee recommended that direct contractors' profit on sub-contracted work should be reckoned at only half the rate on their own work, and in any case profit came usually to be based on the value of capital employed, so that this inducement disappeared. But, with the best will in the world, most contractors were too busy organising their own production to be able to inquire very closely into the prices charged by their sub-contractors. Moreover, many sub-contractors supplied a variety of direct contractors and, though the amount of excessive charges to any one of them might seem innocuous, the total income received from all of them could be quite unreasonably large. It was thus far easier for a sub-contractor than for a direct contractor to make extravagant profits and many did so. Some were doubtless unaware for some time just how fast their profits were increasing. Firms which had not raised prices, in spite of constant increases in labour and material costs, nevertheless found themselves with very high profits, as a result of a great increase in turnover.

For some time, little was done to counter this situation. In the early years of the war neither the P.A.C. nor the S.C.N.E. made any definite pronouncement about it and Contracts Directorates were pre-occupied with other problems. But the evidence of high profits on sub-contracts was becoming too great to be ignored and inter-departmental discussions of the problem began in the spring of 1942 in order to devise some more effective means of control. The problem was difficult and the search for a solution was protracted. It was recognised that it would be impossible to increase the costings investigation of sub-contracts, because of shortage of staff, both in departments and in contractors' organisations. Attention was also paid to ministerial powers to determine prices by direction orders, but as these powers were restricted by the necessity of proving that the order was in the national interest, and this would have entailed investigation of many individual cases, they offered no satisfactory solution. What was needed was something simple to operate, universally applicable, and economical in its demands on staff.

In June 1942 the Ministry of Aircraft Production decided to examine the overall trading results and profits of major sub-contractors in the following circumstances:

- (a) Where the Principal Technical Costs Officer or the Principal Accountant had reported that sub-contract prices appeared to be high and to include excessive profit;
- (b) where published accounts showed high profits which might have been earned on Government orders;
- (c) where main contractors had notified excessive sub-contract charges and their own inability to fix reasonable prices.

There was considerable opposition from firms selected for investigation, which persisted until directions had been issued to several of them under the Industries and Information (Records) Order, but which then subsided. Other departments turned their attention to the same method and the Ministry of Supply proposed the preparation of an inter-departmental scheme on similar lines. After discussion and various modifications, this was finally adopted in April 1943.

Each department surveyed its own field and from existing records, returns from agency factories, replies to inquiries made to main contractors, published accounts, and information obtained by departmental accountants when assessing overhead costs and capital employed on direct contracts, fairly comprehensive lists of sub-contractors, with information relating to their business, were gradually built up. The Ministry of Supply established a special section to collate this information and by mid-1946 its index contained the names of 16,000 sub-contractors, with estimates of the total volume of their sales in respect of Government work. This section became responsible for the investigation and negotiation of prices on sub-contracts for all purchasing branches of the Ministry, except for textiles and general stores. The Admiralty likewise concentrated all such activity in one special section, but the Ministry of Aircraft Production, while adopting a similar approach, left individual purchasing branches to make their own settlements with sub-contractors.

When there appeared to any department to be strong *prima facie* grounds for investigating a sub-contractor's trading results, it called for the preparation of an overall trading report. Under the inter-departmental scheme this task was carried out by the accountants of the department to which the firm was allocated for costing of all direct contracts, but any subsequent negotiations were conducted on behalf of all concerned by the department which was the ultimate purchaser of the greatest proportion of the firm's sub-contract supplies. The scheme was intended to apply mainly to the prices of stores common to several departments; specialised products could be excluded from the general negotiations and their prices arranged by the particular department interested in them. The overall trading report was prepared on the same general lines in all departments, after reference to the firm's latest balance sheet, trading and profit and loss accounts. It showed capital employed, divided between that owned by the firm and capital assistance provided by the Government; sales, divided among direct Government orders, sub-contracting for Government orders, and civil orders; profit before charging interest or making appropriation for taxation and reserves, but excluding non-trading income, e.g. dividends and interest, etc.; and directors', partners', or proprietor's remuneration. In addition, the

firm's sales on Government account were further subdivided, as far as practicable, among different departments and between fixed price and maximum price contracts for both direct and indirect supplies. If the overall trading report showed that a firm was making high profits on its sales to the Government, it was asked to negotiate lower prices for future deliveries and, unless the sum involved was very small, was invited to pay a rebate to the Government in respect of previous supplies. The level of profit and volume of sales at which it was decided to take action varied from department to department and from time to time. Approximate criteria which were generally applied by the Ministry of Supply were that price settlements need not be reopened if profit did not exceed fifteen per cent. on capital employed, or the turnover in respect of sub-contracts was under £20,000. The number of staff available to deal with this work was always a limiting factor, and more firms might have been approached if staff could have been spared for the purpose.

The strength of departments' bargaining position in seeking rebates and price reductions varied according to the contractual arrangements in force. Where sub-contracts included a costings clause, it was usually possible to negotiate a rebate in lieu of costing, i.e. in consideration of receiving a rebate from a firm, a department treated all its outstanding sub-contracts as closed and waived its costing rights in respect of them. In such cases the settlement could be extended to take account of profits on all sub-contracts which had not been costed. If the firm refused to agree to a rebate, then the department costed its larger sub-contracts and claimed any refund due on them. The position was more difficult where sub-contracts had been placed at fixed prices. Even if the price clause was included, as it usually was in Ministry of Aircraft Production sub-contracts over £1,000, this did not permit the department to revise the fixed price once it had been agreed, although it did allow it to ascertain the actual cost. In these circumstances, any refund made by the firm was voluntary and the Ministry of Aircraft Production, which was the department most affected, placed greater emphasis on the revision of future prices than on securing rebates. In some cases a sub-contractor refused either to agree to a rebate arrangement or to give any undertaking about future prices, and when this happened the Ministry of Aircraft Production sometimes instructed all the main contractors concerned that they must not fix a price with that firm and must place further orders with it only subject to a costings clause. Even where voluntary rebates were arranged, the delay which had occurred before the question had been considered usually prevented the settlement from covering the whole period in which excessive profits had been earned. The normal rule was that departments would not seek to reopen fixed price sub-contracts behind the date at which a firm's accounts

had been closed for taxation purposes. Consequently, little was done, except by taxation, to recover excessive profits made by sub-contractors in the first year or two of the war.

The settlements that were made showed considerable variety of detail. Most of them covered all indirect supplies by a firm, whether the sub-contracts concerned were subject to costing or not, but the Ministry of Aircraft Production usually made agreements which applied to its own direct contracts with the firm as well as to indirect supplies to all Government Departments. Refunds agreed in respect of past deliveries were either based on the difference between actual prices paid and revised prices negotiated at the time of the overall settlement, or they were lump sums calculated in the light of trading results. Arrangements about current and future supplies were of three possible types: sometimes specific, reduced prices were agreed; alternatively, prices remained unchanged, but subject either to an agreed rate of discount on all deliveries or to the refund to the department of all profit above an agreed rate; or thirdly, there was an understanding that, at the end of its financial year, the firm's overall trading results would be examined and a refund negotiated.

Although departments were often in a weak bargaining position and the reopening of written contracts freely made was not a procedure which it was easy to defend, most sub-contractors were sufficiently co-operative for the overall investigations and subsequent settlements to be made without undue difficulty.<sup>1</sup> The chief reason for this was probably the existence of E.P.T. Much, though by no means all, of what was refunded to departments would otherwise have had to be paid in E.P.T., and in any case this tax reduced firms' interest in making unduly high profits. Another reason was that many firms preferred to make a block refund to a department rather than reduce prices to their commercial customers, particularly the prices of products similar to those which they made for the civilian market. They feared that it would be difficult to restore prices to the old level after the war when, they expected, turnover would fall and costs rise. The simplicity of the overall arrangement also had advantages for the firms concerned as well as for departments, particularly when it was an alternative to costing and thereby avoided the accountancy work involved in making a large number of settlements with individual customers.

The way in which firms accepted the scheme made it possible to bring sub-contractors' profits more into conformity with those of direct contractors. The overall trading reports revealed that there was great scope for the reduction of prices. By July 1944 the Ministry of Supply had investigated the results of 1,300 firms, each of which

---

<sup>1</sup> The M.O.S. met with less than fifty flat refusals to negotiate.

had a capital employed of more than £50,000, and found that seventy-three per cent. of them had made profits of over fifteen per cent. on capital employed.<sup>1</sup> The Ministry of Aircraft Production up to February of the same year had examined over 200 firms and discovered that their average profit was 19·6 per cent. on cost.<sup>2</sup> The Admiralty found that the 344 firms with over £50,000 capital employed, which it had investigated by November 1944, had in 1942 and 1943 made an average profit of 27·86 per cent. on capital employed.<sup>3</sup> All three departments continued their examination of overall trading results until after the end of the war. They negotiated many price reductions and recovered in rebates some of the excessive profit that had been made, though doubtless some escaped. By 4th January 1947 the Ministry of Supply had secured refunds of over £30 million on an estimated trade of £335 million from 1,217 sub-contractors,<sup>4</sup> and by February 1946 the Ministry of Aircraft Production had recovered £20,900,000 as a result of 946 settlements. The Admiralty, whose contracts were of much less total value than those of the other two departments, had accepted refunds of £4,875,000 up to 31st March 1947;<sup>5</sup> this total had risen to nearly £6 million by the end of 1948. These figures give some idea of what was achieved, but they are not exactly comparable. Those of the Admiralty and the Ministry of Supply include not only voluntary refunds but recoveries due contractually from the operation of price-fixing clauses in contracts; the Ministry of Aircraft Production figures include only voluntary refunds, and recoveries under costings provision would increase them by about £3 million. On the other hand, the Ministry of Aircraft Production recoveries contained a larger element than those of the other departments in respect of direct contracts.

The system of overall investigations and rebates was an emergency device to cope with a neglected problem which was weakening the whole system of war contracts. It did much to keep profits and the costs of completed stores to a reasonable level, but it did not offer a permanent solution of the difficulties of accurate price-fixing on sub-contracts. Even in war-time its application had no effect on many individual prices, and except in war-time it was difficult to apply at all. After the end of hostilities, sub-contractors, less certain of obtaining all the orders they needed and subject to a lower rate of E.P.T., were reluctant to make any new agreements on the existing

---

<sup>1</sup> P.A.C., 1944, 2nd Report, para. 22.

<sup>2</sup> *Ibid.*, 1944, *op. cit.*, para. 21.

<sup>3</sup> *Ibid.*, 1944, *op. cit.*, para. 9.

<sup>4</sup> C. & A.G. Report on Civil Appropriation Accounts, Class X (War Services), 1945-46, para. 60.

<sup>5</sup> P.A.C., 1946-47, Q. 1090.

pattern. Departments found that overall reports were no longer an accurate guide to profits being made at the expense of the Government, as civilian orders made up an appreciable proportion of total sales. Consequently, war-time experience and methods were by no means a complete guide to the subject and, though the magnitude of the problem decreased, it had to be studied afresh for peace-time purposes.



## CHAPTER VIII

# THE APPLICATION OF CONTRACT PRICE POLICY TO PARTICULAR FIELDS

**T**HE three immediately preceding chapters have set out in general terms the principles of contract policy and the results of their application. These principles frequently offered a choice of procedure, and within the general framework there was never complete uniformity, as contract policy had to some extent to be adapted to the technique and organisation of each industry to which it was applied. In order to illustrate this process of adaptation, brief accounts will be given of the way in which various kinds of work were priced. It is practicable to select for this purpose only a very few of the enormous number of classes of war supplies, but the examples include some of the costliest and some of the most numerous types of store.

### (a) SHIPBUILDING

#### (i) *Warships*

Before the rearmament programme began, orders for new warships were infrequent. Ever since the arrears of the First World War had been made good the shipbuilding industry had been afflicted with capacity surplus to current demand and this situation was aggravated by the trade depression of the early nineteen-thirties. Consequently there was keen competition for Government orders, prices were low and profits small or even negative.<sup>1</sup>

Early in the rearmament period competition ceased to be effective. The increase in the volume of orders may have contributed to this situation, but the chief cause was the internal reorganisation of the industry and the formation of the Shipbuilding Conference. The Admiralty continued to obtain tenders from firms, but the prices quoted were so similar to one another that they could not be relied on

---

<sup>1</sup> The last two battleships to be built before the expansion period, the *Nelson* and the *Rodney* which were completed in 1926, were both constructed at a loss (P.A.C., 1943, Q. 3244-45). Cf. also the remarks of the head of a Clyde firm in the issue of *Fairplay* for 10th January 1935: 'It cannot be denied that a welcome volume of work for the British Admiralty is now in hand. . . . Nevertheless it remains true that the potential supply greatly exceeds the demand and the effect on prices is deplorable.'

as competitive figures.<sup>1</sup> The Admiralty therefore acted on the assumption that there was collusion among the shipbuilding firms.<sup>2</sup> This had two results. First, it encouraged the Admiralty to proceed by single tender when it wanted ships completed specially early,<sup>3</sup> and second, it compelled it to seek new means of checking that prices were reasonable. Even while competition prevailed, the Admiralty had always sought from its appropriate technical branches a certificate stating that the price tendered and to be accepted was fair and reasonable, and it decided to rely on such certificates in future. In giving these certificates the technical branches based their judgement mainly on comparisons with previous prices obtained by competition and with the costs of similar vessels built in the Royal Dockyards. There were difficulties in applying these comparisons during the rearmament period because the new ships incorporated considerable changes in design,<sup>4</sup> the increase in the volume of work reduced overhead charges to a lower level than for many years, and contemporary dockyard experience was limited. Between 1936 and 1939 the only ships built in the dockyards were cruisers, sloops and submarines, and no battleships had been built there since 1918.<sup>5</sup> Moreover, as the dockyards were laid out primarily for repair work, their constructional costs tended to be higher than those of private yards.<sup>6</sup> Nevertheless, the comparisons were made and were believed at the time to provide a fairly accurate check on prices.<sup>7</sup>

The Admiralty continued after the outbreak of war to arrange fixed prices which were checked in the same way. But the published accounts of the chief shipbuilding firms were showing high profits and, in order to strengthen his negotiating position, the Director of Contracts suggested the post-costing of a number of typical ships. The Admiralty did not intend to amend the prices already agreed, but desired details of actual costs as a guide in fixing subsequent prices. The proposal was approved in principle by the Board of Admiralty on 8th February 1940, and a detailed scheme prepared for submission to the First Lord in May, but the raising of E.P.T. to 100 per cent. created doubts about its necessity, and, as the Controller of the Navy pointed out that some of the firms concerned were

---

<sup>1</sup> e.g., the prices of *King George V* class battleships approached £3,500,000, but the single tenders for the first two ships, *King George V* and *Prince of Wales*, differed by only £6,000, while the lowest tender for those of the 1937 programme was only £13,000 above the higher of these. *Dido* class cruisers of the 1938 programme were priced at rather over £1,000,000; nine tenders were received which covered a range of only £18,475. All these figures refer to contracts for the hull and machinery only.

<sup>2</sup> P.A.C., 1943, Q. 3294.

<sup>3</sup> See pp. 35-36.

<sup>4</sup> P.A.C., 1943, Q. 3299.

<sup>5</sup> *Ibid.*, 1943, Q. 3999 and 4175.

<sup>6</sup> *Ibid.*, 1943, Q. 4001.

<sup>7</sup> *Ibid.*, 1938, Q. 4149.

small ones which could not spare the necessary staff when they were being asked to work seven days a week on new construction, the scheme was deferred until January 1941. By that time it was clear that E.P.T. was not by itself an adequate substitute for close supervision of prices and the First Lord approved the proposal to cost typical warships.

The shipbuilding firms expressed strong opposition to the proposal, and the Admiralty met one of their grievances by agreeing that, where at least three shipbuilders received orders at the same time for one class of vessel, the costs of all three shipbuilders of that class would be taken out, instead of those of only one of the class. After this concession, the firms agreed to give the Admiralty facilities for the investigation, which covered thirty-two ships, valued at over £20 million and built by twenty-two firms. The ships included a battleship, an aircraft carrier, cruisers, destroyers and miscellaneous small craft. The contracts for twenty-seven of them had been placed between 1936 and the outbreak of war, and for the other five shortly after the outbreak of war,<sup>1</sup> and in value they accounted for nearly a quarter of the total construction of the period, which amounted to about £90 million.<sup>2</sup> The costing showed plainly that very high profits had been made. The details are summarised in Table 3.

*Profits on a sample of warship contracts<sup>1</sup>*

TABLE 3

Profit on cost	Number of cases
Less than 10 per cent.	4
Between 10 per cent. and 20 per cent.	5
Between 20 per cent. and 30 per cent.	9
Between 30 per cent. and 40 per cent.	7
Between 40 per cent. and 50 per cent.	2
Between 50 per cent. and 60 per cent.	1
Between 60 per cent. and 70 per cent.	1
Between 70 per cent. and 80 per cent.	2
Over 80 per cent.	1

Source: P.A.C., 1943, Report, para. 12

<sup>1</sup> All the contracts were for hull and machinery.

The median rate of profit was about twenty-eight per cent. and the arithmetic average over all the contracts twenty-seven per cent. on cost. On the most expensive ship considered, the battleship, the profit was 41.64 per cent., and the only instance of a loss was on a small boom defence vessel; the profit rates over seventy per cent. were all in respect of submarines.

<sup>1</sup> *Ibid.*, 1943, Q. 3250.

<sup>2</sup> *Ibid.*, 1943, Q. 3257.

The Admiralty discussed with the shipbuilders the position thus revealed. The latter agreed that they had made excessive profits on the contracts investigated and, in consideration of this, offered to waive claims for extras on all warship contracts placed since 1st January 1939. When pressed for greater concessions they claimed that the profits disclosed by the costing were not typical and submitted figures relating to twenty-five ships built during a rather longer period. These showed profit rates in seven cases below ten per cent. on cost, in seventeen between ten per cent. and twenty per cent., and in one, a battleship, over twenty per cent.<sup>1</sup> The average profit rate on the ships, which, except for the absence of an aircraft carrier, covered the whole field of warship construction, was nineteen per cent.<sup>2</sup> Even this, however, was a high figure, especially as the sample had probably been selected with some discrimination, and the firms agreed to waive outstanding claims for £2,250,000 on 169 ships, including three battleships, three aircraft carriers, fourteen cruisers, forty destroyers and forty-one submarines.

This investigation forced the Admiralty to reconsider its entire system of fixing prices for warships. Comparison with dockyard costs was shown to be of little use. The cost of a *Fiji* class cruiser built in a Royal Dockyard was found to exceed the price, including a high profit, of a similar ship privately built. Another example was provided by a submarine, of which the actual cost was £170,000. The contract price was £317,000, but the dockyard cost of a similar vessel was still higher than that.<sup>3</sup> The comparisons with earlier commercial prices could not be so precisely tested. The Director of Naval Construction claimed that the chief cause of error in his estimates was that he had allowed too great a margin for expected increases in the cost of labour and materials, which had not been fully realised. This undoubtedly had an appreciable influence, but a more fruitful source of error seems to have been that, until 1939, no change was made in the percentage allowed in the estimates for overhead charges, despite the increased volume of work; it remained unchanged at fifty per cent.<sup>4</sup>

After 1941 the system of fixed prices for warships was abandoned and, in fact, for two years no prices were settled for any but the smaller warships built.<sup>5</sup> The new settlements which were gradually prepared and eventually completed had two prominent characteristics; reliance on knowledge of actual costs and a preference for

---

<sup>1</sup> *Ibid.*, 1943, *loc. cit.*

<sup>2</sup> *Ibid.*, 1943, Q. 4147.

<sup>3</sup> *Ibid.*, 1943, Q. 4020-4175.

<sup>4</sup> *Ibid.*, 1943, Q. 4129-46.

<sup>5</sup> *Ibid.*, 1945-46, Q. 3335.

overall arrangements with a group rather than separate agreements with individual firms.

The first group settlement related solely to claims for additions to the contract prices of the first batches of trawlers and corvettes ordered. Fixed prices had already been agreed for these, but there had been several changes in specifications, and negotiations for additional payments were in progress when the results of the cost investigation began to appear, in June 1941. The Treasury had already given the Admiralty permission to make a settlement within an average net figure of £4,000 per corvette and £1,500 per trawler, but in view of the revelations of high profits, the firms waived their claims. They stated that this was possible only because they had an arrangement that the more fortunate firms contributed part of their profits to the less fortunate, who would otherwise have suffered considerable hardship. This mutual arrangement was essential to the group settlements, which later extended to the initial agreement of prices.

The procedure in making group price settlements began with the builders providing through the Shipbuilding Conference statements of the cost of individual ships. These were based on the actual costs, to as recent a date as possible, plus the estimated costs of completion, and from them the average cost per ship of the same class was calculated for the whole group. A rate of profit normally not exceeding  $7\frac{1}{2}$  per cent. on cost was negotiated and added to the average cost to make up the price which was paid for each ship in the group. Thus the efficient contractor whose costs were comparatively low received a considerable financial benefit, but it is not known how far this was modified by internal arrangements between the firms. In one instance, where there was an unusually wide spread of costs, firms were divided into three zones according to cost. The average cost was calculated separately for each zone, but only the same *amount* of profit was added to each, so that the higher-cost zones received a lower percentage profit on cost.

To ensure that contractors did not obtain excessive profits from the settlements, the Admiralty had three safeguards: (1) it reserved, and sometimes exercised, the right for its own auditors to make a check of current costs;<sup>1</sup> (2) if a firm's estimate of the costs of completion proved too high it had to refund the excess to the Admiralty, but if it was too low it had to stand by its mistake;<sup>2</sup> (3) the group was

---

<sup>1</sup> Some half-dozen test costings were carried out and resulted in rebates in some cases. One firm refunded £10,000 on account of overpayment on the machinery of three tugs and thirteen trawlers.

<sup>2</sup> It might seem that this would simply encourage firms to quote high figures, but the many cases in which firms underestimated their costs suggest that in practice this was not so.

eventually to supply an overall profit certificate showing the amount of profit made on each settlement as a whole.

The earlier group settlements were confined to corvettes, trawlers and other small ships. The agreement of prices for larger warships was delayed until information about the turnover/capital ratio could be prepared and thus give some indication of what rate of profit would be reasonable. The uncertainty caused by this delay eventually led, in December 1942, to the suspension of price settlements for auxiliary vessels also. Turnover/capital figures were available from January 1943, and negotiations began for a settlement of the many outstanding contracts. For guidance in deciding what rate of profit was appropriate the figure of  $4\frac{1}{2}$  per cent. on cost, which was the average received by ship repairers, was used,<sup>1</sup> as this was found to give an average return of 10·8 per cent. on capital to repair firms and 9·6 per cent. on capital to firms engaged in both building and repairing. The Admiralty's original intention was to negotiate with individual firms on this basis, with maximum additions of 2 per cent. for efficiency and 0·5 per cent. for risk, both calculated on cost. But in practice the multiplicity of influences on cost made it impossible in most cases to attribute high costs directly to the inefficiency of any individual builder, so in 1944 a general settlement was at last made, though six ships which had been completed at obviously high cost were excluded from it.<sup>2</sup> The settlement provided for a standard profit of  $6\frac{1}{2}$  per cent. on total cost, including sub-contracted work, for all unpriced warships that had been completed by the end of 1943, of which there were 151. Where there was more than one ship of a class the profit was  $6\frac{1}{2}$  per cent. of the average cost of ships in the group. The average turnover/capital ratio was 2 : 1 so that the average profit on capital was thirteen per cent.<sup>3</sup> This settlement was based on actual costs, but the Admiralty regarded this not as a precedent for future policy but as an *ad hoc* method of clearing off arrears.

The settlement of warship prices was followed by negotiations for a settlement with the group building naval auxiliary vessels. As this group had a higher average turnover/capital ratio than the warship group, the Admiralty hoped to arrange a lower rate of profit on cost. But the ratio varied in individual firms from 0·6 : 1 to 10 : 1, which reflected not so much variations in efficiency as great differences in capitalisation, which were a consequence of many years of depression. Moreover, some of the firms were also building merchant ships, on which the Government was temporarily paying a profit of  $7\frac{1}{2}$  per

---

<sup>1</sup> Profit on repairs varied according to a sliding scale of costs, the average over the whole scale of costs being five per cent. See below, p. 140.

<sup>2</sup> A lower rate of profit was allowed on these six ships. For four of them it was only  $3\frac{1}{2}$  per cent. on cost. (P.A.C., 1945-46, Q. 3390.)

<sup>3</sup> *Ibid.*, 1945-46, Q. 3366.

cent. on cost and they asked for the same rate on their naval auxiliary work. The Treasury therefore agreed with the Admiralty that profit in this case could not be accurately related to capital employed and negotiations were conducted on the basis of  $6\frac{1}{2}$  per cent. profit on cost with slight variations for efficiency and risk. These negotiations were eventually combined with those concerned with merchant shipbuilding, and in October 1945 an agreement was made which allowed seven per cent. profit on estimated cost and applied to vessels for which price settlements were still outstanding and which had been completed or launched by the end of 1944. This gave an average return of fifteen per cent. on capital,<sup>1</sup> but for the reasons already given, this figure was not of much significance.

Early in 1945 a further settlement of warship prices was made which applied to all ships that had been completed by the end of 1944 and the prices of which were still awaiting decision. This was concluded before the actual costs of construction were known and the profit rate, as in the earlier group settlements for auxiliary vessels, was related to the estimated costs stated in the tenders. The Admiralty considered that this introduced a small element of risk, and as it also estimated that the average turnover/capital ratio had fallen slightly to 1.93 : 1, it agreed to a profit rate of seven per cent. on estimated cost.<sup>2</sup> After the end of the war this rate of seven per cent. on estimated cost continued to be applied in settling prices for outstanding wartime orders for warships, naval auxiliary vessels, and merchant ships. Towards the end of 1947 the Admiralty made a further settlement on this basis. It covered ships completed or launched in 1945 and 1946, to the value of about £75 million. On the 1945 value of the average turnover/capital ratio, the settlement would give 11.4 per cent. on capital to warship builders and 13.4 per cent. to other builders.<sup>3</sup>

These settlements show what a drastic change in contract policy occurred as a sequel to the cost investigation of 1941. That investigation also led to one change in a matter of allowable costs. It revealed what the Admiralty had not previously known, that the tenders included an item to cover the amount of a levy payable to the Shipbuilding Conference.<sup>4</sup> The levy was instituted in 1939 and replaced three earlier levies intended to improve the efficiency of the industry and assist shipbuilders against foreign competition. It was included in prices for all private as well as Government orders. When the Admiralty became aware of its existence, it reserved the right to call for a refund of the amount included in respect of the levy in all future

---

<sup>1</sup> C. & A.G. Report on Navy Appropriation Account, 1944, para. 9.

<sup>2</sup> P.A.C., 1945-46, Q. 3335-3414.

<sup>3</sup> C. & A.G., *op. cit.*, 1946-47, para. 17.

<sup>4</sup> P.A.C., 1945-46, Q. 3459.

Government contracts, whether for warships or merchant ships.<sup>1</sup> It subsequently agreed, however, that losses and depreciation incurred in building ships to Government account at Low Walker and Southwick, two derelict yards reopened by the Shipbuilding Conference at the request of the Government, should be met from the levy. From the time when it was made a subject of reservation to the end of 1944, the amount of the levy paid by the Admiralty was £910,000 and the allowable charges against it totalled £608,000, leaving a balance of £302,000. Towards the end of 1945 a final settlement was made for that period, by which the Shipbuilding Conference repaid £365,000 to the Admiralty.<sup>2</sup> In 1947 the Conference agreed to refund a further £190,000 in respect of levies paid in 1945 and 1946, but asked for the payment of the refund to be deferred until the tax position was clear.<sup>3</sup>

(ii) *Merchant Ships*

Before the war the Government was not directly concerned with the production and purchase of merchant ships and after the outbreak of war it had hurriedly to devise a contractual system for this purpose. Responsibility at first rested with the Ministry of Shipping, but was transferred to the Admiralty in February 1940.

The urgency and volume of demand made it impossible to obtain competitive tendering and, of existing methods of pricing, the only one practicable appeared to be the payment of actual labour and material costs plus a lump sum for overheads and profit.<sup>4</sup> The first orders were placed on this basis, but in February 1940 the shipbuilders themselves suggested to the Admiralty that it should be abandoned, as it offered no incentive to efficient production and had an undesirable effect on labour. As an alternative, they proposed that the prices of all types of vessel should be related to those ruling in April 1939, when the recent publication of the British Shipping Assistance Bill had stimulated the creation of a free market between willing buyers and willing sellers,<sup>5</sup> and they stated that a standard formula could be devised to cover subsequent variations in cost. They had already set up a committee of merchant shipbuilders and marine engineers to consider this question and it had reported that from April to December 1939 there had been a total net increase of 10·5 per cent. in the costs of hull material, wages, overheads, and ship machinery, plus a further estimated increase of four per cent. attri-

---

<sup>1</sup> *Ibid.*, 1945, Q. 2749.

<sup>2</sup> *Ibid.*, 1945-46, Q. 3452.

<sup>3</sup> C. & A.G., *op. cit.*, 1946-47, para. 19.

<sup>4</sup> This was the arrangement for merchant ships in the First World War.

<sup>5</sup> The shipbuilders supported this statement by details of twenty-two contracts placed in April 1939 by private owners. The total price was £2,478,978, of which £89,095 was profit, i.e. 3·59 per cent. on cost.



butable to irregular deliveries of material, black-out restrictions, disturbances in the normal proportions of various types of labour, and abnormal overtime. The proportionate increase was practically the same for all types of cargo vessel, including tankers. The Shipbuilding Conference therefore suggested that the prices of all ships ordered on or before 3rd December 1939 should be those of April 1939, increased by  $14\frac{1}{2}$  per cent. For subsequent orders, it proposed that the price increase over April 1939 should be proportionate to the increase in the price of steel, as the market prices of ships had for a long period very closely followed changes in the price of steel. The alternatives were a formula related to variations in the price of steel alone and one which took account of wage variations also. The Admiralty preferred the former because a formula including wage variations might discourage economy in the use of labour.

The formula which the Admiralty proposed to adopt provided for the calculation of the average basic price of steel (weighted in the proportion of two-thirds plates and one-third sections) for the period from the acceptance of the order by the shipbuilder to the delivery of the ship. The average would also be weighted according to the time incidence of the fluctuations. This average price of steel would be compared with the price in April 1939, the price of the ship would be raised in the same proportion above the price ruling at that date for the same type, and the resulting figure used as a basis for negotiating the final price. The Treasury expressed doubts as to whether changes in steel prices alone were an adequate guide to changes in shipbuilding costs and whether a reduction in overheads might not raise profits unduly, but as the Admiralty felt reasonably satisfied on both points it approved the scheme. On 11th June 1940 the Admiralty wrote to the Shipbuilding Conference, agreeing to adopt the proposal, on the assumption that the Government would not artificially peg steel prices and with the reservation that, if the price of steel rose abnormally during the building period, it would have to reconsider the variation clause. The Admiralty reserved its right to investigate costs in any instances in which this was found to be necessary in the public interest.

In practice, it soon became clear that, before they were stabilised in November 1940, steel prices had risen more rapidly than shipbuilding costs. On 22nd November 1940 the Admiralty asked the Shipbuilding Conference for details of the actual cost of ships substantially completed just before the outbreak of war and of ships ordered since then for the Government and delivered or almost completed, so that a more reliable guide to prices would exist. In the meantime the Conference was itself studying the working of the formula, and concluded that it had given reasonable results until the price of steel rose by 30s. per ton on 1st July 1940, after which it indicated excessive prices.

The Conference therefore surveyed the results of thirty-two hull and twenty-two machinery contracts which were comparable with pre-war types, and reported the results in March 1941. These showed that the price increase over April 1939 which was indicated by the formula should be reduced by 33·6 per cent. in respect of direct costs, and this correction was used in applying the formula to all unpriced ships delivered before the end of 1940. The Conference made similar surveys at three-monthly intervals, which resulted in reductions of thirty-six per cent., thirty-two per cent., and twenty-eight per cent. respectively from the formula price increase in the first three quarters of 1941.

Even with these corrections, however, the formula was not entirely satisfactory. Since 1939 there had been an appreciable increase in turnover which inevitably affected the incidence of overhead charges.<sup>1</sup> The Admiralty therefore called for individual quotations and checked each one against its own independent technical estimate and its knowledge of the increased turnover of the responsible firm. Where novel designs were incorporated or there was an unusually wide variation in the prices quoted by several builders for ships of the same type, the actual costs were ascertained either by Admiralty accountants or from figures prepared by independent auditors employed by the builders. As a result, final prices well below those indicated by the corrected steel formula were negotiated for many ships, as shown in Table 4.

*Operation of formulae for merchant ship prices*

TABLE 4

Type of vessel	Price under original formula	Price under corrected formula	Price finally agreed	Increase over April 1939
	£	£	£	%
Steam tanker . . . . .	267,067	247,499	244,500	15·46
Diesel cargo tramp . . . . .	184,539	168,055	169,000	19·69
Steam cargo tramp . . . . .	149,120	135,581	132,000	23·58
Steam cargo tramp . . . . .	179,486	160,037	155,700	30·50
Steam cargo tramp . . . . .	130,348	119,975	110,000	26·24
Diesel cargo tramp . . . . .	239,001	217,987	199,900	22·57
Steam tanker . . . . .	303,564	279,191	251,150	18·58
Diesel cargo tramp . . . . .	219,176	197,579	182,000	28·72
Steam tanker . . . . .	313,134	283,345	255,065	26·80
Steam cargo tramp . . . . .	176,966	159,961	144,384	27·33

Source: Admiralty

Although during 1941 the formula was ceasing to be a very useful guide, the Admiralty still appeared to be able to negotiate reasonable prices, and it believed that the average prices for ships completed for

<sup>1</sup> S.C.N.E., 1941-42, 17th Report (57th Report of series), para. 48.

private orders in that year were about  $17\frac{1}{2}$  per cent. above those for ships built on Government account.<sup>1</sup> Early in 1942, however, it decided that 1939 prices were too remote to be used as a basis any longer, and in June it sought and received permission from the Treasury to abandon the steel formula. It obtained from builders details of the costs of any ships completed in 1941 of which they were to build duplicates and decided to consider future tenders in the light of its existing knowledge of costs. Under the steel formula the actual profits earned had usually not exceeded  $7\frac{1}{2}$  per cent. on cost, which the Treasury considered not unreasonable, and the Treasury agreed that future prices should be made up of estimated costs, plus 6 per cent. to  $7\frac{1}{2}$  per cent. on cost for profit, provided that the turnover/capital ratio was ascertained as a check in typical cases.

Prices were negotiated on this basis from June 1942 to the middle of 1944, when a new safeguard was introduced. In addition to supplying with their tenders particulars of the costs of the last similar vessel constructed by them, contractors had now to state details of the costs of the new vessels as soon as possible after their completion. In the meantime, the turnover/capital ratio had been investigated and by June 1943 detailed figures were available, but they showed such discrepancies between different firms, owing to their financial history, that it was impracticable to devise a standard rate of profit related to capital employed.<sup>2</sup> The Treasury therefore agreed that profit should continue to be related to cost and approved a figure of  $6\frac{1}{2}$  per cent. as a suitable average rate of profit when the tender was submitted just before the launching date and there were no very unusual features. In 1945, when a common rate of profit for both merchant ships and naval auxiliary vessels was negotiated, this rate was raised to 7 per cent.<sup>3</sup>

A prominent feature of this policy, which provoked some criticism, especially from the S.C.N.E.,<sup>4</sup> was that the Admiralty did not seek to fix prices until near the launching date. This appeared to destroy the advantages normally associated with the fixed price contract, but the Admiralty considered that there were so many uncertainties in the earlier stages of construction that any price fixed earlier would be bound to include a large allowance for contingencies. At the launching date, however, there was sufficient information to make possible a reasonable estimate, but the contractor was still at some risk, as part of his work remained to be done, and usually he had still to receive a great many of the invoices from his sub-contractors, whose proposed charges were unknown to him. In practice, settlements were

<sup>1</sup> *Ibid.*, 1941-42, *op. cit.*, para. 53.

<sup>2</sup> The average turnover/capital ratio for the main merchant group was 1.6 : 1 but in an individual case it was as high as 9 : 1.

<sup>3</sup> C. & A.G., *op. cit.*, 1944, para. 9.

<sup>4</sup> S.C.N.E., 1941-42, *op. cit.*, *passim*.

often delayed well beyond the launching date, but discussions were always begun before the ship was completed, and the system does not appear to have had adverse effects on costs, while it kept profit to a reasonable level.<sup>1</sup>

(b) AIRCRAFT

The highly specialised characteristics of military aircraft usually made it impracticable to obtain competitive supply of any particular type, although there was keen rivalry among firms to secure the acceptance of designs by the Air Ministry. Before 1935, prices were usually settled by direct bargaining between the Air Ministry and the contractors, but the smallness of the volume of available orders was a safeguard against unreasonable quotations.

When rearmament began, the large increase in orders, the need to plan production for several years ahead, the introduction of radical changes in design, and the existence of ministerial pledges that there would be no profiteering, all made it necessary to revise existing contractual arrangements. The Air Ministry discussed the various problems with individual firms and with the Society of British Aircraft Constructors, but progress was slow until, in May 1936, the Society appointed Sir William McLintock to negotiate a settlement of the outstanding questions. The sequel was the First McLintock Agreement between the Air Ministry and the S.B.A.C., which was also accepted individually by the eighteen full members of the Society. This agreement was not formally signed until February 1938, but most of its provisions were settled by September 1936 and were applied in contractual arrangements from that time. It stipulated that fixed prices would be negotiated, if possible. If agreement were not possible then prices would be reached by either of two methods or by both successively. The first alternative was for two preliminary batches to be completed and their actual cost paid with the addition of an agreed profit, after which a further attempt would be made to negotiate a fixed price for the remainder of the order. The second alternative was to decide on a 'basic cost' and a fixed profit. If the ascertained cost exceeded the basic cost, the ascertained cost plus a profit not less than the original fixed profit would be paid. If the ascertained cost were less than the basic cost, the contractor would receive the former, plus the fixed profit, plus an agreed proportion of the difference between the basic cost and the ascertained cost. Whatever method of price negotiation was used, the minimum rate of profit would be five per cent. on cost, except on any basic cost contracts on which the ascertained cost was substantially more than the

---

<sup>1</sup> A test made by ascertaining the actual costs of seventeen representative ships, after they had been completed and the contract prices settled, showed that the estimated percentage profit allowed in the seventeen settlements averaged 6·84 per cent., while the average profit yielded by the contract prices was 6·36 per cent.

basic cost. Any disputes could be referred for arbitration to the Hardman Lever Committee, which consisted of three independent members appointed by the Secretary of State for Air to give him general advice.

There was at first much difficulty in negotiating fixed prices, although the Air Ministry submitted to long delays in the attempt to do so and had equipped itself to undertake a greater amount of technical costing for the purpose. The size of the technical costing staff grew from ten in 1934 to seventy-four by February 1938. Firms were unwilling to commit themselves to a definite price even for established types and consequently much use had to be made of batch costing. Under the expansion scheme, contracts for 10,219 airframes had been placed up to February 1938, and batch costing had already been applied to 4,163; for 4,943 the contractors had not then quoted any price. After the cost-plus settlement for initial batches, however, most firms agreed to fixed prices and comparatively few basic cost contracts were placed. In the financial year 1938-39 approximately two-thirds of the aircraft price settlements were on a fixed price basis.<sup>1</sup>

One of the weaknesses of the McLintock Agreement was that it gave no indication of what was a suitable rate of profit except that it should not be below five per cent. on cost. The Air Ministry tried to keep ten per cent. on cost as a maximum rate with some reduction for costed settlements, and it informed Sir William McLintock that it would regard  $7\frac{1}{2}$  per cent. as normal for basic cost contracts. But by 1938 it appeared that the aircraft firms were making very high profits. The Air Ministry therefore asked an eminent accountant, Lord Plender, of Deloitte, Plender, Griffiths & Co., to examine their published accounts. His report, while stressing the limitations of the available information, confirmed that profits were high and recommended the use of maximum price contracts, including a fixed sum for profit. When the Air Council reviewed this report it was obvious that to implement its recommendation would involve breaking the McLintock Agreement, but that was a possibility which it already had in view and at the beginning of 1939 it referred the question to a Committee on Contract Procedure recently appointed by the Treasury. This Committee reported in March, stated that the McLintock Agreement ought to be revised, and recommended maximum price contracts with a bonus on savings and a maximum profit rate of five per cent. on the target cost. Immediately after receiving this report the Air Ministry notified the S.B.A.C. that it would terminate the McLintock Agreement.

The aircraft firms opposed the transfer to a system of costed contracts and the Second McLintock Agreement, which was signed in July 1939 and which applied to all contracts placed after 1st March

---

<sup>1</sup> P.A.C., 1939, Q. 3442.

1939, provided that fixed prices should be the rule except for new types. On initial batches of the latter, actual costs would be paid plus a fixed sum for profit, agreed in advance and equal to five per cent. on the *estimated* costs. For later batches, if it was still impossible to agree on a fixed price, a target cost would be negotiated; if the actual cost fell below this, the contractor would receive a share of the sum saved, varying on a sliding scale from ten per cent. to thirty per cent.; if the actual cost exceeded the target he would receive only two-thirds of the first five per cent. of the excess and one-third of the next five per cent.; any further excess he bore himself. The rate of profit for target cost contracts was calculated by a formula according to the size and annual increase of turnover, and ranged from three per cent. to six per cent. on cost for different proportions of the turnover.<sup>1</sup> An increase up to two per cent. on cost, above the formula profit, was admissible for fixed price contracts. The old provisions for arbitration continued unchanged.

This agreement was in many ways superior to its predecessor, particularly in its treatment of the profit rate, and it had the effect by May 1941 of reducing the average profit on cost to  $3\frac{1}{2}$  per cent. for costed work and five per cent. for contracts at risk.<sup>2</sup> Nevertheless it did not prove satisfactory for long. The target cost system was almost unworkable because it was usually impossible to agree on a fair target and, more important, a further rapid increase in turnover after the outbreak of war, much of it achieved by the use of State-owned assets, had the effect of giving very high profits in relation to the value of capital employed, despite the reduction of the rate on cost.<sup>3</sup> For these reasons the Ministry of Aircraft Production on 7th March 1941 gave three months' notice of the termination of the agreement.

Before negotiating a new agreement the department wished to have fuller information about the financial results of its contracts and called in a firm of chartered accountants, Barton, Mayhew & Co., to examine the accounts of several aircraft firms, but it was still too early to obtain accurate information about their earnings in a period throughout which the Second McLintock Agreement had been in operation. New contracts, placed after the expiry of this agreement, included the price clause devised in the previous year, providing that fair and reasonable prices would be paid, the amount being decided by agreement if possible and, failing that, determined by the Minister. Price negotiations were conducted with individual contractors and the profit rate was calculated to give a reasonable return on capital.

---

<sup>1</sup> The formula is set out in detail on pp. 87-88 above.

<sup>2</sup> P.A.C., 1941, Q. 2282.

<sup>3</sup> Before deciding to terminate the agreement, M.A.P. made rough estimates of the profit on capital employed made by each of six firms during a financial year, in part of which it was in operation. The rates ranged from 9.5 per cent. to 28.1 per cent., the median being 15.6 per cent.

Throughout 1942 and the early months of 1943 the Ministry was trying to make a new agreement with the industry as a whole. It was mainly concerned to devise a new formula which would relate profit directly to capital employed and make suitable allowances for risk and efficiency. Numerous modifications were made from time to time, but the standard rate offered for both fixed price and costed contracts was eight per cent. on the firm's own capital, one per cent. on the value of fixed assets provided by the State, and one per cent. on capital provided (in theory) by sub-contractors. On fixed price contracts, the eight per cent. would be increased automatically as the turnover/capital ratio increased and in the summer of 1942 a graded scale was proposed for this increase, ranging from 0·5 per cent. when the ratio was 1·5 : 1 to 7½ per cent. when it was 5 : 1. In addition the eight per cent., one per cent. and one per cent. could be further increased at any level of turnover by up to four per cent., one per cent. and one per cent. respectively, according to the department's estimate of the risk to be undertaken and the past efficiency of the contractor. Thus it would be possible, in rare and extreme cases, for an efficient contractor to receive up to 19½ per cent. on his own capital. On cost-plus contracts the Ministry at first proposed no addition to the basic rate, but in the summer of 1942, in order to encourage faster production, it proposed to increase the 8 per cent. by from 0·5 per cent. to 2 per cent. as the turnover/capital ratio increased from 1·25 : 1 to 2·5 : 1, but to permit no increase beyond that.

The price settlements made with individual firms in 1942 and early 1943 were doubtless influenced by the existence of this formula, but they were not strictly related to it and were frequently more favourable to the Ministry than they would have been if the formula had been strictly applied. There were various differences with the industry about the grading of the additions to the profit rate, and negotiations for a general agreement were very protracted. The desire for such an agreement waned on both sides and in July 1943 the Ministry informed the S.B.A.C. that it had decided not to negotiate a new agreement. Its reasons for this decision were that in the preceding two years it had been able to negotiate prices with individual firms that were more favourable than those obtainable under the Second McLintock Agreement and at least as good as could have been obtained by any substituted agreement, that it would have had to concede a higher rate of profit than the fifteen per cent. maximum on capital approved inter-departmentally by the Contracts Co-ordinating Committee, and that there would be political difficulties if the Minister signed a document which recognised the possibility of a contractor receiving as much as 19½ per cent. on his own capital, plus 2 per cent. on Government capital, and a further 2 per cent. on sub-contractors' capital.

For the rest of the war the Ministry continued its existing policy of technical costing and the negotiation with individual firms of fixed prices as far as possible. On an average such prices were agreed about a quarter of the way through the production period, though there was no uniformity about this.<sup>1</sup> This system and its results have already been considered, since it is the best example of the working of a fixed price policy in war-time,<sup>2</sup> and it would be superfluous to repeat the discussion here. It is worth pointing out, however, that the task was made appreciably less onerous by the great extension of embodiment loans, price agreements, and statutory price control of materials. The analysis of the costs of the 'Lancaster' in 1943 showed that the constructional and assembly work for which the Ministry had to negotiate a price with the main airframe contractor represented only 23·96 per cent. of the total cost of the airframe; the full analysis is set out in Table 5.

*Analysis of costs of the 'Lancaster' bomber*

TABLE 5 Percentages

Component	Percentage of total cost	Method of cost control
<i>Materials (contractor's purchases):</i>		
Light alloys (less castings and forgings) . . . . .	8·69	Price agreement between M.A.P. and suppliers.
Steel . . . . .	0·77	M.O.S. control.
Castings and forgings . . . . .	1·19	M.O.S. control.
Rivets . . . . .	0·55	M.A.P. fix prices with suppliers.
Timber . . . . .	0·14	M.O.S. control.
Miscellaneous items . . . . .	0·89	Contractor settles prices.
Total: materials . . . . .	12·23	
<i>Proprietary parts (contractor's purchases):</i>		
Undercarriage and hydraulic equipment . . . . .	6·14	M.A.P. fix prices with suppliers.
Petrol cocks . . . . .	0·3	M.A.P. fix prices with suppliers.
Landing wheels . . . . .	1·8	M.A.P. fix prices with suppliers.
Perspex panels, windows . . . . .	0·75	Contractor settles prices.
Armour plate . . . . .	0·15	M.A.P. fix prices with suppliers.
Self-sealing covers for tanks . . . . .	0·75	M.A.P. fix prices with suppliers.
Radiators . . . . .	0·3	Contractor settles prices.
Special nuts, etc. . . . .	0·9	M.A.P. fix prices with suppliers.
Ball bearings . . . . .	0·15	M.O.S. fix prices.
Miscellaneous items . . . . .	2·7	AGS items covered by overriding order.
Total: proprietary parts . . . . .	13·94	
Embodiment loan . . . . .	49·88	Direct purchase by M.A.P.
Construction and assembly work by contractor and sub-contractors . . . . .	23·96	M.A.P. agrees price with contractor.

*Source:* Ministry of Aircraft Production

<sup>1</sup> P.A.C., 1944, Q. 3833-42.

<sup>2</sup> See pp. 77-79 and 91-92 above.



To the general policy of fixed prices there were a few exceptions. Some costed contracts were placed with most firms, and when the Government compulsorily acquired the business of Short Brothers (Rochester and Bedford) Ltd., the new directors whom it nominated refused to accept the risk of fixed prices. Towards the end of the war, the proportion of costed contracts increased and in the financial year 1944-45 about twenty per cent. of the number of aircraft ordered were purchased on this basis. The chief reasons for the change were the cuts in programmes and the interference with the smooth flow of output caused by the transfer of labour to the Services after June 1944, and the unusually large proportion of orders for new types of aircraft and engines, including jet propulsion units, so that on many contracts initial batch costing was necessary. Nevertheless there was no fundamental modification in the department's fixed price policy, and after the end of hostilities it went further and began to invite tenders for both military and civil aircraft, with the intention of negotiating prices before the work began.

(c) MAJOR ARMAMENT STORES

The manufacture of armaments was an industry subject to very great fluctuations in demand and involving highly specialised equipment and technique, as well as needing large financial resources. Inevitably, therefore, few firms were engaged in it, and the position of these few was strengthened in some cases by the possession of patent rights in the most modern designs. Much of the production of tanks, guns, small arms and ammunition was concentrated in the R.O.F., and the Admiralty maintained factories for some of its own individual requirements, such as torpedoes. Before rearmament began there were only five regular commercial makers of shell, two of guns, and one of tanks, and the private manufacturing rights of the most modern designs of tanks and of certain types of gun belonged to a single firm. Consequently, in this particular field, contract policy had to some extent to be merely a series of individual arrangements with particular firms. For shell there was limited competition and fixed price contracts were placed after tendering. Comparison with R.O.F. costs also made it possible to fix prices for some other stores, but where there was only a single supplier the War Office used maximum price contracts.

During the rearmament period much was done to increase available capacity and numerous firms were encouraged to accept armament orders by the grant of Government assistance towards the provision of new capital assets. But the increase of capacity did no more than keep pace with rising demand and consequently it had little effect on price-fixing policy. Indeed, in some cases, the urgency of requirements made it impossible to negotiate prices before production. Even where

a small amount of competition still remained, as it did for shells, fuses, and mines, the volume of demand prevented orders from being confined to the lowest tenderer. Where there was no semblance of competition the War Office and the Admiralty each relied mainly on its traditional method of price settlement, the former on maximum prices subject to costing, the latter on fixed prices negotiated after technical costing.

The outbreak of war accentuated rather than fundamentally changed the problems of the rearmament period, and contractual arrangements followed the same lines as before. Competitive tendering was rarely practicable and orders had to be allocated wherever capacity was available, according to the advice of Production Branches. The I.T.P. was the usual instrument for placing an order and prices were settled during or after production. Designs and specifications were constantly changing and many orders had to be placed with inexperienced firms. For both these reasons it was difficult to forecast the cost of many articles. There were thus strong reasons for the Ministry of Supply to continue in this field the War Office policy of maximum prices subject to costing. The only possible alternative, at least until productive conditions had become more stable, was to fix prices by technical costing. But it was by no means easy to do this and, in any case, the Technical Costing section was already overloaded with work. The Admiralty, however, tried to use technical costing and to maintain fixed prices as far as possible. In a few cases it successfully used technical costing where the Ministry of Supply did not attempt to do so,<sup>1</sup> but in other instances the difficulties of achieving a fixed price defeated it and it had to fall back on settlements based on ascertained costs.

So much can be said in general terms of armament stores. But this heading covers a very wide range of articles, and the differences in the conditions of their manufacture caused some variations in the arrangements for settling their prices. Some details of contract policy for individual stores will illustrate this.

(i) *Tanks and other Armoured Fighting Vehicles*

In 1934 the only producers of tanks were Vickers-Armstrongs Ltd. and the R.O.F., nor was there sufficient work to induce other firms to enter the field, even if designs had been available to them. The total value of orders in the financial year was only about £400,000 (including spare parts). But the subsequent increase of orders changed this situation. Capacity was increased by placing small educational orders on a cost-plus basis with selected firms in the heavy engineering industry. By March 1938 orders for complete tanks or carriers

---

<sup>1</sup> See account of contracts for bullet-proof plate, p. 131 below.

had been placed with nine more firms and the annual value of orders had risen to over £5,250,000.

During the rearmament period none but costed contracts were placed for A.F.V., usually with a maximum price. Until early in the war, target costs with a bonus on savings were occasionally used, but proved unsatisfactory. In one exceptional instance the target related to total costs instead of to direct costs and the contractor obtained a bonus on savings which were almost entirely in overheads and attributable to his having received larger orders.<sup>1</sup> From 1937 onwards orders were often placed before maximum or target prices were agreed.

During the war, tank production ceased in the R.O.F., which concentrated on other classes of munitions. The commercial firms were arranged in groups for the production of different types of tank, each group being under the general direction of a 'parent firm' and each being characterised by particular contractual and financial arrangements. Three of these groups illustrate the variety which existed.

Vickers-Armstrongs Ltd., the parent firm for the 'Valentine' tank, accepted very little free-issue material, but arranged supplies of bullet-proof plate, tracks, and turrets either by sub-contract or by making them itself. Most of the sub-contracts which it placed, like the direct contracts which it held, were at maximum prices subject to investigation by the Ministry of Supply. Components for the 'Churchill' tank were obtained by contracts placed by the Ministry of Supply itself and were issued free to the members of the group making this tank. But, in this group also, the parent firm, Vauxhall Motors Ltd., which had designed the tank and provided the engines for it, played a predominant part. It sought and obtained capacity for the manufacture of components and the erection of greater numbers of tanks than it could erect itself and it was responsible throughout for this tank, both by producing it itself and by organising the production by the rest of the group. For the group producing the 'Crusader', 'Cavalier', and similar types of tank, under the direction of Nuffield Mechanization and Aero Ltd., raw materials and common components were purchased through a central organisation, attached for accounting purposes to Morris Motors Ltd. This organisation issued raw materials on repayment and components free to all group members. Its expenses were borne by the Ministry of Supply, and Morris Motors Ltd. agreed to forgo all profit on its repayment transactions with group members. Contracts held by individual members of this group were all at maximum prices, but agreed settlements were made within the maximum prices twice a year, each settlement covering production in the preceding six months.

---

<sup>1</sup> P.A.C., 1941, Q. 3497.

The maximum price contract remained the general rule throughout the war, though a fixed price was not absolutely unknown, and in the 'Churchill' group there were some isolated examples of contracts at cost plus a fixed sum per tank for profit, without any maximum price. In this field it was impossible to avoid the costed contract because there were so many uncertainties in requirements and so many changes in design. A straight run of production over a long period could not be achieved and consequently the results of technical or current costing would soon have become out of date. The use of comparison to fix prices in the early stages of production was prevented by the existence of wide variations in technique, experience, and efficiency, and by constantly changing scales of free issues to different firms.

The possible weakness of complete reliance on costed contracts, that contractors' interest in keeping down costs by increasing efficiency was not stimulated, was countered by using technical production experts to watch for wasteful methods and advise on improvements. In fact, costs fell appreciably during the war, as a consequence partly of improved technique and partly of increased turnover.

(ii) *Motor Transport Vehicles*

At the beginning of the rearmament period, military opinion was increasingly in favour of using standard commercial models with the least possible modification. This had many advantages, especially cheapness and certainty of supply. For various types of vehicle there was an appreciable choice of supply, which made it possible to rely on competitive fixed prices. Cars were often bought at manufacturers' list prices minus a substantial discount. For special-purpose vehicles, competition was very restricted and most orders had to be allocated to firms which had interested themselves in their development. Maximum prices subject to costing were usual for such types but, where they resembled commercial models fairly closely, the makers sometimes objected to a costings clause. In that case a fixed price was negotiated if possible, on the basis of the list price of the commercial type and a discount for quantity production.

During the war commercial firms continued to supply both standard and special-purpose models, at first usually on maximum price contracts. Subsequently, the results of costing and the comparison of different firms' prices made it possible to negotiate a larger proportion of fixed prices. Technical costing was occasionally used but was generally found inappropriate owing to the large amount of sub-contracting. Current costing was of more service in enabling prices to be fixed in the early stages of a contract.

Accessories and spare parts for vehicles were usually ordered from manufacturers by running contracts. As this imposed on the con-

tractor some risk of being left with stocks of surplus or obsolescent parts, a small allowance was made for this contingency in the price.<sup>1</sup> Where a contractor provided spare parts which were proprietary articles bought by him, he was normally under an obligation to his own suppliers not to sell them below a stipulated price, which might yield him a profit greater than the Ministry would consider reasonable. In such cases the Ministry of Supply paid the stipulated prices for these proprietary spares; but in order to recover any excess profit which consequently accrued to the contractor, it reduced the prices which it paid for spares actually manufactured by him.<sup>2</sup> Most prices were related to manufacturers' price lists, with an agreed rate of discount, and were subject to costing. In some cases the actual manufacture of spares was not costed but prices were revised as a result of comparing the total of the separate prices of all the components of a vehicle with the actual costs of producing a complete vehicle. Cost investigations revealed numerous instances of high profits, which were countered by refunds on past contracts and increased discounts on later orders.<sup>3</sup>

The general trend of prices for M.T. vehicles during the war contrasted with that for fighting vehicles. At first it was fairly steady, but in the later years began to rise.

### (iii) *Guns*

At the beginning of the rearmament period sources of supply for heavy guns and mountings were very restricted, but orders to foreign manufacturers widened the field of purchase for light guns. Efforts were made, with some success, to bring new firms into production before the war, but these changes were not such as to introduce any real competition. For some types of equipment the field remained very narrow. For instance the non-transferable gun mountings (i.e. mountings for 6-inch or larger guns) required by the Royal Navy were produced only by Vickers-Armstrongs Ltd. and the Royal Arsenal, Woolwich, until 1936, when orders began to be placed with Harland & Wolff Ltd.; these remained throughout the war the only sources of supply. The War Office, however, was able to make some changes which affected arrangements for both contracts and production. In 1936 the purchase of complete equipments was supplemented by the direct purchase of rough forgings for subsequent free issue to armament firms or R.O.F., and in 1937 began several schemes for group production under the direction of a parent firm. During the war both the group system and the free issues were greatly extended. The

---

<sup>1</sup> *Ibid.*, 1942, Q. 8148-51.

<sup>2</sup> *Ibid.*, 1945-46, Q. 5532-34.

<sup>3</sup> *Ibid.*, 1943, Q. 4499-4503.

position was further complicated by the introduction of weapons of new design.

In this situation accurate price-fixing was very difficult. The War Office (and later the Ministry of Supply) relied mainly on maximum price contracts, but when seeking to bring new firms into production it often gave them small initial orders on a cost-plus basis, the results of the costing being used to determine a reasonable maximum price for future contracts. Towards the end of the rearmament period and early in the war, some target cost contracts were placed, but this type was seldom used in the last four years of the war. Technical and current costing were applied to some individual contracts for the less complex items, as a preliminary to attempts to negotiate fixed prices. As the war progressed and more information became available from costing reports and comparisons of prices, so the proportion of fixed price contracts increased.

The Admiralty attempted to use technical costing and at all times to negotiate fixed prices as far as possible, and for the simpler items it was usually successful. But difficulties in preparing estimates for the larger and more complex types often defeated the attempt. Like the Ministry of Supply, the Admiralty frequently had to base a settlement on ascertained costs, but, unlike that Ministry, it did not specify a maximum price, since it did not think that the available information was enough to give any accurate indication of what this might reasonably be. An illustration of Admiralty experience is provided by an order for 5·25-inch mountings for *Dido*-class cruisers, placed in 1936 with Vickers-Armstrongs Ltd. Technical costing was requested in the autumn of 1938, but changes in design and in programmes and the employment of inexperienced sub-contractors ultimately made it impossible to prepare the estimates. The firm itself first quoted a price in November 1942 and the Admiralty investigation of the actual costs of the work took another two years, so that it was December 1944 when a general price agreement for all work on the contract was made. Work continued under the same contract until June 1946,<sup>1</sup> the total contract price being adjusted from time to time in accordance with subsequent reports of actual costs by the Principal Accountant. Contracts for 6-inch gun mountings for *Fiji*-class cruisers took a similar course. Prices for orders placed in 1936 were not agreed until 1943 and for orders placed in 1938 and 1939 not until 1944, in each instance on the basis of actual costs.

As in the case of tanks, a general prevalence of costed contracts did not prevent the achievement of large reductions in cost. After 1941 the prices of most types of gun fell considerably, despite constant wage

---

<sup>1</sup> The work of erection and fitting the mountings into ships and incidental alterations were covered by the contract for direct production.

increases. This was attributable mainly to the very much larger quantities which were ordered.

(iv) *Ammunition*

Before 1935 the R.O.F. met most of the demands for all types of ammunition and only the varying amounts beyond their capacity were ordered from the trade. There was thus little inducement for commercial firms to participate in the manufacture. Only two firms regularly supplied small arms ammunition and the field of supply for shell was not very much wider, though competitive tender was used. From 1934 onwards it was necessary to employ new firms to meet the growing demand for shell, and orders were no longer confined to the lowest tenderer. Contracts with the regular shellmakers were at fixed prices, but in 1934-35, owing to the wide difference between trade and R.O.F. prices, they were checked by costing, which showed that commercial costs were much higher than those of R.O.F. Trial orders placed during the rearmament period with firms new to the work were all subject to costing. In 1935-36, as a further means of increasing capacity, some separate contracts began to be placed for shell forgings, which were subsequently issued free to other contractors for machining. Both the forging and the machining contracts contained a costings clause. Much of the necessary new capacity was obtained only by the grant of capital assistance to engineering firms, a selection being made of those whose demands for new plant were not large. Once the War Office had provided additional plant, it was anxious to keep it in use and consequently competitive tendering began to be replaced by the allocation of orders according to available capacity, and as competition declined, so did fixed prices become less common. Before the outbreak of war a high proportion of contracts was at maximum prices and some target prices were in use, but it was still possible to settle the price, fixed or maximum or target, before work began.

After the outbreak of war the same trends of organisation continued. Many more firms were introduced to shell production and quantities were ordered from each, according to estimates of its productive capacity for six months. There was no time to negotiate prices before production began, but some fixed prices were still settled during the course of contracts, though maximum or target prices were more usual. Evidence increased that some of the target cost contracts had given contractors a reward too easily earned. One, placed by the War Office for the supply of fuses, had used the maximum price as a target and offered the contractor thirty per cent. of his savings on it, as well as a profit of seven per cent. on cost, and the guarantee of two renewals of the contract on the same terms but with a fresh target each time. The ascertained costs of the first contract

were used to negotiate a lower target for the second order, but the outcome of the arrangement was naturally to give a much higher profit than conformed to the prevailing policy.<sup>1</sup> After 1941 this type of contract was discontinued. The results of post-costing and the use of current costing enabled the Ministry of Supply to negotiate a larger number of fixed prices in the later war years, but it made little use of technical costing, which it considered unreliable in this field, although the processes in producing all types of ammunition could be more easily separated and defined than those in tank or gun production. The Admiralty, however, had applied technical costing to shell contracts from pre-war days and was more successful in maintaining fixed prices.

During the financial year 1942-43 the Ministry of Supply temporarily adopted an experimental method of ordering gun ammunition. Instead of arranging contracts for specific quantities, it placed what were called 'Continuous Production Orders'. Under this arrangement the contractors were instructed to continue production at a stated rate, which, however, they were free to exceed. Any considerable excess in the total rate achieved by the whole body of contractors for the store was to be offset by a reduction in the number of shifts worked. Payments were based on a fixed price, reached by agreement if possible, otherwise by arbitration. The contract limited the forward supply commitments to a specified period, usually three months, which might not be extended without prior authority from the department, and all contracts also contained a break clause. In this way it was hoped that the flow of production would be constantly adjusted in accordance with changes in demand and stocks. The conditions in which a continuous production order could be satisfactorily used were, however, very rare in war-time. It was essential that the design and specification of the store should remain stable and that the volume and sources of production required for a long period should have been established. Consequently the experiment was confined to a single store. Even gun ammunition did not completely fulfil the necessary conditions and in 1943 there was a return to more orthodox contracts.

The trend of costs for all types of shell during the war was gradually downwards in spite of rising material prices and wage rates.

(v) *Armour and Bullet-proof Plate*

Armour was one of the important stores for which the Admiralty found it impossible to keep to its fixed price policy. Before the war only three firms supplied it and only one more was added during the war. Owing to the complexity of the manufacturing processes, tech-

---

<sup>1</sup> P.A.C., 1941, Q. 3494-96.



nical estimates of cost could not be made, and prices for all contracts placed in 1938 or later were based on ascertained costs. For settlement purposes the three original manufacturers were treated as one unit and all received the same prices. The first large settlement was made in 1940 and applied to 42,045 tons ordered in 1938 and 1939. The price paid was determined by the weighted average cost of the three firms for each type, with the addition of a profit of ten per cent. on capital employed and a bonus of  $2\frac{1}{2}$  per cent. on cost to cover the risk of rejection. The two items together made the total profit allowance 11.5 per cent. on cost.

The Admiralty had in the past granted more restricted bonuses for special skill. In 1937 it introduced a scheme which applied only to the battleships laid down under the 1936 programme and which granted a bonus on all cemented armour and on non-cemented armour of over 180 lb. nominal thickness, which surpassed the specified standard. By October 1939 it had paid out £29,000 in bonus, but the extra armour at the specified standard which would have been necessary to give equivalent protection would have cost £67,000.

A second settlement with the three armour firms in 1943 covered 74,500 tons ordered in 1939 and 1940. The cost investigation on which it was based was in respect of 86,000 tons delivered in the period, the extra 11,500 tons having been ordered earlier and paid for in the 1940 settlement but completed later. The profit rate was 10 per cent. on capital as before, but the allowance for the risk of rejection was reduced to 0.5 per cent., as the P.A.C. had criticised the earlier rate as being too high,<sup>1</sup> and investigation had shown that, in fact, only 0.5 per cent. of the armour supplied in the ten years ended 31st March 1941 had been rejected. The total profit rate due on the settlement was 9.8 per cent. on cost and this was rounded off to 10 per cent. as a concession in a comprehensive bargain. Orders placed in 1941 and 1942 were settled in a similar way in November 1946.

These settlements were pure cost-plus arrangements, except that they applied to a small proportion of armour which, though ordered earlier, was still unfinished at the date of settlement. To that extent a small degree of risk was involved, as no adjustment was made for subsequent changes in cost.

The fourth firm introduced during the war was outside the scope of these settlements but its prices were determined in a similar way. The Admiralty's difficulties in agreeing with the firm about certain accountancy questions delayed settlement so long that it was entirely on a cost-plus basis, although this had not been intended when negotiations began. This firm was also the owner of a special process for

---

<sup>1</sup> *Ibid.*, 1941, Report, para. 25.

the manufacture of non-magnetic bullet-proof plate and, owing to delays arising from the standard method used by other makers, it received all the Navy's orders for this store from mid-1942 onwards, under the terms of a running contract. The same accountancy difficulties as on its other contracts prevented a settlement until many months after the end of hostilities.

Until 1941 two other firms were important suppliers of bullet-proof plate and the Admiralty was able to negotiate fixed prices with them during the currency of their contracts. It had ascertained in 1937 the average cost of producing rough unmachined plate and made technical pre-estimates of the cost of machining and finishing. On this basis, with periodical adjustments for changes in material costs and wage rates, fixed prices were agreed.

The Ministry of Supply employed the same firms to make tank armour and bullet-proof plate, but, unlike the Admiralty, placed contracts with them at maximum prices. It intended to negotiate fixed prices as soon as the results of costing were available, but the firms were allocated to the Admiralty for costing<sup>1</sup> and the difficulties and delays which the latter had in settling prices with them were so great that it was never possible to give the necessary information to the Ministry of Supply early enough for it to agree on fixed prices.

#### (d) CLOTHING AND OTHER TEXTILE STORES

Clothing and textiles was a category which covered a very wide range of individual items, and during the war differences in the conditions of their supply were reflected in differences in contractual arrangements. But before the war almost all of them were obtained by competitive tender. The type of capacity required was usually not specialised to the Government's needs and was large in relation to Government demands. Even so, there was in some branches only a limited number of firms accustomed to working to Government specifications and, in order to establish a reserve of experienced manufacturers for an emergency, the War Office during the rearmament period placed a number of small orders with firms that could not compete with the prices of regular suppliers. The only fields in which there were persistent price difficulties were those where a price-fixing ring existed. In such cases departments sought either to place contracts outside the ring, as they succeeded in doing for linoleum, or to check the quoted prices by costing, which the War Office applied to angola shirting material and to the making up of full dress regimental uniform.

An important feature of contract policy for uniform clothing was that the departments purchased cloth from manufacturers and then

---

<sup>1</sup> *Ibid.*, 1946-47, Q. 3925.

issued it to tailoring firms for making up into finished garments under separate direct contracts. This system was desirable in peace-time in order to ensure that the proper quality of cloth was used, and it was maintained throughout the war as a help in securing a smooth flow of material. The makers of other textile stores usually manufactured or purchased their materials themselves.

It was clear that, in the event of war, much additional capacity would have to be transferred to supplying the Services and from 1937 one of the sub-committees of the Principal Supply Officers' Committee of the Committee of Imperial Defence was continuously investigating the problems involved. It recommended departments to make advance arrangements for their initial war-time supplies. A change in the peace-time scale of the Army, approved in the spring of 1939, forced the War Office to concentrate on obtaining immediate supplies instead of making emergency arrangements for the future, but the Air Ministry was less affected and placed many dormant contracts to come into effect on the outbreak of war, so as to meet the first six months' needs. Firms were told of requirements under conditions of secrecy, and asked how soon after receiving instructions they could begin production and what would be their maximum weekly output. Contracts were placed with firms selected by reason of their capacity, quality, efficiency, and recently-tendered prices. Prices for the dormant contracts were not settled in advance, but there was a general understanding that firms would have to provide specific justification for any increase over pre-war levels. I.T.P. were sent out on 8th September 1939 to implement the dormant contracts, and the entire arrangement worked very successfully.

During the war the purchasing and pricing arrangements for textiles were to some extent simplified by gradually centralising them in one department. The Air Ministry purchased uniforms for the R.A.F., W.A.A.F., A.T.S. and W.L.A. until July 1941, when the Ministry of Supply took over the responsibility. This Ministry also purchased uniforms not only for the Army but for the Civil Defence Organisations, the N.F.S., some of the nursing services, and some of the American forces. The Air Ministry, however, remained responsible for buying flying kit, and the Admiralty obtained most of the clothing needed by the Navy. An odd arrangement was that clothing for the W.R.N.S. was purchased by the Director of the W.R.N.S., instead of the Admiralty's Director of Contracts, until 1943.<sup>1</sup>

Methods of purchase and types of contract varied somewhat from one store to another, but in this field as a whole contractual difficulties were less formidable than in most others. Although many firms unused to Government work had to be employed, the methods of production involved were usually very similar to those to which they were

---

<sup>1</sup> *Ibid.*, 1943, Q. 4230.

accustomed, and they could therefore produce early estimates of cost and move quickly into flow production. Moreover, the stores required were not subject to frequent drastic modifications of design. The existence of statutory price controls for most of the raw materials which were used also simplified the price-fixing problems of the Contracts Branches.

One of the most important supplies was of woollen piece-goods and blankets. The Director of Wool Textile Production allocated orders to firms according to their capacity and suitability for manufacturing particular types of cloth, and in conformity with the Wool Control's general programme of production. Thus throughout the war there was no question of competitive tendering in its usual sense. The Wool Control fixed the issue prices of raw wool and the Contracts Branches were concerned only with the yields from the materials issued and conversion and profit rates for the manufacturing process. Various methods of settling prices were in use. One was to negotiate, usually with a trade association, a standard fixed price, determined according to known yields from given materials and production costs ascertained from previous investigations. Local differences in conditions sometimes made it necessary to arrange separate standard prices for different local groups. Among the items covered by agreements of this kind were drab mixture cloth, khaki and blue-grey serge, blankets, and shirtings. Standard prices were constantly checked by sample investigations and altered where the results showed it to be necessary.

Where standard prices could not be fixed there were two alternatives. One was to supply standard conversion and profit figures to a contractor to whom an order had been allocated and invite him to tender, incorporating in his own breakdown of his quotation the figures supplied. The other was to ask firms to quote their own figures for material, conversion, and profit. In both cases the Contracts Branch had sufficient information from comparisons and previous cost investigations to decide on a level at or below which the tendered price could be accepted as a fixed price. Higher quotations were either reduced by negotiation or accepted as maximum prices subject to costing. Profit rates allowed in the Ministry of Supply's standard costings were 3 per cent. for worsted manufacturers, whose average turnover/capital ratio was 2.5 : 1, and  $3\frac{3}{4}$  per cent. for woollen manufacturers, whose average turnover/capital ratio was 2 : 1. In order to save time in settlements, a fixed profit in pence per yard was allowed on some standard serges and other cloths, the amount being based on estimates of the average capital employed. Increasing experience and information about costs made it possible to place a growing proportion of contracts at fixed prices, and in the later years of the war about eighty-five per cent. were on this basis.

Competitive tendering for cotton piece-goods ceased when the Cotton Control was completely established in the spring of 1941 and had been earlier affected by the statutory determination of raw material and spinning prices. The price-fixing functions of the Contracts Branch were limited, as raw cotton was purchased in bulk by the Cotton Control and issued to spinners at fixed prices, and the prices of yarn and of most types of cloth were controlled by S.R. & O. The policy of the Contracts Branch where it had to negotiate prices as, for instance, for cotton canvases and for dyeing and bleaching all kinds of cotton cloth, was to negotiate with the appropriate trade association, obtain agreement to cost investigation and, on the average results, fix firm prices, including piece-rate profits calculated to return seven per cent. on the value of capital employed.

A special problem was presented by the established importance in the cotton industry of the merchant converter who purchased yarn, sub-let the entire work of weaving and finishing, and sold the cloth on his own account. The Ministry of Supply decided to accept this traditional arrangement and place up to fifty per cent. of its orders for cloth with merchants, paying them two per cent. on their total costs. For cloths not previously required for Service use and for which merchants' special knowledge was needed, it allowed a margin of five per cent.

The making up of men's uniform clothing made very heavy demands on industry. From June 1939, when the first conscripts were brought into the forces, many new firms had to be given contracts and induced to work quickly. As the simplest means of doing this, standard prices for battle-dress, greatcoats, and denim overalls were agreed with the Wholesale Clothing Manufacturers' Federation and offered to all firms, the only exception being that experienced contractors were to be subject to cost investigation and a price reduction if their profits were too high. The Ministry of Supply considered at the time that the standard prices, though higher than previous prices, were no higher than would have been obtained by open tendering, as the many inexperienced firms would have been bound to have allowed a substantial margin for risks. But the costs of a representative sample of firms were examined and found to vary so widely that many were making higher profits than could be justified. In view of this, and also because there was still more capacity than was needed in the immediate future, the standard prices were abolished in November 1939 and replaced by negotiations with individual firms.

Firms when tendering in future had to submit, with their quotations, details of their conversion costs. The Ministry of Supply accepted reasonable tenders as fixed prices and declined high quotations when it was practicable but, if the production offered was indispensable, accepted them as maxima subject to costing. It

negotiated with the Wholesale Clothing Manufacturers' Federation a standard rate of profit which it offered to all contractors. For the commonest items this was a flat rate in pence per garment and for other items a percentage on cost, but, however it was expressed, it was intended to give the trade as a whole an average return of  $7\frac{1}{2}$  per cent. on capital. The average turnover/capital ratio was 1.5 : 1, which meant a profit rate of 5 per cent. on cost. As most material was issued to contractors by the Ministry, the standard profit was calculated in relation to conversion costs only, which averaged one-third of total costs. The standard profit rate was therefore 15 per cent. on conversion costs only, but on costed contracts it was reduced to 13.5 per cent. As the war progressed, the proportion of costed contracts increased owing to a shortage of capacity, which became very acute from October 1944, when there were large demands for clothing for jungle warfare. Orders had to be allocated to firms whose prices would have been declined when open tendering was possible. Similar difficulties arose earlier in respect of high-grade capacity. In October 1942 the Ministry of Supply began to buy uniforms for some of the American forces, but owing to the very high standard of the work and the shortage of suitable manufacturing capacity, it was never able to make price a determining factor, although, after the initial orders, it proceeded by tendering.

Uniform clothing for the women's services was purchased by methods very similar to those for men's uniform, with the same profit allowance in relation to conversion costs. There was, however, less difficulty in meeting all demands, and competitive tender continued throughout the war, each tender being accompanied by a cost sheet in which the contractor broke down his price. Consequently there was little difficulty in ensuring reasonable prices. The one important price problem was presented by the purchase of underwear, because very few British firms produced locknit rayon fabric and the same firms were also garment-makers. The Ministry of Supply, in consultation with the Ministry of Aircraft Production which required the material for other purposes, investigated the costs of producing the fabric as well as the costs of making up and, as a result, obtained considerable reductions in the prices of the finished articles.

The purchase of civilian outfits for the demobilisation scheme presented its own problems. In order to secure early delivery the first contracts had to be given to whatever reliable firms had capacity and material available, but subsequently the Ministry of Supply invited competitive tenders. Only for small items, such as ties, however, did it prove possible to obtain sufficient supplies by this method. Instead, orders had to be allocated by I.T.P. wherever suitable capacity existed. But contractors still had to submit detailed cost sheets which were compared with the Ministry of Supply's model cost figures. The

profit allowance was fifteen per cent. on average conversion costs. These model costs enabled the Ministry to fix price limits and it succeeded in placing most contracts at fixed prices within these limits. Higher quotations which could not be adequately reduced by negotiation were accepted as maxima subject to costing. A special case was provided by the orders for outfits for demobilised chaplains. All contracts were given to one firm accustomed to this type of work and were subject to costing.

At the peak of the demobilisation programme the Ministry of Supply had to purchase large numbers of ready-made utility suits and stocks of utility cloths and trimmings. It negotiated prices for the suits within the maxima laid down by the Board of Trade. Another problem at the peak period was created by the enforced reduction of civilian supplies, which caused the multiple tailors with retail shops to ask the Government for a contribution to their shop overheads. Settlements of such claims were long delayed in a few cases, but a number of the firms concerned accepted a supplement to the contract price ranging from 2s. 6d. to 6s. 6d. per suit produced during the period affected.

The manufacture of woollen, worsted, and cotton cloths and the making up of clothing were probably the most important subjects of contracts in this field, but were by no means the only ones. To describe separately the arrangements for purchasing each type of store would take too long and involve much repetition. It was generally true that, so long as demand put no strain on available capacity, it was possible to arrange fixed prices, and that these were also common where there was much detailed knowledge of costs, even though it had become necessary to allocate orders according to available capacity rather than price. When these conditions were not fulfilled, maximum prices subject to costing were the rule. For the rest, it is sufficient to draw attention to a few exceptional individual features.

Army ankle boots provided an example of the use of selective costing. In 1940 orders were too large to be obtained by competition and there were no facilities to apply costing to all contractors. Consequently the Ministry of Supply and the Boot Manufacturers' Federation first agreed on a reasonable schedule of costs to guide manufacturers in quoting for orders in the second quarter of the year, and then in the third quarter 40 of the 180 contracts placed were costed, after which the profit was reduced from 10d. to 9d. per pair. From the beginning of 1941 it was possible to cost all contracts, and the information obtained caused profit to be fixed at 5d. per pair from July 1941, at which level it remained throughout the war. Standard prices could never be fixed as contractors had to use many different types and qualities of leather, but in the later years of the war there was sufficient information about costs for many fixed prices

to be negotiated on the evidence of the cost sheets submitted with contractors' quotations.

The supply of buttons must have been nearly unique in that competition greatly increased during the war. During the rearmament period, orders for metal buttons became too large to be met by existing suppliers, and the Birmingham Jewellers' and Silversmiths' Association co-operated in introducing many new firms. The Association allocated orders and prescribed prices which the Ministry of Supply accepted as maxima subject to costing. By mid-1940, however, there was sufficient capacity for all the buttons needed to be obtained at competitive prices, lower than those fixed by the Association, and to concentrate production in the more efficient firms. Competition further increased as more orders were placed for buttons of vegetable ivory, casein, and other synthetic materials, instead of metal. The department was able to end the earlier practice of using prices determined by the Association for groups of producers and, by competition and by costing large orders, to check any subsequent rises in price. The supply of plastic moulded buttons was limited during a long experimental period of production, and maximum price contracts were then usual; but by mid-1943 capacity for these also was more than adequate for Service needs, and prices were obtained by competitive tender which were lower than those reached by costing earlier contracts.

Finally, mention may be made of an instance where prices did not have to be decided. Relief clothing for liberated territories had no priority of any kind and was sought by various unusual expedients. One was to place special contracts for cutting out garments and to send the cut pieces to voluntary organisations, such as the W.V.S. and the Central Hospital Supply Service, whose members made them up without charge. This system worked well until the end of the war in Europe, when the interest of the voluntary workers declined, so that many of the cut pieces had to be taken back and their making up placed to contract in the normal way.

#### (e) MAJOR REPAIRS

Large-scale repairs were required to stores of the most diverse character, but in spite of the diversity they had a common feature which makes it convenient to treat them for contractual purposes under a single heading: the extent and nature of the work involved was not fully known before it began and could not conform to any standard schedule. (Routine replacement of parts and general overhaul was a different matter.) Thus it was impossible to make in advance a reliable estimate of cost and in this field, more than any other, the unmodified cost-plus contract was unavoidable.

The contractual difficulties in arranging for the repair of many of



the most important stores used by the Army were greatly reduced as the R.A.O.C. and R.E.M.E. did most of the repairs, either in the field or at base workshops. Where the Ministry of Supply was concerned it usually paid cost plus a profit unless the work was fairly straightforward. For repairs to small types of carrier it was able to negotiate fixed prices according to a schedule of operations. On standardised work, such as modification, it was able to relate profit to output. One firm employing many sub-contractors laid out a special plant for the modification of American tanks. The Ministry of Supply paid the entire overheads and agreed that the price should be ascertained cost, plus a profit varying on a sliding scale, according to the number of tanks modified in a stated period.

The stores for which repair contracts were most important were aircraft and ships. The Ministry of Aircraft Production employed many small firms entirely on the repair of crashed airframes, although the aircraft builders also did a small proportion of the repair work. In the early years of the war it relied on the cost plus percentage profit form of contract,<sup>1</sup> but made some use of technical costing, where possible, in order to improve the efficiency of work.<sup>2</sup> It wished, however, to encourage speed of output without at the same time promoting extravagance. In the spring of 1943 it therefore reached with the committee representing the main repair firms an agreement which provided for a new basis of payment. Firms were to receive their actual costs plus a profit divided into two parts, one consisting of a sum equal to four per cent. on the value of the total capital employed, and the other of a lump sum for every aircraft repaired, varying according to the type.<sup>3</sup> The agreement thus recognised the uncertainty of this kind of work by guaranteeing the payment of costs and a profit, but paid attention also to limiting the return on capital, to the encouragement of output and to the varying difficulties in different classes of work. It was accepted individually by about half the firms concerned, whose average profit in the first year of its operation was 13·5 per cent. on capital.<sup>4</sup> The remaining firms continued to work on cost plus percentage contracts but received a lower rate of remuneration.<sup>5</sup>

Ships presented the most formidable repair and conversion problem of all, and the Admiralty began in 1937 to consider its treatment in time of war. The experience of the First World War suggested that the I.T.P., with a request to the contractor for a firm quotation, did

---

<sup>1</sup> C. & A.G. Report on Civil Appropriation Accounts (Unclassified Services), 1941, para. 15.

<sup>2</sup> P.A.C., 1943, Q. 5323.

<sup>3</sup> *Ibid.*, 1943, Q. 5324.

<sup>4</sup> *Ibid.*, 1944, Q. 4041.

<sup>5</sup> *Ibid.*, 1944, Q. 4042.

not offer a practicable alternative to the cost-plus contract for this type of work. In September 1938 the Admiralty approved a form of contract for conversions and repairs which provided for the contractor to be paid net productive wages, net cost of materials, overhead charges, and out-of-pocket expenses, but for the time being left the rate of profit undetermined, except that it was to be a fair and reasonable amount, to be fixed by the First Lord in default of agreement, and to take account of all relevant circumstances, including the relation of turnover to capital. It was thus less precise than the system in the previous war when a flat rate of ten per cent. profit was paid and it also contained greater safeguards against extravagant cost, because it prescribed competitive tendering for sub-contracts and supplies, and reserved the Admiralty's right to disallow costs which it considered excessive. Admiralty accountants were to check costs, and officials known as recorders were to carry out a concurrent check to ensure that overcharges were not made. This contractual system, which was known as the Emergency Repairs Agreement, received Treasury approval in January 1939, and was then put aside till needed.

In August 1939, owing to the unsatisfactory outcome of negotiations for fixed prices for the conversion of a large number of trawlers to auxiliary war vessels, the agreement was put before the Dry Dock Owners' and Repairers' Council, which accepted its terms, though with some misgivings. Negotiations about the practical details of applying the agreement were naturally concerned with the assessment of overhead charges and the rate of profit, and were protracted. The firms complained that the Admiralty's proposal to wait until the end of the financial year in order to assess the overhead rate involved great delays in making final settlements, and asked that the overhead figure should be based on the previous year's working. Eventually the Admiralty compromised, although the overhead rate was likely to decrease in successive years, and agreed to use an assessed rate based on the previous year's figures, adjusted to the conditions of the current period and fixed normally not earlier than six months nor later than nine months from the beginning of the financial year in question. If the estimate proved very inaccurate there was to be a subsequent adjustment. There were very divergent views about profit: the Admiralty began by offering 5 per cent. on the cost of the contractor's own work and  $2\frac{1}{2}$  per cent. on his sub-contracted work, but the firms asked for a flat rate of 20 to 25 per cent. Later they proposed that repairs should be divided into various classified types of work, on each of which a lump sum profit would be payable, and work which could not be classified, for which they suggested a sliding scale of profit, ranging from 15 per cent. on the cost of work costing between £200 and £1,000 to 10 per cent. for work costing over £10,000. A

settlement was reached in September 1940 and provided that for all work completed by 31st August 1940 profit on classified items would be 80 per cent. of the scale originally proposed by the repairers, but there would be no profit on sub-contracted work or on any other disbursements apart from the contractor's own work; for unclassified work there was a sliding scale which averaged 8 per cent. on cost over the entire price range, but only  $2\frac{1}{2}$  per cent. was payable on sub-contracted work and nothing on other disbursements. The Admiralty would make an annual review of profits only if it was obvious that they were excessive and that the excess was not absorbed by E.P.T.

In June 1941 it was known that, up to 31st August 1940, the agreement had given the firms an average profit of nineteen per cent. on capital, and as the Admiralty considered that ten per cent. was enough, it proposed to halve the rates of profit. The repair firms pointed out that the varying capital structure of the firms in this industry and other difficulties made it impossible to assess equitably the value of capital employed and therefore to relate profit to it. The Admiralty admitted that there were anomalies, but maintained that some such adjustment must be made as turnover, which was £3,250,000 in 1939, had almost exactly doubled in 1940. On 5th December 1941 a revised settlement was reached, which abolished classified work and provided that profit in future would be a lump sum calculated on the cost of the job. A schedule was published which marked off total costs into small ranges; the lump sum profit applicable to a job in each range thus indicated was five per cent. of the mid-point of that range. Sub-contracts were to be included in costs unless they exceeded twenty-five per cent. of the total cost of the work, in which case they would be excluded and  $2\frac{1}{2}$  per cent. would be paid on them. No profit was payable on other disbursements.

This settlement applied to all work completed by 31st March 1942, but was later extended for two further quarterly periods. In September, a review of its operation showed that profit had averaged 12.9 per cent. on capital, and the Admiralty suggested to the Repairers' Council that the rate might be further reduced but, owing to the strength of the opposition, it allowed the agreement to continue unchanged subject to termination at three months' notice. A further review in August 1943 showed that a profit of 13.2 per cent. on capital and 4.5 per cent. on cost had been made on a turnover of some £9 million, and the Admiralty therefore on 26th September gave notice of termination.

Before the expiry of the notice, the Ministry of War Transport, unaware that the Admiralty intended to terminate the agreement, approached the repair firms with a request that ships of the United States, which Britain repaired under reverse lend-lease, should be eligible for the same terms. The Admiralty at the same time was

seeking to reduce the rate of profit to  $3\frac{1}{2}$  per cent. on the cost of contractors' own work and  $1\frac{3}{4}$  per cent. on sub-contracted work. The repairers protested vehemently against the simultaneous introduction of two such drastic changes, and in November the Admiralty agreed that the 5 per cent. profit might continue provisionally for three months. But the Repairers' Council refused to ratify the agreement without a more definite assurance, and on 6th January 1944 it was decided that the agreement should continue indefinitely, subject to three months' notice on either side.

The Admiralty still thought that the five per cent. rate was too high, but regarded the inclusion of American ships within the scope of the agreement as a very substantial *quid pro quo*. It was the less dissatisfied as an investigation in 1945 showed that the average profit had fallen to 12·37 per cent. on capital.<sup>1</sup> In these circumstances the agreement continued without further change during the war.

---

<sup>1</sup> *Ibid.*, 1945, Q. 2759.

## CHAPTER IX

# REMUNERATION FOR AGENCY WORK

**A** GOVERNMENT agent might be defined as a person or body that, for an agreed fee, carried out, with the full authority of a Government Department, work delegated by that department. Thus an agent was distinguished from a contractor by the fact that he was not acting on his own behalf and selling his own commercial products to the Government, and that in no circumstances did he run any risk of loss. But although agents were in a different position from contractors, the level of their remuneration presented a problem fundamentally similar to that of profits on contracts. In one case it was a question of paying for a service, in the other of paying for goods. The subject of this chapter is therefore only a further aspect of one of the major general topics of which other sides have already been treated.

The most important use of agents during the war and, to a less extent, during the rearmament period, was in production, existing firms being called to manage Government-owned factories. Specialist individuals and firms were also used as agents in a few instances to purchase certain stores and materials which called for specialised knowledge. A third type of agent was that employed in lieu of a Government Department to supervise urgent constructional work in all its aspects.

Government Departments recognised that there were a few special supplies, for the purchase of which it was desirable to employ an expert buyer as agent, but such a procedure was very rare in peacetime. During the war the entry into fields of purchase to which Government Departments were unaccustomed and the difficulty or impracticability of buying and distributing materials on reasonable terms by customary commercial methods, made the use of purchasing agents much commoner. The Raw Materials Department was not the only one to buy through agents, but agency purchase was commoner for raw materials than in any other branch of war production.

The extent of the services required from purchasing agents varied. General responsibility for the supply of the most necessary and scarcest materials rested with the Raw Materials Department, within whose purview came not only purchase, but also production, costing, distribution, and pricing. The day-to-day supervision of supply and

distribution, however, was carried out under its authority by Controls. In one exceptional instance, that of non-ferrous metals, the entire operation of a Control was deputed to an agent, the British Metal Corporation.<sup>1</sup> This arrangement was made at the beginning of the war because this firm had a trading organisation already in existence, was the largest undertaking in the business, and had co-operated closely with the Board of Trade before the war in preparing all the schemes for the control of copper, lead, zinc, and brass.<sup>2</sup> The Corporation received a lump sum fee to replace its normal earnings and out of that fee had to pay the entire staff of the Control, except those of the brass section,<sup>3</sup> which was not constituted until after the original arrangement was made and the staff of which was paid by the Ministry of Supply. The P.A.C. recognised the importance of using the services of such an organisation, but noted the difficult problems of dual allegiance created by the arrangement, particularly as higher officials were likely to receive larger salaries than they would have done in the direct employment of the Ministry of Supply.<sup>4</sup> In order to clarify the position, all the senior officials of the Control were in 1942 given temporary appointments in civil service grades, though they continued to be paid by the British Metal Corporation.<sup>5</sup> With this modification the agreement with the company continued as before, but it remained the only one of its kind in the sphere of war production, although the relations between the British Iron and Steel Federation and the Iron and Steel Control resembled it in some respects.

It was more usual for an agent to be required only to make purchases and to sell to licensed consumers. Sometimes an agent was used because it was impossible to get the work done commercially. In peacetime most of the molasses used in this country was imported by the United Molasses Company. At the end of 1939 this firm declared that it had no commercial incentive to continue importing and in the prevailing circumstances could not afford the risk of making forward purchases. In order to safeguard stocks of industrial alcohol, the Ministry of Supply itself took over responsibility for importing molasses and employed the United Molasses Company, the only large experienced organisation, as its agent.

In some other cases, purchasing agents were employed not so much out of necessity as to secure efficiency and convenience. The purchase and distribution of raw cotton was an important example. Before the war this was carried out almost entirely by the merchants who were

---

<sup>1</sup> P.A.C., 1941, Report, para. 5.

<sup>2</sup> *Ibid.*, 1941, Q. 3331 and 3340.

<sup>3</sup> *Ibid.*, 1942, Q. 7777.

<sup>4</sup> *Ibid.*, 1941, Report, para. 5.

<sup>5</sup> *Ibid.*, 1942, Q. 7772.

members of the Liverpool and Manchester Cotton Associations, and in 1941, in order to retain the use of the skill and experience of these merchants, they were persuaded to form a private company known as Cotton Importers and Distributors Limited, to act as agent of the Cotton Control.<sup>1</sup> The functions of the company were to buy whatever cotton was needed and was not obtained in bulk by inter-Governmental arrangements, by lend-lease or by special agents abroad; to handle all cotton on its arrival; to sell it to spinners; and to advise the Cotton Control. For these services the company received an annual payment of £500,000, which was a rough estimate of the amount which the merchants would have received in sellers' commissions if they had handled all this business on a commission basis.<sup>2</sup> In fact, owing to an oversight, the agreement between the Ministry of Supply and the company did not expressly forbid merchants to accept and retain commissions from sellers, and in the year when it was operating they received about £35,000 from this source.<sup>3</sup> Many of the importing merchants also acted as buying brokers for spinners, who paid them brokerage for their services. The agreement permitted them to retain this brokerage except where they were handling Control cotton, and in the year in question they received £110,000, practically all of which was retainable.<sup>4</sup>

The administration of this scheme proved less convenient than the Ministry of Supply had expected and, moreover, the prices paid for Brazilian cotton were unduly high, although the Ministry was satisfied with the prices agreed by the company elsewhere, which was mainly in India and Peru.<sup>5</sup> Consequently the arrangement to work through the company was abandoned and from 1st April 1942 the Control dealt instead with the individual merchants. Purchases from them were restricted to Indian cotton and were made on the basis of competitive tenders, the merchants being left to obtain remuneration from the seller in India. For the sale of cotton to spinners they received from the Control a commission of  $1\frac{3}{4}$  per cent. if they sold ex quay and 1 per cent. if they sold ex store.<sup>6</sup> The arrangement proved more efficient and more economical, and whereas in the year ending 31st March 1942 the Company received £645,000, the total gross remuneration of the merchants in the next year was only £510,000.<sup>7</sup> This system was adopted because, in spite of the fact that the Ministry of Supply believed that the Cotton Control could itself

---

<sup>1</sup> *Ibid.*, 1943, Q. 4850.

<sup>2</sup> *Ibid.*, 1943, Q. 4851-52.

<sup>3</sup> *Ibid.*, 1943, Q. 5855. The terms of the agreement are given in *ibid.*, Appendix 4.

<sup>4</sup> *Ibid.*, 1943, Q. 4865-67 and 4875.

<sup>5</sup> *Ibid.*, 1943, Q. 4870-72.

<sup>6</sup> *Ibid.*, 1943, Q. 4872.

<sup>7</sup> *Ibid.*, 1944, Q. 4614.

have distributed the cotton at a lower money cost, it also held that the higher outlay was justified by increased efficiency.<sup>1</sup> The system continued in existence for the same reason and in 1943-44 the merchants handled an increased amount of cotton, so that gross remuneration rose to £537,000;<sup>2</sup> after deduction of expenses, the net surplus was £271,000, spread over 240 principals.<sup>3</sup>

Another important case in which the regular peace-time importers were retained to handle the war-time imports of the Ministry of Supply was the timber trade, in which it proved very difficult to determine what was a fair level of remuneration, so that despite several reductions in commission, a number of firms appeared to have made high profits. Suitable commissions had at first to be estimated very roughly but in 1941, as a result of the investigation of the profits of selected firms in the six months ended 31st December 1940, reduced rates of 7½ per cent. on softwoods and 8 per cent. on aircraft plywood were fixed.<sup>4</sup> The value of turnover was increasing, however, sales for the fifteen months ending 31st March 1941 being £31,100,000 and rising in the year ending 31st March 1942 to £39,500,000.<sup>5</sup> The trading results of forty-four firms for the six months ending 31st October 1941 were examined and, as a result, commissions were again lowered from 1st April 1942. The new rate on softwoods was seven per cent. and on aircraft plywood five per cent.<sup>6</sup> The commission on hardwoods was ten per cent.,<sup>7</sup> but a maximum of two shillings per cubic foot was imposed and a similar ceiling rate of £8 per standard was fixed for aircraft spruce,<sup>8</sup> in both cases because the high price of the timber would otherwise have caused excessive profits. Commissions did not consist entirely of profit. Expenses had to be met out of them and the merchant had to provide the usual services to customers, such as inspection and selection of goods.<sup>9</sup>

As a result of the imposition of maximum rates of commission, the average net remuneration in 1942-43 and 1943-44 was 5 per cent. on sales for the distribution of aircraft spruce, and in 1943-44 was 7·8 per cent. for the four large firms which distributed hardwoods generally as well as aircraft spruce.<sup>10</sup> The rates of commission introduced in 1942 continued until after the end of the war, but it is impossible to say precisely what effect they produced. There was con-

<sup>1</sup> *Ibid.*, 1943, Q. 4877.

<sup>2</sup> *Ibid.*, 1944, Q. 4617 and 4621.

<sup>3</sup> *Ibid.*, 1944, Q. 4626.

<sup>4</sup> C. & A.G. Report on Vote of Credit Appropriation Account, 1941, para. 54.

<sup>5</sup> P.A.C., 1943, Q. 5126.

<sup>6</sup> C. & A.G., *loc. cit.*

<sup>7</sup> P.A.C., 1943, Q. 5169.

<sup>8</sup> *Ibid.*, 1944, Q. 4660.

<sup>9</sup> *Ibid.*, 1944, Q. 4664.

<sup>10</sup> *Ibid.*, 1944, Q. 4660.



siderable delay in completing investigations into the trading results of a representative selection of firms and in the end the figures could not be put into a satisfactory form. The difficulty was that merchanting formed less than half the business of the firms investigated, and the available records did not permit its costs to be completely segregated from those of other work. The Ministry of Supply could only tentatively conclude that profits on the distribution of softwoods had been reasonable but had probably been excessive on hardwoods, where it appeared that a commission of  $8\frac{1}{2}$  per cent. instead of 10 per cent. would have been sufficient.<sup>1</sup>

Apart from raw materials, the one notable case where agents were regularly employed to import and distribute items needed in war production was that of machine tools. As in all the agency importing schemes, it was at all times impracticable, and, after the introduction of lend-lease, impossible, to relate remuneration to the amount of capital employed. Consequently, rates of commission were fixed which varied with the sales value of the machine tools handled and which were intended to make adequate allowance for the expenses that had to be met. The services which the importer had to provide and pay for included uncrating and collecting the equipment, advising the purchaser on its installation and on any subsequent running difficulties or breakdowns; frequently he also had to prepare blueprints and drawings before the equipment was obtained.<sup>2</sup>

In the early stages of the war, it was difficult, because of the method of purchase, to restrict importers' remuneration to a reasonable level. Most of the foreign machine tools came from the United States and were obtained through the British Purchasing Commission, which bought them at the list price less the importer's remuneration, the amount of which was specified in the importer's agency agreement with the manufacturer. This commission was paid to the importer in sterling by the Ministry of Supply, in order to save dollars, even though in some cases the payment was excessive.<sup>3</sup> The rates of commission on different items varied very widely but many were as high as twenty-five per cent. on the manufacturer's price and on small spare parts they went up to fifty per cent.<sup>4</sup>

When machine tools were imported under lend-lease the major difficulty in lowering remuneration disappeared, and the Ministry of Supply and the importers agreed on the following scale of commission:  $12\frac{1}{2}$  per cent. on the first £500 of the United Kingdom port price per machine, 10 per cent. on the next £2,500,  $7\frac{1}{2}$  per cent. on

---

<sup>1</sup> *Ibid.*, 1945-46, Q. 598.

<sup>2</sup> *Ibid.*, 1943, Q. 4670.

<sup>3</sup> *Ibid.*, 1943, Q. 4672.

<sup>4</sup> *Ibid.*, 1943, Q. 4673 and 4683.

the next £2,000, and  $2\frac{1}{2}$  per cent. on the remainder.<sup>1</sup> Investigations were made into the effect of the scale on firms' profits and, though precise results for a substantial sample could not be obtained, the level appeared to justify a large reduction, which was made effective from 19th October 1942. The new scale was 10 per cent. on the first £500 of the United Kingdom port price,  $7\frac{1}{2}$  per cent. on the next £1,500, and  $2\frac{1}{2}$  per cent. on the remainder.<sup>2</sup> The difficulty in deciding what was the outcome of this change arose because about half the importing firms were also manufacturers and did not in their accounts thoroughly segregate the results of the two sides of their business. In 1944, however, the Ministry of Supply was able to establish that, in the case of four of the nine leading importers of lend-lease machines, the new scale had brought down net profits from 7·06 per cent. on turnover to 3·84 per cent.<sup>3</sup>

The machine tool importers, like the timber merchants and merchants whose services were used by several other Raw Materials Controls, were not directly concerned in purchasing but were acting as distributors of Government purchases. Thus the exact nature and value of their services could be judged only by those conversant with the technicalities of a particular trade and it was impossible to devise any general scale which should govern merchants' commissions. The Treasury asked to be kept informed of the rates of commission which Controls paid, but admitted that it could not easily judge whether a margin was adequate, unless it had guidance from the Ministry of Supply and the Controls.

The employment of an agent to make all arrangements for constructional work was in a somewhat different category. Where a new Government factory was to be operated by an agent it was usual, though not invariable, for the same agent to be made responsible for its construction, and in such cases a single agreement dealt with remuneration for both construction and operation. It will therefore be convenient to consider these construction fees when remuneration for agency operation is being examined.

There were, however, occasional examples of an agent being engaged for constructional work alone. No ruling existed as to the circumstances in which this procedure should be adopted. Several departments possessed their own constructional organisation and did much of their own building. Otherwise, when a department needed new building work, it was usual for the Office of Works (which in 1940 became the Ministry of Works and Buildings) to have charge of it. Departures from this practice were mainly war-time expedients in

---

<sup>1</sup> *Ibid.*, 1943, Q. 4653.

<sup>2</sup> *Ibid.*, *loc. cit.*

<sup>3</sup> *Ibid.*, 1944, Q. 4420.

cases of urgency, when both the Ministry of Works and Buildings and the constructional organisations of Service Departments were already very fully occupied. The outstanding example of the employment of an agent for large-scale constructional work came at the very beginning of the war, when the Ministry of Supply engaged the firm of Sir Alexander Gibb and Partners to erect three enormous filling factories to be operated by the R.O.F. organisation. The firm was entirely responsible for planning the factories, placing the contracts, and supervising the construction.<sup>1</sup> The speed which was required made it impossible to place lump sum contracts or prepare schedules of priced units, and the agency agreement was therefore on the basis of cost plus a fixed fee. The Ministry of Supply paid to the firm its actual expenditure, plus an agreed amount for overheads and an annual fee of £15,000 for the services of directors, of whom six devoted their full time to these factories.<sup>2</sup> The actual fee was very low and was stated to be not more than half of what would have been charged for the services of these directors in peace-time;<sup>3</sup> in the event it worked out at approximately 0·08 per cent. of the cost of the factories.<sup>4</sup> The Public Accounts Committee, however, questioned the very large authority to incur expenditure which the Ministry permitted to the agent and the amount of the expenses which the latter disbursed, particularly in respect of fees and expenses paid to specialist consultants. The agent's fee and expenses together, apart from payments to specialist consultants, totalled £625,000 in respect of the three factories,<sup>5</sup> which was roughly two per cent. of the total cost.

The question of what fees were appropriate for consultants in war-time was a difficult one. In peace-time the usual method of remuneration was an inclusive percentage on the value of the work, but some war-time projects were so large that this would have been likely to yield excessive payments. During the war, departments usually paid an agreed lump sum fee plus expenses. At the three factories in question the agent had complete discretion to call in specialist consultants and arrange payment to them, so long as it was not more than was normal and proper in the profession.<sup>6</sup> The Ministry of Supply considered that even the highest fees paid were below the customary level,<sup>7</sup> but the Public Accounts Committee was led to the view that some of them were higher than necessary, partly because

---

<sup>1</sup> *Ibid.*, 1941, Q. 3343.

<sup>2</sup> *Ibid.*, 1942, Q. 7896.

<sup>3</sup> *Ibid.*, 1942, Q. 7853.

<sup>4</sup> *Ibid.*, 1942, Appendix 7 and 1943, Appendix 8A.

<sup>5</sup> *Ibid.*, 1942, Appendix 7.

<sup>6</sup> *Ibid.*, 1942, Q. 7834 and 7847.

<sup>7</sup> *Ibid.*, 1942, Q. 7836.

different fees were paid for similar work<sup>1</sup> and partly because the total fees to outside consultants were so much higher than those to the main agent, who, after all, was responsible for most of the work. At the three large factories, where the value of the total work was £33,667,000, consultants' fees totalled £77,000 and their expenses £249,000.<sup>2</sup> But even when quantity surveyors were excluded, whose fees were at a lower level than those of other specialists, the total fees and expenses paid to consultants were only 3·5 per cent. of the value of the work on which they advised.

In 1941 the Ministry of Supply decided that in future the agent must submit to it any proposals to pay fees to consultants. This system was in force while the agent was in charge of the building of hostels at two of the original factories and the building of three smaller filling factories.<sup>3</sup> It does not, however, appear to have led to any reduction in payments, for the fees and expenses of consultants, other than quantity surveyors, came to £200,000, which was five per cent. of the value of the work concerned.<sup>4</sup> Departments never succeeded in devising any objective standard of fair remuneration to outside consultants. They could justly claim that they were paying lower rates than in peace-time and also that payments were low in proportion to the total cost of the work on which they employed consultants. On the other hand, they were unable to controvert the criticisms that, judged from any absolute standpoint, consultants' war-time incomes were very large, and that these came mostly from the Government, particularly as many specialists were employed independently by more than one department.<sup>5</sup> The question was necessarily treated empirically, as indeed was the whole matter of employing agents for constructional work alone. It was an emergency arrangement in which finance was not a first consideration. The Ministry of Supply's own verdict, at any rate on the vast scheme on which Sir Alexander Gibb and Partners were employed, was that the outcome was satisfactory, and that in similar circumstances it could not do better than make another arrangement of the same type.<sup>6</sup>

The remaining type of agency agreement was that for the operation of a Government-owned factory and, as has been mentioned, the same agent was also frequently appointed to arrange for the construction of the factory which he was to operate. An agency factory was

---

<sup>1</sup> e.g. in the case of two heating consultants, the total charge for fees and expenses for similar work of the same value was £12,500 in one instance and £23,000 in the other. (*Ibid.*, 1942, Q. 7838, and 1943, Q. 4824.)

<sup>2</sup> *Ibid.*, 1943, Appendix 8A.

<sup>3</sup> *Ibid.*, 1942, Q. 7886.

<sup>4</sup> *Ibid.*, 1943, Appendix 8A.

<sup>5</sup> For particulars of payments made to firms of consultants by more than one department in the same period see *ibid.*, 1943, Appendices 8A, 8B and 8C.

<sup>6</sup> *Ibid.*, 1942, Q. 7866.

succinctly defined by the Ministry of Supply as 'one where the Ministry of Supply pays the cost of its operation and controls the total production, the managers receiving a fee for their services as agents of the department.' By substituting the name of the appropriate department this definition can be applied generally.

Unlike the arrangements for distribution or construction by agents, those for agency production were sufficiently numerous and had enough in common in the circumstances in which they operated for some uniform principles of remuneration to be applied to them, although not rigidly. The appropriate considerations closely resembled those applicable to profit rates on contracts, which varied with risk and efficiency and which departments attempted to lower during the war. An agent was using no capital of his own (except in a few early cases where he provided working capital) and ran no risk. Inferentially, therefore, one would expect to find that his remuneration was at a very much lower rate than that of a contractor, that it was lower during the war than during the rearmament period, and that in some cases it was adjusted for efficiency; and that, in fact, is what happened. It is hardly correct to describe the fees of productive agents as profit. Certainly in pre-war days agents considered that they were entitled to a profit, but the payment was more in the nature of a managerial salary, and departments came increasingly to regard it as such. Its magnitude was therefore to be related more to degree of responsibility than to anything else.

The first agency agreements were those between the Air Ministry and various automobile firms in 1936. There was no clear-cut principle to serve as a guide and the terms were influenced by the necessity of offering firms a reasonable inducement to divert part of their organisation from its normal activity, while their competitors were not doing so. They did, however, provide a pattern for all the Ministry's pre-war agency agreements, the elements being a fixed fee for the construction and equipment of the factory, a management fee for the production period with a fixed minimum and an addition related to the total volume of production, and a bonus on savings similar to that provided in target cost contracts. The first agreement was concluded with the Austin Motor Co. in May 1936, and provided for the erection of a factory and the production of 900 'Battle' airframes in a period of three years. Remuneration consisted of £50,000 in the first year for the equipment of the factory and preparations for production; a dead rent of £50,000 in the second year, against which were to be set payments per machine in that year and later; £200 for each machine produced and accepted; and a bonus on savings in cost as compared with a basic figure, which would be agreed later in the light of experience, the bonus being 12½ per cent. on savings up to £300 per machine and 17½ per cent. on any further savings.

Similar terms were offered to Rootes Securities Ltd. for the erection of a factory and the production of 600 'Blenheim' airframes, and were accepted, except that the fee for each machine was raised to £225. For a joint scheme for the production of 4,000 aero-engines, agreements were made with five automobile firms and the Bristol Aeroplane Co., under which each automobile firm was to be paid £72,000 and the Bristol Co. £60,000, making £420,000 in all, in thirty-six monthly instalments. One-third of this was in respect of construction, the rest was a dead rent for the production period, against which were to be set the payments of £75 per engine. There was also a bonus of  $12\frac{1}{2}$  per cent. of the first £50 of savings below an agreed basic cost and  $17\frac{1}{2}$  per cent. of any further savings. Apart from the bonus, the management fee was virtually fixed, as all but £20,000 of the total payment for full output was covered by the dead rent. This was more in conformity with later practice, but the Treasury, which at this time apparently thought that agents' positions should be kept as close as possible to commercial circumstances, considered it a very unsatisfactory arrangement. Nevertheless it had to be accepted because the firms refused to work the scheme on any other basis.

The fixed management fees were rather high for agreements involving no risk and represented about four per cent. on the estimated production costs, whereas at the same time about ten per cent. on cost was being allowed on Air Ministry aircraft contracts. The high rate was due partly to the novelty of the arrangement and partly to the fact that the firms were in a strong bargaining position, as there were plenty of other ways in which they could use their managerial resources. Even in 1939, when agreements were being renewed, the same situation still existed and generous terms were conceded. The firms operating the aero-engine scheme, for instance, accepted an agreement for the year ending 30th June 1940, by which they received a fixed fee of £150,000 and a fixed bonus of £40 per engine produced, which together represented about five per cent. on estimated costs. Other agent firms received proportionately high fees.

In the pre-war period the management fee proved to be a rather higher percentage of cost than had been expected for the engine scheme, and rather lower for the airframe factories. The actual remuneration received by the agents operating the twelve Air Ministry shadow factories in the pre-war period was examined in relation to the estimated capital employed during production, and it was found that the management fees gave an average return of three per cent. on capital, the highest received by any firm being 6 per cent. and the lowest 2·3 per cent. When bonus payments were added the average return was 4·9 per cent., the highest 6·9 per cent., and the lowest 3·8 per cent.

This was not a very satisfactory state of affairs and departments

asked for a strong lead to counter the assumption of some agent firms that the Government should pay fees sufficient to maintain their dividends at pre-war levels, regardless of the state of their commercial work. The whole question of agency remuneration was therefore referred to the Inter-departmental Committee on Economic Policy, which reported in March 1940. The main principles laid down by the Committee to guide the assessment of agency remuneration were these:

(i) There should be no discrimination between firms on the ground that one was normally engaged in the civil market and the other on armaments production, but payment should be in respect of work done and be no larger than was required to secure efficient output;

(ii) Fees should be calculated on different bases during the period of factory construction, the period of initial production, and the period of flow production respectively;

(iii) Fees should be related to a rate on turnover which, in conditions of maximum output, would secure to the firm a sum agreed with them as representing a suitable rate of return on Government capital employed in the factory; this return would be a reward only for the special skill of the firm's organisation as a whole and the value of the results actually achieved in production; moreover, the fees should be subject to an upper limit determined with regard to the rate of profit earned by the firm both on its normal business in the pre-war period and on all parts of this business (including the management of the agency factory) after the outbreak of war;

(iv) In most cases fees could conveniently be in the form of a payment of so much per unit of output;

(v) As far as practicable the payment should be such as to give a moderate increase in reward per unit of output where costs of production were below the average, and to penalise severely those cases where production costs were above the average.

These principles were immediately adopted for general use.

Strengthened by this authoritative pronouncement and by their improved bargaining position as almost the whole economy was turned over to war production, departments were able to negotiate much lower fees. Experience showed that it was not practicable to apply fully all the principles laid down by the Economic Policy Committee. In particular, there was little scope for the use of incentive bonuses. Even before the war the bonus schemes at Air Ministry shadow factories were very difficult to operate, and during the war frequent changes in orders and modifications to the product usually made it impossible to devise any workable bonus scheme. It was also often convenient to arrange one combined fee for construction and initial production, or for initial and flow production. In the

Ministry of Aircraft Production a combined fee for both stages of production was the universal practice. This Ministry also adopted flat rate management fees, whereas the Ministry of Supply adhered to the policy of relating the fees to output. This had been the latter's policy from its inception and made it difficult to relate fees closely to capital employed. Indeed, in the earlier years of the war the Ministry of Supply held that a rate on capital was not a suitable criterion for management fees, because working capital could not be accurately estimated in advance and because the cost of fixed capital varied widely according to time of erection, necessity for construction of new buildings, extent of work in connexion with the provision of electric power, and equipment with British or with foreign plant. Instead it aimed at arranging a flow production fee equal to two per cent. of the lowest available cost of production of the same store elsewhere on a normal contract basis, or two per cent. of the estimated cost of production at the agency factory, with a minimum annual payment equal to one-third of the total fee payable for full production, provided that any reduction in output was beyond the agent's control. The fee for initial production was to be one and a half times that for flow production in a period of the same length. This scale was intended to be only a general guide, as the Ministry considered that no hard-and-fast formula could be fairly applied to the varying circumstances.

At the same time the Ministry of Supply admitted that if the object was to pay the smallest possible management fee, it was best attained by adhering to a scale of remuneration based solely on estimated capital employed, and that the establishment of such a scale had been assisted by the fact that many firms, because of their E.P.T. position or for other reasons, were not greatly interested in their management fee as a source of profit. A fairly stringent scale of this kind was adopted by the Ministry of Aircraft Production in 1941. The management fees paid during production were as follows:—

On estimated capital employed:

From £250,000 to £500,000	. . .	2 per cent.
From £500,000 to £1,000,000	. . .	1½ per cent.
From £1,000,000 to £2,500,000	. . .	1 per cent.
From £2,500,000 to £5,000,000	. . .	¾ per cent.
Over £5,000,000	. . .	½ per cent.

For schemes with less than £250,000 capital employed there was no fixed scale but a fee of £2,500 per annum was regarded as a maximum at which to aim. As a fee for the construction period, the department was willing to pay 0·5 per cent. on the cost of the plant, plus an amount in respect of building work broadly equal to the profit element in the fee of a professional adviser performing services com-



parable to those of the agent; e.g., if the value of the building work was such that an outside architect's fee would be 3 per cent. of the cost, the agent would be allowed not more than  $1\frac{1}{2}$  per cent. of the cost. The Ministry of Supply also had a sliding scale for guidance in negotiating construction fees, viz.:—

For the first £250,000 of the authorised expenditure	$1\frac{1}{2}$ per cent.
For the next £250,000 of the authorised expenditure	1 per cent.
For the next £500,000 of the authorised expenditure	$\frac{3}{4}$ per cent.
For the remainder of the authorised expenditure	$\frac{1}{2}$ per cent. or less

The Admiralty did not formally adopt a set scale but tried to negotiate the most favourable terms in the circumstances of each case. It always paid careful attention, however, to the scales used by the Ministries of Supply and Aircraft Production and followed them as closely as it could. It also tried to obtain the most accurate information possible about the amount of capital employed, before it finally settled an agency fee. Differences in the line of division between fees and expenses occasionally caused misinterpretation of Admiralty policy. In 1942 the Treasury criticised the Admiralty adversely when it submitted to the T.I.S.C. a proposed agency agreement with a firm managing a factory for the production of magslips. This agreement apparently offered a fee varying, according to output, between seven per cent. and eleven per cent. on capital employed, but this was misleading because the fee included the cost of the management staff, a very abnormal arrangement. The return to the firm was in fact at much the same rate as that conceded by the other two departments, each of which already had an agency agreement with it, at fees rather higher than later they thought suitable. The Admiralty policy on agency fees was, in fact, quite as stringent as that of other departments.

A comparison of the management fees actually negotiated by the Ministries of Supply and Aircraft Production revealed that both had succeeded in bringing them down to a very low level, but suggested that the system of the latter produced results rather more favourable to the Government. In the year ending in October 1942, the Ministry of Supply headquarters settled fees for twenty-five agency factories, with a total estimated capital employed of £14,600,000; the fees represented an average return of 1·15 per cent. on capital. The fees in force in January 1943 at all the Ministry of Aircraft Production's agency factories for which full information was available (except for those operated by I.C.I. Ltd.) were such as represented an average return of 0·757 per cent. on a capital employed of £91,900,000, as estimated on the basis used by the Ministry of Supply. There was no significant difference between the two

Ministries in the extent to which fees provided for overhead costs. The difference between the average remuneration paid by the two Ministries was not entirely due to the difference of approach, but partly also to the higher proportion of very large schemes in the Ministry of Aircraft Production. In both cases the rates of return were probably even lower than is indicated by the figures quoted, for these were based on the Ministry of Supply method of estimating capital employed at agency factories, which was simply to take the actual or estimated cost of the fixed assets provided by the department plus the estimated value of leased assets, and allow twenty-five per cent. more to cover current assets. Ministry of Aircraft Production experience in estimating capital employed for purposes of negotiating fees suggested that, on the average, current assets were worth considerably more than twenty-five per cent. of the value of fixed assets.

When the general standard of agency fees had been brought to so low a level, a little more or less was often of no great moment to the firms concerned. In fact, it was sometimes the case that they were less concerned with the management fee than with the proportion of the overhead cost of their headquarters organisation which would be allowed as a legitimate addition to the costs of the agency factory and therefore be payable by the Government. It was impossible to lay down any uniform practice in this respect and the question had to be treated on its merits in each individual instance.

Several firms undertook the management of factories or stores for Government Departments without fee. In the year ending October 1942 the Ministry of Supply made twelve such arrangements, involving an estimated capital employed of £36,900,000. Three of the undertakings were managed by R.O.F., the remainder by industrial companies.

Special arrangements, very favourable to the Government, were made with its largest agent, I.C.I. Ltd. This firm had, from 1937 onwards, managed an increasing number of Government factories, mostly for the War Office, on terms which showed considerable variety. But on the outbreak of war it reconsidered its position, as it was averse to having its remuneration based either on output or on the cost of production of a factory, because it did not wish to be open to the charge of being financially interested in the prolongation of hostilities or in enhancing the prices of products under its control. It therefore suggested a fixed annual fee for the management of each factory, the amount varying with the fixed capital cost of the factory according to the following formula:—

1·5 per cent. of the fixed capital up to £1,000,000  
 plus 1 per cent. of the fixed capital from £1,000,000 to £2,000,000  
 plus 0·5 per cent. of the fixed capital over £2,000,000

This arrangement applied to seventeen factories, the estimated cost

of which was £27,250,000, and the fees were expected to average about 1·2 per cent. of operating cost. The offer was accepted in May 1940. Two years later the firm offered to accept fees based on the lowest level of its sliding scale and this offer, which applied to all the factories that it operated for the Ministry of Aircraft Production, as well as those for the Ministry of Supply, was also accepted. Thus the whole of the managerial work of I.C.I. Ltd. was performed for fees of 0·5 per cent. of the capital cost of the factories operated.<sup>1</sup>

The figures quoted make it clear that the Government was able to arrange very low rates of remuneration for agency operation, and in the later years of the war the situation further improved in this respect, as the other departments frequently made use of the Ministry of Aircraft Production's scale of fees. In this field the Government succeeded completely in its aim of preventing excessive earnings. Once fees were negotiated on the approved lines there was no reason why this should be otherwise. Prior estimates of the value of capital employed were liable to some degree of error, but it was not sufficient to upset seriously the actual as compared with the intended rate of remuneration. The agency agreement resembled the costed contract in that its outcome in terms of profit was fairly closely known in advance. Success in keeping down remuneration thus came because a low standard was adopted and firms were persuaded to accept it.

---

<sup>1</sup> C. & A.G. Report on Civil Appropriation Accounts (Unclassified Services), 1941, para. 61, and P.A.C., 1943, Q. 4433-34.

## CHAPTER X

# CONTROLLED PRICES, PROFIT POOLING SCHEMES, SUBSIDIES, AND REBATES

IT was pointed out in Chapter VI that the remuneration of producers and traders could be regulated through their prices in two ways: through the price negotiated individually for each Government order or by various types of overall arrangement which fixed prices for all sales of a particular commodity. So far, attention has been concentrated on the former method, and the overall arrangements remain to be described. The study of contract price policy revealed one device which was essentially similar to the latter: the negotiation of standard prices to be paid by the Government to different manufacturers for the same type of article. The difference was that each of these standard prices applied only to a limited and specified field, whereas the true overall arrangements applied to all transactions in one commodity.

As far as munitions production was concerned, the fixing of uniform prices was mainly confined to raw materials and semi-manufactured items. It was achieved in one of two ways: either the Government purchased all supplies of a material from abroad, from United Kingdom production, or from both, and fixed its own selling price for it; or it fixed selling prices by statutory order or voluntary agreement for material produced in the United Kingdom. The responsible price-fixing authority was the Raw Materials Department of the Ministry of Supply, except for silicon, aluminium, magnesium, and fabricated alloys using the two latter metals, for which, from mid-1940, it was an administrative/finance branch of the Permanent Secretary's Department of the Ministry of Aircraft Production.

It was difficult to lay down any strict principle of price-fixing which could apply equally, not only to both Government trading and the private dealings of commercial producers, but also to different industries operating in the most diverse conditions. When the S.C.N.E. examined the question early in 1943 it could say only that the selling price of a controlled product was usually a uniform price, fixed by reference to some criterion other than the costs, actual or estimated, of the individual manufacturer selling it.<sup>1</sup> The Treasury, in

---

<sup>1</sup> S.C.N.E., 1942-43, 14th Report, para. 47.

reply, declared that there was one basic principle, which was to give to industry a reasonable return for its products or services, judged in the light of its contribution to the war effort and of its particular circumstances and financial structure;<sup>1</sup> but that answer, of course, did not relate to the separate but associated question of the selling prices of materials purchased by the Government.

A consideration of actual practice suggests that, in fact, price control began as a matter of convenience, incidental to the control of distribution, and that guiding principles developed only gradually as the war progressed. It was usually imposed only as and when war conditions disrupted the normal channels of trade, so that a widespread system of price control was only gradually established. The prices of timber and iron and steel were controlled from 1st September 1939, and raw wool was placed under control in the next week, but rubber and tin, the last two important commodity markets to be closed, were uncontrolled until the entry of Japan into the war in December 1941 threatened the chief source of their supply. When price control was thoroughly established three considerations slowly emerged as guiding principles: the need to ensure adequate supplies, the necessity of avoiding inflationary effects as far as possible, and the grant of a reasonable but not excessive remuneration to industry; these objects received that order of priority where there was any conflict among them. If, where they were applied to British production, the first two considerations caused an individual producer to receive unreasonably high or low remuneration, the necessary adjustment had to be made by some means other than through the selling price. But where they applied to materials of which the Government was the sole buyer and prevented it from recovering its outlay, then any loss simply became a charge on the Vote of Credit and no further adjustment was needed.

For the sake of clarity, it is useful to consider separately the ways in which price control was applied to Government trading and to private commercial activities, although they had many features in common and developed along similar general lines. Its application to Government trading was the simpler of the two and this will be described first.

At the beginning of the war, the Treasury laid down that Government trading must always avoid loss, unless it were for some very essential cause, and in appropriate conditions should aim at a substantial profit, to assist the conduct of the war.<sup>2</sup> Selling prices were to cover the cost of the material (i.e. the cost at which it could be purchased at the time the price was fixed) with, if necessary, an addition or deduction to allow for changes in cost which could be foreseen, so

---

<sup>1</sup> *Ibid.*, 1943-44, 12th Report, Appendix 2.

<sup>2</sup> P.A.C., 1941, Q. 3153.

that prices might remain unchanged for as long as possible; in addition, prices had to take account of expenditure incurred for freight, handling, storage, transport, insurance, agency charges, salaries, wages, administration (including a proportion of the cost of headquarters administration), interest, and other overhead charges. Modifications were permitted in the case of sales for export or to allies.

In November 1940, for a few basic materials, the Government decided to abandon the policy of covering all trading costs, whenever this policy would prevent the maintenance of stable prices. The Ministry of Supply proposed that henceforward it should consult higher authority before making any change in the prices of iron and steel, non-ferrous metals, wool, cotton, timber, paper, and fertilisers. Responsibility for the supervision of price policy at its highest level was taken over by the Lord President's Committee, which, in February 1941, requested that it should be consulted before any general changes were made in the price of motor spirit, kerosene and fuel oil, coal, iron and steel (including tinplate), timber, cement, wool, cotton, railway charges, and shipping freights.<sup>1</sup> In April 1942 the Treasury withdrew its insistence that controlled prices, other than those exempted by the Lord President's Committee, must be increased as costs increased, and the policy of price stabilisation was extended to commodities, such as leather, which substantially affected the cost-of-living index (and therefore the movement of wages in some industries), and to materials of which something like eighty per cent. or more was used in the production of goods which would be bought by the Government. The last point was particularly emphasised in respect of items, such as molasses, which passed through many hands before the final product was bought by the Government. Price increases in contradiction of this policy were permitted in the rare cases where this was likely to encourage economy in the use of the material or the substitution of a less scarce alternative.

Issue prices of lend-lease materials required special consideration because no cash was expended in obtaining them. The general rule was that issue prices should comprise the notional American costs before shipment and all subsequent charges, including appropriate overheads. Exceptions were numerous and applied where a stabilisation policy was in force; where lend-lease supplies were pooled with those from other sources, in which case the price should cover the average total costs, including notional costs; where a similar article was produced in the United Kingdom, in which case the lend-lease

---

<sup>1</sup> The Lord President's Committee also asked that it should be kept informed and consulted as necessary about the prices and supply of bricks, the level of restricted rents, gas and electricity charges, and charges for goods and passenger transport by road.

supplies should be sold at a similar price; where lend-lease materials entered into the export trade, in which case prices might have to be increased to conform to American costs, so as to avoid charges of subsidising exports; or where, under the general rule, the price would be lower than had recently prevailed in the United Kingdom, in which case the old price might continue to be charged.

The stabilisation policy had three main advantages: it simplified the work of costing Government contracts and, by removing uncertainty about the future course of material costs, made it easier to negotiate contract prices for completed war stores; it assisted smooth production by removing the need for frequent financial adjustments, which variations in costs were apt to cause; and it kept down the inflationary increases in purchasing power, which arose from wage increases in conformity with rises in the cost-of-living index and from increases in the amount of profits which were bound to occur if the same percentage was paid on an increased value of capital or sales. These advantages were considered sufficiently important to outweigh for the time being the drawbacks, which were clearly pointed out in a memorandum by the Economic Section of the War Cabinet Secretariat. The chief of these was that distortion of the price system concealed relative difficulties of supply, which could be restored to view only by more extensive and efficient systems of rationing and licensing. Without this, there was serious danger that the available resources would not be so distributed as to achieve the best pattern of production for war purposes. Trading Controls and Directorates could keep check on the commercial realities of the situation, because their accounting continued to be on a commercial basis, instead of on the purely cash basis used in ordinary Government accounting,<sup>1</sup> but this did not permit the consumer, who was often a Government contractor or a Government Department, to become aware of the changed circumstances. The moral drawn was that administrative action, based on a knowledge of the real costs and resources involved, was increasingly necessary as the price mechanism fell into disuse.

In August 1943 the Ministry of Supply reviewed the stabilisation policy and concluded that the advantage it had been designed to secure had been realised at a very small net cost to the Exchequer.<sup>2</sup> Its effect on industrial prices as a whole can be observed in the movement of the Board of Trade Wholesale Price Index for industrial materials and manufactures, which rose by 21 per cent. from December 1939 to December 1940, and by 5·3 per cent. in the twelve months after that, but only by 2·3 per cent. in each of the two following years.<sup>3</sup> After 1943 it was decided to restore most prices to

---

<sup>1</sup> P.A.C., 1943, Q. 4722.

<sup>2</sup> C. & A.G. Report on Vote of Credit Appropriation Account, 1945-46, para. 46.

<sup>3</sup> For detailed figures of the movement of wholesale prices, see Appendix 1, Table K.

a commercial level for the post-war period, and this was done gradually from 1944 to 1946, though at the latter date the prices of fertilisers and leather were still stabilised because of their effect on the cost of living, and the price of timber because of its importance in building and other services affecting social welfare.<sup>1</sup> Thus some trading Controls were deliberately operated at a loss up to the end of the war. The effect can be seen in Table 6.

*Trading results of Raw Materials Department to 31st March 1945*

TABLE 6

	Sales	Profit or loss	Percentage on sales
Controls on which losses were incurred	£ 1,021,153,000	- £ 136,812,000	13.4
Controls on which profits were made .	918,759,000	+ 45,051,000	4.9
TOTAL . . . . .	1,939,912,000	- 91,761,000	4.7

Source: Ministry of Supply, Raw Materials Department

A policy of uniform and, where appropriate, stable prices was more difficult to execute when it was applied to processed materials worked into various forms by many private businesses. But it would have been pointless to impose uniformity at the issue stage and abandon it immediately beyond, for the main advantage sought was to ensure uniform and predictable material costs at the final stage, when munitions for direct use in the war were being produced. The case for uniform prices was clearly put to the P.A.C. in 1941 by Sir William Palmer. He was speaking with particular reference to iron and steel, but many of his points were of general application. He said:

With the control of industry and the demand exceeding the supply you wish to tell people who had not previously supplied each other, 'Your steel should now be supplied to this man who is nearer to you', or that this particular steelmaker must make something that he has not been accustomed to making but which is now wanted more than the other material which he was accustomed to making. At the same time in order to make that run smoothly you did not want the additional trouble that the prices of one man would be different from the prices of another man.<sup>2</sup>

The difficulty was, however, to know how to arrive at a suitable

<sup>1</sup> C. & A.G., *loc. cit.* Molasses also was still stabilised in price at that date, while information about the purchase price of the post-war sugar crop was awaited. When this was available the price was raised with effect from 1st January 1947.

<sup>2</sup> P.A.C., 1941, Q. 3537.



uniform price. As far as possible it had to be high enough to cover costs, including special additions wholly attributable to war circumstances, but not so high as to give on an average an unreasonably high profit to the industry; yet the demand for some products was so great that firms had to be employed to make them although they could do so only at a cost much above the average of the industry. Where there was a wide range of efficiency in an industry or where an industry made a great variety of products on which it was accustomed to receive widely differing rates of profit, the problem was particularly complex. The usual practice was to relate prices to the average costs and profits of the industry as a whole, and to deal with anomalies affecting individual firms by means of pooling schemes, subsidies, or rebates.

On the outbreak of war the first concern was to ensure that the prospect of supply difficulties was not exploited to secure additional profits. Consequently, for most of the items placed under control in September 1939, existing market or list prices were made statutory maxima. Thus, for the time being, any pre-war element of monopoly profit was preserved, and it was natural that, as war conditions took effect, most producers asked for prices to be revised in proportion to changes in cost, not to prevailing total costs. The exceptions to this attitude were found only in industries such as cotton spinning and weaving, where pre-war profit margins were very low. While it was certainly desirable that full information about total costs should be available when prices were fixed, as was suggested by the P.A.C.,<sup>1</sup> difficulties of staffing made it necessary to limit detailed cost investigations to industries where there was a *prima facie* case for it, such as those with a high degree of monopoly or strongly organised price-fixing arrangements. It was only gradually possible in price-fixing to move from a basis of pre-war prices plus subsequent changes in costs to one of current costs. The price of aluminium, for example, a material of which the British production at the outbreak of war was in the hands of a single firm, was fixed at the pre-war level until November 1939, when the Ministry of Supply became the sole buyer and seller. From then until the end of 1940 the Ministry of Supply or (from August 1940) the Ministry of Aircraft Production paid to the producer the pre-war price, adjusted periodically to offset increases in certain specified costs. Subsequently, cost investigations were made, and henceforward prices for the ensuing twelve months were fixed early in each year on a basis of estimated output and estimated capital to be employed, with allowance for a large number of contingencies.<sup>2</sup> In some cases, however, it was not found practicable,

---

<sup>1</sup> *Ibid.*, 1941, Report, para. 50.

<sup>2</sup> The Ministry resold the metal at a stable price. This price was originally appreciably higher than the price paid to the producer but remained unchanged as costs rose.

even quite late in the war, to relate prices directly to current costs.<sup>1</sup>

Price-fixing was more difficult where a highly integrated industry, with plants at very different levels of efficiency, was making a variety of products. The outstanding example was the iron and steel industry, and there the position was further complicated by the decision to stabilise prices from 1st November 1940 in face of rising costs. The arrangements for remuneration became extremely intricate, but their operation was facilitated because a uniform price system had been established in the industry before the war, under the supervision of the Import Duties Advisory Committee, as part of a general scheme of reorganisation. The prices of heavy products were based on the average cost of production of the main firms. The necessary cost investigation was made by an accountant appointed by the British Iron and Steel Federation and its results were reviewed by the I.D.A.C., which was assisted by an Advisory Accountant from 1937 onwards.<sup>2</sup> This system was taken over as it stood by the Iron and Steel Control when it was created at the outbreak of war.<sup>3</sup> War-time prices were thus based on average costs plus a profit.

In order to distribute equitably the increases in cost which were due to unavoidable war influences, especially the increases in the cost of imported materials, these were met not by the individual firms which purchased the materials but by a Central Fund, which operated from 1st November 1939 and was financed by a levy on all steel output.<sup>4</sup> This levy was included in costs of production, and therefore in prices, and as the cost of imported material rose rapidly, so did the amount of the levy. When it was introduced it was at the rate of 6s. 8d. per ton on steel ingots, 3s. per ton on pig iron and 9s. per ton on bought scrap. These three items together were approximately equivalent to 10s. per ton of ingots.<sup>5</sup> By February 1940 the levy on ingots had reached £1 per ton; in July it was raised to 30s., and in November, when it was decided to stabilise prices, to 45s. 6d., so that the total levy was roughly equivalent to 49s. per ingot ton. Some other

---

<sup>1</sup> One of the best examples is outside the field of raw materials. In July 1943 the Ministry of Supply agreed with the British Electrical and Allied Manufacturers' Association that for standard types of motors and generators it should pay 1939 list prices, plus the percentages estimated by the Association to equal the changes in costs at various dates, minus discounts varying according to the type of product and the date of supply. This was done despite the fact that the costs of eight firms for 1942 had been examined. (C. & A.G. Report on Civil Appropriation Accounts, Class X (War Services), 1944, para. 33.)

<sup>2</sup> C. & A.G. Report on Vote of Credit Appropriation Account, 1941, para. 41.

<sup>3</sup> P.A.C., 1941, Q. 3651.

<sup>4</sup> The technique of the levy was not new to this industry. Since 1937 there had been a spread-over levy of 5s. per ton on ingots, which had been used to equalise the incidence of the extra cost of imported scrap, which different firms had to use in different proportions. It was also used for other minor purposes. In 1939 it ceased to be used for its original major object and became the Special Fund referred to below.

<sup>5</sup> S.C.N.E., 1942-43, 14th Report, para. 184.

costs were dealt with in a similar way; for instance, the cost of certain A.R.P. measures was met from an Anti-glare Fund, and the administrative costs of the Control and of the British Iron and Steel Corporation (which was the industry's trading organisation) were borne by a Special Fund financed by a separate levy. At first all these activities were conducted by the industry on its own responsibility, but from November 1940 they were assisted by the loan of funds from the Ministry of Supply,<sup>1</sup> and from 1st January 1942 the Ministry took them over, the various funds being combined into a single Central Fund (Ministry of Supply Account).<sup>2</sup>

These arrangements provided for the sharing of the incidence of war-time increases in particular costs, but a more serious problem was presented by the firms which had difficulty in producing at a cost below the uniform price. The problem grew in intensity after the stabilisation of prices, as costs continued to increase. It was met from January 1941 by what was essentially a profit-pooling scheme, financed by the same levies as were used to equalise the incidence of special war-time costs. The arrangement was that deficiencies in the profit of individual firms below a pre-war standard profit, which in most cases was the average of profits as assessed for income tax in 1936 and 1937 plus an addition of ten per cent. on new capital, were made good in whole or in part by quarterly grants from a Prices Fund, which in turn received the necessary finance from the Central Fund, i.e. ultimately from levies on steel output.<sup>3</sup> In calculating profit, depreciation was allowed at twenty per cent. above Inland Revenue rates. The amount of the initial grants was determined by the recommendations of the Advisory Accountant, who in war-time was the servant of the Ministry of Supply, and these were based on an examination of quarterly financial returns, rendered by selected firms, and of monthly summaries of weighted average costs, prepared by the Investigating Accountant of the British Iron and Steel Federation, and were expressed in the form of a price increase. Thus every firm which had failed to achieve its standard profit was entitled to receive from the Prices Fund a grant on every ton of output, equal to the difference between the controlled price and the price recommended by the Advisory Accountant, unless the full payment on this basis would have raised its profits above its standard, in which case only the amount of the deficiency of profits was paid. On the other hand, if, after receiving the price increase, a firm had still on the whole of its business made less than twenty-five per cent. of its standard profit, it could apply to a Prices Fund Committee for a

---

<sup>1</sup> C. & A.G., *op. cit.*, 1940, para. 43.

<sup>2</sup> *Ibid.*, *op. cit.*, 1941, para. 51.

<sup>3</sup> *Ibid.*, *op. cit.*, 1941, para. 49.

further grant sufficient to raise its profits to that level.<sup>1</sup> This additional grant could also be made to firms which did not make heavy steels and were ineligible for any price-increase grant.<sup>2</sup> For firms making heavy products a further alternative existed. If, after receiving the price increase, they had still made a loss on the heavy section considered by itself, they could apply to the Committee for a grant to make good that loss, whatever the level of profit on their business as a whole. The concession of either of these additional grants, unlike the price increase, was not automatic but was at the discretion of the Prices Fund Committee.<sup>3</sup>

The amount credited to the Prices Fund in each quarter was what was required to meet the price increase on total output, but in the earlier years of the war much of this was not claimed by the firms. This was partly because some had profitable work outside the iron and steel industry, and partly because average costs were sufficiently low in relation to controlled prices for an appreciable portion of the industry to come fairly near its standard profit before receiving grants from the Prices Fund. The result was that the Prices Fund built up a large credit balance, which appeared as a cash surplus in the Central Fund, and this surplus was further increased because there were no cash outgoings in respect of lend-lease material, which was charged to the account at a notional value and generally sold to manufacturers at controlled prices.<sup>4</sup> In other words, if notional charges had been disregarded, the Central Fund levy and the controlled prices could have been reduced. If, however, this course had been followed, stable prices could, owing to the rise in costs, have been maintained in the last years of the war only with the assistance of a larger subsidy from Government funds than was actually used.<sup>5</sup> As it was, the situation was met by drawing on the surplus built up in earlier years and by reducing the levy, first to 35s. 6d. per ton from 30th September 1944, and then to 25s. 6d. from 12th March 1945, with corresponding reductions in the level of grants from the Prices Fund and no change in selling prices.<sup>6</sup> The great increase in the calls on the Prices Fund can readily be illustrated. For the year ended 31st December 1941 the transfer of £8,250,982 from the Central

---

<sup>1</sup> S.C.N.E., 1942-43, 14th Report, para. 186.

<sup>2</sup> C. & A.G., *op. cit.*, 1941, para. 49.

<sup>3</sup> S.C.N.E., 1942-43, *loc. cit.*

<sup>4</sup> C. & A.G., *op. cit.*, 1941, para. 55.

<sup>5</sup> e.g. in mid-1944 the average cost of production of one heavy product was £17 3s. 3d. per ton as compared with £10 6s. 8d. in the latter half of 1939, but the selling price in mid-1944 was only £15 12s. 3d. per ton.

<sup>6</sup> The selling price of steel was raised by two successive instalments of 15s. and 5s. per ton soon after the end of the war. The Central Fund was wound up in 1946 with a debit balance of £40 million to be borne by the Government. Of this total, however, £25 million was a notional item in respect of lend-lease imports. The total contribution of the industry to the Central Fund was £163 million. (P.A.C., 1946-47 :Q. 4101-02.)

Fund was authorised and claims admitted against it were only £4,416,864. For the calendar year 1944 £28,357,772 was allocated from the Central Fund and claims against it reached £23,804,226.<sup>1</sup> In 1941, of fourteen firms in the heavy section of the industry examined by the Advisory Accountant, only eight made less than six per cent. profit on capital before receiving grants from the Prices Fund, the worst result being a loss of 6·8 per cent. and the best a profit of 13·5 per cent.<sup>2</sup> In 1944, twelve such firms were examined, of which nine made losses from 1·3 per cent. to 17 per cent. on capital and only three made profits, ranging from 0·6 per cent. to 6·7 per cent.<sup>3</sup>

The Iron and Steel Control was not concerned to attempt detailed control over the profits of individual firms,<sup>4</sup> but the recommendations of the Advisory Accountant with regard to allocations from the Prices Fund naturally paid attention to ensuring that the average profits of the industry should not be unreasonably high, though he had no specific instructions to aim at a reduced rate of profit, such as was applied by Government contracting departments.<sup>5</sup> The nature of the equalisation scheme was such as to diminish the likelihood that individual firms in the heavy section of the industry would be able to make profits far above the average. The average profits of the firms investigated in the heavy section of the industry were, after grants had been paid from the Prices Fund, similar to the rates regarded by contracting departments as reasonable and were also comparable with the average figure of 10·5 per cent. on capital which the industry earned in its pre-war standard period of 1936 and 1937.<sup>6</sup> In the war period before price stabilisation was imposed, the average profit was 9·6 per cent.<sup>7</sup> In 1941 it was 9·9 per cent., and 9·8 per cent. in 1942,<sup>8</sup> 9·3 per cent. in 1943,<sup>9</sup> and 8 per cent. in 1944.<sup>10</sup> The highest rates of profit made by individual firms were 13·5 per cent. in 1941,<sup>11</sup> 12·6 per cent. in 1942,<sup>12</sup> 11·6 per cent. in 1943,<sup>13</sup> and 11·5 per cent. in 1944.<sup>14</sup> In some of the lighter sections of the industry, where

---

<sup>1</sup> C. & A.G., *op. cit.*, 1944, para. 50.

<sup>2</sup> *Ibid.*, *op. cit.*, 1941, para. 49.

<sup>3</sup> *Ibid.*, *op. cit.*, 1945-46, para. 55.

<sup>4</sup> P.A.C., 1943, Q. 4947.

<sup>5</sup> C. & A.G., *op. cit.*, 1941, para. 43.

<sup>6</sup> *Ibid.*, *loc. cit.*

<sup>7</sup> *Ibid.*, *loc. cit.*

<sup>8</sup> *Ibid.*, *op. cit.*, 1943, para. 58.

<sup>9</sup> *Ibid.*, *op. cit.*, 1944, para. 47.

<sup>10</sup> *Ibid.*, *op. cit.*, 1945-46, para. 51.

<sup>11</sup> *Ibid.*, *op. cit.*, 1941, para. 49.

<sup>12</sup> *Ibid.*, *op. cit.*, 1943, para. 64.

<sup>13</sup> *Ibid.*, *op. cit.*, 1944, para. 50.

<sup>14</sup> *Ibid.*, *op. cit.*, 1945-46, para. 55.

regular costing and a price system finally approved by the I.D.A.C. had not been established before the war, and which participated only indirectly or partially in the equalisation scheme, much higher rates of profit were obtained, and in some cases price rebates were arranged in order to reduce them. These sections, however, accounted for less than a quarter of the total capital in the whole iron and steel industry.<sup>1</sup>

It appears, then, that in relation to the Government's general profits policy there is not much to be said against the extraordinary system of remuneration in the iron and steel industry during the war. But on a wider view it could never be justified as a permanent arrangement, since it had a strong tendency to shelter the inefficient and perpetuate the obsolescent. During the war, however, this was, within limits, just what circumstances made necessary. It was impossible to satisfy the demands of munitions production from the output of the reasonably efficient iron and steel plants alone; therefore the others had to be kept in production, and for the time being it was physically impossible to make any great improvement in their condition. The weakness of the equalisation scheme was that, although it permitted greater rewards to the efficient than to the inefficient, it was possible for it to offer equal protection to avoidable as to inevitable productive inefficiency and, in particular, that it discriminated in favour of any firm which had declined in efficiency since the standard period and against one which had increased in efficiency. The former defect would have lain in any system of increasing prices sufficiently to assure the marginal firms of some profit, and this would have been a more expensive alternative. The scheme that was used, moreover, did contain the important safeguard that grants additional to the price increase had always to be considered by the Prices Fund Committee, over which a Ministry of Supply representative presided. Before permitting such grants, the Committee considered the productive efficiency of the applicant and, as a result, the Ministry of Supply in some cases took special action to increase the firm's efficiency.<sup>2</sup>

In different conditions it was possible to vary slightly the details of the equalisation method and perhaps reduce its major weakness. In this respect the scheme in the iron and steel industry may usefully be compared with the system of Price (Class of Coal and District) Allowances, operated for the coal industry through the Coal Charges Account from 1942. Under this arrangement the coal industry was divided into geographical districts and, wherever the average receipts per ton of saleable coal in any district failed to exceed the cost by an

---

<sup>1</sup> P.A.C., 1943, Q. 4948.

<sup>2</sup> S.C.N.E., 1942-43, *loc. cit.*

approved minimum, the deficiency was made good from the proceeds of a levy on the sale of all coal. This deficiency payment was made irrespective of the profit position of the individual undertakings. Thus the marginal colliery in a richer area would probably receive nothing, while payment would be made to a highly efficient and profitable colliery in a poor area. In this case the more cheaply operated districts helped to maintain in production the more costly operated, not because the former had not the capacity to meet national needs but because it was impracticable to transfer the labour to them from the latter. It might be that some of the differences in cost between districts were removable and, if so, the scheme discouraged their removal. But at least it did nothing to encourage the individual high-cost colliery in a relatively low-cost district; and it was in such circumstances that the high costs of an individual undertaking were most likely to be due to avoidable inefficiency.

Profit-pooling arrangements were in operation in an appreciable number of raw materials industries. Sometimes they were conducted privately by the undertakings concerned, as was the case among timber merchants;<sup>1</sup> sometimes schemes were conducted under the authority of the responsible Control, as in the production of borax and boric acid. Occasionally a special contribution was made to the profits of individual firms by a single well-placed firm in their industry. Funds for the stabilisation of the price of sulphate of ammonia were obtained partly by a levy on all producers and partly by the voluntary surrender of excess profits by one producer using a process in which costs had not risen as in the case of other producers.<sup>2</sup>

These profit-pooling schemes were very useful in enabling uniform prices to be applied to industries in which there were wide variations of costs among the constituent firms. When the uniform prices were approximately equal to the average costs of the industry (including normal profit) a profit-pooling scheme was sufficient to redress existing anomalies. But where uniform selling prices were fixed below average costs, other assistance was necessary and the Government paid a subsidy to the industry. For instance, certain expenditure in the production of fertilisers was borne directly by the Ministry of Supply. The items so treated included losses on sales of materials at less than cost, increases in manufacturing expenses, and the extra costs of transport of surplus production sold outside producers' normal distribution areas.<sup>3</sup> Subsidies and profit-pooling schemes could exist side by side in the same industry. In the later years of the war, controlled prices in the heavy section of the iron and steel industry

---

<sup>1</sup> C. & A.G., *op. cit.*, 1941, para. 54.

<sup>2</sup> *Ibid.*, *op. cit.*, 1940, para. 48.

<sup>3</sup> *Ibid.*, *loc. cit.*

were below average costs and the difference was covered by the Ministry of Supply meeting the losses on the Central Fund Account, while at the same time the pooling arrangements of the Prices Fund continued to reduce the effects of the individual variations in cost.

Subsidies were sometimes given, not to a whole industry, but to a single firm whose output was essential but whose costs were markedly higher than those of the other firms on whose costs the controlled price was based. In 1941, for example, it was agreed that owing to shortage of supplies one coal and iron firm should continue to make nitric acid for its own use, taking the output at I.C.I. prices, the resultant loss being borne by the Ministry of Supply. Magnesium was produced by three firms using different methods, and the Ministry of Aircraft Production fixed the controlled price at a level which permitted a reasonable profit to the cheapest producer. It repaid the losses of the other two and added a fixed sum per ton to give them a profit. When the costs of the cheapest producer rose above the controlled price, the Ministry agreed to pay to it the difference between the controlled price and a notional price revised from time to time in the light of recent and estimated future costs. The Ministry was not in contractual relationship with any of the producers.

In some cases a producer received his subsidy indirectly. Either he received material at less than commercial cost or he was allowed to raise his price to his customer, who in turn was helped to meet the increase by a direct subsidy, which might also take into account the cost of other items at this later stage. An example of a subsidy given to an industry by the issue of raw material below cost was provided by the production of bichromates. Cotton spinning was assisted by Government intervention at both earlier and later stages of the chain of production. Early in 1943 the issue price of raw cotton was reduced by 1d. per lb., in order to offset increases in spinning and weaving costs. Later in the year the Lord President's Committee gave instructions that the subsidy on raw cotton entering into exports should be withdrawn, but it was found difficult to devise a practical scheme to effect this through yarn prices, or to operate a system of rebates on yarn used in the manufacture of utility clothing. When, therefore, spinning and weaving margins had to be raised again in December 1943, as a result of rising costs, no further reduction was made in raw cotton prices, but instead it was decided in 1944 to intervene at a later stage, when products were more clearly differentiated, and pay a subsidy on utility cloth.

Subsidies were occasionally given for reasons other than the desire to stabilise prices or to retain the output of uneconomical plants. One reason for the issue of straw to papermakers below the purchase price until April 1942 was the hope of inducing them to provide more boiling capacity for the production of straw papers. The subsidy was



thus a concealed form of capital assistance. As such it was crude, speculative, and altogether less satisfactory than more orthodox capital assistance schemes.<sup>1</sup> The subsidy was, however, also required in order to encourage a transfer of production from wood-pulp papers to straw papers by maintaining a price differential between the two. When licensing machinery had been established it was possible to restrict by direct means the use of wood pulp, and the subsidy on straw for papermaking was therefore withdrawn.

The remaining method of correcting anomalies produced by uniform prices was the recovery of rebates from firms which were unduly favoured by them. Arrangements of this type were avoided as far as possible by fixing prices comparatively low, for prices inflated by unduly high profit margins were completely contrary to established policy; but the great variety of products made by some firms and industries made it impossible to control profits closely through the prices of individual articles. So far as the Government's own purchases were concerned, it could to some extent protect itself because controlled prices were usually maximum, not fixed, prices and it could try to negotiate contracts at lower prices and check the contract prices by costing. The Treasury did not accept the thesis that contracting departments should necessarily pay controlled prices without further question, because when such prices were fixed, the return on capital which they gave to any particular firm charging them was not a primary consideration.<sup>2</sup> This attitude was formally abandoned only in such an exceptional case as that of machine tools, where the list prices of firms were used as controlled prices and were revised so as to give no more than a fair and reasonable return on capital over the whole aggregate of their business.<sup>3</sup> Nevertheless, willingness to pay controlled prices greatly reduced the burden of costing and, partly for this reason, departments usually agreed to do this unless there were very exceptional features, such as abnormally large orders. But in any case the very existence of controlled prices made it extremely difficult to obtain any lower prices through contract negotiations. Contractors could seldom be persuaded that a price accepted as reasonable for one purpose might not be reasonable for another.

There were two sets of circumstances in which rebates were sought by price-controlling departments. The first was when holders of stocks made windfall gains as a result of a change in controlled prices. Early in the war, when the controlled prices of timber were raised, a levy was made on the holders of timber stocks,<sup>4</sup> as a result of which

<sup>1</sup> Normal types of capital assistance schemes are described in Chapter XII below.

<sup>2</sup> P.A.C., 1943, Q. 4638.

<sup>3</sup> *Ibid.*, *loc. cit.*, and C. & A.G. Report on Civil Appropriation Accounts (Unclassified Services), 1941, paras. 66-67.

<sup>4</sup> By Treasury order under the Emergency Powers (Defence) Act (2 & 3 Geo.6 c.62), section 2.

nearly £2 million was collected which would otherwise have been entirely fortuitous profit.<sup>1</sup> This was, however, a very exceptional arrangement. Such gains were usually left with industry, as it was expected that ultimately it would have to bear corresponding losses on stocks.

More important was the situation when the products of an industry were so numerous and varied as to make it impracticable to cost them all and difficult to estimate the effect of the prices of individual items on the overall trading results of any firm. This situation was aggravated when a considerable proportion of sales was not made direct to the Government, so that Contracts Branches could exercise no close check. These circumstances were most completely exemplified by the light alloy industry, and the arrangements made to control its remuneration provided a classical treatment of the situation.

The light alloy firms were in no cases direct contractors to Government Departments, but their products during the war were used almost entirely in the manufacture of aircraft. The Ministry of Aircraft Production thus had a strong interest in their prices, but could control them only by some overall arrangement. A price list for sheet, strip, and extrusions, had already been drawn up by the Wrought Light Alloys Association, of which some of the firms were members, but as it covered about 20,000 separate items and other types of product had also to be priced,<sup>2</sup> it was difficult to apply any of the commoner schemes of price control. The industry had, however, expanded at a tremendous rate in the years immediately before the war and there was little doubt that greatly increased turnover had resulted in extravagant profits. In December 1939 the Air Ministry investigated the finances of four companies and found that for 1938 their average profit on capital was thirty-seven per cent. The industry then volunteered price cuts equivalent to a reduction of about eight per cent. in profit, and these were eventually accepted and made applicable for twelve months from 1st July 1939, although the Air Ministry had originally sought larger reductions.

After the expiry of this agreement a much more thorough investigation into the twelve principal firms of the industry was made on behalf of the Ministry of Aircraft Production by Deloitte, Plender, Griffiths & Co. The inquiry revealed that in the four years ending in 1939 the four largest producers of fabricated alloys had made average profits of 40·62 per cent. on operating capital, the range being from 34·26 per cent. to 50·59 per cent. Information was not then available in respect of a later period, but the rate of return was expected to be even higher. All but two of the other firms investigated were in much

---

<sup>1</sup> P.A.C., 1941, Q. 3165.

<sup>2</sup> The total number of items concerned was approximately 68,000.

the same position as the four largest, and the situation was believed to be similar throughout the entire industry. The firms were able to claim that they were justified in expecting an unusually high return, because they had financed their pre-war expansion entirely without Government assistance and had to provide out of profits for the probable premature redundancy of much of their fixed capital. Nevertheless, it could be demonstrated that in the four years up to 1939 the four principal firms had been in a position to distribute a reasonable dividend to shareholders, to provide for the writing-off in full of all expenditure on fixed assets, and to accumulate substantial reserves against contingencies of every description. It therefore appeared that there was no justification for the continuance of their existing level of earnings, particularly as the further expansion of the industry since the outbreak of the war had been financed largely by the Government.

As a matter of administrative convenience it was decided that the best method of control was to leave prices to be fixed by the industry and provide for all profit above a certain level to be paid to the Ministry as a rebate. There was difficulty in obtaining the agreement of the industry to such a scheme, mainly because firms were anxious for a guarantee that they would earn at least their E.P.T. standard profit, a principle which the Government refused to admit. A scheme was put forward, however, and modified to meet the wishes of the industry which, it was hoped, could be persuaded to accept it. This provided that firms could retain a profit of one per cent. on Government capital and a minimum of eight per cent. on their own capital employed, plus a fixed proportion of their total profit, a proportion designed *ex ante* to give a further  $4\frac{1}{2}$  per cent. on capital employed, but which would realise a higher rate if the firm proved relatively efficient and a lower one if it proved relatively inefficient. Any additional profit was to be paid as a rebate to the Ministry of Aircraft Production. Negotiations for the adoption of a scheme on these lines were carried on for many months and then had to be suddenly terminated because of objections raised by the Board of Inland Revenue. The first of these was that a rebate paid to the department could not be treated as an admissible deduction from profits in assessing taxation; the second, which was supported by the Treasury, was that the scheme raised a wide constitutional issue, because in effect it would impose a form of taxation without specific Parliamentary consent and through the medium of a department other than the Board of Inland Revenue. The first objection would have made it impossible for any department to operate any kind of rebate scheme, but it was eventually withdrawn, and after several months a way was found to avoid the second.

The method adopted was to obtain an overall discount on selling prices, at a rate designed to limit profits to the desired level; i.e. the

rebate was related only indirectly instead of directly to the rate or amount of profits, and was therefore not to be classed as private taxation. The practice to be followed was for the Ministry of Aircraft Production to agree with every firm early in each year on the amount of capital it was likely to employ in the year, its probable volume of trade, and the amount of profit likely to be realised on it at existing prices. This amount of profit was then compared with the amount which would be obtained at agreed rates on the estimated capital to be employed, the excess of the one over the other was converted to a rate in the pound on estimated turnover, and it was arranged that the firm should pay to the Ministry a rebate at this rate on all its sales during the year. There was thus a full incentive for firms to keep costs as low as possible, because any saving resulting from a reduction in costs was retained by them. Agreement on such a scheme was reached in September 1942 and it was originally operative for three years from 1st January 1941, but was subsequently extended. The retainable profit allowed in calculating the rebate was fixed for 1941 at fifteen per cent. on the firms' own capital and two per cent. on capital owned by the Ministry. For subsequent years the rate was ten per cent. on firms' capital and one per cent. on Government capital, with provision that at the discretion of the Minister these rates might be increased by a maximum of  $2\frac{1}{2}$  per cent. and 1 per cent. respectively, according to efficiency and the risk undertaken.<sup>1</sup> Recognition was given to individual differences in the position of firms by providing for discretionary variations in the method of calculating the amount of profit, e.g. in exceptional cases sums to provide for the redundancy of fixed assets or for deferred repairs might be deducted from profits. The agreement covered the products manufactured from aluminium or magnesium alloys by members of the Wrought Light Alloys Association; i.e. most of the output of sheet, strip, and extrusions, and a proportion of that of castings and forgings. Separate arrangements on similar lines had to be made with the remaining firms producing sheet, strip and extrusions.

In January 1944 a somewhat similar scheme was accepted by casting and smelting firms which were outside the main agreement.<sup>2</sup> In this case the rebate was fixed retrospectively and firms whose sales did not reach an agreed minimum value were exempt from it. The forging firms which were not covered by the main rebate scheme were

---

<sup>1</sup> The rates were modified for the period from 1st January 1945 so as to allow the firms  $12\frac{1}{2}$  per cent. on their own capital and 1 per cent. on Government capital (C. & A.G. Report on Civil Appropriation Accounts, Class X (War Services), 1944, para. 10).

<sup>2</sup> The scheme covered three years to July 1945 and was designed to leave firms with eight per cent. profit on average capital employed, plus one per cent. on Government capital, plus a flat sum of £5,000 for the first year and £3,000 for each subsequent year. The eight per cent. and one per cent. could be increased at the Minister's discretion by not more than four per cent. and one per cent. respectively.

none of them exclusively concerned with light alloys, and this branch of their work was left to be dealt with by a Ministry of Supply scheme to restrict the profits of iron and steel forgers.

It is interesting to note that in the main scheme, when the rebate for 1941 was arranged, the trading results were already known and therefore the relation between profit and the value of sales could be exactly calculated. The same condition was a permanent feature of the second scheme. In such circumstances the distinction between a rebate on profit, which was unconstitutional, and a rebate on sales, to which there was no objection, was effectively non-existent, or, perhaps one should say, of remarkable subtlety. For the later years there was in the main scheme a genuine difference, based on the deficiencies of foreknowledge. It was, however, only because the planning of production by the Light Metals Control made it possible to forecast output without a very wide margin of error that the scheme was acceptable and able to achieve its objects.

Towards the end of the war a new difficulty arose, as light alloy production was then not quite so exclusively devoted to Government work. Accordingly, for 1945 the rebate was levied only on sales to Government sub-contractors, and was calculated on the assumption that capital employed was divided between Government and civil work in the same proportion as the value of turnover. The rebate schemes came to an end on 31st July 1945,<sup>1</sup> having yielded about £40 million.<sup>2</sup>

The rebate system was not popular, but in certain circumstances it was the most convenient method of price control to administer and, once the light alloy scheme had demonstrated its practicability, an attempt was made to introduce it in one or two other cases, notably some of the lighter branches of the iron and steel industry in which, as already noted, profit control had not been so effective as in the heavy sections. The sections concerned were drop forgings and cold-drawn tubes, both of which produced a considerable variety of articles, and discussions of price control for both of them began at the end of 1942.

The number of products, the variety of techniques, and the wide ranges of efficiency between the firms whose continued employment was inevitable during the war had made it impracticable to impose a schedule of standard prices for drop forgings. Nevertheless, by 1943 it was considered that such a schedule could be devised and the Iron and Steel Control agreed to co-operate with the Association of Drop Forgers and Stampers in preparing one which was expected to be ready for introduction in mid-1944. In the meantime a simple rebate

---

<sup>1</sup> P.A.C., 1946-47, Q. 3941.

<sup>2</sup> *Ibid.*, 1946-47, Q. 3839.

system was required in order to prevent excessive profits. The Association proposed that firms should adjust their prices with effect from 1st January 1943, by the payment to the Ministry of Supply of a rebate on sales, calculated to leave them with a profit conforming to the following formula:

- (1) On the 1936–37 average turnover, the 1936–37 rate of profit;
- (2) on additional turnover to an amount equal to the 1936–37 average turnover, half that rate of profit;
- (3) on any turnover in excess of twice the 1936–37 average, one-quarter that rate of profit.

In order to test the suitability of this formula, a cross-section of the industry was investigated and returns from eleven firms are summarised in Table 7.

*Trading results of a cross-section of the drop-forging industry  
Financial years*

TABLE 7

	Pre-war years 1936–37	Latest financial year <sup>1</sup>	
		Actual	Adjusted by formula
Turnover . . . . .	£2,458,856	£9,682,378	£9,682,378
Profit . . . . .	£363,521	£1,497,992	£722,000
Percentage profit on turnover . . . . .	14·8	15·5	7·5
Capital . . . . .	£1,596,850	£5,532,156	£5,532,156
Percentage profit on capital . . . . .	22·8	27·1	13·05

Source: Ministry of Supply

<sup>1</sup> The latest financial year ended in March 1943 in most cases. Capital in that year included £1,492,682 supplied by the Government, and if 3 per cent. was allowed on this, then the adjusted profit on companies' capital would be 16·9 per cent.

Agreement was reached with the Association of Drop Forgers and Stampers in June 1944 for the introduction of a rebate scheme based on the original formula and its application to all sales from 1st July 1942 to 30th June 1944, but whereas it had been expected that some ninety-five firms would accept the agreement, only nine actually did so.

The scheme must therefore be accounted largely unsuccessful, since it did not touch most of the industry, and the failure was accentuated by the fact that it proved impossible to devise a standard price schedule. The rebate scheme was continued unchanged to 30th June 1945 on the ground that it was better than nothing, and was then abandoned. Control over the profits of firms outside the rebate agreement was left to the operation of costing and it was decided that at least up to the year 1943 it would be practicable to investigate only

direct contracts, which constituted only a small proportion of the industry's business. Firms resisted investigation even to this very limited extent, but price reductions were obtained in the form of bulk refunds on a few contracts.

Cold-drawn tubes proved to be easier to deal with, mainly because ninety per cent. of the output was produced by a group of firms controlled by a single holding company. The variety of products had made it difficult to prepare a scale of prices based on costs, and maximum prices were pre-war prices plus increases in the cost of raw material, as permitted in successive Control Orders. Yet it was impossible to control profits adequately through costing, as only about ten per cent. of the group's output was on Government contracts and some forty-five per cent. on Government sub-contracts. An investigation was therefore made into the overall profits of those members of the group which were primarily engaged in the production of cold-drawn tubes, with the results summarised in Table 8.

*Trading results of principal tube manufacturers*

TABLE 8

	Average of 1936 and 1937	Year ending July 1942
Capital . . .	£3,863,000	£7,950,000 <sup>1</sup>
Profits . . .	£1,066,000	£2,658,000
Turnover . . .	£4,902,000	£14,404,000
Profit rate:		
on capital . . .	27·6%	33·4%
on turnover . . .	21·7%	18·5%

Source: Ministry of Supply

<sup>1</sup> Includes £882,000 Government capital.

The increased turnover during the war had plainly led to an increase in profits which were already high, and to meet the situation the holding company volunteered to pay to the Ministry of Supply a rebate of £1,400,000 in respect of the year ended 30th June 1942, and to reduce prices as from 1st July 1942. The proposed rebate was at a rate on sales which was expected to reduce profit to 15·8 per cent. on capital and 8·7 per cent. on turnover. This offer was accepted and was subsequently extended to cover three more firms, the amount of the rebate being raised to £1,600,000.

The system of an annual review of overall profits and negotiation of price reductions and an appropriate rebate continued for the remainder of the war, departments waiving their costing rights, except that they reserved the right to cost direct contracts for stores despatched before 1st August 1941,<sup>1</sup> and that the Admiralty had the

<sup>1</sup> Only one contract (of the value of £165,000) was costed under this provision.

right to satisfy itself that increases in the prices of boiler tubes were reasonable. The results achieved are shown in Table 9.

*Results of rebate scheme for cold-drawn tubes*

TABLE 9

	Year ending July 1943	Year ending July 1944
Capital . . . . .	£12,158,554	£12,497,610
Profit . . . . .	£2,932,729	£2,462,435
Turnover . . . . .	£17,541,028	£18,127,496
Profit before rebate:		
on turnover . . . . .	16·7%	13·7%
on capital . . . . .	24·2%	19·6%
Government capital in above . . . . .	£2,697,539	£3,253,423
Government interest not charged . . . . .	£85,259	£97,500
Rebate . . . . .	£1,500,000	£1,050,000
Profit after rebate . . . . .	£1,432,729	£1,412,435
Profit after rebate:		
on turnover . . . . .	8·2%	7·8%
on capital . . . . .	11·8%	11·3%

Source: Ministry of Supply

After July 1944 turnover declined rapidly, but a rebate of £300,000 was agreed for the next year. The companies were permitted to retain this, however, for the time being until results for the year ending July 1946 could be considered.

The figures show that this scheme achieved its main object of reducing profits to a more reasonable level. But the fact that it had to be applied year after year proved that the price reductions which had been negotiated were inadequate. And, since this rebate was fixed retrospectively, it offered firms no incentive to seek reductions in costs. In the prevailing circumstances, probably some form of rebate scheme was the only practicable means of dealing with the remuneration of the industry, but it is doubtful whether the one adopted was the best that could have been devised. It was particularly desirable that, where rebate schemes had to be adopted, they should be open to as little detailed criticism as possible, as the comparatively high prices which were implicit in the very existence of rebates were objects of suspicion and were criticised on grounds of general financial policy.<sup>1</sup>

In one special case it was found possible to control the prices charged by an industry which had an enormous variety of products, without recourse to a rebate system. This was in the machine tool industry, but conditions there were so individual that the method of price control operated by the Machine Tool Control in conjunction

<sup>1</sup> See e.g. S.C.N.E., 1942-43, 14th Report, para. 53.



with the Finance Division of the Ministry of Supply had to remain unique.

To cost every machine tool order placed by the Government or its contractors would have required the services of trained staff in numbers that were simply not available, and even then would have given control over only part of the industry's output. Negotiations were therefore begun with the Machine Tool Trades Association in 1940 with the object of securing agreement on a scheme of statutorily controlled prices, the basis of which would be manufacturers' own list prices, with suitable additions to cover increases of cost and deductions to offset the effects of larger turnover. Agreement was reached on such a scheme, which was put into force from 27th July 1940.<sup>1</sup> The list prices used as a basis were the average of those ruling in the six months ending 31st December 1935, a period in which the industry had to some extent recovered from the depression of the early nineteen-thirties, was working with free competition from abroad, and had not been affected by the subsequent rearmament programme. To these prices an addition of  $22\frac{1}{2}$  per cent. was made. The new prices thus reached were given statutory force, at first as fixed prices, but, after a few weeks, as maximum prices. The prices were subject to revision after a set period in the light of investigation of production costs and trading results, and a firm of professional accountants was employed to assist in this investigation. Initial price lists were approved for 255 manufacturers of standard tools, but the task proved more complex than had been expected and the scheme was finally abandoned, because it provided no clear basis on which the provisionally approved prices could be revised and because so many of the machine tools which had to be priced in 1940 and 1941 had not been manufactured at all in 1935.

From 31st March 1942 a new scheme was in operation under which manufacturers' price lists continued to have statutory force but were subject to revision by the Ministry of Supply, whenever the level of profits revealed by an examination of the firm's trading accounts seemed to justify it. The scrutiny of individual prices of standard machine tools ceased, and upward or downward adjustments were applied to a firm's price list *as a whole* so as to keep its total profit at a fair level, irrespective of whether the profit on individual items was high or low. This fair level was determined, as in contractual policy generally, by reference to a margin on capital employed, with small additions (related to turnover) for risk and efficiency; its overriding maximum, including the additions, was intended not to exceed fifteen per cent. on capital employed, but the Ministry did not disclose this figure to the trade. Where non-standard tools were made to the

---

<sup>1</sup> Control of Machine Tools (No. 2) Order (S.R. & O. 1940, No. 1343).

requirements of the customer, prices were determined retrospectively, in accordance with the same principles and sometimes after a special cost investigation, as well as examination of the maker's trading accounts. The controlled prices applied to the entire output of the industry, of which in 1943-44 only about forty-three per cent. was directly or indirectly for the Government.

It is not clear how successful this scheme was in respect of the industry as a whole, since many of the firms were only partially dependent on the manufacture of machine tools. A considerable number of them also acted as importers.<sup>1</sup> In some cases the aim of limiting firms' profits to fifteen per cent. on capital was certainly not achieved quickly. One important firm, for example, had evidently made very high profits in 1941 under the original price control arrangements, and in December 1942 the Ministry proposed to reduce its prices by fifteen per cent., estimating that this would still leave the firm with a profit of eighteen per cent. on capital. Eventually the company agreed to a cut of ten per cent., which would have allowed twenty per cent. on capital. In March 1943 the Ministry decided to reduce prices by fifteen per cent. but, after an appeal by the company, a reduction of only ten per cent. was applied on 1st April 1943. When the firm's trading results for 1942 were available, however, the Ministry proposed in November 1943 a further cut of 7½ per cent. and it actually applied a seven per cent. reduction from 1st February 1944.<sup>2</sup> For the industry as a whole, what can be said is that the final scheme certainly brought profits below the high levels received in the first two years of war.

This scheme remained in force until the end of 1944 when control over the purchase and sale of machine tools ceased, and it provided an interesting variant from the normal methods of price control.

---

<sup>1</sup> See p. 147.

<sup>2</sup> C. & A.G., Report on Civil Appropriation Accounts, Class X (War Services), 1942, para. 62.

## CHAPTER XI

# THE PROVISION OF WORKING CAPITAL

**F**INANCE was concerned not only with the level of prices, but also with ensuring that manufacturers and traders had the means necessary to carry on their business. This involved the provision of working capital, i.e. the money necessary to meet current expenses, such as the payment of wages and the cost of materials, while production was in progress but not completed, and the provision of fixed capital, i.e. the buildings and plant needed for production. The supply of capital for these purposes formed two distinct branches of financial policy, each of which will be considered separately in this and the following chapter.

There was a variety of possible methods by which the working capital necessary for the execution of Government contracts could be provided. In the first place the responsibility might be left entirely with the contractor, in which case he had to supply working capital either from his own accumulated financial resources or by borrowing on ordinary commercial terms from his bank. Alternatively the Government itself might accept the responsibility in whole or in part. If it did so, it could provide working capital by loan to the contractor, by part payment in advance when it placed an order, or by progress payments made while the order was in course of execution.

The general rule adopted by the Government in peace-time was to place the onus as far as practicable on the contractor. Its view was that industry and trade ought to look to the banking system for most of its short-term finance. In peace-time it was unlikely that there would be difficulties caused by the uncreditworthiness of contractors, for they were not inclined to tender for orders which they knew might strain their financial resources, and Government Departments usually had enough choice to be able to place contracts only with firms which were clearly strong enough to complete them. The Government was naturally reluctant to make any payment to its contractors before goods were delivered, as this would weaken its position in negotiating an early price settlement. All departments recognised, however, that the fulfilment of large orders involving a long period of production required such an exceptional amount of working capital that it was only reasonable that some special governmental provision should be made. Among the items for which such special arrangements were

made were warships, airframes, aero-engines, works services of all kinds, and experimental stores.

But departments were anxious that any payments made before the completion of the contract should be related, as far as possible, to the satisfactory progress of the work. This could be achieved only by ruling out the provision of loans or advance payments or progress payments at stated intervals. They therefore adopted the alternative method of paying a proportion of the value of specific stages of the work which had been inspected and approved. In the case of aircraft, for example, eighty per cent. of the value of each completed stage was payable after inspection.

Stage payments of this type remained throughout the pre-war rearmament period the standard method by which the Government provided working capital, but in some cases they proved to be inadequate and had to be supplemented by other means. This was particularly so in the aircraft industry, where firms were involved in a heavy initial outlay before the first stage was completed. In these circumstances the Air Ministry agreed, in November 1935, to make monthly payments of eighty per cent. of the money spent on the purchase of materials, subject to a maximum to be determined by the department, whose interests were safeguarded by a condition that ownership of all materials and equipment, in respect of which progress payments of any type were made, should vest in the Air Ministry. A similar vesting safeguard had been used by the War Office since 1929, and the Admiralty also made instalment payments (with a vesting clause) in several fields. At the same time as the Air Ministry introduced regular payments of a proportion of expenditure, it also increased the maximum amount of the stage payments from eighty per cent. to ninety per cent. In 1936 it decided that on cost-plus contracts for initial batches of aircraft it would allow progress payments up to ninety per cent. of the expenditure, not only on materials, but also on labour and overheads as shown in the contractor's books. A year later expenditure on jigs and tools was also brought within the scope of the ninety per cent. stage payments, subject to the Air Ministry acquiring disposal rights over them.

Similar difficulties were encountered by the War Office among contractors making tanks and other A.F.V., and were resolved by arrangements of the same type. In October 1937 the Treasury approved a War Office proposal that on tank contracts there should be a maximum of three progress payments at quarterly intervals, each up to eighty per cent. of ascertained expenditure. At the time it was doubtless hoped that this would be only a temporary concession, as is suggested by the decision that the payments should be made *ex gratia* instead of by amendment of contracts, but in fact the practice became firmly established, and eleven months later the Treasury authorised

the number of progress payments to be increased beyond three if the completion of the contract was delayed, as the delay was usually caused by the department, not the contractor.

Progress payments, suitably extended as described in the foregoing paragraphs, represented in general the utmost provision which the Government found it necessary to make up to the outbreak of war. Each of the Service Departments also had provision in its contracts practice for the grant of loans for working capital, but very little use was made of it. The conditions, which were payment of interest at one per cent. above bank rate with, in the case of the Admiralty but not the other two departments, a minimum of five per cent., were such as to discourage firms from applying to the Government for this type of assistance, and the only important case in which it was arranged was one in which the usual terms were modified in favour of the firm. This was in the spring of 1938, when the Admiralty agreed to loan to one of its largest contractors all the working capital required above £400,000 (estimated at £414,784) at  $3\frac{1}{2}$  per cent., this being the highest rate which the firm was then paying for any part of its borrowed working capital. Advances to the firm were limited to seventy-five per cent. of the difference between the value of the work done on the whole contract and the amount of any instalments paid, and issues were made on the strength of certificates furnished by the firm's auditors.

Advance payments were never made, but in one special case a somewhat similar arrangement was made by the Office of Works. This was in connexion with the construction of the R.O.F. at Chorley, where permission was given to pay up to ninety per cent. of the value of railway materials brought on to the site but not yet incorporated in the work. This arrangement was made because the sub-contractor was forced to buy the materials as and when they were available and was therefore liable to accumulate exceptionally large stocks. Even so, the Treasury sought to mark that this was an exceptional concession by demanding the payment of at least five per cent. interest on all such advances, a demand which was waived after strong protests by the sub-contractor.

The examples just quoted were exceptional and do not fundamentally modify the preceding account. Almost up to the outbreak of war the provision of working capital presented few serious difficulties. In the summer of 1939, however, as the rate of expansion increased, there were signs that new arrangements would be necessary. In order to obtain sufficient output firms were having to be persuaded to accept larger orders than they were used to taking, and the result was that their financial resources were placed under a great strain. The position was brought under discussion in August when a small firm, making greatcoats and kilts, asked the newly formed Ministry of

Supply for an advance to pay wages, because it had no security on which to borrow further from the bank. As many similar requests were expected, the Ministry asked for authority to make such loans to contractors in urgent cases, without reference to the Treasury, subject to these limitations:

- (i) the amount lent to any contractor was not to exceed £1,000 or twenty per cent. of the value of his contracts, whichever was the less;
- (ii) the possibility of accommodation from the contractor's bank in return for an assignment of payments due under the contract must be considered first;
- (iii) where possible a lien was to be taken on the contractor's equipment;
- (iv) the department must be satisfied that there was every prospect of the contractor fulfilling his contract satisfactorily;
- (v) covering Treasury authority was to be sought *ex post facto*.

The Treasury agreed to the loan in this particular instance, but thought it objectionable in principle and refused to delegate the authority requested, insisting that firms must look to their banks, not to Government Departments, for advances.

The general question could not be disposed of as simply as that, for the Ministry's request referred specifically to cases in which accommodation could not be obtained from the banks. The issue was quite clear and became more urgent with the outbreak of war. Contractors had to take on larger financial commitments, which must be promptly met if production was to be maintained. Therefore, either the banks had to be induced to lend on rather less security, or the Government had to devise means to meet the increased requirements of working capital, or both. From the beginning of the war something was done in both ways. The Treasury held consultations with the Bank of England, which supported the Government's request that the banks should give special consideration to the needs of Government contractors and sub-contractors. The outcome was that in November the Treasury was able to give these directions to departments:

It is not desirable that contracting departments should make any general announcement to their contractors, but in the event of any particular contractor reporting difficulties about obtaining accommodation from his bank the department may say something as follows: 'The banks have been officially requested to give favourable consideration to applications from contractors and sub-contractors engaged on essential Government contracts for advances of working capital, in order to ensure that the prompt execution of such contracts is not held up for the lack of finance'.

The banks had not been asked to lend to uncreditworthy customers; on the contrary, departments were instructed by the Treasury that they must not press the banks in any way to commit themselves imprudently. But it was pointed out to the banks that the possession of a Government contract might make a firm less uncreditworthy than its circumstances would otherwise suggest. As a result, many Government contractors were enabled to borrow more than in the past.

At about the same time further assistance was given by means of increased progress payments. As there was likely to be long delay in the issue of formal acceptances, the Treasury agreed in September 1939 that, before acceptance letters and detailed contracts had been issued, the Admiralty might pay instalments as they were earned to contractors building ships. The instalments were to be calculated on a provisional figure of the tendered price, minus ten per cent. In some cases, however, this procedure still left contractors rather short of working capital, and at the end of the year it was decided that a safe provisional price for payment purposes should be determined as early as possible, even before the receipt of tenders if necessary, and instalments based upon that figure. The same practice was also followed by the War Office and the Air Ministry in comparable cases. In January 1940 the Ministry of Supply was authorised to include provision for progress payments in all costed contracts that were due for completion in a period of more than three months, and it increased the maximum rate of payment from eighty per cent. to ninety per cent. of the value of the work done. It also made payments to a maximum of eighty per cent. on fixed price contracts. A new concession by the Air Ministry from November 1939 onwards was the admission of claims for advances up to eighty per cent. in respect of goods despatched by the contractor but not yet acknowledged by the maintenance unit, and these advances were raised to ninety-five per cent. in May 1940.

On the whole these arrangements, supplemented by rather more generous lending by the banks, were fairly adequate to meet the demand for working capital in the early months of 1940, though in one class of orders the Admiralty sought authority to introduce advance payments. The difficulty arose from the need to place orders for small minesweepers with contractors who had little working capital and often used only a small branch bank. The Admiralty proposed to pay them in five equal instalments, of which the first would be paid immediately the vessel was ordered, and also asked for general authority to do the same in similar cases in future. Both the Treasury and the Ministry of Supply objected to the adoption of such a procedure and the request was refused, the Admiralty agreeing to seek a solution by asking the head offices of banks to arrange

for advances to the contractors. Thus the refusal to weaken the Government's purchasing position to the extent involved in making payments in advance was once again successfully maintained, as it was at home with few exceptions throughout the war.<sup>1</sup> It was only in the case of orders placed in the United States, where the position of the British Government *vis-à-vis* contractors and bankers was not greatly different from that of a private purchaser urgently seeking substantial and specialised supplies, that the making of advance payments was frequently accepted as a necessity.<sup>2</sup>

While so far there had not been undue difficulty, it was recognised that, if there was any marked increase in the volume of Government orders, far-reaching alterations would have to be made in the arrangements for the supply of working capital. The mounting crisis of May 1940 and the immediate increase in the volume of production, which it necessitated, opened the prospect of a dangerous gap between the demand for and the supply of current finance. The situation was particularly serious in the Ministry of Aircraft Production which, unlike the Ministry of Supply, did not as a general rule provide in its progress payments for the reimbursement of wages and overhead expenses, though it did so in some circumstances. As the widespread introduction of the seven-day week with a three-shift system greatly increased the wage bills of contractors, new methods had to be introduced at once. It was the Ministry of Aircraft Production which took the initiative in outlining and pressing for the adoption of such arrangements and particularly in urging the Government to reach an agreement with the banks under which the latter would provide as much working capital as was necessary. A temporary agreement was made at the end of May, whereby for a few weeks it was arranged that local branch banks would pay all the wage requirements of all producers working directly or indirectly on Government account, without reference to the state of their banking accounts or to the safety of the needed banking accommodation.

In the early days of June representatives of the Treasury, the three War Production Departments, and the clearing banks held a meeting at the Bank of England. Their object was to find some means of ensuring that the working capital needed by Government contractors and sub-contractors would always be readily available, so that the flow of production would not be impeded by purely financial difficulties. The scheme that was then devised (which came to be known as 'Scheme C') defined more clearly and more liberally the conditions on which banks would make advances of working capital to Govern-

<sup>1</sup> From June 1940 a slight modification was made in the case of the minesweepers discussed above. No instalment was paid when the order was placed, but twenty per cent. of the price was paid when the keel was laid.

<sup>2</sup> C. & A.G. Report on Civil Appropriation Accounts (Unclassified Services), 1940, para. 98.



ment contractors and sub-contractors. Other provisions dealt with administrative changes to increase co-operation between the Government and the banks, which was essential in order to carry out this important decision. One valuable measure was the appointment in each Supply Department of a liaison officer, who would work in close touch with the banks. It was his business to keep himself informed of the financial position of individual firms and to ensure, in co-operation with the banks, that any difficulties were removed as soon as they arose.

It was a corollary to these arrangements with the banks that departments would do all in their power to ensure prompter and more liberal progress payments and would, under Treasury direction, relax the measures employed to protect the public purse. Indeed, it was pointed out by the Treasury, in a memorandum to the Production Council, that the agreement with the banks, while providing for the initial requirements of working capital, was not intended to cover the whole ground, because if, during the execution of a contract, no instalment payments were received, the requirements of working capital increased week by week and might assume formidable proportions. In order to implement the Government's undertaking a conference of representatives of the Treasury and the Supply Departments met on 4th June and reached the following decisions:

(i) This was no occasion for extending *unnecessarily* the field of contractors or the categories of contracts to which progress payments were applicable.

(ii) Existing systems of progress payments as practised by the several departments should not be disturbed; except that

(iii) in cases where the departments decided, whether at the instance of the banks or not, that there was a case to apply the existing system to new contractors or types of contract, or to extend that system as indicated in (v) below, the departments had Treasury authority to take that course.

(iv) Departments should take immediate and drastic steps to clear up arrears of payment. They should take every possible step to see that the staff at their disposal was sufficient for the purpose. Applications to the Treasury for this purpose would be dealt with immediately.

(v) Within the limits of the foregoing decisions departments were authorised to adopt the broad principles of the progress payments system commonly used in the Ministry of Supply.

(vi) Departments would do their utmost to persuade contractors to pass on progress payments to their sub-contractors.

The Ministry of Supply system, which was authorised for adoption, provided that, during the period of the contract, progress payments

would be made monthly on the basis of ninety per cent. of the total expenditure incurred to date by the contractor under that contract, less the aggregate amount of any payments already made. Payment was made against the contractor's certificates, verified by his accountant or auditor, that all the items were admissible as reasonable costs under the contract and that charges for supplies and sub-contracted work were being promptly met. The total amount paid by way of progress payments was not to exceed ninety per cent. of the total maximum contract price.<sup>1</sup> It should be noted that the extension of progress payments was conditional on contractors accepting the vesting clause.

The departmental arrangements to implement the general decisions varied in detail. In the Ministry of Aircraft Production, in the case of airframe, aero-engine, and armament contracts, payments on account of materials, jigs, and tools were raised to 100 per cent. of the cost and the scale of stage payments was increased throughout, so that at the penultimate stage the contractor would have received 97½ per cent. of the fixed or provisional price; and where, in the absence of a fixed price, provisional prices had been used to determine the amount of progress payments (usually on the basis of about eighty per cent. of the estimated final price), the provisional price was raised to bring it nearer to the estimated actual price. In the case of contracts for other types of store, if progress payments had formerly been restricted to the reimbursement of the cost of materials, they were now often increased so as to make from time to time a substantial contribution towards the cost of wages and overheads. Alternatively, they were put on the basis of the Ministry of Supply system just described, which was also adopted in those cases where previously no payment had been made except upon despatch of the goods. The Ministry of Supply itself, in August 1940, sought and received authority to make still more liberal progress payments, first by paying at a rate of 100 per cent. of contractors' expenditure so long as ten per cent. of the total value of the contract was kept in hand pending final settlement; second, by making progress payments on current contracts which had not included provision for them and on which prices or profit had already been fixed, without seeking any reduction in price from the contractor on account of his saving on interest charges; third, by making payment in respect of all items which the contractor certified as properly chargeable to the contract, whether he himself had already disbursed the money or not. At the same time the upper limit to progress payments on fixed price contracts was raised to ninety per cent. of the contract price. The Admiralty, which did not have to rely so much on unknown firms of small resources, found that its

---

<sup>1</sup> On fixed price contracts the total amount of progress payments was then still limited to eighty per cent. of the contract price.

contractors did not call for progress payments to the same extent as those of the other two departments.

The arrangements made in the summer of 1940 for the provision of working capital, though hurriedly devised to deal with an immediate emergency, were retained without essential alteration for the remainder of the war. The Finance Branches of the Supply Departments developed a close co-operation with the banks, and complaints from contractors that their production was being jeopardised by a lack of working capital immediately diminished and continued to be much less frequent.

Such changes as were subsequently made concerned the level of progress payments and the conditions on which they were made, and for the most part they were intended to restore some of the control which had had to be sacrificed in the interests of speed in 1940. Nevertheless it was still found necessary to make a few minor changes which were intended to remove particular causes of delay. Despite the great reduction in the scrutiny of claims before they were passed for payment there were, even a year later, allegations that progress payments were frequently as much as two months in arrears.<sup>1</sup> This situation could be dealt with in the main only by improvements in staffing, but some further provision was made to reduce the gap between the time when disbursements were made by a contractor and the time when he received progress payments in respect of them. At the end of July 1941 the Ministry of Aircraft Production introduced an arrangement which provided for bulk advances in respect of disbursements actually made by a contractor for work done, but not yet adequately summarised for presentation as a bill to the department. The limits of payment were ninety per cent. of sums outstanding on claims already submitted and fifty per cent. on bills in course of preparation.

For the most part, however, changes in progress payments from 1941 onwards tended to tighten rather than further relax the system. With Scheme C working smoothly and some progress made in catching up arrears of payment, it was possible to reduce somewhat the risks of excessive payment without in any way threatening the financial strength of contractors. In the Ministry of Aircraft Production progress payments on almost all types of contract were restricted to ninety per cent. of the contractor's actual expenditure, subject to an overriding maximum amount to be determined at the Minister's discretion, and in practice an attempt was made to limit payments against the contractor's certificate of expenditure to not more than fifty per cent. of the total estimated value of the contract, additional current finance being provided by payment of his bills.

---

<sup>1</sup> See e.g. 'The Finance of War Production' in *The Banker*, Vol. LIX, No. 188 (September 1941), p. 180.

The Ministry of Supply system made control over payment harder to achieve. The provision that progress payments would be made against liabilities incurred by the contractor, even before he had disbursed money on account of them, was open to abuse but did not, in fact, involve the Ministry in any serious loss. On the other hand, the fact that on costed contracts an amount equal to ninety per cent. of the maximum price might be issued as progress payments before the work was completed, did lead to serious overpayment, as the final price often proved to be less than ninety per cent. of the maximum laid down in the contract. Thus in many cases contractors were being provided with more working capital than they either needed or were entitled to. The Ministry admitted in 1941 that there had been a large number of such cases of overpayment,<sup>1</sup> but attempted no remedy for another two years. In 1943 it estimated that it was owed at least £10 million in respect of these overpayments. It therefore decided that, while on fixed price contracts payment would continue to be made up to ninety per cent. of the fixed price against current expenditure and 100 per cent. against deliveries, on costed contracts no payments would be made against deliveries, but progress payments would be made only up to ninety per cent. of certified current expenditure, increased to 100 per cent. on completion of the contract, with ninety per cent. of the maximum price as the overriding limit. This arrangement, if adopted, would have greatly reduced the risk of overpayment, but, after representations from the F.B.I., contractors were given the choice of either being paid on this basis or receiving up to ninety per cent. of the maximum price against deliveries without receiving interim payments in addition. The latter system meant that for the period of production the Government was making little provision for current finance; all that payment against deliveries did was to ensure that a firm with a succession of contracts did not have to seek working capital elsewhere for a period longer than was required to complete one of them; yet the Government still ran the risk of making excessive payments. In practice, however, this system gave rise to very few difficulties. The changes made in 1943 improved the position from the Government's point of view, but did not put an end to the overpayments, and at 31st October 1946 over £4 million was still owing to the Ministry of Supply in respect of excess advances to contractors.<sup>2</sup> That sum was not, however, very large in relation to the total volume of progress payments made on costed contracts.

A minor influence on the way in which the need for working capital was met was the Excess Profits Tax. The amount of bank overdrafts counted as part of capital employed, on the excess of which over the

---

<sup>1</sup> P.A.C., 1941, Q. 3511.

<sup>2</sup> C. & A.G. Report on Civil Appropriation Accounts, Class X (War Services), 1945-46, para. 55.

capital employed in the standard period eight per cent. profit was allowed. In many cases, therefore, it paid a firm to obtain more of its working capital by borrowing from its bank and less by means of progress payments from the Government, although this course involved an increased charge for interest. In the early stages of the war, when firms were anxious to obtain working capital from any possible source, this was of little importance, but in the last two or three years it had an increasing influence. More and more firms refrained from claiming the full amount of progress payments to which their contracts entitled them and instead allowed their overdrafts to continue or even increase. Thus E.P.T. did not affect the methods by which working capital was provided, but it did modify the proportions in which the task was shared between the Government and the banks.

A different treatment of the problem of working capital was needed in the case of the numerous Government-owned establishments which were operated by private firms as agents of the Government. As the Government was the owner it was responsible for ensuring that adequate working capital would be available. Thus ultimately, over part of the field of war production, the problem of obtaining working capital was by-passed by putting the onus entirely on the Government, and the extension of the agency system became an important contribution to the solution of the problem. But the system was originally adopted for quite other reasons and was not considered as a means of relieving the strain on private sources of working capital, for that strain had not shown itself to any great extent before the war. In fact, at one time some departments thought it reasonable to expect the agent to provide the necessary working capital. When, in the autumn of 1937, the War Office negotiated its first agreement with I.C.I. Ltd. for the operation of agency factories, it took the view that, as the firm bore no risk, it was not entitled to the advantage of being supplied with working capital by the department, and it was agreed that the War Office would repay the actual expenditure one month after it had been disbursed. This argument was not likely to appeal to most agents, who, far from considering that they were being specially favoured by being relieved of risk, thought that it was they who were favouring the Government by lending their managerial services at a cheap rate. It was therefore more usual for working capital to be provided by the department concerned, as was done at the first shadow factories opened by the Air Ministry. The method adopted was to open an imprest account for each establishment and to pay into it at the beginning of each period a sum sufficient to meet the estimated outgoings of the period. If the sum appeared likely to fall short of requirements, then additional payments were made at short notice. Accounts of expenditure were rendered to the department, which took care to ensure

that the balance lying idle at the bank was kept as low as possible. Early in 1941 the Ministry of Supply laid down that agency factories might be financed either by an imprest system or by payment of a certified claim for expenditure incurred, but by that time the former method had become almost universal throughout the Supply Departments. Even the agreement between I.C.I. Ltd. and the War Office had been replaced in 1940 by a new one negotiated by the Ministry of Supply, in which the department undertook to provide all the working capital.

Where the method of repayment of certified expenses had been adopted, the repayment was not very far in arrear, and the arrangement made the difficulty of obtaining working capital much less than that experienced by the ordinary contractor. When an imprest system was used the difficulty, of course, disappeared completely, and during the war this became a new argument in favour of adopting agency operation. For example, towards the end of 1941 two contractors who were each operating a self-contained factory extension, constructed at the Admiralty's expense, declared that, even with progress payments, they could not provide sufficient working capital to run them on a commercial basis. The Admiralty therefore proposed to open imprest accounts and conduct them as agency establishments. In this case the Treasury at first refused to agree and suggested an approach to the banks for assistance. But the argument about working capital weighed in favour of agency operation in the case of many factories which were put on that basis from the beginning. Even the two establishments just mentioned were eventually allowed to become agency factories.

A special problem, rather apart from the general policy on current finance, was presented by the financing of imports. This was at first conducted almost entirely by ordinary commercial methods, through the medium of the banking system, but the establishment of the British Supply Mission in North America in 1940 and the introduction of lend-lease by the United States greatly reduced the extent to which the commercial banks were used. Each Raw Materials Control maintained a banking account supplied with funds by the Raw Materials Finance Branch of the Ministry of Supply, which was able to obtain money from the Paymaster-General and transfer it to a Control at two days' notice. Foreign suppliers were paid either by opening credits in named banks, which made payments on presentation of shipping documents, or, in Canada and the United States, through the British Supply Mission. The Raw Materials Department was usually willing to work through the bank named by the supplier, but reserved the right to choose its own bank. Where this right was exercised the choice was in favour of British banks in any place where they were established. Import finance was a straightforward and

effective system and was never subject to the same sort of strain as threatened the supply of working capital for production contractors in the early stages of the war. But there were difficulties from possible exchange fluctuations and from the scarcity of particular currencies. In order to minimise them, the foreign balances of the Bank of England were, by arrangement with the Treasury, placed at the disposal of the Raw Materials Department. This made it possible (except in Peru) to dispense with forward purchases of currency by the department and was one more example of the co-operation between the banking system and the Government on which the whole war-time system of current finance depended.

Attention so far has been directed only to the positive methods by which working capital was made available. There were also numerous measures which reduced contractors' needs of it. These measures were often adopted primarily for other reasons, but the economy of working capital, though incidental, was substantial.

The most influential of them was probably the growing practice by which stocks of important materials were held centrally by Government Departments and other organisations, especially by the Raw Materials Department of the Ministry of Supply, instead of individually by contractors. As an element in financial policy this practice was opposed by the Treasury. When the question was discussed in October 1942, its representative suggested that the additional burden of increasing the size of stocks might be regarded as a premium to be paid for adventitious war-time prosperity, and that the financing of larger working stocks should be facilitated by the fact that a firm's accruing profits, however distributed, had the effect of increasing its E.P.T. standard in any particular year by an amount equivalent to half a year's average profit. The T.I.S.C., after hearing these opinions, declared that the tendency of producers and consumers to place the onus of war-time stock-holding on the Government should be closely watched and resisted as far as possible. A distinction was thus made between direct assistance in cash to contractors and indirect assistance in kind. But in special circumstances the Treasury was willing to recommend departures from this general policy. For instance, in June 1940, when manufacturers reported that they could no longer find the capital to finance their purchases of ball-bearings from the United States and the Ministry of Supply proposed to advance funds to enable them to do so, it was decided instead, at the Treasury suggestion, that the Ministry should itself make all the purchases. Similarly, in November 1941, the Treasury agreed that two firms should act as Government agents to purchase high-speed steel and issue it on repayment to firms which, for lack of liquid resources, could not incur forward commitments, or which were new to the tool-making trade and unwilling to run the risk of loss on

contracts that did not carry progress payments, as they were not held directly from the Government. In the latter case, in order to conform to general policy, the Treasury suggested that the Ministry of Supply should devise a scheme to reduce toolmakers' profits in consideration of their being relieved of part of their risks. The continued need to ensure that a smooth flow of production was not interrupted by lack of materials made it impossible for the Treasury to maintain its opposition to the holding of increased stocks on Government account. The actual trend is clearly shown in Table 10.

*Value of Stocks held by Raw Materials Department*

TABLE 10

Date	Value of stocks held
	£
31st March 1940	75,000,000
31st March 1941	167,000,000
31st March 1942	240,000,000
31st March 1943	287,000,000
31st March 1944	385,000,000
31st March 1945	409,000,000

*Source:* Ministry of Supply,  
Raw Materials Department

The central holding of stocks arose naturally out of the practice of bulk purchase, one of the specific advantages claimed for which was its effect in reducing idle stocks. Bulk purchase was adopted to a considerable extent by Production Branches as well as by the Raw Materials Department. In the financial year 1942-43, bulk purchase by the Production Branches of the Ministry of Supply was estimated at £237,220,000. In so far as this meant that a contractor need carry a stock only for his immediate needs, without a margin for possible contingencies, this was an economy of working capital. But the arrangements for issue made the saving of contractors' capital very much greater. Most materials subject to bulk purchase were issued free to contractors by the Ministry of Supply, and no further financial adjustment was needed, except for material lost by culpably bad workmanship, as the fact of free issue was taken into account in fixing the price of the product. In some cases, however, the material was issued on repayment. The main contractor was then asked to quote a price for the store he was to make, taking into account the value (at rates notified to him) of the Government material which he estimated he would use. From his invoices for the complete articles was deducted the value of the excess of Government material used over his own estimate. Thus, whichever method was used, there was



no call on the contractor's financial resources. The only difference was one of accounting, which was effected in the one case in terms of quantity, in the other in terms of value. Because of the method of accounting, it was very difficult to put a value on free-issued material and so to estimate the saving in working capital. The system was, however, increasingly used during the war by all the Supply Departments. An illustration of its importance was given by the analysis of the costs of the 'Lancaster' bomber, to which reference has already been made, and which revealed that embodiment loan items (i.e. free issues) accounted for 49·88 per cent. of the total cost of the aircraft.<sup>1</sup> The great relief which was afforded to the financial resources of a contractor in such a case is obvious. It was suggested at one time, though never officially, that in order to minimise the demand for borrowed money the system of free issue might be extended to cover all raw materials required for Government work and that the product of each sub-contractor should be a free issue to the main contractor.<sup>2</sup> On purely financial grounds this suggestion might have been adopted, but objections were made to its indefinite extension on grounds of productive efficiency, to which the F.B.I. drew attention, and because of difficulty in staffing.

Though central stock-holding and free issue were the main sources of economy in contractors' needs of working capital, two other influences tending in the same direction should be noted. The first of these was the adoption, from November 1940 until the closing months of the war, of the policy of permitting Government subsidies on the price of certain raw materials, which has already been discussed.<sup>3</sup> One of the effects was to reduce contractors' expenditure on such materials, or rather, in most cases, to prevent what would have been a certain increase in expenditure on this account.

Finally, there was the fact that production was almost entirely for immediate delivery on Government account. The Government was willing and anxious to accept delivery of completed stores at the earliest possible moment. Consequently, contractors did not have to lock up capital by holding appreciable stocks of finished goods. The effect of this was the more marked in the case of firms which in peacetime had turned out a variety of products, stocks of all of which had had to be retained in order to meet variations or irregularity in the demand from wholesalers.

It can be seen that great reductions were made in the amount of working capital which contractors had to obtain. Nevertheless these reductions were quite insufficient to offset the effects of increased turnover which worked so strongly in the opposite direction. On

---

<sup>1</sup> P. 121 above.

<sup>2</sup> *The Banker*, Vol. LIX, No. 188, *loc. cit.*

<sup>3</sup> Chapter X above, *passim*.

balance there was a very large increase in the amount of working capital needed. Hence the positive measures taken to ensure its provision were the most important part of the story of the current finance of war production, the negative measures described in the last few paragraphs being only incidental modifications in the main theme.

The system that was built up was on the whole extremely successful, but there were instances in which firms found themselves in financial difficulties. Before the subject of working capital is left, something must be said of the way in which such cases were dealt with. The difficulties generally arose from managerial or technical inefficiency within the firm, and were practically confined to a few small engineering firms, whose capacity was essential, although some of them were neither contractors nor sub-contractors to the Government. It was usual to assist them by arranging, with their concurrence, for a skilled manager, nominated or approved by the Ministry concerned, to superintend their affairs. Alternatively, the firm's bank might induce it to make a similar arrangement, or a receiver might be appointed, often as a result of action by the bank at the request of the Ministry. In most of these cases in 1940 the banks asked for a guarantee or indemnity from the Ministry before they would agree to supply further working capital. In March 1941 departments decided that it was undesirable to give such guarantees, as they would tend to defeat the purpose of Scheme C, and the Ministry of Supply undertook to discontinue granting them. The real answer, they all agreed, was to make the firm creditworthy by taking immediate action to improve its managerial efficiency, and while this was being done the bank could be asked to finance it. On these lines a solution was found.

One special type of difficulty which occurred several times was that caused by a failure of firms to retain sufficient cash resources to meet tax demands. If this situation arose because a firm was using its own resources to supply working capital the difficulty could be overcome simply by borrowing from the bank, but if it was due to the firm having spent its accumulated profits on increasing its fixed assets some other means had to be found. When, in 1941, the Admiralty was confronted with a problem of this kind it proposed to meet it by contributing sixty per cent. *ex post facto* to the capital expenditure of the firm in the two years ended 31st July 1940. But in all aspects of Government financial policy retrospective adjustments were deprecated and the Treasury refused to agree to this procedure. Instead it was decided that the Board of Inland Revenue should be asked to spread the tax contribution over several years. In the following year the same problem arose in other departments and the Ministry of Supply suggested that if the banks would not finance these taxation

payments then the departments should do so by loan to the contractor on the best security available. On the other hand it was pointed out in the course of discussion that this would put the Government in the absurd position of lending the means to pay what was owing to itself, and the Ministry of Aircraft Production proposed a general request to the Board of Inland Revenue not to press for immediate payment. In spite of numerous discussions it was found impossible to lay down any uniform procedure and it was decided that each case should be considered individually between the Treasury and the department concerned.

Temporary financial difficulties also appeared occasionally where a firm had used most of its available resources for current finance and then found itself faced by demands for large refunds to a department, on account of overpayments on contracts. In such cases the department granted a loan to the firm as a means of funding the debt. Loans were also occasionally made to enable a firm to meet interest and redemption payments on debenture issues, if it had not sufficient resources of its own immediately available and its bank was unwilling to assist unless the department collaborated.

The greatest extension of Government financial responsibility came in the very rare cases in which a department compulsorily acquired all the shares of a firm,<sup>1</sup> but as this involved all the assets of every kind its discussion can be postponed until the subject of fixed capital has been considered.

---

<sup>1</sup> Under the provisions of Defence (General) Regulations, No. 78.

## CHAPTER XII

# THE PROVISION OF FIXED CAPITAL

**T**HE responsibility for financing the provision of additional fixed assets in any particular instance could be borne by the firm which was to use them or by the Government, or in some way shared between them. But over the field of war production as a whole the Government was bound to take the predominant part in this provision, because of the magnitude of the commitments and the uncertainty of the permanent commercial usefulness of many of the items involved. It is therefore convenient to classify the various types of financial arrangement according to the extent to which the Government was directly involved in them. At one extreme was the normal practice of British industry: each firm providing and owning its fixed assets and financing its expansion out of past reserves and current profits or by raising new subscriptions in the capital market. At the other extreme was the construction or purchase by the Government of establishments to be directly operated by Government Departments; such were the Royal Dockyards and factories of the Admiralty, the Royal Ordnance Factories and certain Ministry of Supply factories. In an intermediate position came different types of arrangement between Government Departments and firms. Great use was made of two types known respectively as capital assistance schemes and agency schemes. In the former, the Government contributed to the cost of extending the existing works of firms,<sup>1</sup> by paying either the full amount or an agreed proportion. The extension was then operated on commercial lines by the firm concerned. In the latter case a complete establishment was provided at Government expense for operation by a firm, not commercially, but as an agent remunerated by receiving a fee for the service of management. Each class will be considered in turn and then the way in which financial provision was divided among the various types will be discussed.

### (a) PROVISION BY FIRMS

Although it was customary for each firm to be responsible for its own expansion and therefore it might perhaps have been expected

---

<sup>1</sup> A 'works extension' under a capital assistance scheme could be physically a complete new factory, though more frequently it consisted of additions to existing buildings and/or plant.

that Government contractors would finance much of the capital increase required for war production, it must be remembered that the situation was abnormal in two respects. In the first place, for a great number of firms, the rate of capital expansion required, especially in the first three years of the war, far exceeded anything they would normally have been able to contemplate. Only large firms were able to finance substantial expansion from their internal resources. Small firms, from which much of the increased production was required, would have had to make large new issues and might well have been reluctant to transform their capital structure so completely. In the second place, and more important, many of the new assets to be provided were suited only to the production of war stores, for which the demand was of uncertain duration. Even if the assets could be used in a contractor's peace-time production, it was often uncertain whether post-war demand would be sufficient to employ them. Thus in some cases it was difficult for firms to provide additional fixed assets and in many more they were deterred from doing so by the exceptional risk involved. In general, firms were willing to provide additional fixed capital only when they were reasonably sure of having a post-war use for it or of being compensated if the assets became redundant. The result was that the major contribution made by firms to the fixed capital needs of war production was that they already had available a great volume of capital equipment which could be turned to new uses, and that for the most part they bore the expense of replacing this equipment as it became normally obsolescent. This latter task itself involved an appreciable increase in financial commitments because it was undertaken in a period of rising prices.

In some cases the volume of fixed capital in the possession of firms at the beginning of the rearmament period was more than could be currently employed and they could therefore undertake greatly increased production without incurring new capital expenditure. The shipbuilding industry was the most important example of this situation. Berths were lying empty and yards were being closed for lack both of work and the prospect of work. There were seven firms with the necessary facilities for building a battleship, but no new construction work on battleships was available between the completion of the *Rodney* in 1926 and the commencement of the *King George V* in 1936. At the same time the volume of merchant shipping construction had fallen from an annual average of 1,522,865 gross tons for 1928-30 to 212,426 gross tons for 1932-34. The existence of so much unused capacity greatly simplified the Admiralty's financial problem in the pre-war rearmament period, and it was admitted that there was then ample scope for the increased construction of heavy warships.<sup>1</sup> Had

---

<sup>1</sup> P.A.C., 1942, Q. 1768.

new fixed capital been needed in any great amount the construction programme might well have suffered, for it would have had to compete with many other demands on the Treasury and it is unlikely that the shipbuilding firms would have been willing to provide the capital, for an examination of the published accounts of fifteen of the most important of them for 1934, the last year before the rearmament programme was decided on, showed that nine of them made losses.

There was, however, one field in which a considerable amount of new fixed capital was provided by private industry during the expansion period. That was aircraft production. The situation was quite different from that in shipbuilding. The Air Ministry's task was, in effect, to create a new force on a larger scale than had previously been attempted in this country. In addition there was every prospect that, even if the demand for military types was again restricted after the end of the rearmament period, there would still be an ever-increasing use of civil aircraft. Though the aircraft industry had never known any great prosperity since the First World War, some of its members had not been so deeply affected by the depression as firms in older industries. A number of them had appreciable resources available for investment and the opportunity appeared to have come to employ them in their own interest. Others, fortified by a Government announcement in 1935 that it was intended to treble the size of the R.A.F., were able to float new issues at a time when business confidence was rising. There were several such issues in 1935 and they continued at intervals throughout the next four years. During the same period a number of aircraft firms were also converted from private to public companies, and some of them used that opportunity to raise additional capital.

In order to investigate the part which the aircraft industry took in financing its own expansion, a sample of thirteen firms was considered. These firms differed considerably in size and were engaged in various branches of the industry. Information in respect of seven of them was available for the whole of the rearmament period, but for shorter periods only in the case of the other six.

Their accounts showed the following increase in their assets during the expansion period:

	<i>Increase</i> £
Fixed assets . . . . .	5,737,000
Investments in subsidiary and associated companies . . . . .	1,191,000
Current assets . . . . .	24,339,000
	31,267,000
<i>Less:</i> Reduction in intangible assets . . . . .	170,000
	31,097,000

This additional capital was financed in this way:

	<i>Increase</i>
	£
New share capital (including premiums) . . . . .	9,480,000
Undistributed profits and reserves employed in the business . . . . .	2,015,000
Borrowed money . . . . .	7,213,000
Credit from suppliers, etc. . . . .	12,389,000
	31,097,000

In the course of this development these firms realised some £2 million of surplus funds held in marketable securities and this helped to keep down their outside borrowing to the level shown above.

These figures indicate that before the war the aircraft industry itself financed much of its expansion both in fixed and working capital, though it was assisted by the Government, particularly by means of the increased progress payments which were described in the last chapter.

Though the aircraft firms were able to increase their fixed capital, they were well aware of the risks involved and it is very unlikely that they would have been willing to do so to anything like the extent which they actually did, had not a scheme been devised to relieve them of much of the risk. The original programme and contracts for Air Force expansion extended only to 1937, and it was evident that additional productive capacity, installed in order to carry out orders, might then prove redundant. In the latter half of 1935 the Fairey Aviation Company Limited, Handley Page Limited, and Gloster Aircraft Limited all asked the Air Ministry for some cover against such an eventuality. The matter was then taken up by the Society of British Aircraft Constructors on behalf of all its members and a settlement was eventually reached, which was incorporated in the First McLintock Agreement.<sup>1</sup> The Capital Clause of the agreement was accepted by Sir William McLintock in a letter, dated 4th August 1936, to the Secretary of State for Air, Lord Swinton, and read as follows:

If for the purpose of completing this and/or other orders of the Air Ministry's Expansion Programme 1935-39 the contractor shall necessarily incur or have incurred after March, 1935, expenditure in the acquisition of land or premises or the extension of existing works or the provision of extra buildings and/or extra fixed machinery and plant including installation, and if, having regard to the amount of work available to him over a period of two years after 31st March, 1939, the contractor shall find that the capacity of his works as so extended is in excess of that which he requires for the execution of orders then available from the Air Ministry or elsewhere, or that by reason of its unsuitability the buildings or machinery or plant cannot be used for the orders then available, it will be open to the contractor within the following twelve months to prefer a claim for compensation in respect

<sup>1</sup> See pp. 117-18 above.

of any loss which the contractor may sustain in the difference between the cost of the above-mentioned capital assets written down by depreciation at income tax rates, or any higher rates allowed in Air Ministry contracts, and the market value of such assets at 31st March, 1941.

On being satisfied that the claim falls within the conditions specified in the preceding paragraph, the Secretary of State will pay such compensation as in the light of all the circumstances appears fair and reasonable.

Provided that if in any case it should be found that a contractor has made an undue or excessive profit under this or any contract of the Air Ministry Expansion Programme and this had not been taken into account in fixing prices under some other Air Ministry contract, the Secretary of State or the Arbitrator shall be entitled to take such fact into account in assessing fair and reasonable compensation. No question shall arise under this proviso in respect of any contract the price for which had been fixed on the basis of the actual ascertained cost of the work for which that price was paid.

If at any time during the execution of the programme the Secretary of State should exercise the break clause with the object of suspending or materially curtailing work under the Programme, an agreed date shall be substituted for 31st March, 1939, and the consequential dates, and the operation of this clause shall be accelerated accordingly. Similarly, if the programme shall be extended so that an abnormal amount of work will be required of the firm after the 31st March, 1939, an agreed date shall be substituted for 31st March, 1939, and the consequential dates and the operation of the clause shall be postponed accordingly.

Any dispute under this clause shall be referred in the same way as disputes under the costing and break clauses.

In fact, of course, a very 'abnormal amount of work' was required after 31st March 1939 and the commencement of the test period for redundancy was ultimately postponed until 31st March 1946.

Although the Capital Clause was in some ways rather vague and left the possible amount of compensation uncertain, it did give an assurance to the full members of the S.B.A.C., who individually accepted the McLintock Agreement, that they were not likely to be involved in serious loss by installing new capacity. As the scale of production programmes increased, it became necessary to place larger orders with firms to which the agreement did not apply, and naturally some of these asked to be given similar cover for capital expenditure. Towards the end of 1938 the Air Ministry decided that, while it would refuse any application from such firms to be brought within the scope of the Capital Clause, it would offer to consider sympathetically on its merits, at some date to be determined, the question of compensation for any additional capacity which might prove to be redundant, provided that it had been specially created after the date of the application and for the purpose of expansion



orders. The Ministry would then be prepared to seek authority to pay such lump sum compensation as seemed fair and reasonable. The criteria to be used in deciding the amount of compensation were (a) the loss that would be encountered if the assets were disposed of, (b) the profit made on the contract or contracts in connexion with which the assets had been used, (c) the amount of normal depreciation of the assets, calculated at income tax rates, unless higher rates had been adopted in arriving at the prices paid for the aircraft, and (d) the proportionate use of the assets on Air Ministry and other work respectively. In addition it would be stipulated as a condition of payment that the assets would be retained for use in an emergency and also, in suitable cases, that the Air Ministry should have the option to purchase them outright. This arrangement was more restricted than the original Capital Clause, but in the prevailing circumstances it gave an adequate reassurance to firms which were, on the whole, fairly willing to increase their capacity.

The Capital Clause, in whichever form was appropriate, did not apply automatically to any particular extension. Firms had to ask the Air Ministry for particular items to be covered by the clause and were sometimes willing to provide some new assets without such cover. Sometimes part of an expansion scheme would come under the clause and part would be left outside it. For example, in May 1939 it was agreed that in one company's scheme for a new establishment the cost of the land and the erection of the main assembly shop (estimated at £188,000) would be covered by the Capital Clause, while the cost of providing an aerodrome (estimated at £90,000) would be the company's own liability. In general, however, firms tended to ask for cover as far as possible, and by 28th February 1938 the Air Ministry's liability under the Capital Clause had reached £5,335,269, with applications in respect of further items of £597,957 under consideration. The liability continued to increase rapidly until the outbreak of war, but after the end of 1939 this system of 'contingent liability' passed into almost complete disuse. The rate of expansion quickened so much that, even if firms were willing to supply new fixed assets, it became difficult for them to do so, especially as any liquid resources which they possessed tended to be used to finance work in progress. At the same time, future conditions had become so much more uncertain that firms were unwilling to commit themselves heavily in capital expenditure. In these circumstances the Capital Clause was no longer appropriate. It had been designed to give additional encouragement to firms which were already more than half inclined to expand their capacity, and in the rearmament period it served a useful purpose. The total estimated cost of the schemes for which the Air Ministry accepted liability under the Capital Clause is set out in Table 11.

*Estimated cost of schemes covered by the Capital Clause*

TABLE 11

£ million

Type of store	Buildings	Plant	Total
Airframes . . .	3,084,986	1,862,216	4,947,202
Engines . . .	1,037,224	1,713,098	2,750,322
Magnetos . . .	25,000	230,000	255,000
Turrets . . .	122,000	—	122,000
Aircraft equipment	10,500	2,500	13,000
<b>TOTAL . . .</b>	<b>4,279,710</b>	<b>3,807,814</b>	<b>8,087,524</b>

*Source:* Ministry of Aircraft Production

A form of capital clause was also occasionally used by the Ministry of Supply and was more definite in its assurances, as it stated that the Minister would pay to the contractor the amount by which the market value of the buildings and plant at the date of the determination of the agreement fell short of the written-down cost. Little use was, however, made of this provision, for the Ministry came into existence only a few weeks before the war.

The fact that Capital Clause cover was little sought after 1939, though mainly due to the changed conditions operating in war-time which have already been mentioned, is also to be ascribed partly to the grant of another concession. The purpose of the special arrangements introduced by individual departments was to some extent achieved by the exceptional depreciation provisions which were applied generally during the war by the Inland Revenue authorities.<sup>1</sup> These gave relief from Income Tax and Excess Profits Tax in respect of buildings and plant likely to become redundant or obsolete or to suffer exceptional depreciation, where the deficiency was wholly or mainly ascribable to conditions due to the war. The amount to be allowed was the difference between the written-down cost of the buildings, plant and machinery provided since 1938 and the value at a date to be fixed by Parliament. The relief was actually granted year by year in advance of the final assessment and thus had the effect of giving current relief.<sup>2</sup>

Thus some assurance of relief from loss as a result of extending capacity became general. Nevertheless it became increasingly common for firms to look to the Government to participate in the provision of any additional fixed assets which were required for the fulfilment of its orders. Firms were willing to bear the cost only of those new assets which they expected would be necessary in order to put them in a strong position in competitive business immediately after the war. And even then, if the Government would provide the

<sup>1</sup> Finance (No. 2) Act 1939 (2 & 3 Geo. 6 c.109), 7th schedule and Finance Act 1941 (4 & 5 Geo. 6 c.30), section 19.

<sup>2</sup> A corresponding relief was given in fixing contract prices.

assets and give the firm the first refusal should it wish to sell them at the end of hostilities, that arrangement was preferable from the firm's point of view, as it minimised its risk. In the war period the supply of fixed capital depended mainly on Government provision.

(b) CAPITAL ASSISTANCE SCHEMES

A capital assistance scheme was one in which the cost of providing additional capacity for the use of a contractor was borne, either in whole or in part, by the Government and in which the capacity so provided was operated by the contractor as an integral part of his business, even though, as was usually the case when the Government bore the entire cost, the extension was owned by a Government Department. The arrangement was one of the most important means of ensuring the installation of essential new capacity and was in use from early in the rearmament period to the end of the war. Capital assistance schemes eventually came to conform to a clear pattern which, though there were minor divergences, was very similar in all departments. That pattern, however, was not imposed complete from the beginning, but emerged in the course of detailed negotiations. It is therefore useful to examine the way in which the early capital assistance agreements were reached.

In May 1936 two contracting firms both asked the Admiralty for a retrospective contribution to their capital expenditure in the preceding five years. The Admiralty, of course, refused to entertain the suggestion and no such contribution was ever made, but it expressed willingness to contribute to future expenditure necessary for the fulfilment of its own orders. The reason for these requests and for a similar one made to the War Office was that there was great anxiety lest, when the expansion programme came to an end, the market value of additional plant which had been installed to meet its demands might fall below the book value as written down at normal rates of depreciation, thus causing serious loss. Capital assistance was thus another answer to the same problem of premature redundancy which the Capital Clause was designed to meet, but, as it offered greater relief to firms than did the Capital Clause, it was employed much more extensively and for a longer period.

The T.I.S.C. set out the general ways in which the question might be approached. Either the Government could pay for the new capital assets and acquire ownership of them, or the firm might undertake part of the capital expenditure. In the latter event several possibilities were open:

- (a) The Government might reserve the right to acquire all or some of the assets;
- (b) normal depreciation rates could be allowed throughout the

expansion period and a single special contribution paid by the Government at the end of the period, the amount being determined in the light of all circumstances;

(c) a special depreciation rate could be paid throughout the period of the contracts and no further claim would then be admissible at the end of the period; or

(d) some combination of these methods could be adopted.

After preliminary discussions the Admiralty, which was negotiating on behalf of both the War Office and itself, offered the following terms in one case. The Government would advance money to enable the firm to erect new plant, but any movable plant would belong to the Government. In return the company would agree not to use the plant for any other than Government work unless the department consented, and to maintain the plant in good working order at all such times as the Government might require. If the Government no longer required the maintenance of the plant, the company should have the right to pay to the Government the then value of the plant, as determined by agreement or, in default of agreement, by arbitration, and would be free of all considerations as to user; property in the movable plant would then be transferred to the company. If the company did not exercise this right then the Government might remove from the company's premises or sell to another purchaser all or any part of the plant, and the company would be obliged to grant all facilities necessary for the removal. Finally, the fact that the plant had been erected with money provided by the Government would be taken into account in fixing the price for any Government work for which the plant was used.

It appears from these terms that the original intention was that in all capital assistance schemes the full cost would in the first place be met by the Government, any contribution by the contractor being made only in the form of a repayment of the residual value, when the assets were no longer required by the Government. The Admiralty, however, wished to negotiate an immediate settlement of the residual values, and suggested as a basis that it should contribute not more than seventy-five per cent. of the capital cost of the necessary plant and buildings, ownership of which would vest in the company. The Treasury agreed on condition that the manufacturing capacity created by the extensions would not be disbanded without permission from the department, that depreciation would be allowed in costs only in respect of capital expenditure borne by the firm, and that the position regarding depreciation allowances for income tax purposes would be safeguarded. On these terms negotiations were conducted with several firms, and in March 1937 a settlement of the original case was reached, under which the Admiralty paid sixty per cent. of

the cost of extensions, the firm retaining ownership of them. These arrangements were contrary to the Government's general policy of acquiring ownership of new capital assets, which, however, was never intended to apply without exception to additional plant for existing factories. But they had the advantage, from the Government's point of view, that they made certain of a substantial contribution by the contractor, whereas it was always possible, and in some cases likely, that an ultimate payment of residual value in exchange for ownership of the assets would be much less than the difference between the original cost and the amount recovered in respect of depreciation. It was for this reason that, from the time of these early Admiralty schemes onwards, the contributory arrangement was regarded as one which firms should be encouraged to make when they were unwilling to accept new commitments entirely at their own expense and risk.

The reasons for adopting a contributory scheme rather than a scheme for 100 per cent. payment by the Government, with Government ownership of the assets provided, were partly circumstantial. At the same time as the Admiralty had been developing the contributory arrangement the War Office had embarked on a number of schemes with Government ownership. The difference in practice between the two departments reflected a difference in the circumstances of their contractors. Most Admiralty contracts had to be placed with firms already possessing some capacity for the work and, where it was necessary to extend that capacity, the additional plant was so intermingled with the firm's own that it was difficult for the department to retain ownership. On the other hand, the War Office had placed with non-armament firms many contracts involving the provision of special-purpose machinery, which would be useless to the firms concerned when these contracts came to an end.

This situation was not peculiar to the beginning of the rearmament period. It persisted throughout the war. In the War Office and the Ministry of Supply, contributory schemes accounted for only a very small proportion of capital expenditure and that little was mainly in two branches, vehicles and raw materials, where contractors were engaged in work which was either the same as or very closely related to their normal activity. The Raw Materials Department was indeed exceptional in that, while its earliest capital assistance schemes were almost all on the basis of 100 per cent. payment by the Government, it became usual, except in the larger schemes, for the firm to make a contribution. In the Air Ministry and Ministry of Aircraft Production contributory schemes were usually too small to be of much importance.<sup>1</sup>

---

<sup>1</sup> For details of the division of expenditure between contributory and 100 per cent. schemes see Appendix 1, Table G.

It was in the Admiralty's programme to improve the equipment for merchant shipbuilding that proportionately most use was made of the contributory method. The total cost of the 100 per cent. schemes was £1,351,333, that of the contributory schemes £2,212,124, towards which the Admiralty paid £1,210,856. If the assistance given directly to shipbuilding firms is considered separately, by excluding the capital expenditure on new or improved facilities at public docks and quays, then the preponderance of contributory schemes is even more marked. In this category the Admiralty spent almost exactly twice as much on contributory schemes as on 100 per cent. schemes. The total cost of the latter was £601,666, of the former £2,204,724, towards which the Admiralty paid £1,206,456.<sup>1</sup> It is significant that it was in a staple peace-time industry with the prospect of considerable work immediately after the war, that this was possible.

It was also no doubt partly the greater probability of post-war usefulness which caused buildings to be the subject of a contributory scheme much more frequently than plant. If buildings became redundant in one use they could generally be transferred to another; highly specialised plant could not. But the main reason was that it was often impracticable for the Government to take separate ownership of new buildings situated among those already belonging to a contractor. In the later years of the war this preponderance was increased by the deliberate policy of the Treasury, which laid down in the summer of 1943 that departments should not enter into further contributory schemes, except where the assets concerned consisted solely of building work and fixed plant which was not readily removable. Certain minor exceptions were made for the time being to this ruling, but they did not greatly alter its operation. They provided that contributory arrangements could still be accepted in respect of movable plant (including machine tools):

(a) where a contribution to the cost of such plant (small in relation to the total cost of the scheme) was necessary in order to obtain the contractor's agreement to a contributory scheme which it was in the department's interest to obtain in respect of other assets, and

(b) where small items were involved which, owing to their miscellaneous character and small value, would require undue effort in listing and in post-war disposal.

In March 1944 the Treasury carried the restriction further and laid down that if a contractor would not bear the whole cost of providing new assets, the departments should do so rather than accept a contribution from him. Three exceptions were permitted:

(a) where a building was the statutory responsibility of a contractor (e.g. a canteen),

<sup>1</sup> For detailed figures see Appendix 1, Table E.

(b) where, in rare cases, it was agreed in principle that the contractor should pay the whole cost but the department did in fact contribute a small percentage (say ten per cent. or less) for administrative convenience in obtaining materials, priorities, etc., and

(c) where the building was something quite small which, though physically separable from the contractor's main works, could scarcely be saleable as a separate asset.

Contributory schemes were, however, still permissible where the building work involved did not constitute a physical or legal entity, but was concerned with the adaptation of existing premises or the erection of some structure on an island site in the middle of a contractor's works or something of that sort.

This change in policy arose out of the same situation which caused the proportion of contributory to 100 per cent. schemes to rise slightly towards the end of the war. The position at the beginning of the expansion, when it had appeared advantageous to the Government to secure a contribution from contractors, had been reversed. By 1943, contractors were considering their post-war position and, from their point of view, it was very good business if they could obtain new capital assets by paying a fraction of the initial cost and a rent on the balance (or its equivalent in the form of price reductions) for perhaps a couple of years and then use them for their own business. This was a position which the Government had to avoid if it was to escape the charges of wasting public money and of giving to some firms special favours which were denied to their prospective competitors. This can be appreciated when the terms on which capital assistance was given are considered.

The early capital assistance agreements set a precedent for some of the decisions which had to be made. Three major questions presented themselves: if a contractor was to own assets for which he had not paid in full, what proportion of the cost must he bear? In what way was the Government to recover its expenditure on capital assistance? What was to happen to the assets when they were no longer required for war production?

An answer had been given to the first question when the Admiralty was authorised to negotiate in the earliest cases up to a maximum Government contribution of seventy-five per cent. and finally made a settlement on the basis of sixty per cent. contribution by the Government and forty per cent. by the firm. These terms were in future treated as a limiting case, and unless a firm was prepared to pay at least forty per cent. of the cost of any capital scheme, it was the Government's normal practice to bear the whole cost and take ownership if possible. As was almost inevitable when the Government had to ensure the provision of the assets in any event, forty per cent.

was not only the minimum but also the usual contribution by contractors, though a fair proportion of schemes was on a fifty-fifty basis and contractors occasionally paid up to seventy per cent. or seventy-five per cent. In some cases a firm was not willing to make a contribution to the cost of a complete scheme but only to certain individual items in it, and it was then customary to require it to pay at least sixty per cent. of the cost of those items. Occasionally a contribution of under forty per cent. was accepted from a firm, but only as a matter of administrative convenience, and if the total sum involved was small. For instance, in May 1939 the Air Ministry was authorised to pay nearly eighty per cent. of the purchase price of an additional factory to expand the wire output of one small firm, because it was not considered worth while to put the extra factory on an agency basis and thus have two different financial arrangements with the same firm.

There were three possible ways for the Government to deal with the recovery of its expenditure on capital assistance. The expenditure might be treated as an inescapable charge and no attempt made to recover it; or the contractor could be charged a rent in respect of the Government contribution; or a reduction could be made in the price which the Government paid for the stores in the manufacture of which the assets created at its expense were used. The first possibility was ruled out because it was grossly inequitable as between one firm and another, and because it was an inducement to inefficient management; the other two were both used.

Rentals were made up in the same way whether the Government bore the whole or only part of the cost of a scheme, and were calculated on the cost of the assets provided or, where the firm had contributed part, on the proportion of the cost borne by the Government.<sup>1</sup> They consisted of two elements: an item for interest on capital, which throughout the war was fixed at four per cent. and which was not recoverable in the overhead allowance included in building up prices; and a percentage for depreciation, which in most cases was allowed as a legitimate addition to contractors' overheads. For buildings the depreciation rate was usually two per cent., making a full rent of six per cent., but in some special cases slight variations were made. Where building work was carried out at public expense on land belonging to a contractor, or held by him on long lease, and he would neither make a satisfactory contribution nor grant the department a suitable ground lease of the site, the Ministry of Aircraft Production preferred to charge only the four per cent. interest and obtain an undertaking that the contractor would pay the residual

---

<sup>1</sup> Rentals were less common when the firm made a contribution to the capital cost. M.A.P., for instance, hardly ever charged rent in contributory schemes. The adjustment was made through contract prices as described below.



value of the building work when it was no longer required by the Government; if an agreement on these lines could not be obtained then the six per cent. rent was charged and, if possible, none of it was allowed to be included in overheads. In the Admiralty, rents on buildings were charged at specified flat rates, not as percentages of cost. Departments usually reckoned the depreciation element in the rental of plant at the Inland Revenue depreciation rate for similar plant, but in cases involving less than £10,000 and in Machine Tool Assisted Schemes the Ministry of Supply charged an inclusive flat rate of  $12\frac{1}{2}$  per cent. as the rental of the plant. This same inclusive rate of  $12\frac{1}{2}$  per cent., representing 4 per cent. interest and  $8\frac{1}{2}$  per cent. depreciation, was also the usual Admiralty rental for plant of all types and was calculated on the total cost borne by the Admiralty in the provision and installation of the plant. For some types of plant, including items so diverse as jigs and blast furnaces, no Inland Revenue depreciation rates existed, and in such cases the Ministry of Supply covered depreciation by requiring the contractor to replace the plant if and when necessary and to pay the Ministry at the termination of the agreement 'such sum as may be agreed or in default of agreement settled by arbitration . . . as fairly representing the amount which a prudent owner of the . . . plant who was building up reserves to provide for the full cost of such . . . replacements . . . would by then have set aside for such . . . replacements'. The Raw Materials Department of the Ministry of Supply differed from the others by charging a higher rate of depreciation on plant, twenty per cent. above Inland Revenue rates. This meant, for example, that if the Inland Revenue rate was  $12\frac{1}{2}$  per cent. the Raw Materials Department charged fifteen per cent., which was nearer to what a prudent businessman might be expected to set aside in a period of rising prices, as Inland Revenue rates were based on original or written-down value, not on replacement cost. In the Ministry of Supply (including the Raw Materials Department) and in the Admiralty the whole rental was always based on the original cost of the assets, whereas the Ministry of Aircraft Production adopted Inland Revenue practice, and calculated the depreciation element, in all years after the first, on the written-down value.<sup>1</sup> It is possible that the higher rentals of Government plant were a minor factor in causing contributory schemes to be commoner in the Raw Materials Department than elsewhere.

In some circumstances rentals were charged either not at all or only in part. If the assets provided under a capital assistance scheme were not in use for a continuous minimum stated period, no rent was charged on them. The Raw Materials Department, for example,

---

<sup>1</sup> The interest element in rentals was always calculated on the original cost.

located a number of reserve plants for ammonia production with various contractors, and while these were not required no rent was charged. Similarly, if output was below full capacity, the rent of the assets was proportionately varied. In the Ministry of Supply there were two alternative methods of doing this. When the plant was such that it could be dropped out of use, item by item, as production declined, the rental was related to the individual items, no rent being paid in respect of any item which had been unused for thirty consecutive days or longer. More often the rental was related to units of output by providing that the total rent should be adjusted upwards or downwards in the proportion that the actual output of the plant in the rental period bore to the potential output as estimated by the department.

If the assets were used partly on Government work and partly for civil contracts it sometimes happened, except in the Ministry of Supply, that rent was charged only in respect of the civil contract work. In such cases the rent charged bore the same proportion to the full rent as the firm's civil sales did to its total sales. In some earlier agreements made by the Ministry of Aircraft Production the rent due under this formula was waived if the contractor could prove that the Government plant had not been used in the execution of all or some of his civil contracts, but from November 1941 the proportionate rent was always based on the *right* to use Government assets on civil contract work, not on actual user. Where rent was charged in respect of both Government and civil contract work it was also, from the same time, based on the right to use Government assets, not on actual user.

When the whole output of an assisted contractor was purchased by the department which had provided the assistance, rent was usually not charged, but the alternative method of recovering the equivalent through a reduction in the price was adopted. In the case of costed contracts this was done by disallowing a part of the depreciation which bore the same proportion to the total amount of depreciation as the value of the Government assets did to the total capital employed, and by fixing the profit rate allowed on Government assets much lower than that on the contractor's own assets. Where a fixed price contract was used, the price based on the ascertained cost of previous contracts was reduced so as to provide the equivalent of a rental or, if the price was reached by technical pre-estimating, the same proportionate exclusions were made as in post-costing.

There were some circumstances in which, though the Government bore the full cost of providing and installing new assets, it was impracticable for it to retain ownership of them. This happened when the assets were inextricably intermingled with or physically fixed in the contractor's property. In such cases the assets were vested in the contractor, who gave an undertaking to pay to the Government at

the end of the capital assistance agreement the residual value to him of the assets provided by the Government. The wording of the residual value clause was modified from time to time, until in 1944 the following form was adopted:

(1) On the date on which the production period in relation to . . . comes to an end the parties hereto shall ascertain by agreement or in default of agreement by arbitration the amount by which the value of the factory is enhanced at that date by reason of the . . . Provided that if the factory is sold before that date the said amount shall be ascertained at the date of the sale.

(2) The Company shall pay to the Minister within one month after the date on which the said amount is ascertained a sum equivalent to the said amount ascertained under sub-clause (1) of this Clause.

(3) Nothing in Sub-clause (1) of this Clause shall affect any rights which the Minister may have against the Company on account of its failure by reason of the disposal of the factory to perform any obligation imposed on it under this Agreement.

Earlier it had sometimes been the practice to agree at the outset of a scheme on the amount of the residual value payment. The Treasury drew attention in October 1940 to a Ministry of Supply scheme in which, for the first time, the Government was to be committed to accept after the war a definite price for new plant which was not more than half the actual cost less depreciation. The arrangement was approved, however, as basically it was not greatly different from one in which the Government made a sixty per cent. contribution to the cost of assets to be owned by the firm; in effect it was as though the firm's contribution had been loaned to it for the duration of the agreement.

The payment of residual value was connected not only with the recovery by departments of some of their expenditure on capital assistance, but also with the disposal of the assets when they were no longer required for war production. Where the assets were owned by the contractor he could, of course, retain them for his own use, provided that he fulfilled the terms of any residual value clause included in his agreement. In the case of Government-owned assets, unless the Government wished to retain them, the contractor at whose works they were situated was usually given an opportunity to buy them at the end of the agreement at a price to be agreed or settled by arbitration.<sup>1</sup> If he chose not to do so, the Government could sell them to any other purchaser and the contractor must grant all facilities necessary

---

<sup>1</sup> The agreement gave the contractor a first refusal in the event of the Government wishing to sell, but did not usually give him a firm option to purchase the assets. Near the end of the war the policy was adopted of granting no more first refusals or options to purchase capital assets.

for their removal. Many capital assets, especially buildings, could not be conveniently used by anyone but the contractor for whom they were originally provided and it was recognised that he might offer only a very low price. In such circumstances the only policy for the Government was to cut its losses by accepting what was offered, once it was clear that the contractor could not be induced to bid any higher.

Early in the war some contractors sought an undertaking that if, after the war, they themselves were not in a position to employ the Government-owned assets which they had been using during the war, these would not be thrown on to the market where they might be bought cheaply by competing firms. The Government, however, refused to be tied down in this way. But one important concession had been made. The Admiralty, when negotiating with certain firms in 1936, had agreed that, if the company declined an opportunity to purchase and the Government removed plant from the firm's premises, the Government would reinstate facilities broadly equivalent to those which existed before the extensions. If this principle had been applied over the whole field of capital assistance, it might have involved the Government in an enormous liability and would certainly have put firms in a very strong bargaining position when the disposal price of assets was being negotiated. The precedent was therefore quickly abandoned, and in 1944 the Treasury was able to claim that it had been careful to avoid any specific undertaking to reinstate the premises or plant of contractors at whose works capital extension schemes had been carried out for the purposes of war production.<sup>1</sup>

When capital assets were provided by the Government the contractor who was using them had to agree to maintain them in working order, if required by the department, for a period after they were no longer needed to carry out Government contracts, so that one important result of the Government's expenditure would be to have readily available a large reserve of capacity for use in an emergency in the post-war period. The departments which were concerned admitted that no uniform practice was possible because of differences in the nature of assets, particularly their liability to physical deterioration and the possibility of storing them, and because of differences in the peace-time occupations of the firms which had been using them. Nevertheless, in 1942 they jointly tried to clarify the general principles. They decided then that, as a rule, firms should be required to maintain Government plant until six years after the end of the emergency, as defined by statute. If a contractor objected to the length of the maintenance period, it was usual to accept any shorter period

---

<sup>1</sup> Occasional exceptions to this principle had to be admitted; e.g. the Admiralty had to admit liability for reinstatement in the case of a glass furnace installed at one firm's works and of capacity for torpedo production provided for another contractor.

which he could be persuaded to agree to, provided that it was not less than the duration of the emergency. If the capacity was located in requisitioned premises which the Government did not intend to acquire, the maintenance period was limited to the duration of the emergency or of the lease, whichever was the longer. These maintenance provisions were less onerous than might superficially appear, as the cost of maintenance after the end of the emergency was borne by the Government and all that was required was 'maintenance in such condition as will enable full output to be produced at short notice'. Until the end of the emergency, maintenance meant 'maintenance in full working order and condition (fair wear and tear only excepted)', and its cost was defrayed by the contractor. The department bore the cost of maintenance from the end of the production period if that was earlier than the end of the emergency.

The foregoing paragraphs have described the general features of capital assistance schemes. But many agreements were made which did not conform to them, particularly in 1940, when capacity had to be increased as rapidly as possible and it was preferable to accept any financial basis that was not wildly unreasonable rather than to prolong negotiations. Two raw materials schemes may serve as examples. In one contributory scheme, the rebuilding of blast furnaces belonging to the Consett Iron Co., the contributions were not arranged on the usual percentage basis, but the Ministry of Supply agreed to pay the amount by which the actual cost exceeded the estimated pre-war cost. In another case the Ministry met the cost of a capital scheme not directly but indirectly by paying a higher price for the product. This was under an agreement with Commercial Solvents Ltd., whereby the company was to convert a distillery to a mixed solvents factory and amortise the cost at  $33\frac{1}{3}$  per cent. per annum by an addition to the price of the solvents till all was written off, the company bearing the risk of the plant not being required for the full three years and the cost of reconversion to a distillery. Equal variety could be illustrated in other departments. But so much use was made of the capital assistance method of finance that, in order to avoid inequity between one firm and another, much more uniform conditions had to be prescribed. Many individual agreements had therefore no successors of similar type and, as the war progressed, capital assistance agreements became more and more stereotyped. The main problems had become clear and as far as possible a single answer was made to each of them. It was this process of generalisation which made possible a representative account of capital assistance, such as has been given in this section.

It may, however, be useful to supplement this account by referring to certain arrangements which, though not quite of the same type, were equally concerned with keeping down the cost of factory exten-

sions to contractors and which at the same time helped to keep down the cost of other war establishments, such as camps and airfields. Their subject was electricity supply and they were made with authorised electricity undertakings and with the Central Electricity Board<sup>1</sup> by the Ministry of Supply on behalf of all departments. Capital expenditure by the C.E.B. on modifications to the grid, either to enable an authorised undertaker to maintain or provide supplies to war factories or to divide the grid lines where they crossed approaches to Admiralty or Air Ministry airfields, was covered by an agreement made in 1940. This provided that the Ministry would pay the ascertained cost, plus 7½ per cent. for consulting and management fees, plus actual maintenance and other charges directly attributed to the supply. At the end of the war the C.E.B. would pay to the Ministry an amount for the equipment based upon its then value to the C.E.B.; in some cases the C.E.B. offered a fixed sum, if the extension merely involved antedating expenditure which would have been disbursed in any circumstances. Where an authorised undertaker had to carry out new works to connect a war factory to his network, payment was based on ascertained costs plus an agreed percentage (established individually for each undertaker in view of varying costs of management and other factors), and the Ministry might be called on to pay for either all or part of this work, the proportion depending on the physical arrangements and the immediate usefulness of the extensions to the undertaker for the development of his system. A recovery value clause usually applied to all work of which the Ministry bore the full cost, and it provided that, at the end of the war, the undertaker would pay to the Ministry a sum based on the value which the mains and equipment provided had to him then. In some cases where the undertaker would himself have carried out the work at a later date he offered a fixed sum. Where the equipment was of no post-war value to the undertaker, there was provision for its recovery and disposal to the best advantage.

Special arrangements for certain other capital charges were also found to be desirable. The Government was anxious that all agreements for the supply of power to war factories should be terminable at short notice but found difficulty in achieving this in certain circumstances. The reason was in the position of undertakers who owned 'selected stations',<sup>2</sup> and who bought power from the C.E.B. at independent operation costs, an arrangement which applied to the majority of the larger undertakings. The cost of the supply which they took from the C.E.B. was, by statute, not to exceed the cost of

---

<sup>1</sup> The relations between the C.E.B. and authorised undertakers were governed by the Electricity (Supply) Act 1926 (16 & 17 Geo. 5 c.51).

<sup>2</sup> All stations at which electricity was generated for the purposes of the C.E.B. were known as selected stations. (Electricity (Supply) Act 1926, sec. 4(1).)

generating a similar amount of power themselves. But in calculating this cost in cases where the demand of the undertaker exceeded the capacity of the selected station, the C.E.B. could take into account the hypothetical cost of such an extension to the selected station as would have brought its capacity to the level of the demand, and could spread that cost over twenty-three years, in accordance with the Electricity Commissioners' scale of depreciation.<sup>1</sup> Under these conditions the undertakers sought long-term agreements with their consumers and the payment of annual sums to protect them against the recurring charges for hypothetical capital costs. To meet this difficulty an agreement was concluded between the C.E.B. and the various electricity supply associations whereby supplies to war factories, the load for which would involve the undertaker in hypothetical plant charges, would be treated as outside the scope of the C.E.B.'s normal transactions with the undertaker, if the latter so desired. In that case a special tariff was agreed for the factory, which was then known as a 'designated factory', a short-term agreement was accepted, and no charge for hypothetical extension costs was payable to the C.E.B. by the undertaker who, in turn, agreed not to claim any continuing charge from the consumer. The supply associations also conceded that every new agreement to supply electricity to a war factory should be terminable by not less than three months' notice expiring on any 31st December, and that there should be included no cancellation or continuing charges. This provision was generally extended to all new war establishments, such as camps or airfields. In addition, the Ministry of Supply early in 1942 made a complementary agreement with the C.E.B. Its chief provision was that, after the war, the Government would pay continuing charges related to the actual generating plant installed to supply war factory loads, the payments being reduced from year to year, or as and when the growth of civil load in any year took up the capacity of the generating plant provided during the war. The liability was assessed according to agreed formulæ for each of the seven tariff areas into which Great Britain was divided. This payment (and consequently the protection given to the undertaker against recurring charges) was contingent on the undertaker agreeing to supply designated factories at certain fixed rates.

The approved tariff for designated factories consisted of a maximum demand charge (at the rate of the lowest increment of the grid tariff), adjusted for power factor and rates, and a unit charge in accordance with the grid tariff. For dealing with this supply the undertaker received 2s. per annum per kVA of maximum demand

---

<sup>1</sup> Electricity (Supply) Act 1926, sec. 13.

(subject to an upper limit of £500) plus  $2\frac{1}{2}$  per cent. on the C.E.B.'s bill for power. If the undertaker's network was used in supplying the factory, he received a rental for this facility; if the Government bore the cost of connecting the factory to the point at which the undertaker received his supply from the grid, no rental was payable. The Government also paid the undertaker an annual contribution towards local rates and operation and management expenses, equal to  $2\frac{1}{2}$  per cent. of the capital cost of the transmission lines and equipment which had been provided at Government expense, together with actual maintenance costs. Separate tariffs were approved for other factories supplied in certain specified ways, but those for factories which did not come into any of these categories were the subject of individual negotiation between the Government and the undertaker concerned.

(c) AGENCY SCHEMES

The agency system owed its origin largely to the same circumstance as the Capital Clause and capital assistance schemes, viz. that new capacity had to be created, the output of which the Government could guarantee to take for only a limited period. There was also the additional influence that it was a useful method when a reserve of capacity, able to go into immediate production in an emergency, had to be created. In the case of complete new factories it was considered simpler to adopt the principle of Government ownership from the outset and thus avoid the necessity of making elaborate arrangements to pay compensation for premature redundancy. In the summer of 1936 the T.I.S.C. accepted the view of the Treasury Sub-Committee on Contract Procedure that the balance of advantage lay in the Government paying directly and at the outset for the new factories and acquiring ownership and control of them. Departments were instructed that this course should be adopted except when special circumstances made it impracticable or inappropriate. Unless departments were prepared to set up new factory management organisations, they had to make arrangements with existing commercial firms to operate the factories on much the same basis as some of the National Factories in the First World War,<sup>1</sup> and this in fact was done. The agency method was particularly suited to the situation where an industry had to be expanded to an extent beyond the managerial capacity of the firms already engaged in it, and firms from other industries had to be induced to take part in it by being relieved of financial risk. It was in just such circumstances that the first agency agreements were made in 1936, when the Air

---

<sup>1</sup> For an account of the various types of management of the National Factories see *History of the Ministry of Munitions*, Vol. VIII, Part I, Chapter IV.



Ministry arranged for the construction of several new airframe and aero-engine shadow factories which would be operated by automobile companies. More agency factories were opened by the Air Ministry during the rearmament period and the system was also taken up by the War Office in 1937.

The agency method, however, was not confined to new factories, specially built to meet the needs of rearmament. In some cases a department bought an existing business as a going concern for operation by an agent; in others a firm leased a self-contained part of its works to a department and continued to operate that section as the department's agent. Thus the extension of the agency system did not represent entirely an increase in the capacity for munitions production. To some extent it was only a transfer from commercial to agency management. As rearmament was extended and more particularly after the outbreak of war, attention was directed less to the problem of premature redundancy and more to the relative merits of different financial arrangements for management, and agency operation began to be officially regarded with less favour. The Air Ministry, which had the greatest experience of agency operation, stated in 1940 that the system was to be deprecated on grounds of efficiency because it could never offer much financial inducement to economical management and entirely lacked the major incentive of the fear of loss. The Interdepartmental Committee on Economic Policy, which considered the remuneration of firms for the management of agency factories, accepted this view and described agency operation as an expedient which should be used only when circumstances made it unavoidable.

Nevertheless, all three Supply Departments operated an increasing number of factories on an agency basis. There were numerous reasons for this. The necessity for transferring many firms to work in which they had little or no commercial interest increased rather than diminished after the outbreak of war. For a time also some firms were unable or unwilling to extend their commercial commitments, because of their difficulty in supplying working capital. And, furthermore, the suggestion that agency operation was less efficient than commercial management seems not to have been satisfactorily proved for all circumstances. The Economic Policy Committee, at the same time as it made the suggestion, admitted that in some agency factories production costs had been lower than in commercial undertakings engaged on comparable work, and cited no evidence of the contrary tendency, though it could have done so, as some of the early aircraft and aero-engine agency schemes had given rise to increases in some items of costs. The system had the additional advantage that, by simplifying contract procedure, it appreciably reduced the administrative strain on Government Departments. In these circumstances it remained important throughout the war. At 31st March 1945 the

Ministry of Supply had 159 agency factories in operation, the Ministry of Aircraft Production 87,<sup>1</sup> and the Admiralty 19.

The actual provision of capital assets for agency operation involved no major questions of financial principle. It was in connexion with the terms of remuneration for management that these arose. The assets were paid for by the Government, which retained ownership and ultimate control of them, and the only way in which the agent firms were financially concerned in the provision of the assets was that, if the factories were new, they were usually responsible for planning them and supervising their construction and received a fee specifically related to this stage of the work. But even this was in essence a payment for a particular managerial service and as such it was discussed when the whole subject of remuneration for agency operation was considered.<sup>2</sup>

(d) CAPITAL ASSETS FOR DIRECT GOVERNMENT USE

It had long been customary for Service requirements of certain basic munitions such as guns, explosives and ammunition to be met in part by the Government's own organisations. The Royal Ordnance Factories which, though coming under the authority of the War Office and subsequently of the Ministry of Supply, formed a self-contained productive organisation, were responsible for most of this work, and in addition the Royal Dockyards carried out much of the special work required by the Navy, including shipbuilding and ship-repairing. Certain Admiralty factories did work similar to that of the Royal Ordnance Factories. It was inevitable that when rearmament was undertaken the Government establishments should have a considerable share in it. In the years immediately before the war a heavy programme of capital expenditure on new R.O.F. was undertaken and on the outbreak of war it was extended and accelerated. From a financial standpoint it calls for little comment as it presented no novel features other than its magnitude. This in itself was sufficient to ensure that the programme was very fully discussed, particularly as all Services were concerned in its cost, because it affected the size of the subsidies which they had to pay towards the costs of R.O.F., and during the rearmament period several reductions were enforced by the Treasury. After the outbreak of war, however, all financial obstacles were removed and a further large expansion was carried through in the next three years.

The activities of the R.O.F. organisation were further increased when it undertook the management of some of the larger Ministry of Supply factories. In 1942 three of these, with an estimated employed

<sup>1</sup> C. & A.G. Report on Civil Appropriation Accounts, Class X (War Services), 1945-46, para. 18.

<sup>2</sup> See pp. 152-56 above.

capital of £7,492,500, were operated by R.O.F. In such cases the distinction between agency and direct operation became blurred and unimportant.

The decision whether or not to use the method of direct operation was taken on grounds of productive efficiency rather than finance, but apart from the R.O.F. and Admiralty establishments this method was little employed. At various times, however, the possibility of extending its use was discussed. The Royal Commission on Private Manufacture of and Trading in Arms had recommended in 1936 that the Government's own manufacturing establishments should be fully equipped to produce naval, military and air armaments of all types.<sup>1</sup> The Government reviewed the arguments used to support this recommendation, the chief of which were that it would facilitate planning for rapid expansion in emergency and that it would provide a check on the prices charged by private firms, and decided that they were by no means conclusive. It was not opposed in principle to extending the range of Government manufacture but stated that the question must be considered on the merits of each case with due regard to economy and in the light of the many complex factors which affected planning for large-scale production in emergency.<sup>2</sup>

The Air Ministry alone among the Service Departments had no manufacturing establishment of its own. The reasons which persuaded the Secretary of State at the beginning of the rearmament period to choose agency factories rather than direct operation were:

- (i) The comparative lack of success of Government factories engaged on aircraft production during the First World War;<sup>3</sup>
- (ii) The belief that factories would be erected more quickly by private enterprise than by the Government;
- (iii) A desire to give education in peace-time to large concerns which would be turned over to aircraft production during a war;
- (iv) The belief that if, at the end of the expansion, it were necessary to cease production at some factories it would be easier to close agency factories than Government establishments;
- (v) The belief that, together with the existing machinery, agency factories would be sufficient to ensure that there was a reasonable control of profits and prices.

Suggestions continued to be made from time to time in Parliament and elsewhere that the Air Ministry ought itself to manufacture aircraft and after his appointment as Secretary of State, Sir Kingsley

<sup>1</sup> *Report*, Chapter XII, para 6. [Cmd 5292].

<sup>2</sup> *Statement of Government Policy on the Report of the Royal Commission on Private Manufacture of and Trading in Arms* [Cmd. 5451].

<sup>3</sup> This reasoning seems to have been founded on a misunderstanding, as most of the National Aircraft Factories in the First World War were managed by commercial firms.

Wood initiated discussions about it among the leading officials of the Ministry. A meeting of them in January 1939 revealed different views about the merits of the proposal, but was unanimous in the belief that it was undesirable to act on it then. Sir Kingsley Wood suggested that it should be reconsidered in the following September, but when that time came there were many other things to think about, and though the project was sometimes informally discussed during the war, it was never seriously revived within the Ministry of Aircraft Production.

Early in the war when agency operation was regarded with much suspicion, the possibility of taking over some agency factories for direct operation by Government Departments was discussed at a high level but nothing came of it. Extensions of direct operation to new fields during the war were practically confined to certain raw materials schemes for which there was little commercial precedent and which in the ordinary circumstances of international trade there would have been little inducement to undertake. The chief examples were the Home Grown Timber Department and the Home Flax Production Scheme. Several chemical plants were also operated for the Raw Materials Department by Production Branches of the Ministry of Supply.

Direct operation or some measure of Government ownership was also occasionally introduced in order to ensure the continuance of secret research. The most notable example was the case of Power Jets Ltd., which was formed in 1936 and was the pioneer British firm in the design of gas turbines for the jet propulsion of aircraft. Because of the secrecy and originality of this company's work it was difficult for it to raise capital in the open market and in 1940 the Ministry of Aircraft Production accepted financial responsibility for it, under an agreement rather like one for agency operation, but with the Government sharing in the ownership of the agent. The Ministry undertook to defray all expenses from 1st July 1939 and negotiated with the firm a fixed sum for profit. Part of the share capital was transferred to the name of the Minister of Aircraft Production, so that the department would benefit from any dividends which might be paid. This arrangement continued until 1943, when the Ministry provided the capital for a new successor company, Power Jets (Research and Development) Ltd. The Ministry subscribed £250,000 share capital to the new company, of which £135,000 was used to purchase the old company and the remainder was retained as working capital.

One remaining form of Government operation came when a department compulsorily acquired all the shares in a company under the provisions of the Defence (General) Regulations, No. 78. Little use was made of this power, which was reserved for cases of extreme difficulty in which it seemed unlikely that any alternative measures would be sufficient to ensure that the required production could be

achieved. The most prominent instance of its use was the acquisition of Short Brothers (Rochester and Bedford) Ltd. by the Minister of Aircraft Production, with effect from 23rd March 1943, at a cost of £1,472,182.<sup>1</sup> Arrangements of this type were avoided by the Government, if possible, partly because of the expense involved, but they were used in a few cases by each of the Supply Departments. The Ministry of Supply, for instance, had nine such cases in all. The purchase price was fixed by the Treasury on a willing seller-willing buyer basis, but the shareholders could appeal to arbitrators, who had power to increase, but not to reduce, the price. This basis meant that the Government had to pay a high price; it had, for instance, to pay for goodwill, although deriving no benefit from it. In a few cases, however, acquisition was considered the least evil. Both the shareholders and the directors were then the nominees of the department, but it was customary for the board to be allowed as much discretion in day-to-day administration as that of an independent company. The department which owned the company could, however, lay down the general lines of its policy. In 1941 the Ministry of Supply established an Industrial Companies' Supervisory Board, one of the duties of which was to keep under review and to report from time to time on the operations of companies whose share capital the Minister had acquired, and to serve as a channel of communication between the Ministry and these companies on matters of policy. It was, however, only an advisory body. The provision of capital by outright Government purchase of firms was done out of necessity in order to remove obstacles to adequate production rather than in pursuit of a deliberate policy of ownership and close, direct control.

#### (e) OTHER FINANCIAL ARRANGEMENTS

Nearly all the capital expenditure on war production was on one or other of the four types of financial basis which have now been described. Other possible methods existed, however, and it remains to outline briefly those which were occasionally employed and to suggest why greater use was not made of them.

The most important of these other methods was the grant of loans, and its general adoption ran counter to accepted policy, which demanded that public money should be used with the least possible risk. The reluctance of the Government to make loans of working capital has already been mentioned, and when the loans were made for the purpose of increasing fixed assets the risk was greater. It was, of course, possible for the Government to safeguard itself by taking some form of mortgage or debenture, but even a first charge is not

---

<sup>1</sup> C. & A.G. Report on Civil Appropriation Accounts, Class X (War Services), 1942, para. 16.

quite so good a security as outright ownership. Unless a firm was prepared to pay at the outset part of the cost of new fixed assets it was, therefore, the usual Government practice to bear the whole cost and retain ownership. The only important departures from this practice came in a few large schemes for developing the production overseas of vital raw materials. These schemes could be completed only over a period of several years and needed supervision of a kind that was not readily available, except from commercial firms which required financial assistance while production was being gradually expanded to its new level, although they expected to be able to carry on unaided thereafter. The chief loans of this type were for aluminium production in Canada and were, for the most part, made before the outbreak of war. In mid-1942 they accounted for over £18 million out of the Ministry of Aircraft Production's outstanding total of overseas capital commitments (i.e. after deducting receipts from the sale of overseas plant and repayment of the principal of loans) of £21,500,000. The Raw Materials Department of the Ministry of Supply also made during the war a number of loans to develop new production, particularly to replace losses in the Far East.

At home, in some special circumstances, the Government set aside its usual objections to making loans. In capital assistance schemes where Government ownership was not very practicable and the contractor, though willing to make the minimum contribution, was unable immediately to do so in full, the department concerned was occasionally willing to lend him the balance. Such cases were always rare and when, with the approaching end of the war, the balance of advantage in contributory cases swung heavily in favour of contractors, additional assistance by way of loan was no longer appropriate. Early in 1944, therefore, the Treasury ordered its discontinuance. Loans were also made occasionally to assist in small expansions of public services, such as gas or water supply, which were for the time being needed specifically for war production but subsequently would be of more general local advantage. In 1941, for example, the Treasury approved a proposal that the Admiralty should loan half the cost of additional coke ovens required by a company which supplied one of its contractors with gas.<sup>1</sup> It was not intended that loans of either type should be large, and in 1943 the Treasury laid down that departments must consult it before they sanctioned any such loans of more than £15,000 each.

A special situation arose in connexion with the replacement of war-damaged plant. The point was raised in December 1940, when

---

<sup>1</sup> The company considered that it had a claim to assistance from the Government because its plant had been damaged by overworking to meet the demands of war industry. It asked for a loan because it did not wish to seek accommodation from its bankers, but wanted to keep its position as liquid as possible to meet future emergencies.

the Ministry of Supply wished to secure the replacement of a sulphuric acid plant which had been destroyed in an air raid. The firm concerned was without resources until compensation was paid, and it was therefore agreed that the Ministry should loan the cost of a new site and plant, the loan being subsequently repaid out of the compensation money. The Treasury made it a condition, however, that the Ministry must safeguard its right to demand the payment of interest. Supply Departments were subsequently given general authority to make loans up to £25,000 for the repair of war damage.

Rates of interest on loans for the provision of fixed assets varied according to individual circumstances from nothing to five per cent., but the commonest charge was four per cent., the same as in rentals for capital assistance. An examination of the loan position in the Ministry of Aircraft Production at 30th June 1942 showed that, of the total of twenty-two loans amounting to £931,774 then outstanding in the United Kingdom, fifteen amounting to £619,268 were at the rate of four per cent. Most of the remainder was accounted for by one of £100,000 at 3½ per cent. and two amounting to £180,000 at 4½ per cent. There were only two very small loans, totalling £1,993, which were free of interest. These figures, besides illustrating the position regarding interest charges, also reveal how small was the use made of loans. In the Ministry of Supply (excluding the Raw Materials Department) loans made for all purposes, of which the provision of fixed assets was only one, were (approximately) only £3,900,000 up to 31st March 1945. Admiralty loans for fixed capital schemes were negligible in amount.

Besides loans there were two other methods of arranging for the provision of fixed capital. One was the deferred payment scheme, which differed from a loan in that ownership of the assets remained with the department until the contractor had paid the final instalment of the purchase price, whereas, in the case of a loan, ownership was vested in the contractor from the outset. A deferred payment scheme was free from the major objection attached to the granting of loans and might well have provided a useful alternative to the contributory arrangement. In fact, however, it was hardly ever adopted.

The remaining method was used in the Ministry of Aircraft Production, which gave it the rather ambiguous title of 'Outside Supplier'. Under this arrangement the department placed with outside suppliers bulk orders for certain common capital items, of which portable hangars were a typical example, and these assets were held in stock for reissue to individual contractors as required, the cost meantime being charged under the heading 'outside supplier'. After reissue of the assets, the charge was transferred to the particular contract concerned so that, when all such transfers had been completed, the out-

standing charge to 'outside supplier' would be nil. In practice, however, there was often considerable delay between the reissue of the physical assets and the completion of the financial adjustment. The arrangement was suited to only a very limited range of items, but where appropriate it was useful in avoiding both extravagance and delay in the completion of some capital schemes.

(f) THE RELATIVE USE OF THE VARIOUS TYPES OF FINANCIAL ARRANGEMENT<sup>1</sup>

The relative proportions in which capital expenditure was incurred under the different types of financial arrangement differed appreciably between one department and another, and between one period and another, but the available figures are not in all cases adequate to make possible a precise evaluation. The rearmament period appears to have differed significantly from the war period in that proportionately more capital was provided by contractors and the Government for their own respective concerns and less under the mixed arrangements. It was pointed out in discussions as early as the autumn of 1936 that there was a fundamental distinction between the Air Ministry and the other Service Departments, as the aircraft industry was financing its own expansion, whereas other munitions industries were receiving Government assistance. Supplementary expansion for the aircraft industry was provided at first almost entirely by agency factories, which in the first two years of rearmament absorbed eighty-six per cent. of the Government's capital expenditure on aircraft production. Even in the aircraft industry, however, as the scale of expansion grew, firms began to request more assistance for their own commercial undertakings, and by the time war was declared the Air Ministry had authorised as much expenditure on capital assistance schemes as on agency factories. Agency operation was in use by the War Office from 1937 but was not on a large scale before the war. The major part of pre-war productive expansion in this department was concentrated on the R.O.F., to which was devoted rather more than seventy per cent. of the capital expenditure on munitions by the War Office and Ministry of Supply in the four years ending 31st March 1940. The rest went mainly on capital assistance schemes, though there were also several large agency schemes. Admiralty finance came in an intermediate position. For the four years to 31st March 1940 sixty-one per cent. of capital expenditure on munitions was for Admiralty establishments, thirty-nine per cent. for assistance to contractors. But in this case differences in organisation and accounting make interdepartmental comparison

---

<sup>1</sup> For detailed figures see Appendix 1, Tables E to J.



rather misleading. An unknown, though probably minor, proportion of the expenditure on Admiralty establishments was more nearly parallel to that on R.A.O.C. (subsequently R.E.M.E.) and R.A.F. workshops, which have not been regarded here as being concerned with war production.

During the war the situation changed considerably. The maximum use had to be made of organisations already existing, and as there were many circumstances to make them unable or unwilling to finance their own expansion, the Government had to provide for it. Consequently capital finance during the war was mainly on the basis of capital assistance and agency schemes. Those departments which had devoted much of their rearmament expenditure to their own productive organisations turned increasingly to agency operation for further expansion; the Air Ministry, which had relied largely on new agency factories, was compelled to devote an increasing proportion of its capital expenditure to capital assistance schemes. In the last three complete financial years of the war only about a quarter of Ministry of Aircraft Production capital expenditure was devoted to agency factories. The Admiralty, whose activity in production was on much the smallest scale, showed the least change between the rearmament and war periods. By the end of 1944 the proportion of expenditure which had gone on capital assistance schemes was about forty-one per cent., not much more than in 1940, but Admiralty establishments represented a little over fifty-three per cent., the difference being due to the introduction of a number of agency schemes. In the Ministry of Supply the proportion of capital expenditure which had gone to R.O.F. and other directly-operated factories had fallen from just over seventy per cent. at 31st March 1940 to just under thirty-nine per cent. five years later. Figures of authorised capital schemes show that the change was due in part to relatively increased use of capital assistance schemes, but mainly to greater reliance on agency operation. Capital expenditure on agency factories which had dropped to a mere £28,264 in the financial year 1940-41 rose spectacularly to £38,359,729 in the next year, and thereafter remained a fairly steady proportion of the Ministry's total capital expenditure.

If the capital expenditure of all three departments throughout the rearmament period and the war is considered as a whole, a few broad conclusions emerge. The expenditure on the Government's own productive organisations was rather less than a quarter of the total, though in the rearmament period alone it had been not far short of a half. An examination of the figures for authorised expenditure, where those of actual expenditure are not suitably classified, suggests that the remaining three-quarters was divided between capital assistance and agency schemes in the proportion of a little under 2 : 1 (13 : 7 would probably be nearer the mark). In very round terms, then, the

Government spent £1,000 million on the provision of fixed capital for war production, of which half was for extensions to contractors' works, a quarter for Government factories operated by commercial firms on an agency basis, and a quarter for directly-operated Government establishments. How much more was provided by industry itself is unknown. Under the Capital Clause the aircraft industry provided just over £8 million. In all departments a certain amount was provided by firms participating in contributory schemes, and this can be roughly estimated. The proportion of total Government capital expenditure devoted to contributory schemes was about 2·6 per cent., which represents an actual expenditure of £26 million. On the average in such schemes the firm's contribution was certainly over forty per cent. and very probably under fifty per cent. A rough estimate in the Admiralty suggested that in that department's schemes it was about forty-five per cent. and that figure is probably not far out for war production as a whole. Firms' expenditure in contributory schemes thus amounted to about £22,500,000 to £25 million. Their further expenditure on new fixed assets which were used in war production is not susceptible of any close estimate.

(g) NEGATIVE INFLUENCES

The increase in the demand for fixed assets for war production made it necessary to supplement the arrangements for their supply by measures to prevent their diversion to less essential purposes. To a large extent this was achieved by direct controls over the allocation of physical assets, but some financial controls also had a part. It should not be overlooked that such measures as differential purchase tax and price subsidies not only operated on consumers' demand but had repercussions on the level of production required in different industries and therefore on the demand for new capital.

The chief financial measure was, however, the control of new capital issues. In 1939 it was laid down that, with minor exceptions, no new issues could be made without a licence from the Treasury's Capital Issues Committee.<sup>1</sup> The exceptions were varied from time to time, but for most company issues involving the subscription of new money, exemption was granted only for amounts up to £10,000 in any period of twelve months.<sup>2</sup> Issues were licensed only if the Committee was satisfied that they were immediately necessary to enable companies to make their maximum contribution to the war-time economy. The effect is apparent from Table 12.

---

<sup>1</sup> Defence (Finance) Regulations 1939 (S.R. & O. 1939, No. 1620).

<sup>2</sup> Capital Issues Exemptions Order 1941 (S.R. & O. 1941, No. 648).

*Annual capital issues of companies*

TABLE 12

£ million

	1938	1939	1940	1941	1942	1943	1944	1945
Debentures .	33·8	16·9	1·3	2·0	2·8	5·6	2·3	5·4
Preference .	21·8	8·8	1·9	0·6	1·1	2·2	3·1	10·1
Ordinary .	104·1	47·8	14·7	10·8	7·1	9·7	5·0	91·7
TOTAL .	159·7	73·5	17·9	13·4	11·0	17·5	10·4	107·2

*Source:* Yearly summaries published each January in *The Economist*. The figures are those of its 'new basis' which includes all issues in which there is permission to deal, not only those made by direct public offer.

The normal methods of capital recruitment were virtually in suspense and the Government had to take direct responsibility for the provision of most of the new capital needed by war industries.

## CHAPTER XIII

# THE COURSE OF POLICY: SOME CAUSES AND EFFECTS

**A**N account of contractual and financial policy naturally tends to concentrate on the solutions which were put forward to deal with problems as they appeared or in anticipation of their appearance. This form of presentation, 'these were the problems; they were tackled in this way', while clarifying the exposition, may give an impression of greater ease and smoothness of adjustment than actually existed. Every problem had its own antecedents and its particular contemporary setting which restricted the way in which it could be approached, sometimes irrespective of whether its treatment fell into a coherent line of policy or not. Many proposals that were put into practice had no preconceived place in a wider setting of deliberate policy, but were adopted in response to particular changes in conditions that made it difficult or impracticable to pay much attention to the remoter probable effects. This does not mean that there was no policy other than a succession of temporary devices; the previous chapters should have made it clear that the truth was quite otherwise. But it does mean that policy did not always develop in a completely orderly and predictable manner and that circumstances sometimes prevented it from following those lines which its shapers would have preferred.

When rearmament began there was in existence a detailed and well-tryed financial and contractual policy which there was no intention of discarding. That was the foundation on which all subsequent developments were built. Many of its features, particularly those concerned with the arrangements for the purchase of stores, survived throughout the war with comparatively little alteration. But deliberate consideration was early given to the ways in which it might need to be modified. In 1934 a sub-committee of the Contracts Co-ordinating Committee<sup>1</sup> began to consider how the prices of war stores and the profits of Government contractors might most effectively be controlled in time of war. Its most influential decision was in first establishing a quantitative standard of reasonable profit, the well-known ten per cent. on capital employed. In 1936 another sub-

---

<sup>1</sup> C.C.C. sub-committee on the control of prices and profits (1934-35), known as the Bovenschen Committee.

committee<sup>1</sup> devoted its attention to problems of the more immediate future, and considered such questions as the duration of contracts for long-term rearmament commitments, the alternative methods of price-fixing that could be used, and the rate of profit to be allowed. It also made the important recommendation that any additional factories needed should be owned by the Government and operated by agents for a fee, a policy which had already been anticipated in a particular instance by the Air Ministry's decision to conduct its first shadow scheme for aircraft production on this basis. In 1936 also was created the T.I.S.C., in order to facilitate all the financial decisions needed for the execution of the rearmament programme.<sup>2</sup>

All these were steps taken to keep policy ahead of expected changes in what was required of it. Except, however, for the decision about the ownership and operation of new factories they were mainly concerned with improving the means by which an existing policy could effectively be applied to a changing situation; they were changes in method rather than in content. Other steps taken during the rearmament period were of a much more empirical nature. Some of them came about gradually and spontaneously in the course of work within departments. For instance, the I.T.P. became a regular method of ordering certain classes of stores, not in pursuit of some pre-ordained policy, but simply because the stores had to be obtained more quickly than before and this procedure was already available. Other important changes were less spontaneous and were mainly due to pressure put on departments from outside. Capital clause cover was not an anticipatory inducement offered to aircraft firms by the Air Ministry, but was a response by the department to repeated requests from firms and their representatives. The Air Ministry, in fact, had originally been disposed to disregard the question, stating that it was 'purely hypothetical', though a little later it suggested that it should be a matter for negotiation. The first important capital assistance schemes also arose from demands by industry<sup>3</sup> and then, when once the system had been established, departments were quick to make extended use of it as a valuable instrument for the fulfilment of their needs.

The outbreak of war might have been expected to and ultimately did produce much greater changes in financial and contractual policy. But initially change was kept to a minimum, with a view to seeing how things worked out and making such later adjustments as seemed necessary;<sup>4</sup> empiricism became a deliberate choice. The result was

<sup>1</sup> Treasury sub-committee on contract procedure, known as the Robinson Committee.

<sup>2</sup> See p. 7 above.

<sup>3</sup> See p. 204 above.

<sup>4</sup> This was the attitude in many fields. An excellent illustration is supplied by an interdepartmental meeting on price fixing, held at the Treasury on 24th November 1939, when almost all the delegates agreed that the existing system was unlikely to remain practicable, but that they would not change it until it was proved by experience to be unworkable. Experience in fact did not conform to their expectation.

that in many fields change had later to be exceptionally drastic and sudden. The strongest influences in bringing this about were the desperate need for greater and more rapid war production and the moral stimulus, both of which sprang from the defeat of France and from the aerial bombardment which began soon afterwards. At this time the financial arrangements were given an enormously increased flexibility, so that finance might become a help to production in every way possible and an obstacle in none. It was at this period and under this influence that progress payments were greatly increased, Scheme C was devised, the detailed checking of contractors' claims was reduced to the barest minimum so as to prevent delay, and finance officers were allowed wide discretion to conclude agreements for the provision of additional capacity on the most diverse financial terms. For the time being it was production that mattered, whatever the cost, and financial policy was reshaped in subordination to it. The swing inevitably went further than could be justified for long, and one of the later tasks of financial policy was to bring a new uniformity from the diverse expedients which had been adopted, and restore some of the abandoned checks on waste which were essential for the ultimate maintenance of efficiency. Changes so considerable as those of 1940 having once taken place, the necessity for any later new developments on a comparable scale did not arise. Later changes were made in the light of experience, but most of them related to particular and limited topics rather than to general issues.

Apart from external influences which operated at a particular time there was one group of them, viz. political considerations, which was always in the background, though during the war its influence was very limited. The most important feature of the finance of war production which was mainly attributable to such an influence was probably the maintenance of E.P.T. at 100 per cent. from 1940 until after the end of the war. In some ways this cut across the general policy of encouraging private industry to meet as many as possible of the demands of war production, and there was general agreement in Government Departments that it made firms much more reluctant to expand their capacity.<sup>1</sup> Against the advantages which it may have conferred must be set, among other things, the innumerable fruitless hours which Government contract and finance officers spent in trying to persuade industrialists to expand their undertakings at their own expense, only to be faced at the end, as at the beginning, by the assertion that 100 per cent. E.P.T. had destroyed any advantage that they might have had from doing so. Clearly the influence that caused its continuance was strong.

Although the changed circumstances of war led to many changes in

---

<sup>1</sup> Cf. p. 85 above.

financial and contractual policy, there were some elements in it which remained remarkably stable, even when their suitability had been called into question, and it is worth considering why this should have been so. Outstanding examples were the persistence of the Ministry of Supply in making general use of costed contracts when this was plainly causing an unmanageable volume of arrears of costing and of final payments,<sup>1</sup> and the adherence of the Ministry of Aircraft Production to fixed-price contracts despite repeated criticisms from the P.A.C. and elsewhere of the high rates of profit which resulted from these.<sup>2</sup> Among the reasons for this unwillingness to change were that there was no known final solution to the problems involved; if a department abandoned one system it could only take up another that had already been tried and found imperfect. There was also the influence of departmental tradition, often strong. The Ministry of Supply and the Ministry of Aircraft Production had inherited both personnel and a body of working practice from the War Office and the Air Ministry respectively, and most of their officials preferred to administer as long as possible a system to which they were accustomed and of the advantages of which they felt themselves more aware than the critics.

It appears that, to a considerable extent, changes in contractual and financial policy were made or avoided on grounds of immediate requirements and of their effect only on the sphere of activity with which they were most directly concerned, and with little regard for their wider repercussions. The S.C.N.E. plainly had this in mind when in 1943 it suggested that there was a need for a body which could overlook the whole field and appreciate how policy in one sphere might react on others.<sup>3</sup> As it went on to point out, 'in many respects, and most clearly in regard to economic policy, the activities of the various Government departments must be regarded as parts of a single whole which react not only on each other but on the general economic life of the country . . . , directly or indirectly affecting every branch of its activities'.<sup>4</sup> It would be useful to consider what some of the effects were. War-time contractual and financial policy concerned itself with immediate requirements in terms of production and the resources needed for production, and on the whole requirements were met. Contractual and financial policy did much to smooth the working of the productive system which achieved that result and its success in this respect would offset very considerable weaknesses if they appeared among its wider effects. The last question is whether

---

<sup>1</sup> See p. 76 above.

<sup>2</sup> See p. 92 above.

<sup>3</sup> S.C.N.E., 1942-43, 14th Report, para. 65.

<sup>4</sup> *Ibid.*, 1942-43, *op. cit.*, paras. 71 and 74.

the narrower and wider results did conflict and, if they did, whether they need have done so.

The amount of Government payments for war production was so large<sup>1</sup> that it was bound to have an important influence, of which particular contracts or groups of contracts could give no indication, on all the important economic institutions of the country and on the position of the national economy as a whole. Among the institutions most likely to reflect this were the banks and the industrial firms.

The position of the banks underwent a fundamental change in two respects in the course of the war. One was a marked acceleration in the growth of deposits, which more than doubled in amount between 1939 and 1945; the other was a drastic and enforced redistribution of their assets,<sup>2</sup> which left them at the end of the war in a position quite at variance with what had formerly been prescribed by established canons of banking practice.

What happened in the distribution of assets was that commercial advances declined not merely proportionately but absolutely, in spite of the great increase in the level of deposits and of production, and that they were replaced by large holdings of Government paper. The yearly average ratio of advances to deposits among the London clearing banks fell from 44·1 per cent. in 1939 to 16·4 per cent. in 1945,<sup>3</sup> and the actual proportion reached its lowest point at 15½ per cent. in August 1945.<sup>4</sup> Bills discounted averaged 11·3 per cent. of deposits in 1939 and only 4 per cent. in 1945,<sup>5</sup> which was only in part a reflexion of a decline in the provision of commercial credit, as it was also affected by the change from Treasury bills to Treasury deposit receipts as the principal Government instrument of short-term credit from the summer of 1940 onwards. On the other hand, the ratio of Government paper and cash to deposits rose from 56·2 per cent. in August 1939 to 83·3 per cent. in August 1945, although the ratio of cash alone was practically unchanged.<sup>6</sup>

Various explanations of the decline in advances were put forward, and they stressed different aspects of the way in which war production was financed. In January 1945 Mr. Colin Campbell of the National Provincial Bank declared that advances could not revive until the Government's bulk purchases of commodities and raw

<sup>1</sup> It approached £11,000 million (see Appendix 1, Table M). Any definition of war production must be arbitrary. Here it refers to the work which was paid for by the Ministries of Supply and of Aircraft Production and, before the creation of the latter, the aircraft production work at the expense of the Air Ministry, and to the industrial production done by or for the Admiralty. It is thus concerned with all the larger branches of industry except food and fuel.

<sup>2</sup> Appendix 1, Table L, below.

<sup>3</sup> Below, *loc. cit.*

<sup>4</sup> *The Economist*, Banking Supplement, 16th November 1946, p. 1.

<sup>5</sup> Appendix 1, Table L, below.

<sup>6</sup> *The Economist*, *loc. cit.*



materials came to an end, as they were financed without direct recourse to the banking system. At the same time Mr. R. E. Beckett of the Westminster Bank pointed to progress payments on Government contracts as a major source of the decline.<sup>1</sup> A further influence was possibly that many firms were financing more work in progress out of their own resources, which they were able to do partly because the Government's readiness to provide capital assistance enabled them to use funds which otherwise they might have invested in fixed capital. No doubt the decline in advances was not entirely due to these factors. Something must be attributed, for instance, to the fact that some industries, notably residential building, which had relied heavily on bank advances, were practically shut down during the war. But the significant feature was that a greater volume of production was financed with a smaller demand for bank advances, and this was mainly due to the arrangements which the Government made to deal with the needs of industry.

It would be superficial to assume that the Government followed a deliberate and successful policy of squeezing the banks out of the most lucrative of their traditional activities, thus leaving them with no alternative but to take up the Government paper which was made abundantly available, and which was partly used to fulfil the same function of providing current finance for industry and trade that was being taken from the banks, with a consequent saving in interest charges to the community as a whole. Industry certainly was directly financed by the Government to an extent hitherto quite unknown and the banks came much nearer to being exclusively concerned with financing the Government. But this situation was an unintentional by-product of Government policy rather than the result of deliberate design. At the beginning of the war the Treasury insisted that the financing of industry should be left to the banks as far as possible. The great increase in progress payments after the middle of 1940 was a concession partly to the force of circumstance and partly to the desire of the banks themselves not to be involved too heavily.<sup>2</sup> Could they have foreseen the extent to which their advances would be reduced, the banks might have been less anxious that the rate of progress payments should be increased. As it was, the decline in advances was probably slightly checked by another feature of Government policy, which for E.P.T. purposes permitted bank advances to be included in the valuation of capital employed, but did not extend similar recognition to progress payments. Paradoxically it appears that the policy of the banks contributed to a situation in which their opportunity of profit was lessened and that the position of the

---

<sup>1</sup> *Ibid.*, *loc. cit.*

<sup>2</sup> See p. 186 above.

Treasury *vis-à-vis* the banking system was strengthened in spite of some of its own actions.

The other prominent change, besides the decline in advances, was the great increase in the volume of bank deposits. The increase of unspent income which this represented did not go back directly into industry, as is shown by the steady increase in what were called net deposits<sup>1</sup> in the successive White Papers on national income and expenditure. Net deposits averaged £1,257 million in 1939,<sup>2</sup> but by the end of 1945 they had reached £4,035 million.<sup>3</sup> Of this latter figure only £1,339 million represented net personal deposits.<sup>4</sup> Most of the remainder must have been business deposits, and it seems likely that during the war net business deposits rose by well over £1,500 million.

Consideration of the position of the banks thus also involves consideration of the effect of war production on the financial position of industry. Different firms were affected very differently by the war. Some were forced to close down all or part of their business and prepare to reopen it after the war ended. But most were employed on war production continuously and at full capacity for five or six years, or in some cases even longer, with a reasonable assurance of a moderate rate of profit. Such firms enjoyed a considerable increase in income, but at the same time they required much more capital. The ways in which the latter need was met and the income was used were bound to have an important effect on their internal finances.

Before the war, firms engaged in the rearmament programme often reinvested in their own business part of the increased income accruing to them. This was particularly so where the fear of redundancy was largely overcome, as it was in the aircraft industry, or where it was outweighed by the immediate prospect of very high profits, as happened in a few cases such as the light alloy industry. But during the war most firms were unwilling to follow this policy. The uncertainty of industrial prospects greatly increased, especially for firms which were diverted from their normal types of business, and there was no risk that a failure on their part to provide or obtain additional finance would lead to any falling off in orders. All firms engaged in war production knew that their output was so urgently needed that the Government would be bound to provide them with any necessary capital which they were unwilling to put up themselves. It is true that they had to pay interest on capital provided by the Government, but the payment was often concealed because it was made through a reduction in contract prices, not as a lump sum, and in any case the rates were usually lower than market rates. The usual Government

---

<sup>1</sup> i.e. total deposits less advances to customers and other accounts.

<sup>2</sup> Appendix 1, Table L, below.

<sup>3</sup> *National Income and Expenditure of the United Kingdom 1938-1945* [Cmd. 6784], Table 27.

<sup>4</sup> *Ibid.*, *loc. cit.*

charge of four per cent. during the war may be compared with the following figures of the average rates paid on loan capital by a large sample of companies:<sup>1</sup>

Year	Rate of interest (%)	Year	Rate of interest (%)
1939	4·47	1943	4·7
1940	4·6	1944	4·3
1941	4·5	1945	4·4
1942	4·7		

And firms enjoyed the further advantage that progress payments provided them with part of their working capital free of interest.

During the war, firms were thus able to refrain from much of that type of expenditure to which they would normally have devoted an accumulation of financial reserves, and they were further deterred from it by 100 per cent. E.P.T. At the same time conditions made such a financial accumulation almost inevitable. Government policy concerned itself to keep the *rates of return* on capital to a not excessive figure, but it was also encouraging firms to use more capital so as to increase their output, and it was less directly concerned with the increase in the *total amount* of profits which naturally resulted. Firms were willing to use part of their increased incomes to finance additional work in progress, as this made some saving in bank interest and was a commitment which would liquidate itself when war orders came to an end, but the amount devoted to this purpose was not by any means sufficient in most cases to absorb all the increase in income. Consequently most firms engaged in war production obtained an increasing surplus of liquid assets, held mostly in the form of bank deposits and Government securities. An illustration is provided by eight Ministry of Supply contractors of varying sizes and in different industries. The excess of their liquid assets over their current liabilities rose between 1939 and 1945 from £43 million to £67 million, an increase of just over fifty-five per cent. The increase within the smaller firms was especially striking for, whereas in the two largest firms the surplus rose by 22·1 per cent. and 76·2 per cent. respectively, in the two smallest it increased by 141·1 per cent. and 131·0 per cent. It is worth noticing that these increases can be attributed simply to the increased activity and not to any change in the companies' financial policy: in 1939 the ratio of liquid assets to current liabilities was 2·1 : 1, in 1945 it was 1·8 : 1.

The result of these changes was to put more firms than ever before into a position of being able to finance their own re-equipment in whole or in part. They also meant that a large addition to purchasing power had been created, of which the increase in bank deposits, pre-

<sup>1</sup> *The Economist*, Vol. CXXXVIII, p. 69; Vol. CXLII, p. 110; and Vol. CLI, p. 771. The figures for 1939 are those of companies making up their accounts in the fourth quarter of the year; for the other years the results of companies making up their accounts in all four quarters were used.

viously mentioned, formed part. During the war most of this was lent to the Government either directly or through the banks, but at the end of the war there was likely to be a strong demand to draw on it in order to undertake capital re-equipment and to make good arrears of maintenance, and the calls on it were likely to be increased by high prices as long as capital goods remained scarce. If this were freely permitted, then there would be large offers of gilt-edged securities and an increase in the velocity of bank deposits, which could only be covered by new savings or by a measure of inflationary credit creation. Thus a consideration of the position of industry suggests that, to some extent, war production finance was a potential source of post-war inflation.

There are not sufficient data available to show with any accuracy the amount of the liquid resources available to industry or its relation to immediate requirements of capital. In addition to the suggested increase of over £1,500 million in net business deposits during the war, there was a large increase of industrial investment in Government securities, but the amount is unknown. There was also a prospect that some further liquid resources might be obtained after the end of 1945 by the continued decline in the amount of private capital in use to finance Government work in progress. It was estimated that from 1940 to 1944 inclusive this item rose by £450 million and in 1945 fell by only £275 million.<sup>1</sup> The first call on available finance would be to make good war-time disinvestment. Private net capital loss at home from 1940 to 1945 inclusive has been estimated very approximately at £2,313 million.<sup>2</sup> But not all this needed to be made good, as part of the capital maintenance which would normally have been required was to provide for consumption which had been not merely postponed but permanently forgone during the war. Furthermore, no allowance was included in the figure of net capital loss for the element of capital formation in Government expenditure on the war. As far as the major item, war production, is concerned a gross figure of £900 million for fixed assets is suggested for the period April 1940 to March 1945,<sup>3</sup> but it should be remembered that a small proportion of this was overseas expenditure, that the amount by which it should be written down in order to arrive at a net figure is uncertain but very substantial, and

<sup>1</sup> *National Income and Expenditure of the United Kingdom 1938-1946* [Cmd. 7099], Table 19, item 24.

<sup>2</sup> *Ibid.*, Table 15, item 9; minus Table 20, item 41; plus Table 20, item 35; minus Table 23, item 67; plus Table 23, item 64; minus Table 18, item 57. This figure is very unreliable as Table 15, item 9, is obtained only as a residual item by subtracting all other components of the national income from an independent estimate of the total and is thus affected by all errors in the estimation of any of these other components. The revised estimates for 1944 and 1945 published in Cmd. 7371 would increase the private net capital loss (1940 to 1945) to £2,500 million.

<sup>3</sup> Appendix 1, Table D, below.

that the proportion useful to peace-time industry is also very uncertain. In any case, as nearly all the capital assets created were owned by the Government, the transfer of any of them to private post-war use involved a call on the financial resources of industry. These figures provide a basis for no very firm conclusions, but they suggest that the financial resources accumulated by industry as a whole,<sup>1</sup> as a result of its long participation in war production, went far to meet its most urgent needs of expenditure in the first year or two after the war.<sup>2</sup>

In fact the financial resources of industry appeared dangerously large when viewed in relation to the physical shortage of capital goods. The significance of the extent of industry's need of capital equipment was that the greater it was, the greater would be the urge to spend the accumulated liquid reserves, almost irrespective of the price-level of capital goods or the volume of current savings; thus the more difficult it would be to prevent this potential source of post-war inflation from becoming an actual one.

This brief consideration of the financial changes in industry shows what an important influence the finance of war production could be on the condition of the national economy, through repercussions which were not among the primary considerations that affected the choice of financial methods. The finance of war production was, of course, only one aspect of financial policy as a whole and it might have been possible to offset by other measures any undesirable wider effects which it had. Nevertheless the effects of the amount and conditions of Government expenditure on war production were important in themselves and could never be wholly neutralised.

Quite apart from the general financial policy regarding war production, certain particular features were singled out for criticism, notably by the S.C.N.E. This committee was concerned about rises in the price of basic materials and components which passed through several hands in the course of incorporation into completed war stores. It pointed, in particular, to the increase in the price of steel as a result of the levy to cover increased costs, which was bound to be reproduced in the cost of completed stores and might be multiplied in so far as there were further charges which were calculated as a percentage on

<sup>1</sup> It has been impossible in the general account given in this paragraph to separate war production industry from the remainder, but the bulk of industry was in fact engaged directly or indirectly on war production and this was the decisive influence on its financial position.

<sup>2</sup> There were some signs that by 1948 industry was ceasing to be able to finance capital outlays from the reserves accumulated in war-time. Cf., e.g., City article 'Industry's Liquid Reserves' in *Manchester Guardian*, 21st May 1948. Cf. also *The Times*, 23rd March 1949, which published the following index numbers (1939 = 100) based on the balance sheet values of a limited number of companies in a variety of industries:

	1945	1947-48
Net cash assets . . . . .	209	62
Fixed assets . . . . .	84	105
Stocks and work in progress	146	256

turnover. It thought that the extra cost might have been offset by a subsidy.<sup>1</sup> The S.C.N.E. also opposed any system of comparatively high controlled prices with a recovery of rebates from the lower cost producers, such as the light alloy schemes, because it meant that controlled products passed into war stores at a price above what was necessary to cover the average cost of production.<sup>2</sup> It contended that inflationary effects were liable to occur in both cases.<sup>3</sup>

These criticisms related to exceptional variations in the prevailing policy, but they raise the whole question of the effect of the system of subsidies. This was important as an anti-inflationary measure, although that was only an incidental reason for its adoption. In so far as it left industry and the community as a whole with a smaller amount of purchasing power for a given volume of production it tended to check inflation, and in general the war-time subsidies appear to have had this result, while rebate systems probably had the opposite effect. Thus the idea implicit in the criticisms made by the S.C.N.E. was quite justified and was generally respected by Government policy, but the application of the criticism to the particular cases mentioned was not necessarily appropriate. Rebate schemes were so little used that they could not have had a marked effect on the economy in any direction. The light alloy schemes, which were the chief of them, yielded an average of only about £8 million per year,<sup>4</sup> and any extra profit paid in respect of stores incorporating light alloys could have been only a fraction of that. Steel prices were more important, but it should be remembered that, although they were not maintained at pre-war levels, they were stabilised from November 1940 onwards, and that in the latter part of the war they were well below average cost.

It should also be borne in mind that the ultimate effects of subsidies do not all operate in the same direction. Their chief defect is to conceal changes in the relative real costs of different factors of production and by so doing to prevent the appearance of what would otherwise be a potent stimulus to technical improvement. Subsidies thus tended to make the total volume of production less than it might have been; and a restriction of production unaccompanied by a restriction of incomes has an inflationary tendency just as much as an expansion of incomes. This situation illustrates how in war-time the finance of production had to be governed by a choice of evils. A response in the form of technical change to the onset of higher costs takes time, and the problem of production was immediate. Firms had to be kept going and, if there had been no subsidies, higher contract prices would have been unavoidable and would have absorbed much

---

<sup>1</sup> S.C.N.E., 1942-43, 14th Report, para. 52.

<sup>2</sup> *Ibid.*, 1942-43, *op. cit.*, para. 53.

<sup>3</sup> *Ibid.*, *loc. cit.*

<sup>4</sup> See p. 174 above.

of the saving in Government expenditure. Nor, where increased costs were due to temporary conditions such as marine war risks, was there any case to be made against subsidies on the ground that they were deterrents from desirable technical flexibility. The chief danger was that, as many of the cost movements were unlikely to be reversed, industry would be thrust into post-war competition without being fully aware of the changes in cost structure to which it would have to adapt itself. This was recognised and provision made to guard against it as far as possible. It was because of its relation to post-war economic conditions that the subsidy policy was gradually curtailed after 1943.<sup>1</sup> The attitude which the Treasury had adopted by the middle of 1944 was clearly expressed when the question of continuing the zinc subsidy was discussed; the Treasury stated that the subsidy ought to be maintained only if the natural price was expected to fall after the war to somewhere near the existing subsidised level. But, although the position was fully recognised, it was impossible in the circumstances to provide very far in advance for the retransfer of industry to peacetime conditions. Even financial adjustment of this kind could not be very extensive, quite apart from the physical difficulties of equipment.

The practical limitations to achieving what was desirable were important and severe. It was difficult to solve the financial problems posed by war production without laying up a store of others for the future. Where there was any clash between them the immediate questions had to be given precedence, both because their nature was plain and because a failure to solve them would have made the post-war problems irrelevant. But it is not necessarily the case that if there were undesirable general repercussions of the finance of war production, they were all due to an inevitable choice between conflicting aims. On this question it may well be that no final answer is possible, but it can be sought in a consideration of the two general subjects most affected: industrial costs (and through them the efficiency of production) and the level of incomes.

Industrial costs have already been mentioned in discussing subsidy policy. It does not appear that much more could have been done by financial means alone to increase the permanent efficiency of industry. Contract policy could and did, where possible, encourage war contractors to produce cheaply and thus helped to prevent the beginning of any slackness in the conduct of industry. But the experience and equipment of different firms and different branches of industry, the nature of their material supplies and the originality of their work, all varied so widely that no general rule about the suitability of different types of contract could be devised. In many circumstances neither fixed-price nor costed contracts proved thoroughly satisfactory, for

---

<sup>1</sup> C. & A.G. Report on Vote of Credit Appropriation Account, 1945-46, para. 46.

the former had often to be determined not only according to the minimum cost that might be achieved, but also with a view to maintaining production, even if things went wrong and costs rose; and the latter were frequently settled so far in arrear as to yield little information of any value about ways in which efficiency could be improved. There was no unanimity of experience which enabled contract policy to develop generally in a particular direction, beyond an avoidance of unadulterated cost-plus by all departments as far as possible. Immediate checks on industrial efficiency had to be provided by technical inspection and supervision on behalf of Production Branches rather than through contract policy. In any case, it was scarcely possible to transfer industry temporarily to new types of work and simultaneously to do much to adapt it to permanently changing conditions in its ordinary pursuits. The only possible procedure was to adjust current policy to current problems and to continue doing that as new problems became current.

The relation between war production and the level of incomes gave more scope to Government policy because industrial incomes were composed to a greater extent than ever before of direct payments by the Government. Attention has already been drawn to the expansion of the financial reserves of war contractors and its inflationary possibilities. The same was true of wages and for similar reasons. It was not only bank deposits which rose enormously. The value of notes in circulation grew likewise, and its increase from £529,498,805 at the beginning of the war<sup>1</sup> to £1,325,914,258 six years later<sup>2</sup> was, to a great extent, a reflexion of the increase in personal incomes, derived largely from war industry. But if the conclusion is drawn that industry was paid too well, the question immediately arises: Too well in relation to what? And the answer is: Too well in relation to current opportunities of expenditure on consumption or industrial and commercial investment.

The reason for this was that the level of remuneration was fixed without reference to the opportunities of expenditure open to the recipients. Government policy was to afford to both management and workers a 'living wage'. But it was impossible to be completely arbitrary in deciding what was a living wage, because it was intended to offer an incentive to maximum effort and production, and to do that it was necessary to conform to prevailing ideas of what was fair and reasonable. Such ideas were not based on the prevailing war-time situation, but were derived from experience of the recent past, and the standard which they set (and to which the level of monetary payments conformed) was above what it was physically possible to maintain during the war. Rates of profit were not on the whole exces-

---

<sup>1</sup> Bank of England Return, 30th August 1939.

<sup>2</sup> *Ibid.*, 29th August 1945.



sive in relation to peace-time standards. But the amounts which they produced on an increased level of production gave to industry a formidable amount of purchasing power. Stringent physical controls and high taxation prevented it from threatening any immediate damage to the economy and most of it returned directly or indirectly to the Government, through the purchase of securities; and by the Government it was spent, mostly in ways that did not provide for any return on it. But its original possessors still had a claim to spend an equivalent amount as soon as the opportunity arose. The surplus purchasing power was taken care of temporarily, but not indefinitely. The situation would have been easier to manage if, instead of the Government paying more liberally and receiving an increased volume of savings, it had been able to pay out less, even if this had been balanced by a corresponding reduction in savings.

The question that thus arises is whether it was possible to lower the general level of payments for war production. This was difficult if reliance was placed on finance to provide the major incentive to maximum effort. The accepted policy was to use commercial firms operating commercially as far as possible and for each of them individually at least a moderate rate of profit was necessary for their continued existence, unless their future was safeguarded in some other way. The war-time contract system recognised this, but tried not to let profits grow far beyond what was necessary for the maintenance of that policy. The situation was clearly summarised by Mr. (now Lord) Pethick-Lawrence in the House of Commons when he said:

We retain the form of capitalism, and yet we take away from it most of the motive power which, in ordinary circumstances, is expected to run it. . . . The costing system is designed to reduce profits to a minimum, the Excess Profits Tax is designed to drain off everything beyond a predetermined maximum. The ordinary manager of the firm is expected to try and serve two masters. . . .

. . . He is the trustee of his shareholders. It is his business to look after their interests and do what he can for them, yet that very motive is directly opposed in many cases by his patriotism and his desire to make use of his business mainly and solely for the benefit of the country as a whole. . . . But as far as it is possible to work this peculiar and difficult hybrid system, it has been done in this country.<sup>1</sup>

So long as this system continued, incomes could not easily be further lowered without creating some mistrust.

The most important thing about the system was that it worked. The financial incentive was still given a fair amount of scope, though it was subject to more limitations than in peace-time and more reliance than before was placed on other incentives to achieve maxi-

---

<sup>1</sup> 383 H.C. Deb., 5th Series, Col. 1243 (7th October 1942).

mum efficiency. This is an indication that financial policy is not a distinct and arbitrary entity, but something to be adapted to general economic conditions, including the institutional framework. The point was expressed succinctly by Mr. Pethick-Lawrence in another debate when he said:

The financial prosecution of this war has taught us one striking fact, which is that nothing which is economically possible ought to be financially impossible.<sup>1</sup>

The view that the dichotomy between financial policy and economic policy is unrealistic received ample recognition in the finance of war production. If in the past it had sometimes appeared that financial policy was mainly concerned with the maintenance of financial strength as an end in itself, in war-time it was consciously used as one means in conjunction with others to fulfil the needs of the military consumer, that is, to serve what were for the time being the ends of all economic activity. It may be that the change was too drastic and that finance was subordinated, not only as a means is subordinated to an end, but also as an inferior means is subordinated to one of greater effect; it may be that the extensive use of physical controls left a lingering, false impression that finance is not the most flexible, responsive, and easily adjustable means in the whole of economic policy. But it was as a means to a larger end that it was used during the war, and it was in that relationship that it remained significant.

---

<sup>1</sup> 380 H.C. Deb., 5th Series, Col. 1543 (17th June 1942).



# Appendices

---



## APPENDIX I

### Tables

Most of the following tables (viz. A to J inclusive) are concerned with expenditure on fixed capital for war production. Tables A to D set out the amounts actually disbursed on this account by the three departments. The limitations of the figures in these tables should be emphasised. They are purely on a cash basis and do not give an accurate indication of the amount of capital formation. Many of the payments were for new buildings and equipment but others merely represented a transfer of ownership from the private to the public sector; expenditure to replace war damage has been included but no deductions have been made in respect of war damage incurred; expenditure on the provision of fixed assets abroad has been included, although many of these assets, notably most of those in the United States and Canada, were sold during the war and the receipts from such sales have not been deducted; no allowance has anywhere been made for depreciation. In addition the rents of premises of which outright ownership was not acquired have been included. All these factors tend to increase the total of expenditure relatively to the formation of real capital. On the other hand, beginning in 1942, a certain quantity of lend-lease machine tools was acquired without the issue of cash, so that there was no corresponding entry in the Appropriation Account. The value, however, was very small in comparison with the total capital expenditure. Where any cash payments to importers of such machine tools were involved they were made by the Ministry of Supply even though the machine tools were used for schemes controlled by one of the other Supply Departments. Another anomaly between departments is that the figures include expenditure on the purchase or lease of land except in the case of the Admiralty, where it is impossible to separate purchases of land for naval and for civil use.

Tables F to J are concerned not with actual but with authorised capital expenditure, i.e. the estimated cost to a department of all the capital schemes which, at any particular date, it had been authorised to carry out. It cannot be expected that these should at any time be closely reconciled with the figures of actual expenditure. The bulk of the expenditure on a scheme was often disbursed in a later financial year than that in which authority for it was given, while on the other hand, after authority for a scheme had once been given, expenditure on it was often incurred in excess of the original estimate many months before covering authority for the addition was recorded, great latitude in this respect having to be allowed during the war. The only purpose in including these tables here is that, for the period which they cover, they present a clearer picture of the way in which expenditure was divided among the various types of financial arrangement than do those of actual expenditure. Similar figures are not available for the Admiralty but an attempt has been made in Table E to apply the same sort of division to total figures

of actual capital expenditure on war production by that department.

A minor apparent anomaly arises in that the tables of actual capital expenditure (A to D) are brought to an end at 31st March 1945, whereas Table M, showing total expenditure, is continued to 31st March 1946. This is justified on the ground that in 1945-46 capital expenditure for munitions production was to a considerable extent directed with a view to its post-war usefulness, whereas current expenditure out of the Vote of Credit, which was the great majority of the total Vote of Credit expenditure, was almost entirely for purposes arising directly from the war.

*Admiralty. Actual Expenditure on Fixed Capital for War Production  
1st April 1936 to 31st March 1945*

	Financial years										£ thousand
	TOTAL	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	
TOTAL . . . . .	88,600	2,100	4,450	5,900	4,100	11,050	17,700	14,100	15,900	13,300	
Assistance to contractors <sup>1</sup> . . . . .	43,100	800	2,450	2,600	600	3,550	9,400	8,100	9,100	6,500	
Royal Dockyards and factories of the Admiralty . . . . .	45,500	1,300	2,000	3,300	3,500	7,500	8,300	6,000	6,800	6,800	

Source: Admiralty<sup>2</sup>

<sup>1</sup> Includes agency factories.

<sup>2</sup> The capital expenditure on assistance to contractors is that under Vote 8, Section III, sub-head DD; Vote 9, sub-head FF; Vote 10, sub-head F; and Vote 16, sub-head B, together with part of the expenditure under Vote 8, Section III, sub-head CC. In the published accounts capital and other expenditure under this last sub-head are not separated. The figure for capital expenditure on the Royal Dockyards and factories of the Admiralty has been compiled by the Admiralty from its own records and is the closest approximation that can be made. Complete accuracy is not possible as the expenditure was accounted for under rather different headings. All the figures have been rounded off.



*Air Ministry and Ministry of Aircraft Production  
Actual Expenditure on Fixed Capital for War Production, 1st April 1936 to 31st March 1945*

	Financial years										£ thousand
	TOTAL	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	
TOTAL . . . . .	384,600	1,200	5,150	6,350	21,050	97,300	73,150	84,000	62,500	33,900	
Contributions to contractors' works <sup>1</sup> . . . . .	384,600	{ 100	{ 800	{ 6,350	{ 21,050	{ 97,300	{ 73,150	{ 62,850	{ 45,100	{ 25,800	
Agency factories . . . . .		{ 1,100	{ 4,350					{ 21,150	{ 17,400	{ 8,100	

Source: Ministry of Aircraft Production \*

<sup>1</sup> Includes expenditure on Government establishments.

\* The figures are taken from Air Ministry Appropriation Accounts, 1936, 1937, 1938 and 1939, Vote 4, sub-head H, and from Ministry of Aircraft Production Appropriation Accounts, sub-head D (1940-44), sub-head F (1942) and sub-head E (1943 and 1944), published in Civil Appropriation Accounts (Class X, War Services), 1944. The separation of expenditure on assistance to contractors from that on agency factories in the first two years is taken from C. & A. G. Reports on Air Ministry Appropriation Accounts, 1936, para. 10, and 1937, para. 6. All the figures have been rounded off.

War Office and Ministry of Supply  
Actual Expenditure on Fixed Capital for War Production, 1st April 1936 to 31st March 1945

	Financial years										£ thousand
	TOTAL	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	
TOTAL		1,500	8,900	16,650	27,800	139,000	164,700	124,400	50,650	22,600	
Agency factories		350	3,350	4,450	7,850	50	38,350	36,650	11,650	3,600	
Assistance to contractors R.O.F. and other M.O.S. directly-operated factories <sup>1</sup> .		1,150	5,550	12,200	19,950 <sup>2</sup>	68,600	64,750	55,850	30,150	13,950	
						70,350	61,600	31,900	8,850	5,050	

Source: Ministry of Supply<sup>3</sup>

<sup>1</sup> A sum of £8,572 not shown in the table above was expended in connexion with the R.O.F. expansion programme during 1935-36.

<sup>2</sup> Estimated. For 1939-40 actual expenditure on R.O.F. was accounted for only in total. This estimated figure was obtained by assuming that actual outgoings in respect of fixed capital exceeded the revised estimates by the same proportion (viz. seven per cent.) as total expenditure on R.O.F. exceeded the revised estimates. If the whole of the excess over the revised estimates were attributed to fixed capital, then expenditure on the latter would be £21,100,000.

<sup>3</sup> For the years 1936-37 to 1938-39 inclusive the figures for expenditure on agency factories and assistance to contractors are taken from the Army Appropriation Accounts, Vote 9, sub-head DD, and Vote 10, sub-head H, in 1936-37, and Vote 9, sub-head E, and Vote 10, sub-head G, in the other two years. The expenditure on R.O.F. is the total outgoings on capital account as published in the R.O.F. Appropriation Accounts, minus the amount of the increase of stores in stock at factories existing before the expansion. The figures of expenditure from 1939 onwards are from sub-heads C, CC, D and DD of the Ministry of Supply Appropriation Accounts, together with a small sum borne by War Office Vote 9, sub-heads D and E, in 1939-40. All the figures have been rounded off.

## CONTRACTS AND FINANCE

*Summary of the Government's Actual Expenditure on  
Fixed Capital for War Production, 1st April 1936 to 31st March 1945*

TABLE D (a) Annual Financial years £ thousand

	TOTAL	Admiralty	Air Ministry and M.A.P. <sup>1</sup>	War Office and Ministry of Supply
<b>TOTAL, 1936-45</b>				
Assistance to contractors <sup>2</sup> .	767,300	43,100	384,600	339,600
Government operation .	262,100	45,500	—	216,600
TOTAL . . . . .	1,029,400	88,600	384,600	556,200
<b>1936-37</b>				
Assistance to contractors <sup>2</sup> .	2,350	800	1,200	350
Government operation .	2,450	1,300	—	1,150
TOTAL . . . . .	4,800	2,100	1,200	1,500
<b>1937-38</b>				
Assistance to contractors <sup>2</sup> .	10,950	2,450	5,150	3,350
Government operation .	7,550	2,000	—	5,550
TOTAL . . . . .	18,500	4,450	5,150	8,900
<b>1938-39</b>				
Assistance to contractors <sup>2</sup> .	13,400	2,600	6,350	4,450
Government operation .	15,500	3,300	—	12,200
TOTAL . . . . .	28,900	5,900	6,350	16,650
<b>1939-40</b>				
Assistance to contractors <sup>2</sup> .	29,500	600	21,050	7,850
Government operation .	23,450	3,500	—	19,950
TOTAL . . . . .	52,950	4,100	21,050	27,800
<b>1940-41</b>				
Assistance to contractors <sup>2</sup> .	169,500	3,550	97,300	68,650
Government operation .	77,850	7,500	—	70,350
TOTAL . . . . .	247,350	11,050	97,300	139,000
<b>1941-42</b>				
Assistance to contractors <sup>2</sup> .	185,650	9,400	73,150	103,100
Government operation .	69,900	8,300	—	61,600
TOTAL . . . . .	255,550	17,700	73,150	164,700
<b>1942-43</b>				
Assistance to contractors <sup>2</sup> .	184,600	8,100	84,000	92,500
Government operation .	37,900	6,000	—	31,900
TOTAL . . . . .	222,500	14,100	84,000	124,400
<b>1943-44</b>				
Assistance to contractors <sup>2</sup> .	113,400	9,100	62,500	41,800
Government operation .	15,650	6,800	—	8,850
TOTAL . . . . .	129,050	15,900	62,500	50,650
<b>1944-45</b>				
Assistance to contractors <sup>2</sup> .	57,950	6,500	33,900	17,550
Government operation .	11,850	6,800	—	5,050
TOTAL . . . . .	69,800	13,300	33,900	22,600

*Source: Tables A, B, and C above*

<sup>1</sup> Expenditure on Government establishments was not separated in the accounts. It was small in amount, the total authorised up to 31st March 1944 being only £4,060,161.

<sup>2</sup> Includes agency factories.

Summary of the Government's Actual Expenditure on Fixed Capital for War Production, 1st April 1936 to 31st March 1945

TABLE D (b) Cumulative

Date	TOTAL	TOTAL	Admiralty	Air Ministry and M.A.P. <sup>1</sup>	War Office and Ministry of Supply
	£ thousand	%	£ thousand	£ thousand	£ thousand
<i>31st March 1937</i>					
Assistance to contractors <sup>2</sup>	2,350	49.0	800	1,200	350
Government operation	2,450	51.0	1,300	—	1,150
TOTAL	4,800	100	2,100	1,200	1,500
<i>31st March 1938</i>					
Assistance to contractors <sup>2</sup>	13,300	57.1	3,250	6,350	3,700
Government operation	10,000	42.9	3,300	—	6,700
TOTAL	23,300	100	6,550	6,350	10,400
<i>31st March 1939</i>					
Assistance to contractors <sup>2</sup>	26,700	51.1	5,850	12,700	8,150
Government operation	25,500	48.9	6,600	—	18,900
TOTAL	52,200	100	12,450	12,700	27,050
<i>31st March 1940</i>					
Assistance to contractors <sup>2</sup>	56,200	53.5	6,450	33,750	16,000
Government operation	48,950	46.5	10,100	—	38,850
TOTAL	105,150	100	16,550	33,750	54,850
<i>31st March 1941</i>					
Assistance to contractors <sup>2</sup>	225,700	64.0	10,000	131,050	84,650
Government operation	126,800	36.0	17,600	—	109,200
TOTAL	352,500	100	27,600	131,050	193,850
<i>31st March 1942</i>					
Assistance to contractors <sup>2</sup>	411,350	67.7	19,400	204,200	187,750
Government operation	196,700	32.3	25,900	—	170,800
TOTAL	608,050	100	45,300	204,200	358,550
<i>31st March 1943</i>					
Assistance to contractors <sup>2</sup>	595,950	71.8	27,500	288,200	280,250
Government operation	234,600	28.2	31,900	—	202,700
TOTAL	830,550	100	59,400	288,200	482,950
<i>31st March 1944</i>					
Assistance to contractors <sup>2</sup>	709,350	73.9	36,600	350,700	322,050
Government operation	250,250	26.1	38,700	—	211,550
TOTAL	959,600	100	75,300	350,700	533,600
<i>31st March 1945</i>					
Assistance to contractors <sup>2</sup>	767,300	74.5	43,100	384,600	339,600
Government operation	262,100	25.5	45,500	—	216,600
TOTAL	1,029,400	100	88,600	384,600	556,200

Source: Tables A, B, and C above

<sup>1</sup> Expenditure on Government establishments was not separated on the Accounts. It was small in amount, the total authorised up to 31st March 1944 being only £4,060,161.

<sup>2</sup> Includes agency factories.

*Admiralty. Distribution of Actual Expenditure on Fixed Capital among various types of financial arrangement*

TABLE E

(a) *Schemes other than merchant shipbuilding, 1st April 1936 to 31st December 1944<sup>1</sup>*

	Contributory	100% capital assistance	Agency	Total assistance to contractors	Government operation
	£	£	£	£	£
Total expenditure . . . . .	5,000,000	31,100,000	4,500,000	40,600,000	43,800,000
Admiralty contribution . . . . .	2,750,000	31,100,000	4,500,000	38,350,000	43,800,000
	%	%	%	%	%
Admiralty contribution as percentage of total assistance . . . . .	7·2	81·1	11·7	100·0	—
Admiralty contribution as percentage of total Admiralty payment . . . . .	3·3	37·9	5·5	46·7	53·3

(b) *Merchant shipbuilding schemes, 1st April 1940 to 31st March 1947<sup>2</sup>*

	Admiralty expenditure						Total expenditure
	Contributory schemes		100% capital assistance		Total		
	Amount	%	Amount	%	Amount	%	
TOTAL . . . . .	£ 1,210,856	47·3	£ 1,351,333	52·7	£ 2,562,189	100	£ 3,563,457
Direct assistance to shipbuilders, etc., by extension and modernisation of plant, etc. . . . .	1,206,456	66·7	601,666	33·3	1,808,122	100	2,806,390
Indirect assistance to shipbuilding and ship-repairing industry by provision of facilities at public docks, etc. . . . .	4,400	0·6	749,667	99·4	754,067	100	757,067

Source: Admiralty

<sup>1</sup> The figures are approximate.<sup>2</sup> All this expenditure was in respect of war-time schemes, though some was not disbursed until after the end of the war. There was no expenditure by the Admiralty on merchant shipbuilding schemes before 1940. Expenditure in the United States, most of which was subsequently recovered by sale of the assets, has not been included.

TABLE F  
*Authorised Expenditure on Fixed Capital of the Air Ministry and Ministry of Aircraft Production, 1936-45*

£ million

Date	Total		Agency factories		Capital assistance <sup>1</sup>	
	Increase since preceding date	Total commitments	Increase since preceding date	Total commitments	Increase since preceding date	Total commitments
July 1939 . . . . .	—	54·458	—	24·409	—	30·049
9th December 1939 . . . . .	47·687	102·145	26·768	51·177	20·919	50·968
13th February 1940 . . . . .	12·587	114·732	9·862	61·039	2·725	53·693
15th May 1940 . . . . .	9·652	124·384	0·890	61·929	8·762	62·455
21st August 1940 . . . . .	9·477	133·861	1·848	62·777	7·629	70·084
20th February 1941 . . . . .	28·547	162·408	12·190	75·967	16·357	86·441
31st May 1941 . . . . .	16·985	179·393	4·868	80·835	12·117	98·558
31st August 1941 . . . . .	19·241	198·634	8·770	89·605	10·471	109·029
31st December 1941 . . . . .	33·504	232·138	14·450	104·055	19·054	128·083
30th June 1942 . . . . .	52·610	284·748	15·549	119·604	37·061	165·144
31st December 1942 . . . . .	33·185	317·933	6·905	126·509	26·280	191·424
30th June 1943 . . . . .	20·903	338·836	1·959	128·468	18·944	210·368
30th November 1944 . . . . .	51·922	390·758	4·956	133·424	46·966	257·334
31st March 1945 . . . . .	28·815	419·573	12·331	145·755	16·484	273·816
30th September 1945 . . . . .	6·024	425·597	0·036	145·791	5·988	279·806

Source: Ministry of Aircraft Production

<sup>1</sup> Includes Government establishments

*Air Ministry and Ministry of Aircraft Production. Authorised Expenditure on Fixed Capital from 1st April 1936. Proportionate division of total at various dates among different types of financial arrangement*

TABLE G Percentages

Date	Total	Capital assistance <sup>1</sup>	Agency factories
July 1939 . . . . .	100	55·0	45·0
9th December 1939 . . . . .	100	49·9	50·1
13th February 1940 . . . . .	100	46·8	53·2
15th May 1940 . . . . .	100	50·3	49·7
21st August 1940 . . . . .	100	52·4	47·6
20th February 1941 . . . . .	100	53·2	46·8
31st May 1941 . . . . .	100	54·9	45·1
31st August 1941 . . . . .	100	54·9	45·1
31st December 1941 . . . . .	100	55·2	44·8
30th June 1942 . . . . .	100	58·0	42·0
31st December 1942 . . . . .	100	60·1	39·9
30th June 1943 . . . . .	100	62·1	37·9
31st March 1944 . . . . .	100	65·9	34·1
31st March 1945 . . . . .	100	65·3	34·7
30th September 1945 . . . . .	100	65·7	34·3

For the closing stages of the war a further sub-division of the forms of capital assistance can be made:

Financial basis	Percentages	
	31st March 1944	30th September 1945
TOTAL . . . . .	65·9	65·7
Assistance to contractors with Government ownership . . . . .	54·5	52·9
Contributory schemes . . . . .	1·5	1·7
Loan schemes . . . . .	3·7	3·5
Outside supplier . . . . .	5·1	5·4
Deferred payment schemes . . . . .	(under 0·05)	(under 0·05)
Government establishments . . . . .	1·1	2·2

Source: Ministry of Aircraft Production

<sup>1</sup> Includes Government establishments.

TABLES

Ministry of Supply.<sup>1</sup> *Authorised Expenditure on Fixed Capital from 1st April 1932*

TABLE H

£ million

DATE	TOTAL	Munitions				Raw Materials <sup>3</sup>				
		Total	Capital assistance <sup>4</sup>		Agency factories	Ministry establishment <sup>5</sup>	Total	Capital assistance <sup>4</sup>		
			Government owned	Without Government ownership				Government owned	Without Government ownership <sup>6</sup>	Agency factories
31st December 1942	402·806	360·556	109·927	3·073	86·056	161·5 <sup>7</sup>	42·25	23·3	5·0	13·95
30th June 1943	422·963	374·958	116·223	3·439	88·601	166·695	48·005	24·373	7·248	16·384
31st December 1943	438·292	388·195	122·879	3·765	90·720	170·831	50·097	24·962	7·786	17·349
31st March 1944	441·405	390·331	124·096	3·837	90·622	171·776	51·074	25·899	7·817	17·418
30th June 1944	445·710	394·074	126·264	3·947	91·366	172·497	51·636	26·028	8·038	17·570
30th Sept. 1944	449·890	397·998	128·010	4·004	92·807	173·177	51·892	26·197	8·033	17·662
31st December 1944	455·295	400·672	129·369	4·048	93·169	174·092	54·623	26·547	9·881	18·195
31st March 1945	458·345	403·114	130·959	4·080	93·270	174·805	55·431	27·484	10·374	17·573
30th June 1945	459·626	405·000	132·554	4·028	93·367	175·051	54·626	26·632	10·360	17·634
30th September 1945	460·372	405·754	132·998	4·048	93·436	175·272	54·618	26·484	10·409	17·725

Source: Ministry of Supply

<sup>1</sup> Includes rearmament expenditure by other departments on services taken over by the Ministry of Supply on its creation in 1939.

<sup>2</sup> The figures in the table do not include capital expenditure on hostels, married quarters, storage and technical establishments (£32,382,000 at 30th June 1943).

<sup>3</sup> Excludes capital assets provided through Raw Materials Controls (£6·607 million at 30th September 1945).

<sup>4</sup> Assistance by loans and debentures is not included.

<sup>5</sup> Includes a small proportion of Raw Materials expenditure (authorised expenditure on such Raw Materials establishments was £2·211 million at 30th September 1945), but refers mainly to R.O.F.

<sup>6</sup> Excludes assistance given in Canadian dollars (\$3·155 million at 30th September 1945).

<sup>7</sup> This figure represents the authorised expenditure at 31st August 1942 in the case of engineering factories, and at 20th August 1942 in the case of explosive and filling factories.



*Ministry of Supply. Authorised Expenditure on Fixed Capital from 1st April 1936. Proportionate division of total at various dates among different types of financial arrangement*

TABLE J

(a) Munitions

Percentages

Date	Total	Capital assistance		Agency factories	R.O.F.
		Government owned	Contributory		
31st December 1942 . . .	100	30·5	0·8	23·9	44·8
30th June 1943 . . .	100	31·0	0·9	23·6	44·5
31st December 1943 . . .	100	31·7	0·9	23·4	44·0
31st March 1944 . . .	100	31·8	1·0	23·2	44·0
30th June 1944 . . .	100	32·0	1·0	23·2	43·8
30th September 1944 . . .	100	32·2	1·0	23·3	43·5
31st December 1944 . . .	100	32·3	1·0	23·3	43·4
31st March 1945 . . .	100	32·5	1·0	23·1	43·4
30th June 1945 . . .	100	32·7	1·0	23·1	43·2
30th September 1945 . . .	100	32·8	1·0	23·0	43·2

(b) Raw Materials<sup>1</sup>

Percentages

Date	Total	Capital assistance		Agency factories
		Government owned	Contributory	
31st December 1942 . . .	100	55·1	11·8	33·1
30th June 1943 . . .	100	50·8	15·1	34·1
31st December 1943 . . .	100	49·8	15·5	34·7
31st March 1944 . . .	100	50·6	15·3	34·1
30th June 1944 . . .	100	50·4	15·5	34·1
30th September 1944 . . .	100	50·5	15·5	34·0
31st December 1944 . . .	100	48·6	18·1	33·3
31st March 1945 . . .	100	49·6	18·7	31·9
30th June 1945 . . .	100	48·8	18·8	32·4
30th September 1945 . . .	100	48·5	19·0	32·5

(c) Total

Percentages

Date	Total	Capital assistance		Agency factories	R.O.F.
		Government owned	Contributory		
31st December 1942 . . .	100	33·1	2·0	24·8	40·1
30th June 1943 . . .	100	33·2	2·6	24·8	39·4
31st December 1943 . . .	100	33·7	2·6	24·7	39·0
31st March 1944 . . .	100	34·0	2·6	24·5	38·9
30th June 1944 . . .	100	34·2	2·7	24·4	38·7
30th September 1944 . . .	100	34·3	2·6	24·6	38·5
31st December 1944 . . .	100	34·2	2·8	24·5	38·5
31st March 1945 . . .	100	34·6	3·1	24·2	38·1
30th June 1945 . . .	100	34·6	3·1	24·2	38·1
30th September 1945 . . .	100	34·6	3·2	24·1	38·1

Source: Ministry of Supply

<sup>1</sup> There was also a small amount of expenditure on directly operated Raw Materials establishments but its inclusion would make only a small difference in the proportions shown. At 30th September 1945 the proportions on this basis were: Ministry establishment 3·9 per cent., Agency factories 31·1 per cent., Capital assistance with Government ownership 46·5 per cent., Capital assistance in contributory schemes 18·5 per cent.

War-time Movement of Wholesale Prices

TABLE K

(a) Yearly Average Index Numbers of Wholesale Prices, 1939-45 (1930 = 100)

Group	1939			1940	1941	1942	1943	1944	1945
	Jan.- Aug.	Sept.- Dec.	Year						
Coal . . . . .	119·7	124·1	121·1	140·1	159·5	171·1	185·8	209·1	237·0
Iron and steel . . . . .	129·7	135·1	131·5	159·2	181·1	182·5	182·8	184·1	188·8
Non-ferrous metals . . . . .	97·3	107·0	100·4	123·2	123·9	125·8	126·0	127·8	127·1
Cotton . . . . .	80·4	107·4	88·5	125·3	138·2	140·9	136·7	153·6	161·9
Wool . . . . .	99·3	120·3	105·8	157·3	170·1	172·9	177·3	183·7	184·0
Other textiles . . . . .	74·0	92·3	79·7	108·5	120·2	128·4	132·8	134·3	138·6
Chemicals and oils . . . . .	93·1	99·9	95·3	117·1	126·9	136·0	146·3	151·4	149·3
Miscellaneous . . . . .	91·2	115·9	98·7	142·6	169·1	172·0	177·1	184·2	187·9
<b>Total — Industrial materials and manufactures . . . . .</b>	<b>100·7</b>	<b>115·9</b>	<b>105·5</b>	<b>138·4</b>	<b>155·8</b>	<b>160·1</b>	<b>164·0</b>	<b>170·2</b>	<b>174·5</b>
<b>TOTAL—All articles</b>	<b>97·5</b>	<b>114·1</b>	<b>102·8</b>	<b>136·6</b>	<b>152·6</b>	<b>159·4</b>	<b>162·8</b>	<b>166·2</b>	<b>169·0</b>
<b>Industrial materials (excluding fuel):</b>									
Basic materials . . . . .	91·8	117·7	99·7	147·3	166·7	168·8	173·8	184·1	187·7
Intermediate products . . . . .	100·7	118·9	106·5	145·0	165·1	169·2	171·5	175·2	180·8
Manufactured articles . . . . .	108·7	116·8	111·3	133·7	148·4	152·2	154·9	158·6	160·6

(b) Industrial Materials and Manufactures

Period	Percentage increase between dates shown
August 1939 to December 1939 . . . . .	21·6
December 1939 to December 1940 . . . . .	21·0
December 1940 to December 1941 . . . . .	5·3
December 1941 to December 1942 . . . . .	2·3
December 1942 to December 1943 . . . . .	2·3
December 1943 to December 1944 . . . . .	4·1
December 1944 to December 1945 . . . . .	1·2
<b>Aggregate:</b>	
August 1939 to December 1945 . . . . .	<b>70·9</b>

Source for (a) and (b): Board of Trade Journal, 19th January 1946

(c) Percentage increase in prices of various Industrial Commodity Groups

	Aug. 1939 to Dec. 1939	Dec. 1939 to Dec. 1940	Dec. 1940 to Dec. 1941	Dec. 1941 to Dec. 1943	Dec. 1943 to Dec. 1944	Dec. 1944 to Dec. 1945	TOTAL Aug. 1939 to Dec. 1945
Coal . . . . .	8·6	19·5	6·9	14·1	20·6	8·8	107·6
Iron and steel . . . . .	10·3	26·6	1·2	0·7	1·5	2·3	47·8
Non-ferrous metals . . . . .	13·3	8·1	0·6	1·5	1·6	-0·8	26·1
Cotton . . . . .	50·4	4·7	11·1	-3·7	17·2	1·4	100·0
Wool . . . . .	27·9	27·3	2·9	6·3	0·9	-0·5	78·8
Other textiles . . . . .	37·9	7·9	14·7	5·3	2·2	1·8	87·0
Chemicals and oils . . . . .	13·4	16·2	5·8	16·1	0·7	-4·7	55·2
Miscellaneous . . . . .	30·8	28·4	6·9	4·3	3·1	1·7	96·6

Source for (c): Board of Trade Journal, 20th January 1945 and 19th January 1946

## London Clearing Banks: Distribution of Assets

TABLE L

Year <sup>1</sup>	(a) Amounts							£ million
	1939	1940	1941	1942	1943	1944	1945	
Current accounts . . . . .	1,252	1,487	1,885	2,148	2,455	2,765	3,127	
Deposits and other accounts . . . . .	996	1,018	1,085	1,128	1,222	1,388	1,566	
Total deposits . . . . .	2,248	2,506	2,970	3,275	3,677	4,153	4,692	
Coin, bank notes and balances with								
Bank of England . . . . .	244	268	311	345	386	437	492	
Balances with other banks, etc. <sup>2</sup> . . . . .	67	87	107	116	123	131	141	
Money at call and short notice . . . . .	149	148	134	133	152	180	206	
Bills discounted . . . . .	255	369	231	234	185	171	188	
Treasury deposit receipts <sup>3</sup> . . . . .	—	73	495	642	1,002	1,387	1,811	
Investments . . . . .	608	666	894	1,069	1,147	1,165	1,156	
Advance to customers and other accounts . . . . .	991	955	858	797	747	750	768	
Total liabilities or assets . . . . .	2,513	2,765	3,216	3,512	3,918	4,396	4,942	

(b) Particular items as proportions of total deposits

Percentages

Year <sup>1</sup>	1939	1940	1941	1942	1943	1944	1945
Coin, bank notes and balances with							
Bank of England . . . . .	10·9	10·7	10·5	10·5	10·5	10·5	10·5
Money at call and short notice . . . . .	6·6	5·9	4·5	4·1	4·1	4·3	4·4
Bills discounted . . . . .	11·3	14·7	7·8	7·2	5·0	4·1	4·0
Treasury deposit receipts <sup>3</sup> . . . . .	—	2·9	16·7	19·6	27·3	33·4	38·6
Investments . . . . .	27·0	26·6	30·1	32·6	31·2	28·1	24·6
Advances to customers and other accounts . . . . .	44·1	38·1	28·9	24·3	20·3	18·1	16·4

Source: Bank of England Statistical Summary

<sup>1</sup> The figures are averages of the monthly figures for each year. These monthly figures, except for the first eight months of 1939, give the position on a day, varying from bank to bank, towards the end of the month. Until August 1939 the monthly figures were averages of weekly figures.

<sup>2</sup> Balances with and cheques in course of collection from other banks in Great Britain and Ireland.

<sup>3</sup> Treasury deposit receipts were first issued in July 1940.

TABLE M  
 (a) Amounts

	Class of Expenditure	Financial years								TOTAL
		1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	£ million	
A	M.A.P., ordinary expenditure . . . . .	—	578	721	845	918	858	517	4,437	
B	M.A.P., net cash outgoings on trading services . . . . .	—	—	9	6	7	5	—2	25	
C	M.A.P., total expenditure (A+B) . . . . .	—	578	730	851	925	863	515	4,462	
D	Ministry of Supply, ordinary expenditure . . . . .	82	673	1,008	1,182	1,157	987	626	5,715	
E	Ministry of Supply, net cash outgoings on trading services . . . . .	74	136	—46	—87	—44	8	—32	9	
F	Ministry of Supply, total expenditure (D+E) . . . . .	156	809	962	1,095	1,113	995	594	5,724	
G	M.A.P. and M.O.S., ordinary expenditure (A+D) . . . . .	82	1,251	1,729	2,027	2,075	1,845	1,143	10,152	
H	M.A.P. and M.O.S., net cash outgoings on trading services (B+E) . . . . .	74	136	—37	—81	—37	13	—34	34	
J	M.A.P. and M.O.S., total expenditure (C+F = G+H) . . . . .	156	1,387	1,692	1,946	2,038	1,858	1,109	10,186	
K	Total expenditure of Civil Departments on War Services (included in Departmental Appropriation Accounts) . . . . .	88	1,632	2,318	2,434	2,493	2,283	1,551	12,799	
L	Total expenditure from Vote of Credit by departments other than Service Departments . . . . .	291	2,052	2,657	2,782	2,802	2,774	1,864	15,222	
M	Total expenditure from Vote of Credit . . . . .	365	3,156	4,146	4,638	4,946	5,100	4,575	26,926	
N	Total United Kingdom Government expenditure . . . . .	1,359	3,905	4,956	5,546	5,908	6,164	5,765	33,603	

TABLE M (continued)  
(b) Proportions<sup>1</sup>

	Class of expenditure	Financial years						Percentages	
		1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	TOTAL
O	War production expenditure as percentage of total expenditure $\left\{ \frac{J}{N} \times 100 \right\}$ . . . . .	11.5	35.5	34.1	35.1	34.5	30.1	19.2	30.3
P	War production expenditure as percentage of Government war expenditure $\left\{ \frac{J}{M} \times 100 \right\}$ . . . . .	42.7	43.9	40.8	42.0	41.2	36.4	24.2	37.8
Q	War production expenditure as percentage of total war expenditure of Civil Departments $\left\{ \frac{J}{L} \times 100 \right\}$ . . . . .	54.0	67.6	63.7	69.9	72.7	67.0	59.5	66.9
R	War production expenditure minus trading services as percentage of ordinary expenditure of Civil Departments on war purposes $\left\{ \frac{G}{K} \times 100 \right\}$ . . . . .	93.2	76.7	74.6	83.3	83.2	80.8	73.7	79.3

Source: The figures in line N are from the statements of expenditure published annually as an appendix to the evidence to the Public Accounts Committee. The other figures are from Appropriation Accounts.

<sup>1</sup> To take line J as the figure for war production expenditure, as has been done in this table, somewhat underrates the true position as it does not include expenditure on that account by the Admiralty throughout the war and by the War Office and the Air Ministry in 1939-40, all of which is included in line M and again in line N. The total of such expenditure by the Admiralty, War Office and Air Ministry may be estimated as of the order of £750 million, which, when added to the total of line J, suggests that from 1939-40 to 1945-46 inclusive United Kingdom Government expenditure on war production was rather less than £1,100 million, i.e. about thirty-three per cent. of total expenditure and forty-one per cent. of total war expenditure.

## APPENDIX 2

# Compulsory Powers of Supply Departments in Wartime

### A. EXTRACTS FROM MINISTRY OF SUPPLY ACT, 1939

#### PART II

##### *Temporary Powers of Minister*

##### *Power to require delivery of supplies and carrying out of works*

7.—(1) The Minister may give directions to any person who by virtue of any contract, whether made with the Minister or another Government Department or any other person, and whether made before or after the commencement of this Act, is under an obligation—

- (a) to deliver any articles required for the public service; or
- (b) to carry out any works so required;

that any work in connection with those articles or works shall be given priority over all other work, or shall be given priority over other work to such extent and by such means as may be specified in the directions.

(2) Where the Minister is satisfied that any person to whom directions have been given under the foregoing subsection with respect to any articles or works has failed without reasonable excuse to comply with those directions, he may give that person directions to deliver those articles or carry out those works within such period as may be specified in the directions.

(3) Where the Minister is satisfied that any person who

- (a) produces, deals in or has control of any articles required for the public service, or carries out works so required; or
- (b) carries on a business which in the opinion of the Minister is suitable for or can be adapted to producing or dealing in such articles or carrying out such works;

having been requested by the Minister or another Government Department or any other person concerned to enter into a contract for the delivery of such articles or the carrying out of such works on terms which appear to the Minister to be fair and reasonable, has refused or failed to enter into the contract, he may give that person directions to deliver any such articles or carry out any such works within such period and to or for such person as may be specified in the directions.

(4) The period specified in any directions given as aforesaid with respect to any articles or works shall be a period within which, in the opinion of the Minister, it is possible for the articles to be delivered or the works to be carried out having regard to all the circumstances of the case, and any

such directions may provide that the obligation to comply therewith within that period shall be conditional on the happening or continuance of the circumstances so specified.

(5) Where the Minister is satisfied that any person to whom directions have been given under this section to deliver any articles or carry out any works within a period specified in the directions has failed without reasonable excuse to comply with the directions, the Minister may authorise any person to carry on, until the Minister otherwise directs and subject to and in accordance with the provisions hereafter contained in this Act, the whole or any part of the business of the person to whom the directions were given.

(6) Where directions are given to any person under this section with respect to any articles or works, then—

(a) if the directions are given under subsection (1) or subsection (2), the price or remuneration, if any, to be paid for the articles or works in addition to the price or remuneration which would have been payable therefor if the directions had not been given; and

(b) if the directions are given under subsection (3), the price or remuneration to be paid for the articles or works;

shall be such as may be agreed between that person and the Minister or, in default of agreement, such as may be determined to be fair and reasonable, having regard to all relevant considerations, by an arbitrator or arbitrators appointed as hereafter provided.

(7) Where the failure to fulfil any contract, whether made before or after the commencement of this Act, is due to the compliance on the part of any person with any directions given by the Minister under this section, proof of that fact shall be a good defence to any action or proceeding in respect of the failure.

[Section 8 conferred similar powers in relation to storage of required supplies.]

*Power to require production of documents and keeping of records*

9.—(1) The Minister may direct any person producing, dealing in, storing or having control of any articles required for the public service or carrying out any works so required, to produce to any person authorised for the purpose by the Minister any books or documents of any description specified in the directions and to permit the person so authorised to take copies of or extracts from any such books or documents.

(2) If the Minister is satisfied that the records kept by any such person as aforesaid are insufficient to enable a fair and reasonable price for the article in question to be determined, or a fair and reasonable remuneration for the storage of the article or carrying out of the works in question to be determined, he may direct that person to keep such records as may be specified in the directions.

B. EXTRACTS FROM DEFENCE REGULATIONS AS AMENDED  
UP TO MAY 1945

*General control of industry*

55.—(1) A competent authority, so far as appears to that authority to be necessary in the interests of the defence of the realm or the efficient prosecution of the war, or for maintaining supplies and services essential to the life of the community, may by order provide—

(a) for regulating or prohibiting the production, treatment, keeping, storage, movement, transport, distribution, disposal, acquisition, use of and consumption of articles of any description, and, in particular, for controlling the prices at which such articles may be sold and the charges which may be made for the hire of such articles and for labour, services or goods provided in connection with the hire thereof;

(b) for regulating the carrying on of any undertaking engaged in essential work, and, in particular, for controlling the charges which may be made by the undertakers in respect of the doing of any work by them;

(c) for any incidental and supplementary matters for which the competent authority thinks it expedient for the purposes of the order to provide;

and also make such provision (including provision for requiring any person to furnish any information) as the competent authority thinks necessary or expedient for facilitating the introduction or operation of a scheme of control for which provision has been made, or for which, in the opinion of the competent authority, it will or may be found necessary or expedient that provision should be made, under this Regulation; and an order under this Regulation may prohibit the doing of anything regulated by the order except under the authority of a licence granted by such authority or person as may be specified in the order, and may be made so as to apply either to persons or undertakings generally or to any particular person or undertaking or class of persons or undertakings, and either to the whole or to any part of any undertaking, and so as to have effect either generally or in any particular area.

[*Note.*—‘Competent Authority’ was defined in section (5) as Treasury, a Secretary of State, Admiralty, Board of Trade, Ministers of Fuel and Power, Agriculture and Fisheries, Health, Labour and National Service, Production, Supply, Food, Aircraft Production, and Works, and the Post-master General.]

*Powers of competent authorities as to keeping of books, making of returns, entry and inspection*

55AA.—(1) A competent authority, so far as appears to that authority to be necessary so to do in the interests of the defence of the realm or the efficient prosecution of the war or of maintaining supplies and services essential to the life of the community, may, by direction given with respect



to any undertaking or by order made with respect to any class or description of undertakings, require persons carrying on the undertaking or undertakings of that class or description—

(a) to keep such books, accounts and records relating to the undertaking as may be prescribed by the direction or, as the case may be, by the order or a notice served thereunder;

(b) to furnish, at such times, in such manner and in such form as may be so prescribed, such estimates, returns or information relating to the undertaking as may be so prescribed.

A competent authority may, to such extent and subject to such restrictions as it thinks proper, delegate all or any of its functions under this paragraph to any specified persons or class of persons.

(2) Where it appears to a designated officer that, in the interests of the defence of the realm or the efficient prosecution of the war or of maintaining supplies and services essential to the life of the community, it is necessary to authorise the inspection of any undertakings or class or description of undertakings—

(a) for the purpose of enabling a competent authority to exercise any of the powers conferred on the authority by or under any of these Regulations, or to determine whether, and if so in what manner, any of those powers ought to be exercised; or

(b) for the purpose of securing compliance with any order made or direction given under these Regulations by or on behalf of a competent authority; or

(c) for the purpose of verifying any information furnished to a competent authority; or

(d) for the purpose of securing that the work carried on by the undertaking or undertakings is performed in such manner as a competent authority considers best calculated to promote the interests aforesaid;

he may issue a warrant in writing to any person named in the warrant (hereinafter referred to as an 'inspector') authorising him to enter and carry out an inspection of the undertaking, or any undertaking of the class or description, specified therein.

## APPENDIX 3

# Some Standard Contract Clauses for Particular Purposes

NOTE.—*The clauses set out in this appendix did not remain entirely unaltered from the date of their adoption to the end of the war, but the main principles embodied in the forms given here were maintained.*

### A. PRICE-FIXING CLAUSES

#### (i) *Air Ministry and Ministry of Aircraft Production*

(a) Fair and reasonable prices will be paid in respect of the items supplied by the Contractor under this Contract.

(b) The actual prices to be paid under paragraph (a) above will, if practicable, be agreed between the Minister and the Contractor, but in default of agreement will be determined by the Minister after examining the particulars to be furnished by the Contractor under paragraph (e) below.

(c) In the event of delay in the agreement or determination of the actual prices to be paid under the preceding paragraph provisional prices will be inserted in the Contract by the Minister for the purpose of effecting payment thereunder. The Minister reserves the right to alter from time to time the provisional prices so inserted.

(d) The Minister will pay to the Contractor such sum as may become due by reason of the sum payable on the basis of the actual prices being in excess of the sum paid on the basis of the provisional prices and the Contractor will refund to the Minister any sums paid on the basis of the provisional prices in excess of the sums payable on the basis of the actual prices. In the event of an alteration of the provisional prices, similar provisions for payment and refund will apply.

(e) The Contractor will, if the Minister so requires, afford facilities to officers of the Minister to visit the Contractor's works for the purpose of examining the processes of manufacture and estimating or ascertaining the costs of production of the articles to be supplied under this Contract and will furnish such particulars as the Minister may require as to his overhead charges and other costs and for the purpose of verifying the same will permit the Contractor's books to be inspected and examined by representatives of the Minister. Should any portion of the work under this Contract be carried out by a firm or company subsidiary to or allied with the Contractor, similar facilities for visiting the works of such firm or company and for obtaining information and inspection and examination of books shall be afforded by such firm or company.

(f) Where in connection with this Contract the Contractor places orders with any one sub-contractor to the value in the aggregate of £1,000 or over, he shall make such arrangements as will secure that the sub-contractor shall afford to the Minister similar facilities to those described in paragraph (e).

(ii) *Admiralty* (Instruction to Contractors)

This order is placed on the understanding that you agree to satisfy the Admiralty as to the reasonableness of the price to be paid and to afford all facilities considered necessary by the Admiralty for that purpose. Similar facilities are to be provided in respect of any subsidiary or allied firm or company concerned, and, for major sub-contracted items, any other sub-contractor; any major sub-contracts you may make should therefore contain this condition.

(iii) *Ministry of Supply Costings Clause in Maximum Price Contracts*

(1) The Contractor undertakes to furnish such particulars of costings in connection with this contract as may be required by the Minister of Supply and to permit the same to be verified by a representative of the Minister of Supply by inspection of his books, and, should any portion of the work under the contract be carried out by any subsidiary or allied company, to secure that the books of such firm or company shall be open to the inspection of such representative.

(2) The total amount stated to be payable under this contract shall not be exceeded and shall be the maximum price but shall be subject to the Minister of Supply being satisfied, from an examination of the costings of the Contractor, his suppliers or sub-contractors or otherwise, that the charges for materials, labour, and overhead costs and the profit margin are fair and reasonable. Pending the result of any such examination, the Minister of Supply reserves the right to withhold a percentage of such maximum price.

(3) In the event of the Minister of Supply considering after any such examination that either the charges for materials, labour or overhead costs or the profit margin are in excess of what is fair and reasonable, such maximum price shall be subject to such deduction as the Minister of Supply may determine, and payment for all goods delivered under the contract shall be made at such reduced price.

(4) If in connection with or for the purposes of this contract sub-contracts or orders the aggregate value of which are £1,000 or over are made or placed by the Contractor with any one sub-contractor or supplier, the Contractor shall include in any such sub-contract or order the provisions of this clause subject only to the omission of this sub-clause and the last sentence of sub-clause (2).

## B. KING'S ENEMY RISKS CLAUSE AS REVISED IN 1941 FOR GENERAL USE

(1) In this Clause:—

(a) The expression 'Government property' means property issued by the Minister [of Supply] to the Contractor in connection with the Contract.

(b) The expression 'Government goods' means articles properly provided by the Contractor for the purposes of the Contract, the property in which has passed to the Minister [of Supply] and all materials, equipment, fittings, articles or things which have been

properly acquired or allocated by the Contractor for incorporation in any Government property or in any such articles and the property in which has passed to the Minister of Supply.

(c) The expression 'lost' includes destroyed; the expression 'loss' includes destruction, and the expression 'King's Enemy Risks' has the meaning assigned to it by Section 15 (1) (a) of the War Risks Insurance Act 1939, or any statutory modification thereof and by any order made under the said Act or under any statutory modification thereof.

(d) The expression 'net cost' means the actual net cost properly incurred by the Contractor having due regard to economy and efficiency (including reasonable overhead charges but excluding any element of profit), and so that the Minister [of Supply] shall be entitled to the full benefit of all discounts, rebates, penalties and other advantages in connection with any Contracts entered into by the Contractor.

(2) Notwithstanding anything in the General Conditions of Contract relating to 'Risk of loss or damage to Government property' and 'Risk of loss of or damage to articles supplied under the contract', the Contractor shall not be responsible for King's Enemy Risks to Government property or to Government goods issued to him, but if the Minister [of Supply] rejects any articles the same shall from the time of the rejection be at the risk of the Contractor in respect of King's Enemy Risks and he shall have no claim against the Minister [of Supply] in respect of loss of or damage to the same therefrom.

(3) On the occurrence of any loss or damage from King's Enemy Risks to any Government property or Government goods or to the premises, plant, machinery or equipment used or intended to be used by the Contractor in the execution of the Contract or to any materials, bought-out components and articles in course of manufacture, the property in which has not passed to the Minister [of Supply] and which have been properly acquired or allocated by the Contractor for incorporation in any Government property or in any articles to be supplied under the Contract, the Contractor shall forthwith notify the Minister [of Supply] in writing of the occurrence of such loss or damage.

(4) If the Minister [of Supply] is of opinion that by reason of any such loss or damage from King's Enemy Risks the Contractor will be unable to deliver all or any part of the articles then remaining to be delivered within the period or periods specified in the Contract (or such extended period or periods as the Minister may have allowed) he may, by notice in writing given to the Contractor not later than thirty days from receipt of the notification by the Contractor of such loss or damage, forthwith determine the Contract either wholly or in relation to such articles as may be specified in the notice and thereupon the Contract or such part thereof shall be determined without prejudice to the rights of the parties accrued to the date of determination but subject to the operation of the following sub-clause.

(5) In the event of such notice being given by the Minister [of Supply]

(a) The Contractor shall deliver in accordance with the directions of the Minister [of Supply]

(i) All Government property and Government goods, whether damaged or undamaged from King's Enemy Risks, pertaining to the Contract or the part thereof determined, as the case may be, except such as the Contractor shall, with the concurrence of the Minister [of Supply] and at such price as may be agreed, elect to retain, and

(ii) All undamaged materials, bought-out components and articles in course of manufacture which at the date of such notice had been properly acquired or allocated by the Contractor for incorporation in any Government property or in any articles to be supplied under the Contract or the part thereof determined as the case may be, the property in which had not passed to the Minister [of Supply], except such as the Contractor shall elect to retain.

(b) The Minister [of Supply] shall pay to the Contractor a fair and reasonable price for any Government goods so delivered and for any work done thereon or on Government property so delivered and for any such unused materials, bought-out components and articles in course of manufacture the property of the Contractor provided that at the time of delivery the same are undamaged.

(c) Except as provided in paragraph (b) of this sub-clause the Minister [of Supply] shall pay to the Contractor a sum equal to the net cost to the Contractor

(i) of any Government goods so delivered and of any work done thereon or on any Government property so delivered and

(ii) of any Government goods lost and of any work done thereon or on any Government property so lost.

(d) The Minister [of Supply] shall pay to the Contractor fair and reasonable handling and delivery charges for any Government property and Government goods, and any such materials, bought-out components and articles in course of manufacture so delivered and consequent upon compliance with the directions of the Minister [of Supply] given under paragraph (a) of this sub-clause.

(6) Except as provided in any notice given under sub-clause (4) hereof the Contractor shall proceed to complete and deliver in accordance with the terms of the Contract all articles remaining to be delivered thereunder subject only to the replacement by the Minister [of Supply] of any Government property so lost or damaged, to such extension of time as in the circumstances the Minister of Supply thinks reasonable and to the provisions of the following sub-clause:—

(7) (a) The Contractor shall repair any Government goods so damaged which the Minister [of Supply] may require the Contractor to repair

for the completion of the articles remaining to be delivered under the Contract.

(b) The Contractor shall deliver in accordance with the directions of the Minister [of Supply] all Government property and Government goods damaged from King's Enemy Risks except:—

(i) Such as the Minister [of Supply] shall require the Contractor to repair under paragraph (a) of this sub-clause, and

(ii) Such as the Contractor shall, with the concurrence of the Minister [of Supply] and at such price as may be agreed, elect to retain.

(c) The Minister [of Supply] shall pay to the Contractor as an addition to the contract price

(i) a sum equal to the net cost reasonably incurred by the Contractor in effecting such repair;

(ii) a sum equal to the net cost reasonably incurred by the Contractor in replacing any Government goods so lost or so damaged and not required to be repaired under paragraph (a) of this sub-clause and in re-executing any work done thereon and in re-executing, on any Government property issued to the Contractor in replacement of any such property so lost or so damaged, any work done on such lost or damaged property;

(iii) fair and reasonable handling and delivery charges for any Government property and Government goods delivered pursuant to directions given by the Minister [of Supply] under paragraph (b) of this sub-clause.

(8) It shall be a condition precedent to any payment to the Contractor under this Clause in respect of any such Government goods or such work so lost or damaged that:—

(a) Such Government goods and such work were not insurable against King's Enemy Risks, and

(b) That no allowance in respect of King's Enemy Risks occurring thereto has been made in the price agreed to be paid to the Contractor under the Contract.

(9) Any payment due to be made by the Minister [of Supply] under this Clause shall be subject to such deduction, if any, on account of any progress payments already made to the Contractor as the Minister [of Supply] shall think proper.

(10) Any dispute or difference which may arise between the parties as to the carrying out of this Clause (except as to matters left to be determined by the Minister [of Supply]) shall be referred to the arbitration of a single arbitrator to be agreed upon between the Minister [of Supply] and the Contractor or in default of agreement to be appointed by the President of the Law Society.

## C. PATENTS RIGHTS CLAUSES

- (i) *Clause agreed inter-departmentally in 1942 for use when no indemnity was required from the Contractor*

*Patent Rights, etc.*

(1) Under the provisions of Sections 29 and 58A of the Patents and Designs Act 1907 as amended by Section 2 of the Patents and Designs Act 1942 and under Regulation 3 (5) of the Defence (Patents, Trade Marks, etc.) Regulations 1941, the Contractor is authorised for the purpose of performing the Contract (but not otherwise) to make, use, exercise or vend such inventions and designs as may be required for that purpose, and in connection with the making, use, exercise or vending of any inventions or application of any design as aforesaid to use any drawing, model, plan or other document or information as may be required for that purpose. No royalty, licence fee or other expense in respect of the making, use, exercise or vending by the Contractor of any invention or design for the purpose of performing the Contract or in respect of the use by the Contractor of any drawing, model, plan, document or information in connection with the making, use, exercise or vending of any invention or application of any design for that purpose will be allowed as a proper item of cost incurred by the Contractor unless it shall have been specifically agreed by the Minister [of Supply] and no such royalty, licence fee or other expense not so agreed shall be included in the Contractor's tender, quotation, offer, acceptance or Contract price.

(2) The authority hereby conferred has the effect of relieving the Contractor from liability, whether under licence agreements and similar agreements or otherwise, to make any payments, whether by way of royalties and licence fees or otherwise in respect of the Contractor's making, use, exercise or vending of any invention or design, or use in connection therewith or with the application of any design, of any drawing or model or plan or other document or information, for the purpose of performing the Contract. If any claim for any such payment is made against the Contractor, it shall be referred to the Minister [of Supply].

(3) The Contractor shall inform the Minister [of Supply] as soon as possible

(a) of any licence or other agreement under which he would or might but for this authority have been liable to make any payment in respect of the making, use, exercise or vending as aforesaid of any invention or design or the use as aforesaid of any drawing, model, plan or other document or information, and

(b) of any patented invention or registered design the making, use, exercise or vending of which by the Contractor is likely to be required for the purposes of the Contract and which the Contractor would not have been entitled to make, use, exercise or vend if this authority had not been given.

Provided that if and in so far as the Contractor has already given any of the information so required to the Minister [of Supply] in connection with

a previous contract it shall be sufficient for him to identify such contract and the letter giving such information.

(4) The Contractor shall incorporate in any sub-contract or order, made or placed by him for the purposes of the Contract, of the classes specified in the Schedule or of any further classes which may be agreed upon between the Minister [of Supply] and the Contractor, the provisions set out in sub-clauses (1), (2) and (3) of this Condition with the substitution of a reference to the Sub-contractor for each reference to the Contractor.

(ii) *Clause agreed inter-departmentally in 1942 for use when the Contractor was required to indemnify the Department against claims*

*Patent Rights, etc.*

(1) Under the provisions of Sections 29 and 58A of the Patents and Designs Act 1907 as amended by Section 2 of the Patents and Designs Act 1942 and Regulation 3 (5) of the Defence (Patents, Trade Marks, etc.) Regulations 1941 the Contractor is authorised for the purpose of performing the Contract (but not otherwise) to make, use, exercise or vend such inventions or designs as may be required for that purpose and in connection with the making, use, exercise or vending of any inventions or application of any design as aforesaid to use any drawing, model, plan or other document or information as may be required for that purpose.

(2) The Contractor shall be and he is hereby appointed the agent of the Minister [of Supply] for the purpose of dealing on behalf of the Minister [of Supply] with all claims that may arise in respect of the exercise by the Contractor of the above-mentioned authority but he shall at his own cost discharge and settle any such claims.

In the event of any such claims being enforced against the Minister [of Supply] the Contractor shall on demand repay to the Minister [of Supply] any sum or sums which the Minister [of Supply] may pay to any claimant and shall also on demand pay to the Minister [of Supply] the amount of any costs, charges or other expenses which the Minister [of Supply] may pay or incur in respect of any claim or claims.

(iii) *Collaboration Clauses*

*Conditions as to patents arising in connection with experimental or other work undertaken by firms or persons in collaboration with Government Departments*

No patent shall be applied for in respect of any invention relating to the matters or instructions submitted by the Department, without the consent of the Department and subject thereto, the following rules shall take effect.

(1) Where matters or instructions are submitted by the Department to a collaborating person or firm, all improvements or developments in detail, accessory to and for the purpose of carrying out the original design or instruction are to be deemed the property of the Department and no independent patents shall be taken out by the said person or firm, without the consent of the Department.

(2) In cases of developments and improvements made by the person or firm collaborating and which in the opinion of the Department do not fall



within (1) the application for the patent may be in the sole name of the inventor.

(3) In cases of Inventions made by the person or firm concerned, with the assistance of or in collaboration with a Government Department or in connection with information supplied by such Department, and which in the opinion of the Department, do not fall within (1) the Department, in addition to any necessary parties, shall have the right to join in any application for a patent whenever made.

(4) In any case the Government or the Department shall have the right of a free licence for the use for Government purposes in any part of the world of any invention so made including the right of using it in Government establishments or by Contractors for such purposes.

(5) Whenever the Department deems it expedient that any invention so made should be the subject of a secret patent, the benefit of such invention and of any improvements made therein, or the benefit of any patent obtained or to be obtained therefor, shall be assigned to the Government under Section 30 of the Patents and Designs Acts 1907 to 1939; the expenses of patenting in that case being borne by the Government and the terms of remuneration of such assignment being settled by mutual agreement or in the absence thereof by an arbitrator to be agreed between the parties, or failing agreement, to be nominated by the Lord Chancellor. In the assessment of the sum payable any benefit or compensation which the assignor(s) may have received directly or indirectly from the Department in respect of the invention shall be taken into account.

(6) On the other hand, if assignment of the invention and patent for reasons of secrecy has not been required, the person or firm collaborating with the Government Department concerned shall be at liberty to exploit the invention commercially for any non-Government purposes for his or their own benefit, without payment to the Government Department concerned providing always that the Government or any official or nominee joined in the patent shall have the ordinary rights of a joint patentee and shall be entitled to exercise those rights in such manner as he may be instructed or permitted by the Government Department concerned.

(7) Except as provided above any dispute under the above conditions shall be settled by reference to the Law Officers of the Crown or by a competent Arbitrator appointed by them for the purpose who shall have the power to direct what steps shall be taken in the interim by the several parties pending decision of the matter in dispute in order to protect the rights of all concerned.

(8) The term 'use' as applied to the invention under the above conditions shall include the right to make, use, exercise and vend for Government purposes and shall cover the right to dispose of any article so made for Government purposes no longer required for such purposes.

#### D. BREAK CLAUSE AS REVISED IN NOVEMBER 1940 FOR GENERAL USE

(1) The Minister [of Supply] shall, in addition to his power under other clauses to determine this Contract, have power to determine this Contract at any time by giving to the Contractor written notice to expire

at the end of the period set out in the instruction to proceed or in the schedule to the Contract and upon the expiration of the notice the Contract shall be determined without prejudice to the rights of the parties accrued to the date of determination but subject to the operation of the following provisions of this clause.

(2) In the event of such notice being given the Minister [of Supply] shall at any time before the expiration of the notice be entitled to exercise and shall as soon as may be reasonably practicable within that period exercise such of the following powers as he considers expedient.

(a) To direct the Contractor to complete in accordance with the Contract all or any articles parts of such articles or components in course of manufacture at the expiration of the notice and to deliver the same at such rate as may be mutually agreed on or, in default of Agreement, at the contract rates. All articles delivered by the Contractor in accordance with such directions and accepted shall be paid for at a fair and reasonable price.

(b) To direct that the Contractor shall as soon as may be reasonably practicable after the receipt of the notice of determination,

(i) take such steps as will ensure that the production rate of the articles specified in the schedule and parts thereof is reduced as rapidly as possible

(ii) as far as possible consistent with (i) above concentrate work on the completion of parts already in a partly-manufactured state

(iii) determine on the best possible terms such contracts for materials and parts bought out in a partly manufactured or wholly manufactured state as have not been completed, observing in this connection any directions given under paragraphs (a) and (b) (i) and (ii) above as far as this may be possible.

(3) In the event of such notice being given

(a) The Minister [of Supply] shall take over from the Contractor at a fair and reasonable price all unused and undamaged materials, bought-out components and articles in course of manufacture in the possession of the Contractor at the expiration of the notice and properly provided by or supplied to the Contractor for the performance of this Contract except such materials, bought-out components and articles as the Contractor shall, with the concurrence of the Minister [of Supply] elect to retain.

(b) The Contractor shall deliver in accordance with the directions of the Minister [of Supply] all such unused and undamaged materials, bought-out components and articles in course of manufacture (except as aforesaid) taken over by or previously belonging to the Minister [of Supply] and the Minister [of Supply] shall pay to the Contractor fair and reasonable handling and delivery charges therefor.

(c) The Minister [of Supply] shall indemnify the Contractor

against any commitments, liabilities or expenditure which, in the opinion of the Minister [of Supply], are reasonably and properly chargeable by the Contractor in connection with the Contract to the extent to which the Minister [of Supply] is satisfied that such commitments, liabilities or expenditure would otherwise represent an unavoidable loss by the Contractor by reason of the termination of the Contract.

Provided that in the event of the Contractor not having observed any direction given to him under sub-clause (2) hereof the Minister [of Supply] shall not be liable under this sub-clause to pay any sums in excess of those for which the Minister would have been liable had the Contractor observed that direction.

(4) If in any particular cases hardship to the Contractor should arise from the operation of this clause it shall be open to the Contractor to refer the circumstance to the Minister [of Supply], who, on being satisfied that such hardship exists shall make such allowance, if any, as in his opinion is reasonable.

(5) The Minister [of Supply] shall not in any case be liable to pay under the provisions of this clause any sum which, when taken together with any sums paid or due or becoming due to the Contractor under this Contract shall exceed the total price of the articles specified in the schedule payable under the Contract.

(6) Any dispute or difference which may arise between the parties as to the carrying out of this clause (except as to matters left to be determined by the Minister [of Supply] shall be referred to the arbitration of a single arbitrator to be agreed upon between the Minister [of Supply] and the Contractor or in default of agreement to be appointed by the President of the Law Society.

(7) The Contractor shall in any substantial order or sub-contract placed or made by him in connection with or for the purposes of this Contract take power to determine such order or sub-contract in the event of the determination of this Contract by the Minister [of Supply] under this clause upon the terms of the foregoing sub-clauses of this clause and save only that

(a) the name of the Contractor shall be substituted for the Minister [of Supply] throughout except in sub-clause 3 (a) where it last occurs, in sub-clause 3 (c) where it occurs for the second and third times, in sub-clause (4), and in sub-clause (6) where it first occurs, and

(b) the period of the notice of determination shall be the period set out in the instruction to proceed or in the schedule to the Contract.

(Substantial orders or sub-contracts shall in this context mean orders or sub-contracts of over £1,000 (one thousand pounds) in value.)

## APPENDIX 4

# Specimen Capital Assistance Licence Agreement, Ministry of Aircraft Production

THIS AGREEMENT is made the            day of            One thousand  
nine hundred and            BETWEEN the MINISTRY OF AIRCRAFT PRO-  
DUCTION acting by            Secretary of the Ministry of  
Aircraft Production of the one part and [name of company] whose  
registered office is situate at [full address] (hereinafter referred to as  
'the Company') of the other part

WHEREAS the Minister desires to provide additional capacity for the  
production of [type of store]

AND WHEREAS the Company is the owner of a factory at  
and the Minister has agreed to provide the plant machinery and equip-  
ment set out in Schedules approved by him and necessary to enable the  
said factory to produce [quantity] [type of store] per month

AND WHEREAS it has been agreed that these presents shall be entered  
into for the purpose of providing and maintaining such additional  
capacity and for the other purposes hereinafter appearing.

NOW IT IS HEREBY AGREED AND DECLARED as follows:—

1.—(1) THE Company shall purchase the said plant machinery and  
equipment strictly in accordance with the Schedules approved by the  
Minister and the Company shall not exceed the estimated cost so approved  
without the consent of the Minister.

(2) THE Company shall, if so required by the Minister, incorporate in  
any contract placed for such purchases clauses relating to the determina-  
tion of that contract, to the variation of the price due to variations in the  
rates of wages or prices of materials, and to costing and such other clauses  
as the Minister may require.

2.—(1) THE said plant machinery and equipment shall be installed  
strictly in accordance with the Schedules approved by the Minister who  
shall be responsible for the cost of the plant machinery and equipment so  
installed (including the cost of the installation thereof) provided always  
that the Minister shall not be liable under this Clause to pay more than  
the amounts specified in estimates approved by the Minister in relation  
thereto<sup>1</sup> unless the excess cost has been incurred with his approval.

(2) THE Company shall test or cause to be tested the said plant  
machinery and equipment to the satisfaction of the Minister and shall  
remedy or cause to be remedied at its own expense any defects revealed  
by such tests as the Minister may require.

3.—(1) THE Company shall from time to time keep in such form as the  
Minister may require an inventory of the plant machinery and other

---

<sup>1</sup> Instead of this phrase a specific sum was sometimes stated in the agreement.

equipment provided for the purposes of this Agreement by and belonging to the Minister (hereinafter referred to as 'the Crown plant').

(2) THE Crown plant shall be marked to show the ownership of the Minister in such manner as he may require.

(3) THE inventory shall show the position in the factory of the various items comprising the Crown plant and shall contain records of all additions to or removals replacements or loans of any of the Crown plant.

(4) THE Company shall keep full records of all losses of Crown plant and of the circumstances in which such losses occurred and of any action taken to prevent a recurrence of such losses and the Company shall report to the Minister any losses of Crown plant by theft fraud fire tempest sabotage or otherwise forthwith upon the detection of the loss.

(5) THE Company shall from time to time on the request of the Minister furnish him with copies of the inventory and of any records made under this Clause made up to the date of the request and shall afford all facilities to the Minister to enable him to check the inventory and records.

(6) THE Company shall post notices in conspicuous places in the factory stating that the Crown plant is the property of His Majesty's Government.

4.—ALL Schedules of the Crown plant and all estimates relating to the Crown plant and all books, costing or other accounts and writings, plans and drawings and records made or kept for the purpose of this Agreement shall be the property of the Minister and shall be delivered to him at his request.

5.—THE Crown plant shall be and remain the property of the Minister whether or not affixed to the Company's lands.

6.—(1) DURING the period of ten years from the date when some item of the Crown plant is first put into production or during the period from such date to the date of termination under Clause 16 hereof, whichever period shall be the shorter (which period is hereinafter referred to as 'the production period') the Company shall, subject to the provisions of Clause 15 hereof, be entitled to use the Crown plant for the production of [type of store] or other products ordered for Government purposes, that is to say, under contracts placed by the Minister or any other Government Department or by other persons firms or companies in connection with the execution of contracts placed by the Minister or any other Government Department, and shall at all times during the production period operate the factory and the plant machinery and equipment therein to such extent as may be necessary for Government purposes and in the manner which shall be most conducive to the successful and economical operation thereof.

(2) DURING the production period the Company shall, subject to the provisions of Clause 15 hereof, be entitled to use the Crown plant for purposes other than Government purposes if, and to the extent to which, the Crown plant is not under the provisions of the foregoing sub-clause required to be used for Government purposes.

7.—(1) For the purposes of this Clause:—

(a) 'Rent period' in relation to any item of Crown plant shall mean every full year ending with the                      day of                      and

any shorter period which falls between the date on which some item of Crown plant is first put into production and the end of the production period.

(b) 'Government contracts' shall mean contracts placed with the Company direct by a department of His Majesty's Government.

(c) 'Civil contracts' shall mean contracts (other than Government contracts) placed with the Company.

(d) 'Full economic rent' in relation to any item of Crown plant shall mean the aggregate of the following sums in respect of that item of Crown plant

(i) a sum equivalent to four per cent. per annum on the total sums paid by the Minister under Clause 2 hereof in the provision of that item of Crown plant and

(ii) a sum ascertained by applying to such total sums the rates of depreciation (as modified to give effect to the additional allowances given by Section 18 of the Finance Act 1932 as amended by Section 22 of the Finance Act 1938) allowed by the Inland Revenue Authorities for the purposes of income tax on the plant of the Company most nearly approximating to that item of Crown plant for the income tax year immediately following [*or next before*] the end of the rent period in question provided that if it is the practice of the Inland Revenue Authorities in calculating the depreciation on such plant of the Company to calculate the annual depreciation on the written-down value of such plant of the Company then for the purposes of this sub-clause the depreciation on the Crown plant shall similarly be calculated on the written-down value thereof.

(e) The value of Government contracts and Civil contracts executed during any rent period shall be a sum equal to the total sums falling due to the Company during that rent period under Government contracts and Civil contracts respectively.

(2) IF the Company uses any item of Crown plant during any part of a rent period for the purpose of Civil contracts the Company shall pay to the Minister in respect of such user sums by way of rent in respect of the whole of that rent period which bear the same proportion to the full economic rent of that item of Crown plant for that rent period as the value of the Civil contracts executed in whole or in part during that rent period at the factory bears to the value of Government contracts and Civil contracts executed in whole or in part during that rent period at the factory.

(3) IF any rent period is less than one year the rent payable under this Clause shall be ascertained by reference to such proportion of the full economic rent as the number of days in that period bears to three hundred and sixty-five.

(4) FOR the purpose of ascertaining the value of the Company's Civil contracts the Minister shall have the right to inspect the Company's books and accounts and the Company shall give to the Minister all

facilities for such inspection and shall furnish the Minister with such vouchers and information as he may reasonably require for such purpose.

(5) PAYMENT of the rent to be paid by the Company under this Clause shall be made as soon as the amounts due may have been determined but not in any event later than three months after the end of the rent period to which the payment relates.<sup>1</sup>

(6) IF for the purposes of income tax National Defence Contribution or Excess Profits Tax or other tax on income or profits the Company obtains an allowance on account of depreciation wear and tear or obsolescence on any plant and machinery and equipment forming part of the Crown plant the Company shall forthwith pay to the Minister an amount equal to the additional tax which would have been payable if such allowance had not been obtained.

(7) IF at any time after the rent payable in respect of that item of Crown plant for any rent period has been finally ascertained and paid an increase is allowed by the Inland Revenue Authorities in the rates of depreciation by reference to which the amount of that rent was ascertained the Company shall notify the Minister of the increase and the rent payable in respect of that item of Crown plant shall thereupon be re-ascertained by reference to the increased rates of depreciation as certified in writing by the Inspector of Taxes and the Company shall within fourteen days after re-ascertainment pay to the Minister any sum found due from it as a result of such re-ascertainment.

8.—DURING the production period the Company shall, subject to the provisions of Clauses 14, 15 and 19 hereof at its own expense

- (a) maintain the Crown plant in good order, repair and condition
- (b) insure the Crown plant to such extent as the Minister may require and
- (c) take adequate precautions to safeguard the security of the Crown plant both by day and by night.

9.—THE Minister shall have the right at all reasonable times to enter the Company's factory and to inspect the Crown plant and to call upon the Company to effect such repairs or do such other acts as he may consider necessary for the proper fulfilment of the Company's obligations under this agreement.

10.—THE Company may with the approval of the Minister lend the Crown plant or any part thereof to sub-contractors upon such terms (including the payment of hire) and subject to such conditions as the Minister may require and in the event of a loan of Crown plant being made the Company shall ensure that the Crown plant shall remain the property of the Minister and be maintained in good order repair and condition and be open to the inspection of the Minister and the Company

---

<sup>1</sup> This sub-clause applied where under 7(1) (d)(ii) depreciation allowance was related to the income tax year next before the end of the rent period. See alternative clause (pp. 283-284) for the wording of 7(5) used when the appropriate income tax year was that next following the end of the rent period.

shall be responsible in all respects to the Minister for the Crown plant so lent.<sup>1</sup>

11.—THE Company may place and move the Crown plant within the Company's premises to such extent as it thinks fit but save as aforesaid and for the purpose of maintenance [and of a loan of Crown plant to sub-contractors under Clause 10 hereof]<sup>2</sup> the Company shall not at any time take down or remove any of the Crown plant without the consent in writing of the Minister.

12.—THE Company shall comply in all respects with the provisions of the Factories Act 1937 and any other obligations imposed by law or otherwise in regard to carrying on work in the factory.

13.—THE Minister shall not during the production period be liable for any rates taxes and other outgoings payable in respect of or attracted by the Crown plant or such part thereof as the Company is entitled to use and these charges shall be borne by the Company.

14.—IF at any time during the production period the Company does not require to use any item of Crown plant at all the Company may give one month's notice to the effect to the Minister and upon the expiration of the notice and so long thereafter as the Company does not use the item of Crown plant specified in the notice the Company shall maintain and insure the item of Crown plant so specified to such extent and for such period (not extending beyond the end of the production period) as the Minister may require and on such terms as may be agreed or in default of agreement as may be settled by arbitration.

15.—IF at any time the Minister is of the opinion that it is necessary in the national interests that the Crown plant or some part thereof should be removed from the Company's factory [or the premises of any sub-contractor to whom it has been lent under Clause 10 hereof]<sup>2</sup> he may give notice in writing to the Company specifying the item or items of Crown plant which he requires to be removed and on the expiration of the period specified in the notice the Company [and any sub-contractor]<sup>2</sup> shall cease to be entitled to use and the Company shall cease to be liable to maintain or insure the item or items of Crown plant so specified and shall give or procure to be given to the Minister all facilities for the removal thereof.

16.—(1) IF the Company shall fail to pay any sum due in respect of rent within fourteen days after the due date the Minister shall be entitled to terminate the production period forthwith.

(2) IF in the opinion of the Minister the Company has at any time failed to fulfil any of its obligations under this Agreement (other than its obligation as to the payment of rent) the Minister shall be entitled at any time thereafter to give notice to the Company specifying the failure and requiring them to remedy it forthwith and if the Company shall have failed to take without delay and thereafter to continue to take proper steps to remedy such failure to the reasonable satisfaction of the Minister he may

---

<sup>1</sup> This clause was omitted in some cases.

<sup>2</sup> The words enclosed between brackets were included only where Clause 10 was also included.



terminate the production period by giving to the Company one month's notice in that behalf.

(3) WITHOUT prejudice to the power reserved under either of the foregoing sub-clauses the Minister shall be entitled at any time upon giving three months' notice in writing to the Company to terminate the production period.

17.—AT the end of the production period the Company shall if required by the Minister maintain and insure the Crown plant to such extent and for such period as he may require on such terms as may be agreed or in default of agreement as may be settled by arbitration.

18.—SO long as the Company is entitled to use or is using or is maintaining the Crown plant or any part thereof the Company shall maintain the premises in which the plant is situate in good order repair and condition.

19.—ANY obligation to maintain the Crown plant imposed by the Company under or by virtue of this Agreement shall not extend to making good fair wear and tear or damage by fire explosion accident or other event which is not due to the neglect or wilful act or default of the Company or its servants.

[19A.—IF the said services and equipment specified in the Second Schedule hereto or any part thereof are destroyed or damaged by any cause (including destruction or damage by war) and the Company receives by way of compensation or indemnity any cash payment in respect of such destruction or damage the whole or any part of which is not expended either in reinstating or making good such destruction or damage, or, with the Minister's knowledge and consent, in acquiring alternative facilities the Company shall pay to the Minister an amount equal to such payment, or to the part thereof not so expended, in or towards reimbursement to the Minister of the amount contributed by him under this Agreement in respect of the facility so destroyed or damaged.]<sup>1</sup>

20.—THE Minister shall be entitled to enter or authorise\* any person to enter upon the Company's land for the purpose of removing the Crown plant or any part thereof which the Company is no longer entitled to use making good all damage caused by such removal.

21.—THE Company hereby declares that during such period as any rights are vested in the Minister hereunder the Company's land shall be held upon such trusts as without prejudice to the rights of the Company hereunder are requisite to enable the Crown plant to remain the property of the Minister and to enable the Minister to exercise the powers conferred upon him by these presents or any Agreement to be executed pursuant to these presents.

22.—UPON the date when the Company ceases to be responsible under the terms of this Agreement for the maintenance of the Crown plant or any part thereof the Company shall:

(a) deliver up to the Minister or as he may direct the Crown plant concerned properly maintained in accordance with this Agreement;

---

<sup>1</sup> This additional clause was inserted between Clauses 19 and 20 when certain items, which were specified in an attached schedule, were provided at the expense partly of the Ministry and partly of the Company and the Company retained ownership of them.

(b) hand over to the Minister all inventories of the Crown plant and all books, costing or other accounts and writings plans drawings and records relating to the Crown plant made or kept for the purpose of this Agreement.

23.—(1) THE Minister shall not after the end of the production period sell or dispose of the Crown plant or any part thereof unless he shall have first given to the Company an option in writing (to be exercised by it in writing within twenty-eight days of the receipt of the notice) to purchase the Crown plant as specified in the notice on fair market terms.

(2) FOR the purpose of this Clause the expression 'fair market terms' means terms to be agreed between the parties or settled by arbitration as being terms which are fair and reasonable as between a willing seller and a willing buyer.

24.—ANY dispute under this Agreement shall be referred to the arbitration of a single arbitrator to be agreed upon between the Minister and the Company and in default of agreement to be appointed by the Lord Chief Justice of England.

IN WITNESS whereof the said party of the first part has set his hand and seal and the Common Seal of the Company has been hereunto affixed the day and year first before written.

#### ALTERNATIVE CLAUSES

##### *Alternative to Clauses 1 and 2*

1.—(1) ANY plant machinery and equipment provided or to be provided by the Minister for the purposes of this Agreement shall be installed strictly in accordance with Schedules approved by the Minister.

(2) THE Minister shall be responsible for the cost of the plant machinery and equipment so installed (including the cost of the installation thereof) provided always that the Minister shall not be liable under this Clause to pay more in respect of the said plant machinery and equipment than the amounts specified in estimates approved by him in relation thereto unless the excess cost has been incurred with his approval.

(3) THE Company shall test or cause to be tested the said plant machinery and equipment to the satisfaction of the Minister, and shall remedy or cause to be remedied at its own expense any defects revealed by such tests as the Minister may require.

##### *Alternative to Clause 6 (2) and 7*

DURING the production period the Company shall not use the [said floor space the Company's plant or] the Crown plant otherwise than for Government contracts except with the consent in writing of the Minister first had and obtained and it shall be a condition of such consent by the Minister that the Company shall pay a rent for the use of the Crown plant of [such amount to cover interest and depreciation on the plant as may be

agreed between the parties hereto or in default of agreement as may be settled by arbitration].<sup>1</sup>

*Clause substituted for Clause 7, where rent was charged on Government work as well as civil contract work*

(1) THE Company shall, subject to the provisions of Clause 14 hereof, pay to the Minister in respect of its right to use each item of Crown plant under this Agreement during each year or part of a year ending with the day of which falls within the production period sums by way of rent which shall be the aggregate of

(i) interest at the rate of four per cent. per annum on the total sums paid by the Minister under Clause 1 hereof in the provision of that item of Crown plant, and

(ii) the sum ascertained by applying to such total sums the rates of depreciation (as modified to give effect to the additional allowances given by Section 18 of the Finance Act 1932 as amended by Section 22 of the Finance Act 1938) allowed by the Inland Revenue Authorities for the purposes of income tax on the plant of the Company most nearly approximating to that item of Crown plant for the income tax year next before the end of the year in question provided that if it is the practice of the Inland Revenue Authorities in calculating the depreciation on such plant of the Company to calculate the annual depreciation on the written-down value of such plant of the Company then for the purpose of this sub-clause the depreciation on the Crown plant shall similarly be calculated on the written-down value thereof.

(2) THE rent of the Crown plant for any period shorter than a year shall be apportioned and for the purposes of paragraph (ii) of sub-clause (1) of this Clause the rates of depreciation to be applied shall be the rates allowed by the Inland Revenue Authorities as aforesaid for the income tax year next before the end of the period to which the payment relates.

(3) THE rent payable in respect of each item of Crown plant shall be calculated from the date on which that item was first put into production.

(4) PAYMENT of the rent to be paid by the Company in respect of any item of Crown plant under this Clause shall be made as soon as the amount due may have been determined but not in any event later than three months after the end of the year or part of a year to which the payment relates or the end of the production period as the case may be.

(5) IF for the purposes of income tax National Defence Contribution or Excess Profits Tax or other tax on income or profits the Company obtains an allowance on account of depreciation wear and tear or obsolescence on any plant machinery and equipment forming part of the Crown plant the Company shall forthwith pay to the Minister an amount equal to the additional tax which would have been payable if such allowance had not been obtained.

<sup>1</sup> The words 'the amount specified in the following clause hereof' were sometimes substituted for the concluding phrase here placed between brackets. In that case this clause was followed by the alternative form of Clause 7 printed hereafter and providing for the payment of full rental in respect of both Government and civil work and by the additional sub-clause relating to the allowance for depreciation in Government contract prices.

*Additional sub-clause where rent was charged on Government  
as well as civil contract work*

(i) In all contracts for the supply by the Company of [type of store] or other products for Government purposes, the following provisions shall apply to the calculation of the cost to be included in the prices charged by the Company:

(a) The amount included in such cost in respect of depreciation on the Crown plant shall be limited to an amount calculated by applying to the total sums paid by the Minister under Clause 1 hereof in the provision of the Crown plant rates which do not exceed the rates of depreciation (as modified to give effect to the additional allowances given by Section 18 of the Finance Act 1932 as amended by Section 22 of the Finance Act 1938) allowed by the Inland Revenue Authorities for the purposes of Income Tax on plant of the Company of a nature similar to the Crown Plant provided that if it is the practice of the Inland Revenue Authorities in calculating the annual depreciation on the written-down value of such plant of the Company then for the purposes of this sub-clause the depreciation on the Crown plant shall similarly be calculated on the written-down value thereof.

(b) Nothing shall be included in such cost whether by overheads or otherwise in respect of the rent payable by the Company for the Crown plant save in so far as anything may be included in respect thereof by virtue of the foregoing paragraph.

(c) No profit shall be allowed on that part of the cost which is represented by the depreciation included therein under paragraph (a) of this sub-clause.

(d) For the purposes of this Clause the expression 'products for Government purposes' shall mean any products ordered under contracts placed by the Minister or any other Government Department or by other persons, firms or companies in connection with the execution of contracts placed by the Minister or by any other Government Department.

*Alternative to Clause 7(5) used where in Clause 7(1)(d)(ii)  
depreciation allowance was related to the income tax year  
immediately following the end of the rent period*

PAYMENT of the rent to be paid by the Company in respect of the factory and any item of Crown plant under this Clause shall be made not later than three months after the end of the rent period provided that if the amount due in respect of any item of Crown plant for any rent period shall not be ascertained by the end of the said period of three months the following provisions shall have effect, that is to say:

(a) a provisional payment thereof shall be made before the end of the said period of three months consisting of the payment due to the Minister in respect of that item of Crown plant calculated by reference to the rates of depreciation which the Company proposes to

claim for the purposes of income tax on the plant of the Company most nearly approximating to that item of Crown plant for the income tax year following the end of the rent period in question;

(b) the Company shall forthwith upon the final determination of the depreciation rates by reference to which the rent payable in respect of that item of Crown plant for that rent period is to be ascertained produce a certificate from an Inspector of Taxes as to the depreciation rates finally allowed on the plant of the Company most nearly approximating to that item of Crown plant and thereupon the amount of the rent due in respect of that rent period shall be ascertained and any balance due by reason of an overpayment or an underpayment on the provisional payment already made shall be ascertained and shall be paid by the Minister or by the Company as the case may be within fourteen days after the production of the certificate.

## APPENDIX 5

### Specimen Agency Agreement, Admiralty

THIS AGREEMENT is made the \_\_\_\_\_ day of \_\_\_\_\_ One thousand nine hundred and \_\_\_\_\_ BETWEEN THE COMMISSIONERS FOR EXECUTING THE OFFICE OF LORD HIGH ADMIRAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND (hereinafter called 'the Admiralty') of the one part and [name of company] (hereinafter called 'the Company') whose registered Office is at [full address] of the other part

WHEREAS the Admiralty are in possession of premises known as the \_\_\_\_\_ in the County of \_\_\_\_\_ (hereinafter referred to as 'the factory') and it has been agreed that the Company shall on behalf of and as agent for the Admiralty alter renovate and equip the factory in accordance with plans specifications schedules and estimates approved by the Admiralty and operate and maintain the factory for the production of [type of store] on the terms hereinafter appearing

NOW IT IS HEREBY AGREED AND DECLARED as follows:

1.—THE Company is hereby appointed agent and manager for the Admiralty for the purpose of carrying out the work and duties hereinafter referred to on the terms and conditions hereinafter contained.

#### *Adaptation and Equipment of Factory*

2.—(1) THE Company shall with the utmost despatch and strictly in accordance with the plans and specifications approved by the Admiralty complete the alteration renovation and equipment of the factory to provide for a monthly output of not less than [quantity and type of store and quantity and description of spare parts] working double shifts. The Company shall not without the consent of the Admiralty incur any cost in excess of the estimated cost approved by the Admiralty.

(2) THE Company undertakes to ensure that all work is carried out and purchases made as economically as is consistent with efficiency and where practicable to obtain competitive tenders for the alteration renovation and equipment of the factory the provision of services therefor and for all material required for that purpose.

(3) ALL material used in the alteration and renovation of the factory and the provision of services therefor and all plant machinery and equipment installed or provided therein shall be of a quality efficient and satisfactory for the purpose intended and unless otherwise agreed by the Admiralty of United Kingdom manufacture.

(4) ALL work shall be carried out in a proper and workmanlike manner and to the satisfaction of the Admiralty.

(5) ALL plant machinery and equipment ordered by the Company for the purposes of this Agreement shall be the property of the Admiralty as soon as it is severally delivered to the Company and shall be so marked.

(6) THE Company shall if so required by the Admiralty incorporate in

any contract placed for such work and purchases clauses relating to the determination of that contract and to costing and such other clauses as the Admiralty may require.

(7) ALL notices required to be given to local authorities or to any authorised undertakers and all licences and consents relating to the alteration and renovation of the factory shall be given or obtained by the Company.

(8) THE Company shall use its best endeavours to complete the alteration renovation and equipment of the factory with the utmost despatch.

3.—(1) IF at any time the Admiralty shall require the Company to produce [general class of store] of any type or equipment or any other articles or other kind of work for which the factory is not suitably equipped the Company shall further alter and re-equip the factory to such extent as the Admiralty may require for the production thereof.

(2) UPON request being made the provisions of the foregoing Clause if and so far as applicable shall apply to the further alteration and re-equipment of the factory as they apply to the alteration and equipment thereof.

4.—UPON completion of the alteration renovation and equipment of the factory or of any further alteration or re-equipment thereof the Company shall forthwith test the plant machinery and equipment therein to the satisfaction of the Admiralty and remedy any defects revealed in the test as the Admiralty may require.

*Operation of the Factory by the Company and the keeping of books*

5.—THE Company shall within the facilities available at the factory train such labour have available such jigs tools gauges and materials and attain such a degree of efficiency as will enable the factory to operate to full capacity as soon as possible after completion.

6.—(1) THE Company shall as agent of the Admiralty diligently and skilfully manufacture in the factory [general class of store] of the [particular type of store] or other such type or types and manufacture such other equipment or articles or carry out such other kind of work as the Admiralty may from time to time require within the capacity of the factory (and subject as provided by Clause 2 of this Agreement) and notify to the Company and shall use its best endeavour to secure continuous output and delivery of such [type of store] at not less than the rate mentioned in Clause 1 (1) hereof and of any such other type or types and of any such other equipment articles or work as aforesaid at such rate or rates as the Admiralty may from time to time require.

(2) THE Admiralty shall have the right to vary the type of [general class of store] and the output and delivery thereof notified from time to time to the Company as provided for in the foregoing sub-clause so far as relates to the balance or any part thereof of the quantity of [general class of store] so notified remaining to be manufactured.

(3) THE Company shall if required by the Admiralty design and produce such inspection gauges as may be required for the use of representatives of the Admiralty.

7.—(1) THE Company shall manufacture and complete and repair all

[general class of store] of any type so to be supplied by it to the Admiralty as aforesaid strictly in conformity with drawings specifications and schedules relating to that type to be supplied from time to time by the Admiralty.

(2) IN order to increase the rate of manufacture or the efficiency of the said [general class of store] and of any other equipment articles or work as aforesaid the said drawings specifications and schedules may be modified from time to time by the Admiralty or by the Company with the approval of the Admiralty. Any modifications proposed by the Company shall be submitted to the Admiralty in such form and accompanied by such drawings as they may direct and all such modifications and drawings shall be available for the use of the Admiralty or of any contractor employed by them without any payment to the Company therefor.

8.—THE Company shall test the [general class of store] and any other equipment articles or work as aforesaid produced in the factory in such manner and to such extent as the Admiralty may require and the same when certified by a duly authorised representative of the Chief Inspector of Naval Ordnance<sup>1</sup> to have been tested and passed shall forthwith be delivered in accordance with directions given by the Admiralty.

9.—SUBJECT to the determination of this Agreement as hereinafter provided the Company shall as agent of the Admiralty be entitled to use the factory until the completion of its obligations as to manufacture testing and delivery of [general class of store] and any such other equipment articles or work as aforesaid under this Agreement.

10.—(1) THE Company shall in accordance with the terms of this Agreement as agent and manager of the factory for the Admiralty in the manufacture of the [general class of store] and any such other equipment articles or work as aforesaid:—

(a) Order and do its best to obtain on behalf of the Admiralty at the most economical prices reasonably obtainable all material necessary for the said work being material in accordance with specifications approved by the Admiralty and unless otherwise agreed by the Admiralty of United Kingdom manufacture.

(b) Be responsible for the engagement and employment of all the staff and workmen to be engaged in the factory and accordingly do its best in its own name to employ instruct and pay such skilled competent managers departmental heads supervisors and other staff and workmen as are required for the purpose of this Agreement and make all proper provision for their engagement discharge and proper conduct. Provided that the Admiralty shall be entitled at any time to investigate the number of persons employed and their duties salaries and wages and to require the dismissal of any member of the staff or any workman engaged at the factory but shall indemnify the Company against all actions claims and demands on the part of any such member or workman by reason of such dismissal.

---

<sup>1</sup> Or other officer, according to the type of store manufactured.



- (c) In its own name discharge all obligations incurred by an employer of labour by statute or otherwise and  
 (d) effect such insurances as the Admiralty may require.

(2) THE Company shall notify the appropriate employment exchange as and when any labour is required for the purpose of this Agreement. Subject to compliance with the provisions of any Order made under Regulation 58A of the Defence (General) Regulations 1939 the Company shall be at liberty to seek workpeople from other sources but it shall inform the employment exchange without delay of any vacancies so filled.

(3) THE Company may for any of the purposes of this Agreement supply suitable [name of company] stores and manufactured articles at prices and on conditions to be agreed with the Admiralty which prices shall include a reasonable margin of profit and shall afford all facilities which the Admiralty may consider necessary in connection with the settlement of such prices.

11.—THE Company shall keep books containing such full and accurate costing and other accounts and records as are necessary to supply the information required by the Admiralty for the purposes of this Agreement and shall render accounts and submit inventories to the Admiralty at such periods as may from time to time be agreed between the Admiralty and the Company in such form and certified in such manner as may be required by them of the expenditure incurred by the Company in respect of the matters specified in Clause 12 hereof and shall produce to the Admiralty such vouchers and other documents as they may require for the purpose of verifying such accounts and records. The Admiralty the Comptroller and Auditor-General and any officer authorised by either of them for the purpose shall at all times have access to such books records and documents.

*Reimbursement of expenses incurred by the Company*

12.—THE Admiralty shall pay to the Company and indemnify it against:—

(1) The net cost incurred by it in altering renovating and equipping the factory with the necessary plant and machinery for the purpose of this Agreement and in providing services in accordance with the plans and specifications approved by the Admiralty and in the payment of all fees as may be agreed by the Admiralty including architect's and other professional and technical fees incurred by the Company under this Agreement.

(2) The net cost incurred by it in respect of electric light power gas water sewerage and drainage and other like services necessary for the purpose of this Agreement.

(3) The net cost incurred by it in equipping and re-equipping the factory with the jigs gauges and other tools and in purchasing the material necessary for the manufacture of [general class of store] in accordance with this Agreement.

(4) The net cost incurred by it in paying premiums on all

insurance policies which the Admiralty shall require the Company to effect and licence fees for the use of patents or inventions which the Admiralty may from time to time authorise the Company to incur.

(5) The net cost incurred by it from time to time in maintaining repairing rebuilding and reinstating the factory and testing maintaining repairing and replacing the plant machinery and equipment thereof.

(6) The net cost incurred by it in the payment of salaries and wages to and by way of insurance of persons employed by it under Clause 10 (1) (b) of this Agreement.

(7) The net cost of delivering the [general class of store].

(8) All other expenses of whatever nature or kind which may be properly incurred by the Company in carrying this Agreement into effect.

13.—FOR the purposes of this Agreement 'net cost' shall mean the actual net cost properly incurred by the Company having due regard to economy and efficiency and so that the Admiralty shall be entitled to the full benefit of all discounts including cash discounts rebates commissions penalties and other advantages in connection with any contracts entered into by the Company and so also that the Admiralty shall be entitled to all scrap and residuals resulting from the said alteration renovation equipment and manufacture or otherwise arising out of the carrying out of this Agreement.

14.—THE Admiralty shall repay to the Company any expenditure properly incurred by it in anticipation of this Agreement coming into effect credit being given to the Admiralty for any sum already advanced by them to the Company in respect of such expenditure.

#### *Sub-contracting by the Company*

15.—(1) THE Company may subject to proper employment of the capacity created under this Agreement and to due compliance with the provisions of this Clause and to the consent in writing of the Admiralty enter into contracts with any other persons firm or company for the provision of parts of the [general class of store] and any such other equipment articles or work as aforesaid to be produced in the factory.

(2) UNLESS the Admiralty otherwise agree the Company shall in all such contracts incorporate the provisions of Clause 24 hereof.

(3) ANY sums properly paid by the Company under a contract for the provision of parts of such [general class of store] and any such other equipment articles or work as aforesaid or for jigs tools and gauges for the purpose of this Agreement shall be allowed in the net cost for the purposes of Clause 12 provided that the contract has been entered into in accordance with the provisions of this Agreement and in particular with the contracting procedure agreed by the Admiralty.

#### *Provision of Working Capital for the Company*

16.—FOR the purpose of financing capital expenditure and production and maintenance expenditure respectively two accounts have been

opened by the Admiralty at a local branch of an agreed bank under the title of 'The Admiralty (        Factory) Public Account' and the Company are authorised by the Admiralty to operate the said accounts by such officers as the Company may nominate for the purpose and in accordance with directions to be given from time to time by the Admiralty. The Company shall be responsible to the Admiralty for all operations on the accounts and shall make all payments in respect of any expenditure properly incurred by it on capital account and on production or maintenance account on behalf of the Admiralty in carrying out this Agreement out of the appropriate account and not otherwise.

17.—FOR the purpose of enabling the Company to make such payments as aforesaid in due time the Admiralty shall at or before the commencement of each calendar month during the currency of this Agreement pay into the said account by way of imprest in respect of each such period such sum as (together with any money already standing to the credit of the account) they consider to be sufficient to meet the expenditure which the Company will incur in carrying out its obligations under this Agreement to the end of the said period.

18.—FOR the purpose of enabling the Admiralty to decide the amount to be paid into the said account as aforesaid the Company shall not later than two days after the commencement of each period of one calendar month submit to them in such form as they may require an estimate of its expenditure during that and the next ensuing calendar month.

19.—IF the Company satisfies the Admiralty at any time that the sum standing to the credit of the account is insufficient to enable the Company to meet any emergency payment incurred by it on behalf of the Admiralty in carrying out the terms of this Agreement the Admiralty will pay into the account such additional sum as will enable the Company to meet such emergency expenditure as it falls due. In no circumstances must there be an overdrawal of the account.

#### *Remuneration*

20.—THE Admiralty shall pay to the Company by way of remuneration for the services rendered by it under this Agreement such reasonable fees at such periods as shall be agreed between the Admiralty and the Company to cover

- (a) organising adapting laying out and supervising the equipment and maintenance of the factory prior to production;
- (b) similar services in respect of any further alteration and re-equipment thereof in accordance with Clause 2 hereof;
- (c) management and supervision of the factory when in production.

#### *Maintenance and repair of factory etcetera*

21.—THE Company shall maintain the factory and all plant machinery and equipment therein in good order repair and condition and shall if the Admiralty so require repair the factory and any plant machinery and equipment therein if in their opinion it is not in good

order repair and condition or remove and if necessary replace any plant machinery or equipment which in their opinion is unsuitable or unserviceable or has become obsolete.

22.—THE Admiralty may at all times inspect the factory and the plant machinery and equipment therein and may in such manner as they think fit examine the state of repair of the factory and the plant machinery and equipment therein and the progress and method of manufacture of the [general class of store] or any such other equipment articles or work as aforesaid and the Company shall furnish to the Admiralty such information relating to any of the matters provided for by this Agreement as they may require. The Admiralty may take such measures as they may from time to time think fit for the general oversight of the working of the factory and the Company shall comply with such instructions in connection therewith as may from time to time be given by the Admiralty.

*Miscellaneous*

23.—(1) THE Admiralty shall have the right on behalf of His Majesty of free user in Government establishments or factories or by contractors employed by them of any invention or design (whether such invention or design is the subject of a patent or not) relating to [general class of store] or such other articles or work as aforesaid to be manufactured or done hereunder made or discovered in the course of or arising out of the manufacture of the same by any person employed in such manufacture whose salary or wages in respect of such employment are paid by the Admiralty under the terms of this Agreement.

(2) THE Company shall with the utmost despatch forward or procure to be forwarded to the Admiralty particulars of all inventions and designs so made or discovered.

(3) THE Admiralty shall have the right to require any such invention or design to be assigned to them on behalf of His Majesty and the Company shall if so required assign or procure the assignment of any such invention or design to the Admiralty on behalf of His Majesty.

24.—(1) THE Company shall not communicate or cause or permit to be communicated to any unauthorised person any information whatsoever relating to the terms of this Agreement or to the manufacture of [general class of store] or such other articles or work as aforesaid or the nature and extent of the [general class of store] or such other articles or work manufactured or done by the Company.

(2) THE Company shall take all proper steps to secure that access to and inspection of the drawings and other documents and models relating to the manufacture of [general class of store] or such other articles or work as aforesaid are limited to as few employees of the Company as possible in the execution of the work hereunder and that when not actually in use such drawings and other documents and models are kept under lock and key and are otherwise strictly safeguarded.

(3) THE Company shall not without the written consent of the Admiralty employ persons other than British subjects in the factory and shall not without the written consent of the Admiralty allow any person other than an employee of the Company directly concerned with the production to

inspect the [general class of store] or other articles or work manufactured or done hereunder.

(4) THE Company shall take all necessary steps to bring to the notice of their employees and of the staff employed for the purposes of this Agreement the provisions of sub-clauses (1) (2) and (3) hereof and the application of the Official Secrets Acts in that behalf.

25.—(1) THE Company may with the approval of the Admiralty in writing lend the plant machinery or equipment provided for the purposes of this Agreement or any part thereof to their sub-contractors on such terms including the payment of hire and subject to such conditions as the Admiralty may require.

(2) IN the event of any such plant machinery or equipment being lent as aforesaid the Company shall ensure that it shall remain the property of the Admiralty and be maintained in good order repair and condition and the Company shall be responsible in all respects to the Admiralty for the plant machinery and equipment so lent.

26.—IF at any time the Admiralty are of opinion that it is necessary in the national interest that any of the plant machinery or equipment provided under this Agreement and not otherwise required for the performance of the Company's obligations under this Agreement should be removed from the factory they may give notice in writing to the Company specifying the item or items of plant machinery or equipment which they require to be removed and on the expiration of the period specified in the notice the Company shall cease to be entitled to use the item or items of plant machinery or equipment so specified and the Company shall remove or procure the removal thereof in accordance with the directions of the Admiralty.

27.—(1) SAVE as is provided in the two foregoing Clauses the Company shall not without the consent of the Admiralty in writing remove from the factory any plant machinery or equipment provided for the purposes of this Agreement.

(2) THE Company shall not make any alterations to the factory without the consent in writing of the Admiralty.

28.—(1) THIS Agreement shall be deemed to have commenced on the        day of        One thousand nine hundred and        and shall remain in force unless and until determined in accordance with the provisions of this Clause.

(2) THE Admiralty may determine this Agreement at any time by giving to the Company not less than six months' notice in writing of their intention so to do and upon the expiration of the notice this Agreement shall be determined.

(3) ANY notice given by the Admiralty under the last foregoing sub-clause may be accompanied by directions from the Admiralty as to

(a) the further performance or cessation of any work to be done under this Agreement;

(b) the termination of contracts for the alteration and renovation of the factory and the supply of plant machinery equipment and material therefor or

(c) any other matter arising out of this Agreement with regard to which the Admiralty may think directions from them are necessary.

And the Company shall (so far as shall be reasonably possible) during the said period of six months comply with any such directions.

(4) IF in the opinion of the Admiralty the Company has at any time failed to fulfil any of its obligations under this Agreement the Admiralty shall be entitled at any time thereafter to give notice to the Company specifying the failure and requiring it to remedy the failure forthwith and if the Company shall have failed to take without delay and thereafter to continue to take proper steps to remedy such failure to the reasonable satisfaction of the Admiralty they may terminate this Agreement by giving to the Company one month's notice in writing in that behalf.

(5) IN the event of any determination under this Clause the Company shall be entitled to be paid the cost due to it under Clause 12 hereof and the apportioned part of the remuneration due to it under Clause 20 hereof up to the date of termination but shall not be entitled to any further remuneration under this Agreement.

29.—UPON the termination of this Agreement the Company shall at the expense of the Admiralty:

(a) Deliver up in good running order and condition (fair wear and tear excepted) to the Admiralty or as they may direct the factory and the plant machinery equipment and material therein.

(b) Hand over to the Admiralty all plans specifications schedules and estimates relating to the factory and the plant machinery equipment and material therein together with all books costing or other accounts and working plans and drawings and records made or kept for the purposes of this Agreement.

(c) Assign in accordance with the directions of the Admiralty all contracts entered into by the Company for the purposes of this Agreement in such manner that the Company shall be completely released from and indemnified against all the obligations properly incurred thereunder.

30.—(a) The Company shall in the erection and equipment of the factory and in the management and operation thereof and otherwise in the performance of its obligations under this Agreement take all such steps (including the selection of suitable personnel) as are appropriate and reasonable to ensure the safety of the factory and to prevent the occurrence of any event whereby the due operation of the factory might be interrupted or the factory or any plant machinery or equipment therein or any other property of the Admiralty might be damaged or destroyed or whereby the Admiralty might be involved in any liability to a third party.

(b) If and so long as the Company shall comply with the foregoing sub-clause the Company shall not be under any responsibility to the Admiralty for any damage or loss of whatever nature sustained by the Admiralty or for any third party claims of whatever character which may

be brought against the Admiralty (being damage loss or claims against which the Company is not insured and is not required by the Admiralty to be insured) notwithstanding that such damage loss or third party claim may be the direct result of some negligent act or default on the part of the servants or agents of the Company for which in the absence of this provision the Company might be liable in law and the Admiralty shall indemnify the Company against all claims demands actions or proceedings brought or instituted against them by any third party in connection with any such negligent act or default as aforesaid.

(c) Subject as aforesaid but without prejudice to any indemnity implied by law the Admiralty shall effectually indemnify and keep indemnified the Company and its employees and agents both before and after the termination of this Agreement from and against all actions proceedings claims demands costs expenses and liabilities whatsoever taken or made against or incurred by the Company or to which the Company may be or become liable in carrying out any of its obligations under this Agreement or incidental to the proper performance of its obligations hereunder.

31.—CLAUSES Numbers 14, 17, 18, 19 and 20 of Form 901-U shall apply to and shall be deemed to be incorporated in this Agreement.

IN WITNESS whereof two of the Commissioners for Executing the Office of Lord High Admiral of the United Kingdom of Great Britain and Ireland have hereunto set their hands and seals and the Company has caused its Common Seal to be hereunto affixed the day and year first above written.

# Index

---





# INDEX

*The suffix letter n indicates a footnote)*

- A/B plan, 58-59  
Accounts Branches, 20  
Aden, 68, 72n  
Admiralty, 1, 19, 20n, 40, 59n, 122, 176, 182, 195, 197, 198, 215, 219, 220, 223, 224, 225, 233n, 247, 262n  
  agency factories, 154, 191, 219, 226, 249, 252-254, 287-296  
  capital assistance schemes, 204-206, 207, 208, 210, 226, 227, 249, 252-254  
  competitive tendering, 35-36, 37  
  contracts, 36, 61-63, 64, 71, 72, 74, 77, 78-79, 80, 106-117, 123, 126, 129, 130-131, 132, 138-141, 181, 184, 185n, 187-188, 206, 268  
  delegated authority for expenditure, 16-17  
  Director of Electrical Engineering, 70  
  Director of Naval Construction, 70, 109  
  Director of Navy Contracts, 107, 132  
  disposal of small craft, 2  
  Emergency Repairs Agreement, 139-140  
  Engineer-in-Chief, 70  
  financial control, 13  
  insurances, 45-49  
  patent policy, 52-54, 291, 293  
  profit rates, 89-90  
  sub-contracting, 95, 96, 101, 104, 268, 291, 294  
  technical costing, 70, 71, 79, 126, 129, 131  
  —*See also First Lord of the Admiralty, Merchant ships, Navy Estimates, Royal Dockyards, Shipbuilding, Ships, Warships*  
Advance payments, 182, 184-185  
Aerodrome construction, 74  
Aero-engines, 97, 122, 151, 181, 187, 218  
  jets, 122, 221  
Agency factories, 19, 37, 50, 80, 81, 142, 147, 149-156, 190-191, 217-219, 226-227, 249-258, 287-296  
Air Defence of Great Britain (A.D.G.B.), 87  
Air Estimates, 7  
Air Ministry, 1, 14, 30, 40, 171, 199, 200, 201-202, 215, 220, 225, 230, 232, 233, 262  
  agency factories, 150-151, 152, 190, 217-218, 225, 226, 230, 250, 255-256  
  Air Council, 118  
  Air Council Committee on Supply, 11-12, 18  
  capital assistance schemes, 206, 209, 225, 226, 250, 255-256  
  competitive tendering, 34-35  
  contracts, 37, 40, 60-62, 68, 71-72, 74-75, 79, 87-88, 117-119, 132, 181, 184, 268  
  delegated authority for expenditure, 16-17  
  Directorate of Aircraft Production, 3  
  Finance Branches, 12  
  insurances, 46  
  patent policy, 52n  
  sub-contracting, 95, 96, 268  
  technical costing, 70, 71, 118, 123  
  —*See also Ministry of Aircraft Production, Royal Air Force, Secretary of State for Air*  
Aircraft  
  industry, 87, 181, 199-203, 225, 227, 230, 235  
  insurance of, 49-50  
  profits on, 91-92, 117-118, 119  
  repair of, 138  
  types of  
    Battle, 150  
    Blenheim, 151  
    Halifax, 60  
    Lancaster, 97, 121, 194  
    Manchester, 60  
    Stirling, 60  
    Wellington, 99  
    Whirlwind, 60

- Aircraft carriers, 108, 109  
 Airframes, 150-151, 181, 187, 218  
 Aluminium, 157, 162, 223  
 Ammunition, 122, 128-129  
 Anglo-Egyptian Sudan, 42  
 Armaments Profits Duty, 84  
 Armour, 129-131  
 Army, 138  
     expansion of, 10  
     uniforms for, 132  
 Army Estimates, 7  
 Association of Drop Forgers and Stampers, 174-175  
 Austin Motor Co. Ltd., 150  
 Australia, 41  
 Auxiliary Territorial Service (A.T.S.), 132  
 Awards to Inventors, Royal Commission on, 54-55
- Ball bearings, 192  
 Bank of England, 183, 185, 192, 241n, 260  
*Banker, The*, 188n, 194n  
 Banking system, 180, 183-184, 186, 188, 191, 192, 195, 233-235, 260  
 Barton, Mayhew & Co., 119  
 Battleships, 106n, 107, 108, 109, 130, 198  
 Beckett, Mr. R. E., 234  
 Bell Telephone Laboratories, 59n  
 Bichromates, 169  
 Birmingham Jewellers' and Silversmiths' Association, 137  
 Blankets, 133  
 Block grants, 14, 16  
 Board of Inland Revenue, 172, 195, 196  
 Board of Trade, 49, 57, 64, 136, 143  
 Board of Trade Supply Organisation, 3  
 Board of Trade Wholesale Price Index, 160, 259  
 Boot Manufacturers' Federation, 136  
 Boots, 136-137  
 Borax, 168  
 Brass, 143  
 Brazil, 42, 144  
 Bricks, 159n  
 Bristol Aeroplane Co. Ltd., 151  
 British Air Commission, 56  
 British Electrical and Allied Manufacturers' Association, 62, 163n  
 British Iron and Steel Corporation, 164  
 British Iron and Steel Federation, 143, 163, 164  
 British Metal Corporation, 143  
 British Purchasing Commission, 56, 146  
 British Shipping Assistance Bill, 113  
 British Supply Mission, 191  
 British Thomson-Houston (B.T.H.) Ltd., 59n  
 Building plant, 97  
 Building, residential, 234  
 Bulk purchase, 40-42, 144, 157, 158-161, 193-194, 233  
 Bullet-proof plate, 123n, 124, 131  
 Buttons, 137
- Cabinet Office (Economic Section), 23, 160  
 Campbell, Mr. Colin, 233  
 Canada, 64, 191, 223, 247  
 Capacity, post-war maintenance of, 213-214, 282  
 Capital, 235  
     fixed, 4, 153, 155, 180, 197-228, 234, 247-258  
     capital assistance, 122, 170, 204-214, 217, 223, 226-227, 230, 249-258, 277-286  
     contributory schemes, 204-206, 207-209, 227, 254, 256, 257-258  
     Capital Clause, 200-203, 204, 217, 227, 230  
     deferred payment schemes, 224, 256

- 'Outside Supplier' schemes, 224-225, 256
- reinstatement of contractors' equipment, 213
- Government capital
  - disposal of assets, 212-213
  - profit on, 90, 120, 172, 173, 211
- issues of companies, 227-228
- loss during war, 237-238
- method of valuing, 93-94
- working, 4, 19, 150, 153, 155, 180-196, 200, 234, 291-292
  - Scheme C, 185-186, 188, 195, 231
- See also *Agency factories, Interest rates, Loans, Rents, Residual values, Royal Dockyards, Royal Ordnance Factories*
- Capstan gear, 96
- Cement, 159
- Central Electricity Board (C.E.B.), 215-217
- Central Hospital Supply Service, 137
- Chamberlain, Mr. Neville, 7
- Chancellor of the Exchequer, 6, 7, 9, 10, 11
  - (Mr. Neville Chamberlain), 7, 59
- Chaplains, demobilisation outfits for, 136
- Civil Defence Organisations, 132
- Coal, 159, 167-168, 259
- Collaboration clauses, 55, 273-274
- Commercial Solvents Ltd., 214
- Committee of Imperial Defence (C.I.D.), 2-3
- Commodity Insurance Scheme, 46
- Comptroller and Auditor General (C. & A.G.), 104n, 112n, 113n, 116n, 138n, 145n, 156n, 160n, 161n, 163n, 164n, 165n, 166n, 168n, 170n, 173n, 179n, 185n, 189n, 219n, 222n, 240n, 290
- Compulsory powers, 29, 42-43, 263-266
- Compulsory purchase of businesses by Government, 122, 196
- Consett Iron Co. Ltd., 214
- Constructional agents, 142, 147-149
- Consultants' fees, 148-149
- Continuous Production Orders, 129
- Contracts, 8, 85, 229, 240-241, 242, 267-276
  - breaking of contracts, 44, 59-65, 274-276
  - competitive tendering, 34-38, 69, 71, 72, 83, 96, 106-107, 122, 123, 128, 134, 135, 139
  - Contracts Directorates and Branches, 1-4, 24-25, 34, 70, 85, 100, 133, 171
  - dormant contracts, 132
  - instructions to proceed (I.T.P.), 36, 123, 132, 135, 138, 230
  - running contracts, 42, 125, 131
  - types,
    - basic cost, 68, 72, 87, 117, 118
    - cost-plus, 67, 75, 111, 113, 118, 119, 120, 123, 125, 126, 130, 137, 138, 139, 181, 241
    - fixed price, 66-67, 71, 73, 74, 75, 76, 77, 91-92, 107, 109, 110, 116, 117, 118, 119, 120, 122, 123, 125, 126, 128, 133, 134, 137, 185, 187, 211, 240
    - maximum price, 67-68, 71, 74, 75-77, 122, 123, 124, 125, 126, 128, 131, 133, 134, 137, 189, 268
    - target cost, 68, 72, 74, 75, 87, 119, 124, 126, 128, 150
- See also *Contracts Co-ordinating Committee, Costing, Insurance, Patents, Prices, Profits, Progress payments, Sub-contracts, Treasury Inter-Service Committee*
- Contracts Co-ordinating Committee (C.C.C.), 25-27, 61, 63, 100, 120
  - Accountants' Sub-Committee, 25-26
  - General Purposes Sub-Committee (G.P.S.C.), 27, 38-39, 46-47, 53
  - Sub-Committee on the control of prices and profits (Bovenschen Committee), 86, 229
  - Works Sub-Committee, 27
- Cooper, Mr. A. Duff (later Lord Norwich), 13
- Copper, 143
- Corvettes, 110, 111
- Cossor, A. C., Ltd., 59n
- Costing, 4, 162, 170, 175-176, 242, 288, 290
  - arrears of, 76-77, 232
  - batch costing, 79, 117, 118, 119, 122
  - current costing, 80-81, 125, 126, 129

Costing, *contd.*

post-costing, 68-69, 71, 75-77, 78, 107, 108-109, 110, 114, 117n, 123, 125, 126, 128, 129, 130, 131, 133, 134, 136, 211

technical costing, 69-70, 77-79, 96, 98, 115, 121, 123, 125, 126, 129, 131, 138, 211

—*See also Prices, Profits*

## Cost-of-living index, 159, 160

## Cotton, 259

Cotton Control, 134, 144

Cotton Importers and Distributors Ltd., 144

manufacture, 134, 162, 169

raw, 41-42, 143-145, 159, 169

—*See also Utility cloths*

## Cruisers, 107, 108, 109

## Defence Loans Acts, 6-7

Defence Regulations, 43, 51, 53, 57n, 77, 196n, 221, 227n, 265-266

Deloitte, Plender, Griffiths & Co., 118, 171

Demobilisation outfits, 135-136

Depreciation, exceptional, tax relief for, 203

Destroyers, 36, 108, 109

Discounts, 38, 69, 96, 125, 126

—*See also Rebates and refunds*

Distilling machinery, 96

Douglas, Mr. F. C. R. (later Sir Francis), 88n

Dry Dock Owners' and Repairers' Council, 139, 140, 141

## East Africa, 42

Economic Policy Committee, 152, 218

Economic warfare, 40

*Economist, The*, 228, 233n, 236n

Egypt, 42

Electric Lamp Manufacturers' Association, 38

Electrical and Musical Industries (E.M.I.) Ltd., 59n

Electricity charges, 159n, 216-217

Electricity supply, 215-217

Electricity (Supply) Act, 215n, 216n

Embodiment-loan, 97, 121, 194

—*See also Free issues*

Emergency Powers (Defence) Act, 170n

Engineering Employers' Federation, 77

English and Scottish Steel Makers' Joint Association, 73

Estimates Committee, 25, 26, 72, 95n

*Evening Standard*, 13n

*ex gratia* payments, 29, 181

Excess Profits Tax (E.P.T.), 84-86, 88, 103, 104, 108, 140, 153, 172, 189-190, 192, 231, 234, 236, 242, 280, 284

Exchange Requirements Committee (E.R.C.), 21-22

—*See also Foreign exchange*

Exchequer and Audit Departments Acts, 28

Expenditure of Government, 233n, 248, 252-253, 261-262

Experimental stores, 181

## Fairey Aviation Co. Ltd., 200

*Fairplay*, 35n, 106n

Federation of British Industries (F.B.I.), 62, 189, 194

Ferranti Radio Ltd., 59n

Fertilisers, 159, 161, 168

Finance Act (1939), 84n

Finance no. 2 Act (1939), 84n, 203n

Finance Act (1940), 84n

Finance Act (1941), 203n

Finance Divisions 1-4, 6, 11, 12-13, 17-18, 22, 34, 188

Financial control, 4, 5-24, 28, 31-33

—*See also Parliamentary control over expenditure, Public Accounts Committee, Treasury, Treasury Inter-Service Committee*

- Financial policy, 229-243  
 —*See also Capital, Financial control, Foreign exchange, Inflation, Prices, Profits, Rebates and refunds, Subsidies, Treasury*
- First Lord of the Admiralty  
 (Mr. A. V. Alexander), 108  
 (Mr. W. S. Churchill), 107  
 (Mr. A. Duff Cooper), 13
- Food, purchases of, 22, 30
- Foreign exchange, 21-22, 30, 73, 146, 192
- Free issues, 124, 125, 126, 128, 193-194  
 —*See also Embodiment-loan*
- Fuel oil, 159
- Fuses, 128-129
- Gas charges, 159n
- Gas Supply, 223
- General Electric Co. Inc., 59n
- General Electric Co. Ltd., 59n
- Gibb, Sir Alexander, and Partners, 147-148
- Gilbert, Sir Bernard, 88-89
- Gloster Aircraft Ltd., 200
- Group schemes, 97, 124-125, 126
- Guns, 10, 122, 126-128
- Handley Page Ltd., 200
- Hardman Lever Committee, 118
- Harland & Wolff Ltd., 126
- House of Commons debates, 242-243
- Hurstfield, Mr. J., 42n
- Imperial Chemical Industries (I.C.I.) Ltd., 50n, 154, 155-156, 169, 190-191
- Import Duties Advisory Committee (I.D.A.C.), 163, 167
- Imprest accounts, 190-191, 292
- Income tax, 203, 279, 280, 284, 285, 286
- Incomes, personal, 241  
 —*See also National income and expenditure*
- India, 42, 144
- Industrial costs, 240-241
- Industries and Information (Records) Order, 101
- Industry, financial position of, 235-238, 241-242
- Inflation, 160, 238, 239, 241-242
- Insurance, 30, 44-50, 282, 290-291  
 Civil Disturbance Risks, 45  
 King's Enemy Risks, 45-47, 268-271
- Interest rates, 182, 209, 224, 235-236
- Iron and steel, 161, 174  
 Anti-glare Fund, 164  
 Central Fund, 163-166, 169  
 Control, 143, 163, 166, 174  
 prices, 114, 158, 159, 163-167, 169, 238-239, 259  
 Prices Fund, 164-166, 167  
 profits, 164-166, 175, 176-177  
 —*See also British Iron and Steel Corporation, British Iron and Steel Federation*
- Italo-Ethiopian War, 68
- Japan, 41, 158
- Kerosene, 159
- Knox, Colonel Frank, 56
- Lead, 143
- Leather, 159, 161

- Lend-lease, 17, 42, 56, 144, 146, 159-160, 165, 191, 247  
 —See also *Mutual aid*
- Liability for War Damage (Miscellaneous Provisions) Act, 45
- Light alloys, 157, 171-174, 235, 238
- Light Metals Control, 174
- Linoleum, 131
- Liverpool Cotton Association, 144
- Loans, 182, 183, 196, 222-224, 256  
 —See also *Interest rates*
- London Salvage Association, 49
- Lord President's Committee, 23, 159, 169
- Low Walker Shipyard, 113
- Machine Tool Control, 177
- Machine Tool Trades Association, 69, 178
- Machine tools, 21, 97-98, 146-147, 170, 177-179, 207, 210, 247
- McLintock Agreements  
 first, 60, 87, 117-118, 200-203  
 second, 61, 87-88, 89, 90, 118-119, 120
- McLintock, Sir William, 117, 118, 200
- Magnesium, 157, 169
- Malta, 68, 72n
- Management fees, 150-156  
 —See also *Agency factories*
- Manchester Cotton Association, 144
- Manchester Guardian*, 238n
- Manpower, 21
- Marconi's Wireless Telegraph Co. Ltd., 59n
- Merchant converters, 134
- Merchant ships, 198, 207, 254  
 contracts, prices, and profits, 111, 112, 113-117  
 insurance of, 48-49
- Merchants' commissions, 144-147
- Metropolitan-Vickers Ltd., 59n
- Minesweepers, 184, 185n
- Minister of Aircraft Production, 221, 222
- Minister of Supply (Dr. L. Burgin), 61-62
- Ministry for Co-ordination of Defence, 69
- Ministry of Aircraft Production, 1, 19, 29n, 39-40, 85, 97, 162, 169, 171, 172, 173, 196, 220, 223, 224, 261  
 agency factories, 37, 152-156, 219, 226, 250, 255-256  
 Air Supply Board, 18  
 Aluminium Control, 22  
 capital assistance schemes, 206, 209-210, 211, 250, 255-256, 277-286  
 Capital Finance Division, 18  
 Central Radio Bureau, 58  
 competitive tendering, 37  
 contracts, 36, 37, 38, 64, 74, 76, 77, 78, 79, 98, 119-122, 135, 138, 185, 187, 188, 232, 233n, 267  
 delegated authority for expenditure, 16-17, 18  
 insurances, 46-47  
 patent policy, 53-54  
 Permanent Secretary's Department, 157  
 profit rates, 89, 90, 91-92  
 sub-contracting, 98-99, 100, 101, 102, 103, 104, 267  
 —See also *Aero-engines, Air Ministry, Aircraft, Airframes, Light alloys, Light Metals Control, Minister of Aircraft Production*
- Ministry of Fuel and Power, 40
- Ministry of Labour and National Service, 23
- Ministry of Munitions, 60, 67, 70, 217n
- Ministry of Production, 22-23
- Ministry of Shipping, 48, 113  
 —See also *Ministry of War Transport*
- Ministry of Supply, 1, 15, 39, 97, 143, 144, 145, 146, 147, 148-149, 150, 159, 160, 162, 167, 168, 169, 174-175, 192, 195, 197, 203, 214, 215-216, 219, 222, 224, 233n, 236, 247, 261  
 agency factories, 80, 81, 153-156, 191, 219, 226, 251, 257-258

- capital assistance schemes, 206, 210-211, 226, 251, 257-258  
 contracts, 36, 38, 42, 64, 65, 74-77, 79, 80, 91, 123, 124, 126, 127, 129, 131, 133-137,  
 138, 183, 184, 185, 186-187, 189, 232, 267  
 delegated authority for expenditure, 16-17  
 Director of Wool Textile Production, 133  
 Directorate of Disposals, 2  
 Finance Division, 178  
 Home Flax Production Scheme, 221  
 Home Grown Timber Department, 221  
 Industrial Companies Supervisory Board, 222  
 insurances, 40-47  
 Machine Tool Department, 23  
 Munitions Production Division, 80  
 overpayment of contractors, 189  
 patent policy, 52n, 53-54  
 Production Branches, 193, 220  
 profit rates, 89, 90, 91  
 Raw Materials Department, 18, 40-42, 79, 142-146, 157, 161, 191-192, 193, 206,  
 210, 220, 223, 257-258  
 Raw Materials Finance Branch, 18, 191  
 Special Adviser to the Director of Finance (Production), 80-81  
 sub-contracting, 101, 102, 103-104, 267  
 —See also *Machine tools, Minister of Supply, Ministry of Supply Act, Raw materials, Royal  
 Ordnance Factories, War Office*  
 Ministry of Supply Act, 43, 77, 263-264  
 Ministry of War Transport, 140  
 —See also *Ministry of Shipping*  
 Ministry of Works and Buildings, 147, 148  
 —See also *Ministry of Works and Planning, Office of Works*  
 Ministry of Works and Planning, 39  
 —See also *Ministry of Works and Buildings, Office of Works*  
 Molasses, 143, 159, 161n  
 Morris Motors Ltd., 124  
 Motor spirit, 159  
 Motor vehicles, 42, 125-126  
     spare parts, 125-126  
 Munich Agreement, 10  
 Murphy Radio Ltd., 59n  
 Mutual aid, 58, 140  
 —See also *Lend-lease*
- National Arbitration Tribunal, 78  
 National Factories, 3, 217, 220  
 National Fire Service (N.F.S.), 132  
 National income and expenditure, 235, 237  
 Naval and Military Works Acts, 7  
 Naval auxiliary vessels, 111-112, 116  
 Navy Estimates, 7  
 New Zealand, 41  
 Nitric acid, 169  
 Non-ferrous metals, 64, 143, 159, 259  
 Nuffield Mechanization and Aero Ltd., 124  
 Nursing services, 132
- Office of Works, 8, 25, 29, 147, 182  
 —See also *Ministry of Works and Buildings, Ministry of Works and Planning*  
 Overall trading results, investigation of, 81, 100-105  
 Overpayment of contractors, 193, 196  
 Overriding orders, 97, 121
- Packard Co., 56  
 Palmer, Sir William, 161  
 Paper, 23, 159, 169-170  
 Paper Control, 64  
 Parent firms, 97, 124, 126



- Parliamentary control over expenditure, 4, 5, 7, 8-9, 20-21, 28, 29  
 —See also *Estimates Committee, Public Accounts Committee, Select Committee on National Expenditure*
- Patent Interchange Agreement, 57-59
- Patents, 44, 50-59, 272-274, 291, 293
- Patents and Designs Acts, 51-53, 55, 57n, 272, 273, 274
- Paymaster General, 191
- Peru, 42, 144, 192
- Pethick-Lawrence, Mr. F. W. (later Lord), 242, 243
- Plender, Lord, 118
- Post Office, 8, 25, 39
- Postan, Professor M. M., 3n, 10n
- Power Jets Ltd., 221
- Power Jets (Research and Development) Ltd., 221
- Price agreements, 96, 121
- Prices  
 comparison of, 69, 71, 72, 79, 107, 109, 122, 125, 133  
 controlled, 83, 121, 133, 157-179  
 negotiation of, 1, 3-4, 68-71, 83, 92, 117, 121, 122, 230n  
 policy, 23, 27, 28-29, 31-32, 85, 159-161  
 price clause, 77  
 priced schedule of quantities, 75  
 provisional, 71, 267  
 reductions where Government capital used, 211  
 standard, 72, 74, 133, 134, 157  
 variation clauses, 73, 77  
 —See also *Board of Trade Wholesale Price Index, Contracts, Cost-of-living index, Discounts, Profits*
- Principal Supply Officers' Committee, 2-3, 132
- Private manufacture of and trading in arms, Royal Commission on, 220
- Production Agreements, 97-98
- Production Branches, 3, 4, 17-18, 22, 24, 27, 80, 123, 241
- Production Council, 186
- Profits, 63, 126, 130, 133, 134-135, 147, 162, 164-166, 171, 172-173, 175, 176-177, 178-179, 193, 232, 235, 241-242  
 on aircraft, 91-92, 117-118, 119, 138  
 control over by contracts, 66, 68, 74, 75, 82-83, 93  
 and incentive, 82, 242  
 method of calculating, 94  
 pooling schemes, 162-168  
 quantitative standards of profit rates, 86-90, 111, 229  
 rates intended and rates realised, divergence between, 91-93  
 on shipbuilding and ship repairs, 107, 108-109, 110-112, 115, 116, 117n, 139-141  
 on sub-contracted work, 96, 98-99, 100, 111, 120, 139, 140, 141  
 —See also *Agency factories, Capital, Contracts, Costing, Excess Profits Tax, Prices, Rebates and refunds, Subsidies*
- Progress payments, 19, 45, 181-182, 184-190, 193, 200, 231, 234, 236
- Proprietary articles, 34, 126
- Public Accounts Committee (P.A.C.), 2n, 6, 8, 13, 20, 28, 29n, 36n, 64n, 69n, 70n, 72n, 74n, 75, 76n, 78n, 80n, 85, 86n, 88, 89, 91, 92, 93n, 99n, 100, 104n, 106n, 107n, 108n, 109n, 111n, 112n, 113n, 118n, 119n, 121n, 124n, 126n, 129n, 130, 131n, 132n, 138n, 141n, 143, 144n, 145n, 146n, 147n, 148n, 149n, 156n, 158n, 160n, 161, 162, 163n, 165n, 166n, 167n, 170n, 171n, 174n, 189n, 198n, 232
- Purchase tax, 227
- Purchasing agents, 40, 142-146
- Purchasing programmes, 17, 22
- Pye Radio Ltd., 59n
- Radar, 56, 58-59
- Radio Corporation of America, 59n
- Railway charges, 159
- Raw materials, 17, 21, 22, 30, 40-42, 73, 133, 157, 168, 192-193, 194, 214, 233-234  
 Controls, 147, 160, 161, 168, 191, 257  
 —See also *Ministry of Supply*
- Rayon, 135
- Raytheon Manufacturing Co., 59n

- Rebates and refunds, 39, 102-104, 126, 170-177, 239  
     —*See also Discounts*  
 Relief supplies, 137  
 Rents, 247  
     in capital assistance schemes, 209-211, 278-280, 281, 283-286  
     restricted, 159n  
 Repairs, 42, 48, 107, 111, 137-141  
 Residual values, 205-206, 211-212, 215  
 Road making plant, 97  
 Road transport charges, 159n  
 Rolls-Royce Ltd., 56  
 Rootes Securities Ltd., 151  
 Royal Air Force (R.A.F.), 226  
     expansion of, 10, 199, 200  
     uniforms for, 132  
 Royal Army Ordnance Corps (R.A.O.C.), 138, 226  
 Royal Dockyards, 72, 107, 109, 197, 219, 249  
 Royal Electrical and Mechanical Engineers (R.E.M.E.), 138, 226  
 Royal Ordnance Factories (R.O.F.), 2, 7, 11, 15, 17, 39, 80, 81, 122, 123, 124, 126, 128,  
     148, 155, 197, 219, 220, 225, 226, 251, 257-258  
     Royal Arsenal, Woolwich, 126  
     R.O.F. Chorley, 182  
 Royalties  
     —*See Patents*  
 Rubber, 158
- Secretary of State for Air, 60, 118  
     (Lord Swinton), 200  
     (Sir Kingsley Wood), 220-221  
     —*See also Air Ministry*  
 Select Committee on Estimates  
     —*See Estimates Committee*  
 Select Committee on National Expenditure (S.C.N.E.), 1, 21, 23-24, 26, 27-28, 32-33,  
     66n, 67n, 68n, 71n, 74n, 75n, 76n, 78n, 88, 89, 90n, 100, 115n, 116, 157, 158n, 163n,  
     165n, 167n, 177n, 232, 238-239  
 Shells, 72, 122, 128-129  
 Shipbuilding, 79, 80, 106-117, 198-199, 207, 254  
 Shipbuilding Conference, 35, 106, 110, 112-113, 114-115  
 Shipping freights, 159  
 Ships  
     H.M.S. *Dido*, 107n, 127  
         *Fiji*, 109, 127  
         *King George V*, 35, 107n, 198  
         *Nelson*, 106n  
         *Prince of Wales*, 35, 107n  
         *Rodney*, 106n, 198  
     S.S. *Majestic*, 13  
 Short Brothers (Rochester and Bedford) Ltd., 122, 222  
 Silicon, 157  
 Simmonds Aerocessaries Ltd., 29n  
 Sloops, 107  
 Small arms, 122  
 Society of British Aircraft Constructors (S.B.A.C.), 49, 87, 117, 118, 120, 200, 201  
 South Africa, 41  
 Southwick shipyard, 113  
 Sperry Co., 59n  
 Standard Telephones and Cables Ltd., 59n  
 Steel, high-speed, 192  
     —*See also Iron and Steel*  
 Sterling area, 17, 22  
 Sub-contracts, 53, 54, 60, 63, 81, 95-105, 124, 125, 138, 139, 140, 174, 176, 182, 183,  
     185-186, 194, 267-268, 273, 276, 280-281, 291, 294  
     —*See also Contracts, Costing, Overriding orders, Production agreements, Profits, Rebates and  
         refunds*  
 Submarines, 107, 108, 109  
 Subsidies, 168-170, 194, 227, 239-240

- Sulphate of ammonia, 168  
 Supply Board, 1  
 Supply Branches, 1  
 Sweden, 64  
 Swinton, Lord, 200
- Tailors, multiple, 136  
 Tankers, 114, 115  
 Tanks, 30, 97, 122, 123-125, 127, 138, 181  
 Textile stores, 37, 74, 131-137  
 Timber, 145-146, 158, 159, 168, 170-171  
*Times, The*, 238n  
 Tin, 41, 158  
 Tizard mission, 56  
 Torpedoes, 122  
 Trade Associations, 38-40, 131, 133  
 Trawlers, 110, 111  
 Treasury, 6, 8-17, 20, 22, 23, 24, 25, 26, 28-29, 30, 32-33, 34, 45, 46, 48-49, 53, 54, 61, 73, 75, 76, 85, 88, 89, 93n, 112, 139, 147, 151, 154, 157, 158, 159, 170, 172, 181, 182, 183, 184, 185, 186, 191, 192, 193, 195, 196, 199, 205, 207, 213, 219, 222, 223, 224, 230n, 234, 240  
     Capital Issues Committee, 227  
     Committee on Contract Procedure (1939), 72, 74, 118  
     Sub-committee on Contract Procedure (1936) (Robinson Committee), 86-87, 95-96, 217, 230  
 Treasury bills, 233  
 Treasury deposit receipts, 233, 260  
 Treasury Inter-Service Committee (T.I.S.C.), 7-10, 11, 14, 15, 16, 17, 19, 22, 26, 29, 30, 59-60, 61, 73, 87, 96, 97, 154, 192, 204, 217, 230  
 Tubes, cold-drawn, 176-177
- Underwear, women's, 135  
 Uniform clothing, 37n, 42, 74, 131-132, 134-135  
 United Molasses Co. Ltd., 143  
 United States of America, 42, 56-59, 64, 146, 185, 191, 192, 247  
     Office of Scientific Research and Development, 58  
     repairs to ships of, 140-141  
     Secretary of the Navy (Col. F. Knox), 56  
     uniform clothing for forces of, 132, 135  
     —See also *Lend-Lease*, *Mutual aid*
- Utility cloths, 136, 169
- Vauxhall Motors Ltd., 124  
 Vickers-Armstrongs Ltd., 50n, 99, 123, 124, 126, 127  
 Vote of Credit, 20, 21, 158, 248
- Wage policy, 4, 77-78, 160, 241  
 War Cabinet, 21  
 War damage  
     loans for repair of, 224  
     War Damage Contributions, 93  
     —See also *War risks*
- War Office, 1, 15, 40, 128, 219, 232, 262n  
 agency factories, 155, 190-191, 218, 225, 251  
 Army Council, 3  
 capital assistance schemes, 204, 205, 206, 251  
 competitive tendering, 35, 37-38, 128  
 contracts, 3, 60, 62, 71, 72, 74, 87, 122, 123, 125-127, 128, 131, 132, 181, 184, 206  
 delegated authority for expenditure, 16-17  
 Department of Munitions Production, 3  
 Director of Army Contracts, 3, 40  
 financial control, 12  
 patent policy, 52n  
 sub-contracting, 96  
 —See also *Army*, *Army Estimates*, *Ministry of Supply*, *Royal Ordnance Factories*

- War risks
  - War Risks Insurance Act, 45, 46
  - War Risks Insurance Office, 49
  - See also Insurance, War damage*
- Warships, 198
  - contracts for, 54, 62-63, 72, 80, 91, 106-113, 181
  - insurance of, 47-49
  - repairs to, 138-141
  - See also Royal Dockyards, Ships*
- Water supply, 223
- West Africa, 42
- West Indies, 42
- Western Electric Co., 59n
- Westinghouse Electric and Manufacturing Co., 59n
- Wholesale Clothing Manufacturers' Federation, 134-135
- Women's Auxiliary Air Force (W.A.A.F.), 132
- Women's Land Army (W.L.A.), 132
- Women's Royal Naval Service (W.R.N.S.), 132
- Women's Voluntary Services (W.V.S.), 137
- Wood, Sir Kingsley, 220-221
- Wool, 259
  - Control, 133
  - manufacture, 133
  - raw, 41, 133, 158, 159
- Works services, 68, 87, 181
- Worsted manufacturers, 133
- Wrought Light Alloys Association, 171, 173

Zinc, 143, 240











