

The Beginnings of Economic Planning
in the United Kingdom

In the two lectures that I shall be giving as Marshall Lecturer to-day and tomorrow I propose to talk about the beginnings of economic planning in this country.

To-day I propose to give some historical account of the first attempts at planning. Tomorrow at the end of my second lecture I propose to try both to draw some lessons from our earlier attempts to plan and to ask how far these lessons have in fact led in recent years to improvements in our planning or how far, on the other hand, those responsible have failed to learn from the earlier experience.

Peace-time planning, in any serious sense, began in the year 1947. It is true that over the years 1945-1947 the Labour Government continued to use for the purposes of administration many of the instruments of the war-time economy. (about these I shall be speaking in a few minutes). And in those years the Economic Section of the Cabinet Office performed valuable coordinating functions. But it was not until we suffered in 1947 combined effects of the break-down of our attempt to fulfill our obligations to provide convertibility of sterling and of the fuel crisis of that year that we set up a formal planning organisation, under Sir Stafford Cripps as Minister of Economic Affairs, and more directly under Sir Edwin Plowden as Chief Economic Planner. The purpose of this organisation, as described by Sir Stafford Cripps in the House of Commons, was to co-ordinate the work of the various Departments, both long-term and short-term, in the economic field. It was to be formed by drawing into a central organisation persons representing their own Ministries and giving liaison with them. But with the addition of a small central core.

May I emphasise that apart from the longer-term work that I shall be describing, we were also responsible for the short-term planning, for writing the 1948 Economic Survey and for a great deal of incidental day by day integration of immediate decisions into the longer-term thinking. One cannot isolate the long-term from the short-term. If you attempt to do so all the decisions required by long-term considerations will have been wrongly taken on the basis of short-term considerations.

We were given about nine months to do the long-term work - not very long if one has in mind that virtually none of the background data and

none of the material that goes into an input/output table was in existence.

The entire Central Economic Planning Staff, as we were called, consisted of no more than some twenty people. Three of us who were principally concerned with the preliminary drafting of the long-term plan had come straight from Cambridge. Our task was to work with the responsible departments - the Treasury, the Board of Trade and the Ministry of Supply, the Ministry of Labour, the Ministry of Food and the Ministry of Agriculture, in particular, in establishing the main outlines of an economic policy for the United Kingdom.

At that time the United Kingdom's experience of economic planning was confined to having operated planned economies in the two wars of this century. The instruments that we had to hand and our instinctive thinking about many of the problems of running a planned economy derived from our war-time experience, and it was natural that we should build on it. I have always felt that one of the questions economists should ask themselves is why there should be almost complete unanimity that a war-time economy should be a controlled economy and almost equally complete disagreement as to whether a peace-time economy should be planned.

It is not - I would suggest - because one is fighting that the economic system needs to be different. Nor do I think one can say that in war-time the objectives are unanimously agreed. Anyone who lived within ear-shot of the disputes over the relative importance of the Battle of the Atlantic and the Big Bomber Force - the issues since popularised by Sir Charles Snow - would hardly define a war economy as the use of scarce means for agreed ends. It is much truer, I suggest, to say that war requires the very rapid re-deployment of resources to meet changed and changing objectives and that that can only be done with a measure of planning and control and direction.

When one has the same needs for rapid redeployment in a peace-time economy I think it is not irrelevant to ask whether the answer should sometimes be the same.

Since we were basing our actions on war-time instruments and our thinking was partly conditioned by war-time experience, I hope you will forgive me for spending a few minutes on that experience.

The essential elements of war-time planning had been evolved progressively as the war went on and reflected its various stages.

Seen from the economic point of view, a war economy runs through four broad phases. In the first you create the capacity for the making of munitions. In the second you build up the initial equipment for the divisions, squadrons or other units. In the third you need do no more than replace wastage and balance up your equipment. In the fourth, as the end of the war comes in sight, you can begin to run down your stocks. In our own case, the first stage was in part but only small part completed before war broke out. In this phase capacity is the limiting factor. In the later stages, if you have planned right, manpower is the limiting factor.

In our case manpower was in effect the limiting factor from 1940 onwards. We had 1,700,000 unemployed at mid-1938. The number was down to 700,000 by mid-1940 and to 200,000 by mid-1941.

Before I begin to give you some account of the essentials of the war-time planning let me make certain things clear and remove certain misconceptions.

War-time planning was not (as now seems generally to be imagined) conducted in terms of monetary valuations of resources. In the military field, including munitions production, the essential planning was in terms of the claims on manpower - our scarcest resource. But planning had to take account also of materials and shipping space. All three of these, manpower, materials, shipping, were budgetted and allocated. We allocated also the limited resources available for building.

In the civilian field rationing and the levels of rations for food and clothing particularly were in many respects more important than the levels of money incomes.

The overall estimates of the aggregate of national income lead an important part, of course, in two respects. They helped us to see how far resources could be directed to the war effort without intolerable reductions of real consumption. They helped us to control inflation. Keynes' important study of How to Pay for the War helped in these strategic ways. But it was not the basis of the planning system.

Planning, I have said, was conducted during the last three years of the war primarily in terms of manpower. May I describe in brief outline how it was done? Every six months there was a manpower review

The Chiefs of Staff and the planners of the three fighting services working under them made operational plans in some detail and estimated the forces to be deployed and the manpower requirements of the services to cover those operations and to make the casualties and wastage that was to be expected. Other branches of the service departments estimated the munitions requirements to mount these activities.- the quantities of tanks, guns, aircraft, ships, ammunition and other stores. These requirements in turn were examined by the supply departments - the Ministry of Supply for the Army, the Ministry of Aircraft Production for the Air Force, and the Controller's Department for the Navy - and turned by them into manufacturing programmes.

These departments then estimated, in consultation with the Minister of Production, the manpower requirements to fulfill the manufacturing programmes, and from these estimates it could be seen what additions to the existing allocations of manpower might be required, or in some cases what numbers of workers might become available for transfer to other activities.

At the same time that these manpower requirements were being estimated, similar estimates were prepared in respect of civilian requirements by the Board of Trade and by the Ministry of Agriculture and for building by the Ministry of Works.

At the same time that these demands for manpower were being estimated, the Ministry of Labour and National Service prepared estimates of the supplies of manpower likely to become available - the size of the age group entering the labour market, the numbers of others who could be drawn into activity, retraining casualties who might be fit for civilian work and the like. They estimated also the losses to the labour force from death, sickness, old age and other causes. Thus at each review it was possible to set probable demands against probable supplies.

It was the task of a small committee drawn from the Ministry of Labour and National Service on the one hand and from the Cabinet Office and Ministry of Production on the other to examine these estimates and to see what could be done to secure a balance. Initially the demands were often one million or more greater than the potential supplies. By paring estimates something could be done towards achieving the necessary balance - over-insurances, exaggerated estimates of probable casualties, pessimistic estimates of productivity trends

could be eliminated. But not infrequently the process demonstrated that some planned operation must be curtailed or postponed, or that the expansion of the Air Force could not be achieved so rapidly as had been intended.

The final processes of adjustment were always a matter of Cabinet decision. But in working out an acceptable solution, Sir John Anderson, in a personal capacity, played a central part.

It is interesting to look at this for a moment not only (as I am concerned to do) as a technique of planning but also because subsequent historical research has shown that it was precisely here that our centralised war economy was incomparably more efficient than that of the Nazis with their rival bosses, where Speer as Minister of Production never achieved even reasonable integration with Sauckel as Minister of Labour, the Gauleiters, Himmler, Hitler himself and everyone else who was butting in.

But what I want to make clear is that our own system depended on a number of instruments that had been progressively designed and improved.

- (1) Control of the call-up under Compulsory Military Service with a complete system of directives regarding the reservation of certain classes of essential workers and a centrally agreed policy on which these reservations were based and determined.
- (2) The Power of Direction of Labour (the civil equivalent of compulsory call-up). This very seldom had to be used, but was available and known to be.
- (3) A system of first preferences and second lower preferences to guide the officials of the Ministry of Labour and National Service in steering available labour supplies towards the points of greatest need. These first preferences and the rest were decided for munitions by the Minister of Production.
- (4) A recognition that priorities were bad instruments. What you need is not to give all labour to "fighters" or "tanks" or whatever it may be, but a temporary advantage. Priorities at the end of the war were given only for short periods and to help to bring about desired changes.

- (5) A Control of Engagement Order that made it certain that all vacancies would be filled through the Ministry of Labour and that firms were not free to poach labour wherever they might work.
- (6) You have got to have a system by which you know all the time what is happening and to be in a position to help what is lagging and to stop helping what is already complete and beyond the need of help. You must, that is to say, have adequate and quick statistics.

Fortunately by 1942 and later we had. And perhaps it is appropriate I should say why we had.

Walter Layton, who died a few days ago and was one of the group that Alfred Marshall attracted to build up Cambridge economics in the early years before 1914, had been in the Ministry of Munitions, dealing with manpower problems in the later years of 1914-8.

In 1939 he impressed on one or two of us in the Cabinet Office the need for much better manpower statistics if we were to use our manpower effectively. I have always felt that without Walter Layton's intervention in 1939 we might have found ourselves without the ready-made instrument which was so essential by 1942. Certainly the Ministry of Labour would not have created it for themselves so soon.

One of their senior officials, the then Permanent Secretary (as some of us have always remembered) described the L Returns as being collected "to satisfy the prurient curiosity of the Cabinet Office", and for no more useful purpose. By 1942 we could not have managed without them.

I have taken the case of labour only as an example. The same methods, very broadly, were applied to raw materials. But they did not in the same degree represent both a macro-economic and a micro-economic control. What I want to bring out is that war-time planning, in a nation that was sufficiently limited to accept authoritarian control, was based on a system that was micro-economic as well as macro-economic - which was in some senses primarily micro-economic.

In war-time it is an essential of your planning that you recognise the need for very rapid, very dramatic changes of your economic structure.

This means implicitly that you have to try to assist the making of these structural changes.

You cannot do this solely by macro-economic measures. You have got to be watching all the time the adequacy of the micro-economic changes - to have statistics adequate to your purpose.

And in war-time we built up a tradition of relative instruments of policy to objectives of policy and of always assuring ourselves that our instruments were fully adequate to our objectives.

We learned one other thing also that I would stress - the importance of foreseeing the strains that were going to come onto the economy. When we foresaw our problems sufficiently in advance, we could usually deal with them. It was when - as in the case of the unexpected delays in releasing shipping used for North African landings in 1943 - there was an unexpected problem of adjusting to reduced imports, that we ran into more serious difficulties.

In these war years we had learned by the hard way of experience some of the essentials of planning.

- (1) That if you want to plan something you must create all the essential instruments for planning it.
- (2) That it was no use creating a list of objectives and just hoping that somehow they would come about.

When we came to peace-time planning in 1945-7 most of this war-time system was still in existence.

Quite apart from that, most of us who had been concerned in building up the war-time system still remembered our war-time experience. If something required to be done we asked ourselves quite instinctively what instruments were required to do it.

But our first and central task was

to identify the problems
to see why they had arisen
to see what the possible solutions might be
to see what was involved in achieving the
solutions

- (1) in terms of the changes of structure -
and particularly the deployment of manpower.

(2) in getting the incentives right.

This seems to me so obvious that I feel some diffidence in even mentioning it to such an audience as yourselves. But it is precisely in clarity over some of these fundamental questions that the recent National Plan seems to me particularly to reveal its inadequacies. Of that I shall want to say more at a later stage.

When we came to plan in 1947 there were four major problems which we identified and made the objectives of economic policy for the next five years ahead. (am quoting)

- (1) to secure a balance of payments by means which would permit us to achieve the highest possible national income (i.e. by means other than severe inflation).
- (2) to restore the nation's capital equipment and raise it to a state in which it could afford a firm foundation for further development.
- (3) to bring consumption standards back towards the pre-war levels as rapidly as might be permitted by increasing productivity and was consistent with the first two objectives.
- (4) to establish an efficient and smoothly working economic system in which the incentives to produce and consume would operate with no more control and compulsion than was absolutely necessary to the achievement of the Government's economic and social objectives.

I want to say something about each of those. But before I do so I want to talk in broader terms about what we meant at that stage by an economic plan.

I think the last of the objectives that I have just read out will absolve us from the criticism that we were trying to maintain the authoritarian straight-jacket of a rigidly planned economy. We did not - so far as I can remember - devote a lot of time in late 1947-8 to philosophic discussions of alternative lines of planning. The Civil Service is not a body that is well-suited to philosophic argument, though many members of it would in fact be highly skilled

in such an activity. There had been, however, some serious thinking about the limits of democratic planning in the 1947 Economic Survey, to which I would refer you.

What I think we did in fact accept among ourselves was that our economic plan should be - what we called it in practice - "A Long-Term Survey". That its function was to identify the problems; to see what was involved in their solution; to see what structural changes were required; to see that the ordinary economic incentives were working to assist a solution; to see how the resources and powers of a government could best be deployed to help the achievement of a solution.

In one sense we were engaged in what has since come to be called "indicative planning". We were partly engaged in trying to see the pattern of future consumption, future exports and future levels of activity and to promote expansion where it was becoming clear that expansion would be needed. Mr. Harris's pioneering study of the prospective demands for steel and a work of collaboration with the bodies responsible for planning iron and steel production to remove what had become a principal bottleneck on our economy - and particularly on investment - is an example of this. But throughout the period of the preparation of the Long-Term Survey and after it was finished, I found myself constantly in consultation with economists and others in the various trade associations and other concerns that were helping to plan the expansions of particular industries. We were helping to create the general expectations on which other more detailed decisions could be based.

May I come back now to the problems that we identified? Our first objective we regarded as a solution of the problem of the balance of payments.

Remember for a moment the setting. In war-time we had sold foreign securities. We had incurred sterling debt. We had reduced our exports - partly as a result of the theology of Lend-Lease - to about 30% of their pre-war level. Keynes and his colleagues had secured us the American loan. But we had, in all sincerity, agreed with the United States authorities both during the war and in the course of the Washington Loan agreement to make sterling freely convertible at an early date.

We had, in our attempt to honour our obligations, run through our dollar resources, partly on our own account, partly in providing convertibility to others by August 1947 and were forced to abandon our undertaking to make sterling convertible into dollars.

One of my own first tasks when I joined the Central Economic Planning Staff in 1947 had been to attempt a rough calculation of what might be the consequences of attempting to live on our foreign earnings. My estimate had been that, with food supplies far more austere than any to which we had been driven in the war, we would be forced by lack of materials to employ them to face over three millions of unemployment.

In the end Marshall Aid came in the nick of time to save us from grave disaster. But we were faced then by a balance of payments crisis far more severe, far more fraught with danger of complete economic collapse than any that has confronted us in recent years.

If we were to deal with it effectively we had to understand its character. Was it a short-term, transitional phenomenon that could be overcome if we could be given sufficient time to get back into normal conditions? Or was it a long-term phenomenon which required for its solution a major structural redeployment?

The analysis of these problems had, of course, been going on for a number of years before 1947. Some of us (Professor Meade and I among those here) had been engaged as early as 1941 in trying to see the expansion of exports that was desirable if we were to get a balance of payments. Others in the immediate post-war period (in particular Mrs. Humphreys, now a Fellow of Clare Hall) had tried to see the problems of expanding our exports in particular forms to particular markets. But I think it was some work that Mr. Berrill (while working in the Central Economic Planning Staff) did on the long-term trends of our imports and exports which most clearly brought out the structural character of the problems and the extent to which the economic problems of the great depression of the 1930's had been part of a great process of the emergence of the United States as the world's biggest exporter of manufactures, and the extent to which balance of payments pressures on ourselves, on France and other countries in the 1930's had resulted from this, leading on to the consequent need to adjust the whole structure of the British economy to these changing world conditions, a need that would have confronted us independently of the war.

That apart, we had to take account also of the long-term effects of the war - of the extent to which nations which hitherto had bought manufactures abroad had developed their own resources in war-time.

It was clear that it was likely to be extremely difficult in practice to achieve quickly the 50% increase of exports which we had set ourselves in the early days of the war, still less the 75% increase that we had been regarding as necessary by the time of the Washington Loan negotiations.

But my purpose to-day is not to discuss precise figures or even the economic judgements which lay behind our estimates, but to give you an impression of how we attempted to tackle things.

As I have been emphasising, we tried to identify and appraise the long-term problems, and then to see what was involved in solving them, and in the case of the balance of payments it seemed clear to us that a major structural adjustment was necessary.

May I turn secondly to the problem of restoring the nation's capital? During the war a large part - it has been estimated at 34% - of the resources devoted to our military effort had come from running down capital without replacing. The decline in the national capital from this cause was equal to about six year's net investment at the existing rate of 1948.

At the same time we had to be able to expand exports and required the capital equipment in our industries to enable us to do it. Thus the capital of 1938 was not enough. We needed to be able to absorb into employment the larger actually occupied population - the result of absorbing perhaps 1,200,000 of the 1,700,000 unemployed of 1938. We needed in all an addition to capital equivalent to something like nine year's net investment.

We had, that is to say, a very great urgency to increase the national capital and an inevitable scramble to do so. It was not a situation that could satisfactorily be left to be controlled by interest rates. There was a wide-spread shortage of goods of every kind. Prices, because of measures to restrain inflation, did not reflect scarcities. The short-term profitability, in money terms, of investment did not reflect the true profitability of the investment, even assessed in private terms on the most strictly laissez-faire basis - still less the desirability from a national viewpoint.

In these very abnormal circumstances it was inevitable that there should be some control over investment. There had, of course, been some measure of control not only in war-time but also in the first two years after the war. But it had not been severe enough and more investment was being started than was capable of completion and resources were being dissipated in unfinished projects. In 1947 a new, stronger and more rigorous control over investment programmes was introduced and an attempt was made to reduce the total of investment, in order to increase the volume of exports of capital goods. We had to learn the hard way the difficulties of reducing resources devoted to investment; in fact the chief short-term result was to reduce new projects, while speeding up the completion of those already in train.

But again what I am wanting to stress is that the attempt to plan investment was paralleled by the creation of an appropriate instrument to give effect to it. We relied for these purposes partly on the ability of the Investment Programmes Committee to scrutinise the investment programmes for which the various government departments were directly or indirectly responsible - partly on the system of building licences and the control that that gave us over permissions to start new projects.

But there was another aspect of this which, however familiar to the present generation, was not so familiar twenty years ago. The problem was not only that of limiting our attempted investment to our current investible resources. There was also the prior question of determining, on a longer-term basis, the desirable scale of investment, and integrating that decision into the whole plan. And this involved, clearly, not only the estimating of the volume of voluntary saving but also the problem of determining the volume of compulsory saving through taxation that it might be reasonable to assume.

The possibilities of achieving that integration were made somewhat easier in practice when the very unfortunate accident of Hugh Dalton's unthinking remark to a lobby correspondent on budget day led to his resignation and to Sir Stafford Cripps doubling the responsibilities of Minister of Economic Affairs responsible for planning and of Chancellor of the Exchequer. Cripps was able to appreciate the importance of forming a longer-term strategy over investment and acceptance of an obligation by the Chancellor to integrate his budgetary policy into a national policy of reconstruction and modernisation.

Thus one of the first stages of planning in 1947-8 was to get the agreement of the Chancellor as to the sort of levels of public expenditure and of investment that he thought he would be prepared to support with budgetary policy. Obviously a good deal of guess-work was necessary here. We had far too little experience as to what the levels of company saving and personal saving might be in the post-war world, and far too little experience of the repercussions of compulsory saving on personal saving. And obviously the actual level of budgetary saving in practice in particular years would have to be a matter of short-term decision in the light of experience regarding voluntary saving. But what is I think interesting and important is that it was Stafford Cripps in 1948 who first carried consciously into peace-time budgeting the concepts which Keynes had developed for war finance. Hugh Dalton - let me make it clear - had followed budgetary policies of large surpluses, designed less consciously and overtly to meet the needs to supplement savings. But there had not been a clear intellectual and practical integration of budgetary policy into a national investment policy. I would regard the clarification of the thinking about the relations of the long-term strategies and the short-term tactics as one of the important achievements of that period.

I have said earlier that the strategy underlying the long-term programme involved giving a first claim on our resources to the balance of payments and to the need to reconstruct our capital. What could be done for consumption and for public expenditure would have to depend on the growth of our resources.

Cripps did in fact greatly reduce some of the more unrealistic ambitions of his colleagues in the field of public expenditure and made it wholly clear that at that stage even the strong claims of housing, to take one example, had to be secondary to getting the economy viable externally and more productive internally.

I have always had a sneaking sympathy for Nye Bevan, whose bold plans for housing had to be massacred in 1947 and gave Harold Macmillan the opportunity to make a triumphant entry into successful politics four or five years later.

But in 1947-8 what could be done for consumption, public or private, depended on the probable total of available resources.

It was at that moment extremely difficult to forecast the growth of the gross national product. We were still under the shadow of the experience of the years following 1916 with their catastrophic early depression. We were still in the frame of mind in which Beveridge's target of 3% of unemployment, as representing "full employment in a free society" seemed optimistic after the experience of the 1930's. We had great difficulty, because of the difficulties of statistical measurement of war-time production and its linkage to peace-time production, in measuring what had really happened to productivity between 1930 and 1945. We found it difficult to know how far productivity would bound up if some of the temporary obstacles and bottlenecks of the moment were removed.

That apart, we were assuming a considerable redeployment of manpower so that the number of workers would be considerably increased in some activities and reduced in others. Allowance had to be made for the changes in productivity consequent on that.

I cannot myself claim anything more than a passive share in this part of the work. It was almost wholly Mr. Marris's responsibility - but like all Civil Servants we were working with others in the C.S.O. and other Departments, with their help and their criticism and such work is never quite the private property of anyone.

The planning calculations in this field were made roughly in this way.

- (1) A crude first guess was made of the growth of productivity and thus of resources.
- (2) Estimates were made of how we might use those resources: the shares of government expenditure, capital formation, exports (including commodity-wise estimates), consumption (including the distribution of consumption between commodities).
- (3) Necessary levels of activity in different industries based on our estimates of capital formation, exports, consumption.
- (4) The consequent manpower distribution.

- (5) Estimates of the extent to which we should be moving persons towards points of higher or lower productivity.
- (6) Estimates were made of the effects of
- (1) their movements and
 - (2) capital investment and
 - (3) progress on productivity in particular sectors.

An estimate of the growth of productivity in the economy as a whole.

- (7) Go back to the beginning and refine all the first rough calculations.

In the light of all this work, and of past experience, we assumed for our planning purposes that productivity per man-year would rise by 2 $\frac{1}{2}$ per cent per annum above the 1948 mid-year level. That rather brave estimate, based on this massive work by Mr. Marris, turned out to be very near the truth. But - as we foresaw - the available resources, when the balance of payments gap had been closed, would grow much more slowly - only by about 1 $\frac{1}{4}$ per year.

May I turn now to consumption standards?

In 1946 consumption per head in aggregate was about 5% below that of 1938 (in terms at least of the calculations we were then making). By 1948 it was probably no worse than 2% below. We hoped that by 1952 it would be slightly above pre-war.

But it was narrowly circumscribed by rationing and those whose clothes and other consumer durables were worn out with almost ten years of war and transition were naturally clamouring to be free to replace them. While restrictions on consumption had been accepted in war-time, they were much less acceptable three years later. In 1947 at least the proportions of consumers' expenditure which could be devoted to clothing and durables were considerably below those of 1938. From any considerations of humanity or politics, increasing consumption expenditures in some of these categories was immensely

important. But in macro-economic terms, the share of consumption almost certainly had to be reduced. What was in practice more important, if we were to find the good to be exported, it could only be done by restraining domestic consumption (Cripps in 1946 had tried to persuade Dalton to use purchase tax to help exports).

What this might mean for real consumption per head would clearly depend partly on the aggregate growth of Gross Domestic Product in practice but largely on the prospective volume of production of particular industries.

In particular consumption would depend on our success in solving the problems of the balance of payments and thus being able to buy food and materials and of re-expanding textiles and clothing.

It was these considerations which had led us in 1947 to a policy of expanding our own food supplies. And at the same time they reinforced our need to try to achieve a very considerable structural redeployment.

It is these problems of structural adjustment that I want to discuss now, and I shall discuss it in terms of the distribution of manpower.

If you go back to 1938, there were a little under 6½ million persons employed in manufacturing industries. They represented just under a third (32%) of the total working population and about 37% of the population actually in civil employment. Of these, 6½ million, about 1.6 million (or just about 1/4 of all engaged in manufacturing) were engaged in textiles and clothing. A little over 1 million persons were engaged in manufacturing goods for export - about one person in six engaged in manufacture. We needed to increase these by at least 500,000.

In the war years, despite the numbers in the armed forces, the total numbers in manufacturing were increased considerably. In 1943 there were some 20% more than in 1938 in manufacturing. But many of these were engaged on air-frame production and assembly, ammunition filling and all sorts of activities which left no usable peace-time equipment as a basis for future employment. By 1946 manufacturing employment was only some 3½% above its 1938 level - about as much as the rise of population.

To see the orders of magnitude involved we attempted, as I have said, to make long-term estimates of the levels of different industries to meet the home and export demands that we had estimated. Our estimates showed a need - if we were to meet our estimated home demands in full - for an increase of industrial production by about 38% above the level of 1938.

We estimated that this would involve having about 7 1/4 millions in manufacturing against the 6 1/4 or thereabouts of 1938 and about 7 million in 1947.

But the main problems were micro-economic and not macro-economic. At mid-1947 we had 90,000 fewer workers in textiles and 40,000 or so fewer in clothing than we believed to be really necessary. At the same time the agricultural policy required (as we then thought) an addition of 120,000 workers. The coal industry provided a quite different problem which does not appear from any figure of net change. It was in 1945 an industry of old men. It had been depressed and contracting throughout the 1920's and 1930's with minimal recruitment. We had called the younger men to the forces after the export markets disappeared in 1940 and many had not returned. By 1947 it was necessary to replace the older generation by a younger generation.

I do not want to be claiming that we made these estimates right at a time when the evidence on which to make them was very inadequate. We started moreover from certain pre-conceptions. We were very anxious to solve the immediate problems of feeding the population in circumstances in which we could not tell whether we should have the export earnings to buy food abroad. We did not want the agricultural policy to break down over manpower supply. In the event productivity in agriculture increased and the necessary output was obtained without as much additional manpower as we had assumed to be needed.

Equally it would be true to say that in the longer run, and after the Korean war, the level of our exports of textiles fell abruptly and in the end the manpower in textiles has again had to contract.

That does not make me regret our decision to try to save the industries. Nor am I myself very convinced by the argument that what some four or five of us failed to estimate perfectly in a great hurry in 1947 is therefore shown to be incapable of being estimated with sufficient accuracy in 1966. I am much more inclined to believe that others since then have learned to do much better and with much more evidence what we imperfectly attempted.

The interest, I would suggest, in these structural adjustments lies much more in the actual adjustments that were made in the immediately ensuing years.

I have said earlier that when we made our Survey, instruments of planning still survived from the war. The power of direction of labour continued until October 1950. When it was revoked in that month it was stated that it had not been used for some time previously. The Control of Engagement Order was revoked in March, 1950. While there is no doubt that before that date labour was being taken on otherwise than through Labour Exchanges, it was by no means a dead letter. And right down to October 1950 the First Preference system was working, whereby guidance was given to Managers of Labour Exchanges as to the directions in which they should attempt to steer labour. Compulsion was very seldom used, even in war-time. The system worked sufficiently well without it.

I think it is most interesting to consider how far the Ministry of Labour had been able to achieve the required structural adjustments by mid-1950 when these instruments of control were removed. They had succeeded in expanding the textile industries by 80,000 and clothing by about 50,000. Total manpower in manufacture had been increased by about 370,000, largely because of a higher female participation rate than we had thought it safe to assume, but partly also because unemployment was kept down to lower levels than we had assumed.

What I am anxious to bring out is that down to 1950, when we had the bonfire of controls, it was possible not only to plan but also to achieve a structural readjustment of the British economy.

I have left until now the fourth of the objectives that we set ourselves in trying to plan in 1947-8 - the objective

"To establish an efficient and smoothly working economic system in which the incentives to produce and consume will operate with no more control and compulsion than is absolutely necessary to the achievement of the Government's economic and social objectives."

That was intended to be much more than lip-service. We were confronted then with some very real problems. The rationing systems of war-time, both for food and clothing, had been worked out for a civilian population from which those doing the most arduous work in the forces were automatically excluded. And with a strong sense of

war-time equality, pressures for differential rationing could either be disregarded, or where absolutely essential handled administratively on a minimum scale.

As the peace years advanced, so did pressure for differential rationing. And increasingly rationing, both formal and informal by shop-keepers with supplies far from equal to demand, became inimical to the incentives of the pay-pocket.

At the same time the problems of extorting, bullying and cajoling producers were becoming more difficult. So long as all production was profitable and almost anything could be sold it was not difficult to persuade industry. But as we moved into a world in which, certainly in the more competitive export markets, losses as well as profits were being made, it became more and more obviously necessary to make financial profit and loss coincide with national interest rather than be - as it not infrequently was - in opposition.

The situation of 1947-8 was inevitably a situation of scarcity and potential inflation. People were prepared and indeed anxious to disinvest war-time savings to re-equip themselves. It was difficult at that moment to set the economy free without triggering off a galloping inflation.

When the bonfire of controls came in 1950 it was in a different world from the world of 1947; it was part of a very necessary process of returning to a workable economy in which any attempt to plan was limited to reinforcing the more normal workings of a price system. In 1947-8 there were still far too many cases in which financial incentives and planning intentions were frustrating each other.

This was not, in most cases, by intention. Indeed I think there were many others besides myself who, when confronted by an economic problem, would ask themselves first of all what would happen in such a situation if one left the whole operation to a perfectly working competitive price system. We were very often reluctant to use the price system in full completeness because of its implications for inflation, for sterling, for the wage spiral, or whatever you will. But we were very frequently anxious to move towards the same physical and structural solution which reliance on the price system would have given us. Thus we were often seeking to mitigate the secondary and incidental effects of the price system rather than to frustrate its ultimate and fundamental physical solution of a problem. We were

trying, if I may put it that way, to short cut the price system rather than to frustrate its ultimate results.

Perhaps I can illustrate this best from import policy. If one had left the balance of payments wholly to the price mechanism, including a freely fluctuating exchange rate, there would have been two-fold effects, partly stimulating British exports, partly discouraging British imports - the division between the two depending on the various elasticities of demand and supply. If one was trying to find a solution within a planned framework and with fixed exchange rates, it was right, I would argue, to plan import-substitution as well as export promotion and not rely wholly on compelling industry to expand exports by making raw material allocations depend (as for a time we made them do) on the performance of export targets.

It would have been wrong, I would argue, to leave out measures of import substitution.

Before I leave these problems of the experience of the war years and of 1947-8 there is one further thing I would like to say.

In war-time planning we had always present in our minds the asymmetry of risks. A short-fall of 10% of a critically important weapon is not identical in effect positive or negative with a surplus of 10%. On the other hand a 10% surplus of all conventional weapons meant that you were short of the resources to embark on the new war-winning weapons. Thus we had to learn to prevent over-insurance - but to insure where the risks were very great. We learned, that is to say, to attempt to make a "fail-safe" plan.

If one transfers these same ideas to a peace-time economy, the effects of a 10% shortage of (say) ice-cream and of steel or coal or electricity are not identical even if equivalent in value. The one has virtually no multiplier effects. On the other hand, a shortage of steel or electricity or coal in 1947 can be widely pervasive and reduce other output. It can lead to heavy import and precipitate a balance of payments crisis. The effects of a 5% surplus of steel or electricity is not equivalent to a 5% deficit.

On the other hand financial risks are also asymmetrical in the opposite sense. If one provides too much, a freely operating price system fines one. If one provides too little, however much damage you may cause, the hidden hand will reward you.

A financial fail-safe argues producing slightly too little. A national fail-safe argues producing slightly too much. I am myself inclined to regard this as a justification for some measure of planning or control of these key industries.

But for the moment I do not want to say more than that we tried to carry into our thinking about steel in particular some of this "fail-safe" concept.

I cannot but think that the application of this same concept to balance of payment policy is very considerably overdue.

A last point in this context. The problems of 1947-8 were not problems of the difficulties of choice. Perhaps we rode a little rough-shod over some of the questions of choice - how to balance marginal investment in keeping the railways just safe and running against marginal investment in repairing houses and building new houses. The great problem of economic administration - and that I think always needs to be remembered - is the problem of making things happen. Making exports flow, getting our agricultural output increased, getting agreement to go ahead energetically to expand steel and remove that bottleneck.

Those were the things that mattered. And it is over-emphasis of choice that so often makes the economist a bad civil servant. He is over-concerned to stop things, to delay things in order to perfect choice - too little concerned to make things happen. And both in the war and in those early post-war years decision and energy were more important than perfection of choice. If you make your economy more productive you will have less acute problems of choice. If you speed up decision-making and increase the rate of economic growth you may be able to allow people to have within a decade both the things that they want rather than choose between them. The powers of delay and frustration in the British economy seem to have come to exceed the powers to make things happen.

This brings me to what I believe to have been the principal lesson of those years. With the aid of manpower planning and the powers that we possessed, and with the aid - let me hasten to say - of private enterprise and with the help of a devaluation - we achieved a very remarkable redeployment of the nation's manpower, so that the country that was down and out in 1947 was more healthy by 1950 than

it has been in most subsequent years. I do not believe that this could have been done if we had held in 1947 the bonfire of controls that was so appropriate in 1950.

May I try now to summarise what I believe to have been the chief lessons?

First I would insist on clear and searching diagnosis of the problems. If you are growing too slowly, you must ask why you are growing too slowly and attempt to act on the causes. If the balance of payments is not balancing you must ask why you are exporting too little or importing too much. Are the troubles short-term and transitional or long-term, requiring considerable structural adjustment?

Without careful diagnosis one cannot be sure of giving the right treatment. A doctor takes infinite trouble over diagnosis, as a means of identifying the right treatment. He cannot treat appendicitis with the cure for measles. A sufficient dose of deflation is not an universal panacea of all economic ills.

Second I would stress the need we found to match problems with instruments. In the field of macro-economics we have multiplied the instruments since 1947. We have new fiscal instruments - investment allowances and the like, we have closer long-term control over public expenditure, closer co-operation with and control over the banks over the granting of credit - a number of new weapons. On the other hand the bonfire of controls removed almost all micro-economic instruments. We have tried to re-invent them in other forms: special investment allowances, for instance, for those investing in particular regions. But many of these instruments are micro-economics only in respect of regions. They are, so to speak, macro-economic inside the region.

Before I pursue this further, I want to look first at what is happening to-day with the eyes of one who engaged in planning in 1947-8.

May I take in turn what I have described as the fundamentals of our war-time and early post-war experience and try to see what we are doing now?

(1) Identify your problems.

I think we would all agree what they are to-day, though we might disagree about the order in which we put them.

- (a) We are back in the 1947-8 necessity of making our economy viable and balancing our exports and imports.
- (b) We want to solve the problem, major in long-term importance, of increasing our productivity and growth rate.

I put the balance of payments first because I am myself convinced that its solution is a condition of solving the second.

- (2) Analyse and diagnose the causes of your problems.

The National Plan does almost nothing to help one to analyse these problems and to see how and why they have arisen, and what is involved in solving them. We do in fact have to turn to the more serious and academic work that Beckerman and others have done for the National Institute.

- (3) See what is required in terms of structural redeployment.

If one had looked at our problems at any moment during the past six years one would, I think, have identified these same problems.

To effect a cure one would, I think, have argued that we have needed a relative expansion of resources going to exports and to import-saving. To raise real income here at home we also need more resources going into manufacturing of goods for sale in the domestic market.

With that in one's mind it is interesting to see what has been happening to the use of manpower in this country. Over the years 1960-4 we have been in a position to deploy or re-deploy about 1.3 million persons.

Of these 1.3 million, 700,000 persons have come from the net growth of the working population. About 400,000 of the 1,300,000 have come from declining non-manufacturing activities - agriculture, mining, railways and the smaller size of the armed forces. About 200,000 of the 1,300,000 have come from contractions of declining manufacturing industries - textiles and clothing, shipbuilding and aircraft.

Where have these 1.3 million persons (or their successors because the individuals are not static) gone to? Almost exactly the same number, 200,000, as came out of the declining industries have gone to the expanding manufacturing industries, to metals and engineering (other than aircraft and shipbuilding), to paper, printing and publishing, to building materials, and to various other smaller claimants in the field of manufacturing.

Just about 200,000 of 1,300,000 have gone (as the evidence of one's eyes would enable one to guess) to building and construction.

About 75,000 have gone to public utilities - to gas, electricity and water and to transport other than railways.

The remainder - more than 750,000 in number - just on 60% of the whole of the manpower resources available for redeployment - went to services - to distribution, professional and other services including a small increase of government services.

If a group of hard-headed realistic manpower planners had looked at the British economy in 1960, would they have said "Direct 60% of your available manpower resources into services"?

If we look at the performance of the British economy over the past six years and apply my test of how do we believe a perfectly working economy would have worked, can we put our hands on our hearts and say that we feel certain that the normal incentives of the British economy as it operates to-day are working satisfactorily at the moment to solve our problems for us? Or ought we to be saying to ourselves (as I find myself saying) "Somehow this is not working out as it should".

But I have taken the recent past only as an introduction to the plans for the future.

If one looks at the expectations and assumptions of the National Plan, what does one find assumed about the redeployment of manpower?

For the years 1964-70 it is expected that about 1.4 million workers can be re-deployed.

A little under 800,000 of these are expected to come from a net increase of manpower available.

About 450,000 of these will come from further contractions of agriculture, coal mining, railways.

About 150,000 of these will come from further contraction of textiles and clothing and from shipbuilding and aircraft.

Where does the National Plan envisage their redeployment?

It assumes that 430,000 of the 1,400,000 will go to expanding sectors of manufacturing (almost 1/3 of those available).

It assumes that over 100,000 of the 1,400,000 will go to building and building materials.

It assumes that public utilities will require about 60,000.

It assumes that once again distribution, services and public administration will take nearly 800,000 workers (56% of the whole).

This time I find myself asking two questions.

First - as before - does this distribution of manpower really represent what we believe this country needs to-day? Is our destiny to become - in a much more literal sense than ever before - a nation of shop-keepers selling little or no more at ever widening margins?

Second, have we any reason for confidence from recent past experience that 280,000 more workers (430,000 expansion less 150,000 contraction) will be attracted into manufacturing by present relative earnings and present net advantages? If in 1960-4 only some 15,000 more workers entered manufacturing industry, have we so changed the rewards, the conditions, the locations of job opportunities that we can believe the 280,000 to be a realistic figure?

But the main question I want to put to you is a different one.

I have tried in these two lectures to picture to you the planned war economy and the earliest planned post-war economy. I have told you that in war-time and those early post-war years the planning was macro-economic in its broad discussions only. The detailed planning was micro-economic. We were attempting - and I believe in some considerable degree succeeding - not only to see the structural requirements but also to achieve them.

In the 1950's we had the bonfire of controls - inevitably and rightly I would hasten to say. But it has meant that planning has supposedly been based on a few macro-economic instruments, which are in my view very inadequate to carry it.

The combination of fiscal policy and of interest rate policy can help to maintain the volume of investment and saving at a high level.

But on what are we relying to secure the optimum micro-economic distribution of our resources. On profitability? But even if we believe (and I feel hesitation in doing so) that the present system works sufficiently well for profits to be best where national interest most requires expansion, it still remains true that the individual industrialist plans expansion with the possibly recruitable labour force in his mind.

And so one finds oneself asking whether the good modern efficient firm is or should be paying the wages that it is worth its while to pay to attract the labour it needs for its expansion. And immediately one finds oneself in the emotional aroma of phrases like "poaching labour" and in the macro-economic problems of the wages-prices spiral and the danger that firms will pay high wages in the certainty of being able to pass on high prices to others sharing in the benefits of the spiral.

Let us concede these difficulties. But to accept the prevention of the wages-prices spiral as the objective of action means that we have agreed to leave unsolved the micro-economic problems of the distribution of manpower between firms and between economic activities. And I suspect that a part of the gain of manpower by "services" is a consequence of worse control over wage bargains in the commercial sector.

But here I come back to one of our war-time lessons. If you control you must be prepared to perform administratively the functions that would have been performed by prices. Are we prepared for that? If it is the price of an efficiently running economic system that we should have some steering of labour, is this politically unacceptable?

If it meant direction of labour I believe it would be unacceptable. But if one looks at the experience of 1945-50, there was almost no industrial direction in practice - other than the opportunity to avoid military service by going to the coal mines. The essential tool of

that period were the Control of Engagement Order and the system of First Preferences - a government machinery designed to give some advantage to certain types of activities. My own belief is that the first preference system was the more effective of the two.

So let me come finally back to some of the thinking about these problems in 1947 - before the Central Economic Planning Staff began its work. The Economic Survey of that year set out two planning frameworks as being the instruments of democratic economic planning in this country - the manpower budget and the national income and expenditure budget. It put the manpower budget first and the national income and expenditure budget second. In the past twenty years we have almost ceased to think micro-economically. We have abandoned the micro-economic attempt to balance the economy and to steer its structural changes. We have come to depend wholly on macro-economic controls. Is there evidence in past performance that macro-economics is enough?

I believe on the contrary that there is a good deal of evidence that it is not. And high in this category I would put the paradox that some of the countries which most of us would judge to be worst controlled macro-economically turn out, often with the aid of more inflation than we would tolerate, a better redeployment of resources, a better micro-economic performance and a better growth rate in consequence than we achieve with better control.

In the years 1947-8 we began to use in peace-time the principles that Maynard Keynes had worked out for war finance. We began to plan the use of national resources. If we are looking to the credit side I think we can honestly say that the world to-day is a different place from what it was in the 1930's - in very large measure as a result of the economic thinking that began in this Faculty in Cambridge in those exciting years of the 1930's.

The years of the 1950's have been years of experiment. The bonfire of controls was a necessary part of the process of getting the co-ordinated operation of financial incentives on the one hand and planning controls on the other hand. But I think the time has now come to assess that experiment on the one hand, despite our new institutions in that field, the economy is more monolithic, more concentrated in large blocks of power than it was, and one can less

than ever assume that the financial incentives of self-interest are identical always and everywhere with national interest.

More important the Keynesian revolution has, I almost said, created the incomes/prices spiral.- (We were - let me say - already wrestling with it more effectively than ever since in 1948). Wages and incomes have come during these twenty years to reflect the economic power of sectors of the economy rather than the scarcities of particular skills. At the same time the need to restrain wage bargains, to put pressure on firms and industries not to contribute to a spiral by bidding up wages, has made the efficacy of relative wages, both between occupation and occupation and between region and region, far less than it should be in a perfectly competitive smoothly running economy.

What are the morals? It might - I realise - be argued that this all goes to prove the folly of planning. I would not myself agree. I believe that the macro-economic planning has brought such benefits to the human race that we cannot think of surrendering it. The completely unplanned world is not a world of perfect macro-economics plus all of the results of perfect competition. It is a world without macro-economics, a world of trade cycles and 2 million unemployed.

But if we are going to live, and I think we must live, in the planned macro-economic world, we must, I think, ask ourselves whether macro-economics is enough.

The bonfire of controls destroyed the micro-economic controls and left untouched the macro-economic controls. It is I think easy to see why. In some broad sense, macro-economic controls are general, universal, non-discriminating. They can readily be regarded as just, impartial, fair as between man and man. They restrict liberty, but they restrict equally the liberty of all in a similar position.

Micro-economic controls are, almost by definition, discriminating. They are trying to develop some things and to restrain others. To favour some industries and to discourage others.

In practice we have from time to time operated in this way. Differential purchase taxes have had this effect. Hire purchase restrictions again. On occasions we have used ad hoc measures to help or to safeguard particular declining industries - cotton textiles for example. Import duties again can in some measure discriminate.

But I think that if you reflect on this list of discriminatory measures, you will at once recognise one common feature in these micro-economic measures. They have been used belatedly to help depressed industries and to diminish flexibility and change. They have seldom been used to facilitate expansion, to give added facilities, added manpower, to the things we have needed to expand. It is, in some sense, regarded as fair to help the failing, but unfair to help the vigorous and successful.

I think the time has come when we should ask ourselves whether we should not have a more conscious manpower policy and re-create a system of first preferences, with the instruments of the state devoted to helping the expansion of the sectors of manufacturing industry that need to be expanded. I am far from sure that such a policy would not in the end pay off. The wages/prices spiral is in no small degree the pressure of the efficient expanding sectors of the economy to attract manpower towards themselves. If we help that result administratively we shall have done something to restrain the forces that lead to the spiral.

Looking at the converse, our great pool of resources for the future is the large body of inefficiently employed manpower. If we contract that pool faster, we accelerate economic growth.

The question then that I want to leave in your minds is the question that I have re-iterated through this lecture: Is macro-economics enough?