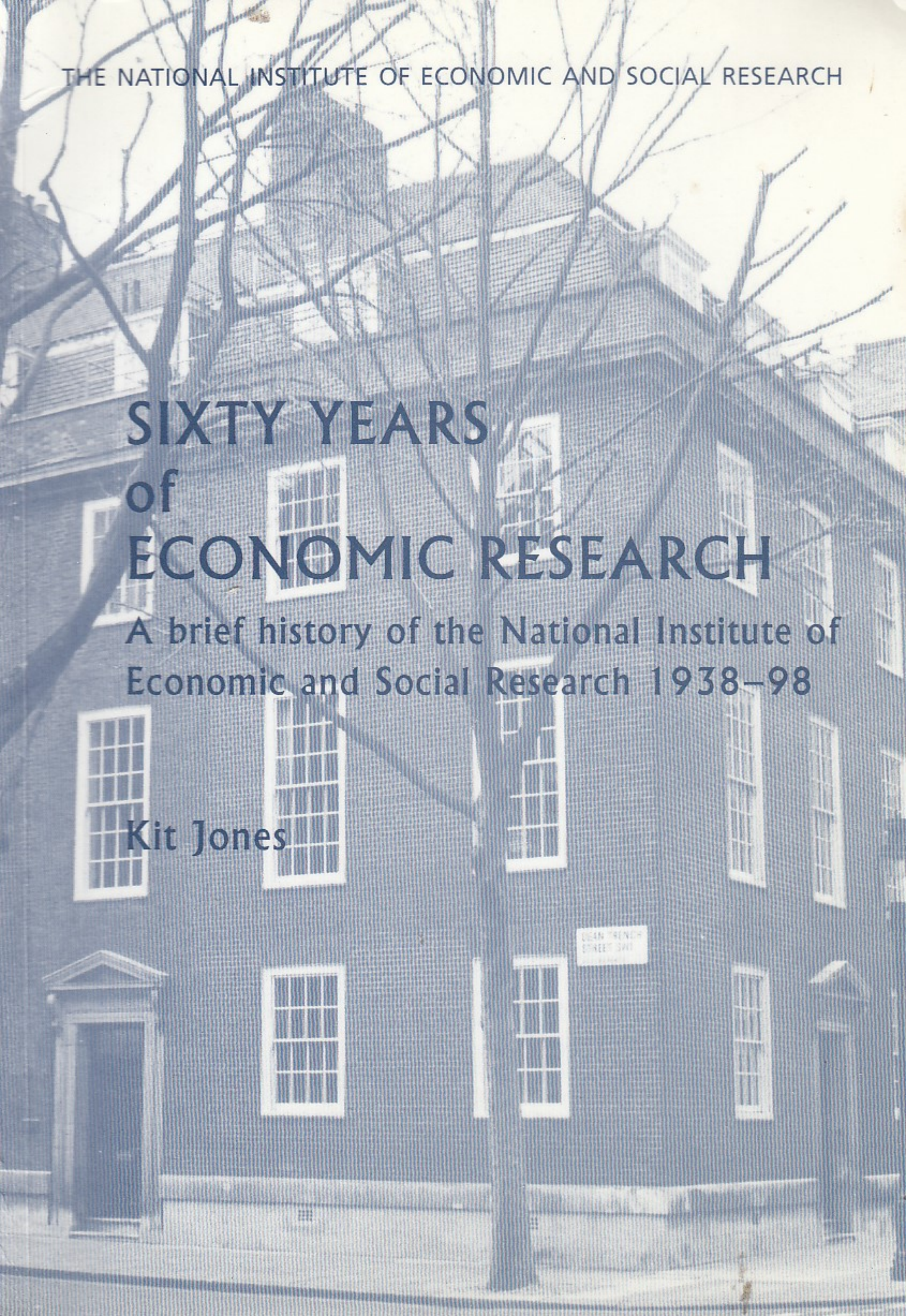
THE NATIONAL INSTITUTE OF ECONOMIC AND SOCIAL RESEARCH



# SIXTY YEARS of ECONOMIC RESEARCH

## A brief history of the National Institute of Economic and Social Research 1938–98

Kit Jones

THE NATIONAL INSTITUTE OF
ECONOMIC AND SOCIAL RESEARCH

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## A brief history of the National Institute of Economic and Social Research 1938–98

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The main source for this history is the archive of the National Institute, which includes the papers of Sir Henry Clay on the early years and a record of events leading up to the foundation by Sir Noel Hall. An earlier version was published in the *National Institute Economic Review* in 1988. I received helpful advice for that version from the following: Sir Austin Robinson, Lord Roberthall and Sir Donald MacDougall, all former Chairmen of the Institute; all four postwar directors, Sir Bryan Hopkin, Christopher Saunders, David Worswick and Andrew Britton; and other senior members or former members of the staff: Frank Blackaby, Christopher Dow, Peter Hart, Sig Prais and George Ray. David Worswick, Andrew Britton, Sig Prais and Martin Weale have also commented on this revised and updated version; while Garry Young provided me with a note on recent developments in the domestic model. In addition I benefited from discussions with Sir Kenneth Berrill and Sir Donald MacDougall. I am most grateful to all of them for their many helpful suggestions; any shortcomings in this history are entirely my responsibility.

It has been impossible to cover all the research projects and to refer to all those who have undertaken research at the Institute by name. I should therefore like to acknowledge the Institute's debt to all those who have made a contribution to the Institute's research programmes; and also to all the many supporting staff whose work also played an important part during those 60 years.

Finally it will be apparent that the Institute owes a great debt to all those who have given freely of their services on the Council of Management and Executive Committee. Their names do not appear in this history but their wise advice and guidance has been invaluable.

KJ
October 1997

# FOREWORD

It is a pleasure and an honour to be able to write a foreword to Kit Jones' history of the National Institute on its 60th birthday. Ten years ago, some of the most distinguished economists involved with the Institute in its earliest days, such as Sir Austin Robinson and Sir Richard Stone, were still with us. Now the Institute has lost these links with the past.

On the other hand an institution at 60 or even 100 should hope to retain its youthful vigour. To be successful any research institute needs to manage the twin goals of keeping its research agenda slightly ahead of the field and at the same time building on its existing strengths. Where does this leave the National Institute?

As Kit Jones records, in the mid-1950s the National Institute took on the role of a conjunctural institute. It has met that function ever since, using an increasingly coherent and theoretically based model as a tool both for forecasting and for policy analysis. I am sometimes asked whether there is still a need for such a role, now that there are about 35 forecasts of the British economy, produced primarily in the City. Such a comment confuses the role of an economic model with that of a forecast. It is gratifying to note that forecasts based on coherent models are more reliable than naive or intuitive forecasts, but forecasts are of very limited use in the policy debate. Their main function is to provide a structure for an assessment of the current economic situation. On the other hand coherent models are a very important tool in assessing policy and in contributing to the policy debate. How well will inflation be controlled if the Bank of England does its best to deliver the inflation target? How active should fiscal policy be if Britain joins the monetary union?

Without a coherent model it is not possible to address questions of this sort and it is easy to fall into traps. For example the rational expectations 'revolution' has taught us that expectations of future policy affect the present. With a coherent model it is impossible to recommend policies which appear attractive in the short run but which make no sense in the long run. Or to make the predictions of doom which greeted sterling's departure from the ERM in 1992; the benefit of the lower exchange rate was clear to economic modellers. The only embarrassment the Institute could feel about that period is not having advocated a devaluation more forcefully.

But the era in which it makes sense to have a single model has passed. In addition to its 'traditional' models of the United Kingdom and world economies, the Institute has been developing two completely new sorts of models The first is a general equilibrium model of spending and saving behaviour. This looks at a panel of households spread out along the income distribution, and allows us to identify the effects of changes in tax bands on the distribution of income and wealth. We expect it to form the basis of work both empirical and theoretical on pensions and social insurance. The second is intended to build from work we have done on monthly data to provide a very short-term forecasting model.

These developments stress that the maintenance and development of models is not an end in itself but rather the by-product of a vibrant research programme. As our research develops into new areas and as the technology of economic research develops so new models might be expected to appear. A research organisation like the National Institute has to be committed to new research if it is to maintain its reputation.

At present then the research of the Institute falls into three main, and overlapping groups. First we have a very substantial programme of work on the international economy. This includes work on monetary union, substantial studies of trade and foreign investment and work on our model of the world economy. Secondly, we shall continue to work on aspects of economic modelling, including not only research pertinent to our domestic and world models, but also on some of the other areas described above. The third area of research at the National Institute is productivity, education and the labour market. This encompasses work on the measurement and determination of productivity, the link between education and productivity and on other factors which may influence employment and unemployment. It has obvious links not only with our work on economic modelling but also on the international economy.

Even as a research innovator there will always be questions about the role of an independent research institute and how it complements the work done in the universities. As Kit Jones' book shows, the National Institute, and indeed the other research institutes in the country, have positioned themselves on an interface between academic research, policymakers and the business community in a way that no university has managed. Their involvement in public policy is much greater than that of the typical university because they can build up a body of expertise and a fund of knowledge. They are much more successful at dissemination outside academic circles. And while we would all like to face less intense funding pressure it does maintain the drive to innovate.

The prospects for the National Institute are much better than might have been thought fifteen years ago because it is much less of a single-product operation than when traditional macroeconomic modelling was its mainstay and it was extremely vulnerable to loss of funding for its modelling/forecasting work. But nothing is certain except that for the Institute to continue to thrive it will have to continue to innovate and to produce research of unquestioned academic standing.

Martin Weale

# I
# ORIGINS AND EARLY YEARS

## The need for economic research

The National Institute was founded in 1938, after a first initiative by Sir Josiah Stamp in the early 1930s. Stamp, who was the President of the London Midland and Scottish Railway, had been connected with a Rockefeller Foundation scheme to provide fellowships in the social sciences; he became convinced that a wider attack was needed on the problem of financing research in the social sciences in Britain and his objective became the development of a central unit, of British origin, with funds under its own control. This would supplement and replace the help given by the Rockefeller Foundation (then the main source of research funds in the British social sciences) and develop an increasingly large research effort in economics and related subjects. Stamp made known his views and with the support of a number of prominent academics – in particular William Beveridge, Director of the London School of Economics; Henry Clay, Economic Adviser to the Bank of England; and Hubert Henderson, Secretary of the Economic Advisory Panel – began to search for British financial support.

During 1934–5 Stamp, with the help of Noel Hall, then a lecturer at University College London, set out to interest a number of trusts: Halley Stewart, Leverhulme, Rockefeller and the Pilgrim Trust. The Halley Stewart trustees appointed a small committee to explore the possibility of forming an institute of economic research to study applied problems and provided a grant of £600. The committee consisted of Sir Percy Alden, Secretary of the Halley Stewart trustees; Henry Clay; Hubert Henderson and Noel Hall. The committee concluded that it was necessary to establish a central institution devoted to realistic and quantitative economic research. Three aspects were regarded as especially important.

- First, the institute should be in a position to analyse and interpret statistical information, so that it would be presented in a form conveniently accessible to all who take part in framing policy or expounding it to the public. The institute should subject the existing material to scrutiny and criticism and in this way draw attention to any points which needed amplifying and supplementing.
- Secondly, the institute should on its own account be able to promote definitive economic investigations. It should have resources which would enable it to do so on the necessary scale, and also to keep results up to date, and where necessary follow them up with further studies.
- Thirdly, it should provide facilities and assistance to economists pursuing their own individual studies.

The Halley Stewart committee was then expanded into an organising committee to proceed with the formation of the institute. Sir Percy Alden, Sir Henry Clay, Sir Hubert Henderson and Sir Josiah Stamp all signed a letter to a group of people inviting them to attend. They included Arthur Bowley, Robert Brand, William Coates, Sir Malcolm Stewart, Sir Ernest Simon, Sir Walter Citrine, Dennis Robertson and Lionel Robbins. Israel Sieff also joined the committee. A subcommittee then carried out the detailed work on a memorandum and articles of association, a statement of aims and a draft budget. In the budget the aim was to split expected income: 50 per cent to an internal budget carrying the cost of headquarters staff, library and services; and 50 per cent to external financing of work in universities and elsewhere.

By mid-1936 a public statement about a national institute of economic research had been agreed. It was proposed that the institute, through the Director and staff, should carry out realistic inquiries into contemporary economic problems which could not adequately be studied by individual workers or existing research organisations. Such questions would include the change in the distribution of population, the study of which was indispensable to a full understanding of the unemployment problem and the depressed areas. By its nature this would require some coordination of regional studies. Other aspects of unemployment called for urgent study. It was contemplated from the outset that the institute should embark on studies requiring continuous and systematic observation over a period of years, such as changes in the volume and distribution of national income, the relationships between different groups of prices, and results of recent experiments in planning. A second aim of the institute should be to secure coordination of economic research where possible and to do this it would organise and finance special studies outside the institute.

Finally the organising committee hoped that as a result of experience in using statistical data, it would be possible to secure a substantial improvement in both the quantity and quality of statistics.

## The Institute is set up

The establishment of the institute was delayed by problems concerning Sir William Beveridge's activities and the London School of Economics. Beveridge had been trying to secure his release from the Directorship of the LSE to give him time for his own research. He had put up a scheme to the Rockefeller foundation for a 'Beveridge Institute', and when this was turned down he became interested in the Halley Stewart committee proposal where there was a possibility that he might become the Director. At about the same time the LSE professors put up an alternative scheme for an economic research department at the LSE. But Beveridge himself continued to be actively interested in the proposed new Halley Stewart institute, suggesting amendments to the proposals of the organising committee, only one of which was accepted; namely the inclusion of the word 'social' in the title. The National Institute of Economic Research thus became the National Institute of Economic and Social Research.

Relations became strained and delay ensued while alternative names to that of Beveridge for the Directorship were explored. It was not until the end of 1937 that the decision was taken to set up the Institute. Professor Noel Hall was appointed director. Lord Stamp was elected as President and Sir William Beveridge, who had left LSE to become Master of University College Oxford, was to become the first chairman of the Council of Management. In fact Beveridge attended only one meeting. He was then taken ill and, following his recovery, withdrew from the chairmanship in order to devote himself to his own research. The following year Lord Stamp was elected chairman and Henry Clay deputy chairman.

A press statement was released on 5 January 1938. First it referred to the financial arrangements: financial support had been promised by the Pilgrim Trust, the trustees of the late Lord Leverhulme, and the Halley Stewart trustees. There had been some difficult negotiations with Halley Stewart who offered only £1,000 a year for three years instead of the £2,000 a year from both the Pilgrim and Leverhulme Trusts for seven years.

Their contributions were to be matched pound for pound by the Rockefeller Foundation, making a total of £10,000 a year for seven years. (In the event the Halley Stewart Trust provided money for only the two years 1938 and 1939 and then suspended their grant.)

Secondly it described the motive as the observed inadequacy of the facilities for research in the social sciences compared with those in the natural sciences and the need for a national organisation for carrying out independent economic research. It was thought that a number of developments in the universities, for example the LSE, the Economic Research Section at Manchester, and the Oxford Institute of Statistics had not met this need. Nor was the new Nuffield College expected to do so: its objectives were different. The college would exist for the students, whereas the Institute would exist for the studies.

Thirdly the functions of the new Institute were described in the following terms:

1. To conduct research either by its own regular staff or by other persons temporarily associated with it, into the facts and problems of contemporary human society.
2. To provide assistance and facilities for research to members of university staffs and others.
3. To apply for funds in aid of such research both for use in its own work and for allocation to other bodies and persons conducting approved research in consultation with it.
4. To collaborate with any similar institutes or organisations in other countries with a view to securing comparative study on similar lines of common problems.
5. To publish or assist in the publication of the result of researches, subject to adequate safeguards for the impartial and scientific character of these publications.

The Institute was established at 32 Gordon Square, the house where Sir Percy Alden, Secretary of the Halley Stewart Trust and Chairman of the British Institute of Social Services, had his offices. The certificate of incorporation was issued on 2 June 1938 and the first meeting of the Council of Management was held on 7 July with Sir William Beveridge in the chair.

## Early years

Following the delay in establishing the Institute there was a strong sense of urgency about starting a research programme. An inquiry was immediately made for schemes of research which were being held back for lack of financial support. Economics had already begun to be more quantitative and this was where the Institute's strength was to lie. One field of activity, national income studies, stood out above all others. A number of special committees were appointed on the following subjects: national income; unemployment; location of industry and distribution of population; the process of economic change in the UK since 1928; studies of credit and the money markets; and commercial policy and trade regulations.

The special committee on national income studies recommended that the LSE be invited to undertake a study of the national income of the United Kingdom as a whole and of its distribution, together with an examination of definitions and special topics such as depreciation. AL Bowley was in charge of the investigation. Grants were made to the LSE and to Harry Campion of the Economics Research Section at the University of Manchester. Responsibility for the conduct of the inquiry was transferred to a committee at the LSE.

At the outbreak of war, several investigations were suspended or curtailed. *Studies in the National Income 1924–1938*, edited by Bowley, was published in 1942. This was the first book to be published in the series of economic and social studies,[1] Bowley describing it as 'in incomplete form'. The authors had a lot of problems with definitions as well as with the lack of statistics in some categories and an element of approximation in nearly all categories, and they concluded that there was no simple answer to the question of what constituted the national income. Further, there was no precise answer to the question of how great the national income was. Some parts of the study followed conventional lines, but others broke new ground. For the measurement of real income, changes in the quantities of the principal categories were estimated for the first time and weighted by their importance at fixed dates to obtain the measurement of the change in the quantity of goods and services in successive years.

Progress on the unemployment studies was slow owing to Sir William Beveridge's illness, and in December 1939 the Council of Management decided that Beveridge should be allowed to retain the balance of grants that had been made to him for expenditure, as opportunity offered, on incomplete investigations in the Institute's programme. The special committee on unemployment was then dissolved. None of Beveridge's work appeared among the National Institute's publications.

Studies on the location of industry and regional problems, economic change since 1929, credit and money markets, and problems of commercial policy and foreign trade all made progress before the outbreak of war. Grants were made to the universities of Birmingham, Bristol, Manchester, Glasgow, Durham, Newcastle and Cardiff for work on the location of industry and Norman Chester and Brian Reddaway acted as observers of the work. A small grant was made to a group of economists at Cambridge under JM Keynes's chairmanship for work on economic change. A programme on credit and money markets was drawn up as part of an international study; Thomas Balogh was appointed to the staff to undertake the work. An inquiry into trade regulations and commercial policy also formed part of an international study and was undertaken by staff. Publications by the Institute from all these programmes appeared either during or after the war, as well as many articles in academic journals.

At the outbreak of war the staff, including the Director but with one exception (Balogh), entered government service. This, together with the transfer to war work of many of those in the universities collaborating on the research, meant the cessation or delay of some of the projects. After a temporary suspension of activity, the Council of Management decided in December 1939 that the Institute should continue its activities, with international economic relations as the main subject of the internal work.

An Acting Director, Geoffrey Crowther, was appointed until he himself was drawn into government service in June 1940. From then until 1952 the business of the Institute was conducted by an Executive Committee of the Council with the Secretary, Miss Feodora Leontinoff, who later became Mrs Stone, playing a more active role. At this stage Sir Henry Clay took over as Chairman of the Executive Committee from Lord Stamp, the Chairman, when he was killed in an air raid in 1941. Clay took over the affairs of the Institute and carried out the duties of a Director throughout the war and early postwar years. He was also responsible, together with the Committee, for working out the Institute's strategy both during and after the war. He set up expert committees to plan, guide or direct each research project and to report progress and problems to the Executive Committee.

A programme of wartime research was approved by the Council. It covered six main sectors: finance, industry and production, labour and consumption, foreign trade and exchange, regional problems and social problems. Specific proposals were made by a number of experts for projects and personnel. In the event, the conditions under which the Institute had to operate during the war, such as scarcity of research workers and the secrecy of much of the data, made it impossible to carry out a large-scale coordinated programme. Nevertheless the Institute was able to recruit a group of able immigrants who were not eligible for government service. These included Laci Rostas, Hans Singer, E Grebenik, Hermann Levy and Alexander Baykov. From 1941 to 1952 the research staff employed at the Institute averaged about ten.

Particular projects undertaken by independent scholars under the Institute's auspices included population studies; a study of national health insurance; problems of local taxation; regional and industrial distribution of disease mortality; methods of investigating oscillatory time-series; and the effect of the war on money markets and banking. Programmes of research within the Institute were developed along two main lines. First, investigations of current importance included the burden of British taxation; a survey of saving and spending; the location and size of plants in particular industries; colonial finance; Soviet economics; and the European war economies.

The second main line of activity was to promote quantitative investigations into the workings of the economy. The major inquiries were into national expenditure, output and income by Richard Stone, and productivity, prices and profits by Laci Rostas. These culminated in the publication of major studies in these subjects. Rostas's pioneering comparisons of industrial productivity in Britain and the United States opened the way to a much wider appreciation of Britain's competitive weakness after the war.

Other wartime activities included the preparation of a weekly diary of economic and social changes and a register of research in the social sciences which was edited by the Secretary. The Institute accepted funds from the Garton Foundation to provide studentships, subsequently converted to a prize and finally transferred to the Library with the agreement of the trustees. Facilities were provided for a committee advising the Ministry of Labour on the deferment of research workers in the social sciences, that also provided a paper on postwar education and employment of economists. Towards the end of the war, a joint exploratory committee was set up with representatives of the Institute of Chartered Accountants, notably Sewell Bray, to investigate problems of common interest such as standardised accountancy, and to bring together economic and commercial accounting concepts.

The Institute's offices at 32 Gordon Square at the beginning of the war consisted of two rooms and a library of about 1,200 books. However in autumn 1940 these premises suffered severe bomb damage and alternative accommodation had to be sought. The Royal Institute of International

Affairs offered its hospitality and temporary headquarters were set up at 6 Duke Street, but the Institute's library had to be closed. Early in 1942 the Institute moved to 2 Dean Trench Street where the library was reopened. In July 1944 this house was wrecked by a flying bomb, fortunately without loss of life. Temporary accommodation was found until 2 Dean Trench Street was repaired and ready for reoccupation at the end of 1946. In 1949 the Institute acquired 4 Dean Trench street with the intention of converting the two houses into a single suitable headquarters. Because of difficulties with planning permission, licences and development charges, this was not achieved until the end of 1951.

## Lessons from the wartime experience

The end of the war was a first turning point in the development of the Institute. As early as 1943, Sir Henry Clay and the Executive Committee began to consider postwar policy for the Institute. It was felt that the distribution of resources between the internal and external budgets had been right in the initial stages but, even allowing for the dislocation caused by the war, doubts were felt about whether the attempt to coordinate research by means of grants was justified by the results. Some members of the Committee felt there were other strong reasons for a larger proportionate allocation to internal research: first it would increase the standing of the Institute; secondly it was easier to supervise and ensure completion in a reasonable time; and thirdly it would be impossible to meet all external claims anyway.

Further development of the Institute's research policy was dependent on a solution to the problem of a severe shortage of trained applied economists. There had been virtually no output from the universities for five years, while the number available before the war had been insufficient to meet government needs. Demand for applied economists was unlikely to fall off with the end of the war: universities needed restaffing and government departments would set up a permanent establishment of economists. However, the need for research would be greater than ever as the turnover of the economy from war to peace threw up a host of problems for which fundamental research was necessary. It was hoped the Institute would be able to add to the total of resources devoted to social studies.

The magnitude of the tasks gave plenty of scope for the modest contributions which research institutions could make to the country's well-being, provided that the organisation was flexible, quick and adaptable to the requirements of any investigation. It was also felt that the Institute should be prepared to take risks in opening up new ground and in experimenting with new, even though expensive, methods. During 1944 the broad lines of the future programme were laid and action was taken to secure funds for the next few years. It was recognised that some subjects the Institute had studied had been taken over by government departments which could devote much larger resources to them. On the other hand, the war had accelerated the extension of statistical studies with the government providing new data and consequently there was more scope for collecting and analysing such data. Suggestions for research were coming in from government departments, academics and businessmen.

The Committee recognised that the need would be for the statement of problems in realistic and quantitative terms and for this the Institute could provide the research assistance, equipment and library that it involved. But the limited resources needed to be concentrated on one field with a prospect of achieving definite results without serious overlapping with university research departments.

The field the Committee chose was the structure and productivity of the national economy and in particular the way in which wealth is created, the determinants of wealth, a comparison with other countries, and what could be done to accelerate the increase. Existing projects which fitted into this framework were the national expenditure, output and income inquiry and the work on the productivity project. New work planned included the experience of specific industries in manufacturing, agriculture and distribution. A start was made with an inquiry into distribution, with James Jefferys directing the study, at about the same time that an official committee was set up to consider a census of distribution. A second step was taken with an investigation into the building and building materials industries.

The Institute's own series of publications had become the main instrument by which the results of the research were made available. The Cambridge University Press had taken the initiative in 1938 of informing the Institute that the Syndics would be glad to become its publisher. The first studies appeared in 1942 in a series of occasional papers and a series of economic and social studies. The Press accepted the manuscripts without refereeing, knowing that a publications subcommittee of the Executive Committee arranged for them to be read, refereed and edited. Until 1949 the books were published under half-profit agreements; from then until the mid-1950s the arrangement was a deferred royalty. The Press therefore took the risk, an arrangement which suited the Institute at that time.[2] The Institute owned the copyrights, but handed over a share of the royalty to the outside authors, with each case of a staff author judged on its merits.

During the war the Institute had maintained its income by renewing grants from the original donors. In 1945 the Rockefeller Foundation had again made further support conditional on contributions from British sources and the Committee succeeded in raising a grant from the Nuffield Foundation. However the concern to increase British income continued and conversations with bankers and industrialists in 1946 about finance for research on industrial structure and productivity proved fruitful. For the first time the Institute raised money from business supporters, amounting to £4,230 in 1946. The response of business was thought to provide a substantial increase in security but the need for a balanced relationship between charitable and non-charitable sources of funds remained in order to ensure the appearance of independence. It was desirable that the Institute should continue to draw the greater part of its funds from disinterested sources such as the charitable foundations.

## Links with other bodies

During the war strong links had been established with government departments. The national expenditure study had profited from continuous and patient help from government departments as well as from numerous associations and firms. The statistical investigations on prices, costs, distribution and productivity of different-sized units within industries had been made possible by the assistance of the Board of Trade. The Colonial Office provided active assistance on colonial national income. Other projects received assistance from the Ministries of Health, Labour, Food and Agriculture, the Board of Inland Revenue and the Post office. Although the need for information by the government and its advisers was met largely by statistical compilation and interpretation within the civil service, the Institute had been able to add its own contribution, in particular in making comparisons with the past and with other countries and also in analysing the problems involved in increasing efficiency and productivity.

Relations with university economists were also strengthened during and immediately following the war. The expert committees which ran the research projects included many senior academics. The preparation of the Register of Research in the Social Sciences brought further contacts. In

1946 with the agreement of the universities a scheme of senior research fellowships and grants-in-aid to universities was adopted to use up certain funds accumulated by the Institute during the war. These were the funds which had been allocated to university research under the 50 per cent external financing rule when the Institute was set up, but which had not been spent because of the war.

Contacts with overseas academics also steadily increased after the end of the war and links were established with the research institutes in the United States, France, Sweden, and the Netherlands. In particular Professor Derksen of the new Central Planning Bureau of the Netherlands contributed a paper on the pioneering Dutch experience in using national accounts for macroeconomic policy. From the beginning of 1948 the Institute acted as corporate correspondent for the new International Association for Research in Income and Wealth, and compiled and maintained the British section of an international bibliography of the literature in the fields of income and wealth. The Institute provided accommodation for, and made a contribution to the cost of, its secretariat; it became the headquarters of the Association in 1949 and remained so for twelve years until the Association moved to Yale University in 1961. The Institute also cooperated with the American Economic Association by organising the distribution of a free gift of American economic publications in 1948.

The Institute's participation in these ancillary activities and the development of contacts with government departments, universities and overseas academics and research institutions was regarded as a useful contribution to establishing the Institute as a clearing house for information. In pursuance of this aim and following the establishment of an interdepartmental committee on social and economic research, the Institute took the initiative in calling a conference in March 1946 to discuss the problems of research relations between government departments and academic bodies. The Institute also became a member of the Parliamentary and Scientific Committee which had been formed with the object of providing a permanent liaison between scientific bodies and parliament.

# 2
# DEVELOPMENTS IN THE 1950s AND 1960s

## New research projects

By the late 1940s the research projects which had been carried over from the war were largely completed. The work on national income and expenditure by Richard Stone and Deryck Rowe was by then well advanced. It was eventually to result in a series of seven volumes on national income and expenditure (five of them written in Cambridge) under the joint sponsorship of the Institute and the Department of Applied Economics in Cambridge under the general editorship of Stone. Rostas had completed two studies on productivity. Phyllis Deane had finished her book on colonial social accounting and Sargant Florence had completed his study on location of industry and the size of plant. The same was true of the statistical study of advertising. Most of the projects which had begun in 1946 were also nearing completion; in particular the inquiries into distribution by James Jefferys and the building industry by Ian Bowen, and the study on the lessons of the British war economy by Norman Chester. Two new projects were started and for both of these the initiative came from outside the Institute. The first was a new study on the location of industry undertaken at the invitation of, and financed by, the Board of Trade with William Luttrell in charge. There had been some heart searching on the Committee about whether the Institute should undertake such sponsored work. The other new project was on migration following a proposal by Brinley Thomas and this was progressing well.

In the late 1940s the Executive Committee seems to have felt the need to sort out its priorities. Moreover the financial outlook was also worrying. A conference was called at Cambridge in December 1949. It was attended by Cairncross, Hall, Henderson, Hicks, Jewkes, Postan, Robbins and Robertson as well as members of the Executive Committee. It resulted in proposals for two new programmes of research, one in the field of capital and one on the factors determining productivity. A start was made on the capital research programme but it was severely limited by the finance available. A study of British economic statistics began, in the charge of Charles Carter. Preliminary steps were also taken in the development of social research following a generous grant for this purpose by the Nuffield Foundation. The first project to be financed concerned the recruitment of industrial and commercial management.

However, it was becoming clear to the Committee that the Institute was badly in need of the intellectual focus and leadership which only a director could provide. The structure of expert committees which had worked well during the war had come under increasing strain as those who had given time and energy to this voluntary work had increased demands laid on them by their universities or institutions. Members of the Executive Committee were also faced with greater pressure on their time and it is noticeable that attendance at meetings declined. Sir Henry Clay, probably the Institute's best friend, who had become Chairman of the Council on Lord Stamp's death in 1942, gave up the chairmanship in 1949. He had also served as Chairman of a number of the research committees and had taken a strong interest in all the projects. His departure (to become President for three years before retiring fully) left a great gap.

Joint Chairmen, Humphrey Mynors and Austin Robinson, were elected and turned their attention to raising the necessary funds to finance a director. In 1951 a financial committee of the Governors was set up and under its guidance a wider appeal than that of 1946 was made to banks, insurance companies and leading firms. In the same year a block grant was given by the Rockefeller Foundation for the special purpose of making it possible to appoint a director. An attempt to raise a general grant from the Treasury failed because of the economic climate and the need to reduce public expenditure.

## Appointment of a director

In 1952 Bryan Hopkin became the Director on approved employment terms from the civil service, and the Institute entered a new phase of research and expansion. Directing committees were still used but became less and less important. With the appointment of a director the Executive

Committee gradually withdrew from day-to-day management decisions and concentrated on strategic matters relating to the Institute's work, continuing to give the Director and Secretary the benefit of its experience and wisdom. The research programme moved into a number of new fields during the next five years and the number of research staff rose from ten to sixteen.

The finance of public companies (Ronald Henderson and Brian Tew) was an investigation into the sources and uses of funds of public companies in the postwar period. It was based primarily on published accounts, but also supplemented by additional information obtained from companies themselves. The object was to build up a statement in standardised terms of the main financial transactions of public companies and to use these statements to illuminate the important problems of investment, dividend policy and profitability of quoted companies. Linked series of annual figures for the period 1949–53 were produced showing separate statements of financial transactions for each of 21 industries with further subdivisions. Discussions with the Board of Trade led to the Board's decision to carry on the Institute's analysis as a new official series and this work is still continued on an annual basis. The Institute was also the first to publish a list of large companies ranked by size and this is still done annually by *The Times*.

In 1953 the government made arrangements for the counterpart funds of Marshall Aid to be devoted to a number of purposes intended to promote productivity and stimulate competition. One of these was for the expansion of research into factors affecting economic efficiency. The Director was invited to assist an official working group under the chairmanship of Sir Robert Hall, Economic Adviser to the Government, to draw up the programme. Among the researches financed in this way were several projects at the Institute and further funds were provided for the finance of the public companies project. Projects wholly financed under conditional aid were a detailed industry-by-industry study of business concentration (Richard Evely, Ian Little); the general process of industrial concentration (Peter Hart, Sig Prais); a symposium on the structure of British industry, under the general editorship of Duncan Burn; the measurement of the growth of industrial capital (Tibor Barna); and a study of the United States antitrust laws (Alan Neale). All these studies were relevant to policy issues at the time. The work on industrial concentration identified the high concentration trades and the factors contributing to change between 1935 and 1951. The study of the structure of industry set out to give an up to date picture and to examine the effects of structure on economic performance and its adaptability to markets and to technical change. Barna's study drew a number of conclusions about policy changes needed to achieve a faster rate of growth, in particular to ease the entry of new firms into industry. He also wanted new information on the operation of business firms and a better measure of the capital stock, changes subsequently adopted. The study of United States antitrust laws gave an account of their actual working for the benefit of British businessmen and lawyers and also provided a highly perceptive evaluation. It turned out to be one of the Institute's best selling publications.

In response to the Nuffield Foundation's award, there were tentative moves in the field of social research. As in the past, it was proposed to confine investigations to social problems where the economic aspect, though part only of the relevant considerations, was important. The inquiry into the recruitment of industrial personnel was continued and developed further in the hope that it would throw light on the question of social mobility. A study of the costs of the National Health Service was undertaken by Brian Abel-Smith and Richard Titmuss with the object of examining their impact on the economy and the effects on them of changing wages, fees and prices; and to make comparisons with other countries.

Until 1953 the greater part of the work of the Institute had been devoted to the analysis of long-term trends, and much of the current work in 1953 was on long-term problems through its study of capital and the structure of industry. In 1954 research began on Britain's postwar economic experience. The new field involved short-term developments and differed also in having a direct bearing on some central problems of economic policy. The aim was to study all the factors which had an important bearing on levels of employment, inflation and the balance of payments and so far as possible to measure their separate influences. There seemed little prospect of obtaining precise quantitative answers to all the relevant questions, but it was hoped to build up a documented account of the main factors and to illustrate the extent to which economic developments had been affected by government policy. A general study undertaken by Christopher Dow (on secondment from the Treasury) concluded that policy had had more success in promoting full employment than in promoting steady and rapid economic growth. It suggested that fiscal and monetary policy needed to be supplemented by separate measures to accelerate growth of supply and restrain the rise in wages. There were associated studies of the response of prices, output and employment to changes in costs and demand by Leslie

Dicks-Mireaux; and separate studies of postwar controls by Peggy Hemming and Max Corden, and of British imports by Maurice Scott. Christopher Dow's book on the *Management of the British Economy 1945–60* was a major contribution to the serious study of economic policy and the assessment of the impact of various kinds of policy measures. It was widely used in teaching and sold 13,500 copies.

The first study to be carried out by Alfred Maizels, who joined the staff on leave of absence from the Board of Trade, was on the industrialisation of the primary producing countries with special reference to its effects on international trade in manufactured goods. The initiation of a large project devoted entirely to a problem in international economics was a new enterprise for the Institute, but of course it had implications for Britain in the need to adapt her economic structure closely and continuously to the changing patterns of the world economy. A deeper understanding of the developments and their significance was of great importance to any view of the long-term prospects for exports.

## A change of course

In 1955 the Institute made a change in direction, owing chiefly to an initiative by Christopher Dow and Bryan Hopkin. Both had worked in the Treasury and had felt that the lack of informed debate about economic policy gave the government an unduly great influence on public opinion. The pursuit of full employment policies had led to the development in government of economic forecasting; the resulting assessments of the current situation (then published in the official *Economic Survey* each year) largely set the tone for government policy. Outside the government there was no comparable body of expertise and thus too little check to the government's influence. In 1953–4 Dow, with Hopkin's support, formulated a scheme whereby the Institute would take on the function, on the model of the institutes in some other European countries, of a *Konjunktur* institute. It would publish forecasts; report periodically on the state of the economy; and, to underpin the work of current assessment, it would devote much of its resources to research into the behaviour of the economy.

Despite the fact that this would create a rival to the Treasury, Sir Robert Hall, Economic Adviser to the Government, gave the proposal by Dow and Hopkin his full backing, believing it wrong that no one was in a position to challenge the analyses by the Treasury on which advice on policy was based. He approached Sir John Woods, then President of the Institute, with the suggestion that the National Institute might set up a research team on macroeconomic studies and short-term national income forecasting. Sir Robert met the Executive Committee, which agreed to investigate the possibilities. After considerable discussion the proposal was accepted and preliminary work began. It became clear in the course of seeking the views of a large number of economists from the academic, business and journalistic world that the publication of regular analyses of the economy, with forecasts of the direction in which it seemed to be going, might also be of considerable value to decision makers and their advisers in industry and commerce.

The Executive Committee was anxious that a move into this field of activity should not reduce the amounts of long-term research of a fundamental kind which should remain the central feature of the Institute's work; the Institute should not become *exclusively* a *Konjunktur* institute. Nevertheless a decision to focus research more narrowly on the behaviour of the British economy was thought to be justified because the Institute was well equipped to make it a speciality. A programme of work was drawn up and a search for financial support began. The Ford foundation made a generous grant of £100,000 over the five years 1957–62 on the understanding that the Institute would increase income from British sources, so that by 1962 the programme would be supported entirely by British finance. In 1956 Sir Paul Chambers, then President of the Institute, launched a major appeal in the City and to large industrial companies to support the new venture and he, together with other members of the Executive Committee, succeeded in increasing contributions from business from £15,000 in 1956 to £28,000 in 1958.

However, finance for the *Review* was a major problem in the early 1960s. The Ford Foundation grant with which it had been launched was due to end in 1961 and it had been made clear this was a once-for-all operation. The Institute had decided to price the *Review* at a level sufficient to cover only the costs of printing and distribution in order to achieve maximum circulation; so there was no prospect of a contribution to the costs of research from that source. Furthermore the Institute had failed to raise sufficient funds from business sources to replace the Ford grant and the balance needed to meet the costs of the programme. An outright grant from the Rockefeller Foundation of £65,000 over a five-year period from 1959 was of only limited help as, while it included some work on short-term forecasting and analysis, it was primarily for new projects. This proved to be the last grant from the Rockefeller Foundation, for a change of policy in the early 1960s concentrated their charity on 'the provision of an adequate food supply for all'.

The search for an alternative source of funds intensified as 1962 drew nearer. In 1960 an appeal was made to the Treasury and in the autumn of 1961 they agreed to help. Both the Institute and the Treasury thought it would be a mistake to use direct government money for the actual work involved in writing the *Review* because this might raise doubts about its independence. But in 1961 the Treasury awarded a three-year grant for two research projects, one of which was a central study of long-term growth and resources and the other, social expenditure. At the same time they made a small 'recognition' grant towards support costs.

In 1962 Sir Robert Hall succeeded Austin Robinson as Chairman and the following year he led a new appeal to business. Covenants and donations from banks, industry and insurance companies which had been falling back since 1959 increased to an annual rate of £34,000, many of them promised under seven-year covenants. But while the new Treasury grants and the extra business money were very helpful, they did not solve the problem of financing the *Review*, which remained a matter of acute anxiety in the early 1960s when the *Review* was produced only by drawing on the Institute's slender reserves.

## The National Institute Economic Review

The first issue of the *Review* did not appear until January 1959 but much of the preparation was carried out by Bryan Hopkin with the help of Christopher Dow, who had been appointed Deputy Director in 1957, and the Secretaries, Mrs Feodora Stone and later Mrs Anne Jackson; new staff were recruited and experimental surveys began before Hopkin's term of office came to an end in 1957. The *Review* was planned to provide a well reasoned and analytical assessment of current trends; and the object of the research associated with it was to build up knowledge about the nature and causes of contemporary economic change, in particular factors directly influencing the economy in the immediate past or likely to do so in the immediate future. It was hoped in particular to develop further work then in progress on the factors determining prices and income changes, levels of investment and changes in the stock of fixed capital, the effects of monetary and credit policy, patterns of consumers' expenditure and changes in Britain's international trading position; and to build and test models which could explain past trends and form a basis for projections. A study of the problems of forecasting and public discussion of methods used should lead to improvements in technique. Work on long-term projections was to be included in the programme.

The main task of launching the *Review* fell to the new Director, Christopher Saunders, who also came on approved employment from government service. The staff was increased still further. From a total of ten in 1950 the research staff had grown to sixteen in 1956 with the expansion under Hopkin, and then to 22 in 1960 with the launching of the *Review* and the associated programme of research. Total staff rose from 30 in 1956 to nearly 50 in 1960. The first Editor was Robert Neild. He was followed in 1961 by Alan Day who in turn was succeeded by Frank Blackaby in 1963.

The *Review* was generally welcomed as the first serious independent contribution to the understanding of the contemporary economic situation. It produced a change, widely noted in early press comments, in the availability of economic information and analysis to the business, academic and official worlds and, through financial journalists, to the public generally. For the first time also in this country it made available a systematic view of economic developments and likely trends in the world as a whole.

The initial philosophy of the *Review* was the philosophy of demand management; that is, that it was the job of policy to reduce demand if it were excessive and increase it if it were deficient. From the start the forecasts were on the basis of unchanged policies, one of their uses being to point the way to possible changes in policy. It became the practice to include an appraisal of events and some indication of the options for policy. For example, as early as 1962 both devaluation and incomes policy were put forward as possibly desirable measures. Criticism of the course of events implied in most cases criticism of the government, so that those responsible for the *Review* had to be particularly careful not to draw conclusions which would sound absolute when the material on which they were based was uncertain. From time to time there were discussions among the staff about whether the *Review* should make policy recommendations at all, some of them taking the view that the consequences of certain changes in policy should be described but the *Review* should stop short of choosing between such outcomes as this involved value judgements. This view was rejected but, as the *Review* expressed the consensus of the team, often on contentious subjects, it was not always easy to reach agreement on what should be done. As a result the appraisals were usually careful to give a number of options rather than an outright recommendation. In spite of criticisms of its policy the Treasury was prepared to provide finance to the Institute for the background research programme through the 1960s and 1970s, never appearing to wince at the thought that it might have lent weight to a stick for its own back. There was never any attempt to prejudice the Institute's independence and academic freedom.

From the beginning there was a continuous watch on the methods of analysis used and studies were undertaken with the aim of improving those methods. The first post mortem analysis was undertaken after two years and this identified areas where research seemed likely to be most fruitful. This approach has been continued. One example from the early years was a special attempt by Robert Neild to improve knowledge about pricing and employment in the trade cycle. These, he concluded in 1963, had been remarkably stable in the face of fluctuations in exports and investment. Prices had not weakened when demand had fallen and employers were slow to dismiss labour when output fell, with the result that profits had been highly sensitive to variations in capacity utilisation. This work was useful for forecasting prices of manufactures.

The purpose of the work on analysis and forecasting of short-period changes in the economy was to build up a body of knowledge about the causal processes and time lags of short-term fluctuations and to systematise the forecasts published in the *Review*. A special impetus to the methodology had been given by Wynne Godley, on loan from the Treasury from 1963 to 1965. Research was undertaken into ways of improving forecasting methods, which gradually became more sophisticated.

By 1965 the *Review* was well launched – circulation had risen to nearly 4,000 – and the forecasting process had become increasingly sophisticated. It had become the practice to make explicit in figures the whole set of assumptions lying behind the forecast. The advantage to the reader of such explicit formulation of the reasoning behind the forecast was thought to offset the risk of being more easily proved wrong in the event. It had also become the practice to publish studies on the behaviour of the economy in special articles, for example on the demand for cars, for housing and for consumer durables. The *Review* also had the advantage of providing a speedy means of publishing articles arising from the Institute's other research projects at a time when there were long delays in the publication of articles in the learned journals.

## New research on economic growth and other projects

The demanding nature of this new activity, which in its first two years involved an issue of the *Review* every two months and from the third year quarterly, led to a pause in launching other new research. The early 1960s was, with two exceptions (the role of innovation and technology in growth, and urban redevelopment), a period of consolidation and expansion within the framework of the macroeconomic programme. The work on longer-term projections, which was to be included in the macroeconomic programme, was not in fact launched until 1962 when a grant for it was promised by the Treasury, but it had been designed originally at the same time as the short-term programme and to be complementary to it. The general object was to make a comprehensive study of the way in which the British economy might develop during the following two decades. The project was divided into two sets of studies. The first was designed to display a possible pattern of economic growth in the light of a quantitative assessment of resources available and the competing demands on them, considering both the economic requirements of faster growth and how the additional resources might be used. The second set of studies related to selected long-range policy issues in both the economic and social fields where government policy would dominate development and investment: transport, energy, the health and welfare services, housing and education.

Following on this main study of the British economy in 1975, under the direction of Wilfred Beckerman, work began to try to identify the particular factors determining the rate of economic growth in a mature economy, and in particular factors which could be influenced by public policy or by changes in attitudes and practices. An inquiry was carried out into replacement policy and an attempt was made to explain inter-firm differences in labour productivity as a result of the amount of capital per man, the age structure of the capital stock, the quality of labour and management, and the size of plant (Robert Neild and Frank Brechling).

Another major project launched in the early 1960s, a 'supply side' product, was a study, with a number of objectives, of the role of innovation and technological change in economic growth in Britain and other European countries (Tibor Barna and Christopher Freeman). It attempted to measure the significance of new products in Britain compared with the continent; their significance for international trade and for Britain's competitive position; and it considered the obstacles to their speedier introduction and faster growth in Britain and the possible consequences of European integration for British industry.

In 1963 a new study began on the cost of urban redevelopment, a topical subject at that time and a new one for the Institute. Peter Stone was appointed to lead it and he hoped to predict the costs for various combinations of urban patterns and to highlight the relative costs of alternative policies. Attention was to be paid first to housing and then to other buildings. This was to prove an elaborate study using a large volume of planning data relating to both the current condition of urban facilities and further needs, and involving a considerable amount of survey work.

Two other projects completed by the mid-1960s were concerned with changes in the structure of occupations and their relative pay in the 20th century; and the exports of the sterling area.

Among other activities, the Institute gave evidence to the Radcliffe Committee on the working of the monetary system and to the National Incomes Commission, and assisted in a Federation of British Industries inquiry into research in industry. In 1961 the Institute organised two Anglo-French conferences on methods of planning in France in collaboration with the French planning authorities. There was also collaboration with ASEPELT in Brussels (*Association Scientifique Européenne pour la Prévision Economique à Moyen et à Long Terme*) in their publications on 'Europe's future consumption'. The Institute continued to welcome a large number of academic and other visitors.

## The future scene

By the time Christopher Saunders resigned as Director in 1965, the Institute had established a reputation for research of a very high standard, which was closely related to matters of concern both to governments and industrialists. The *National Institute Economic Review* had become a major way of publicising the quarterly economic analysis and forecasts, while books, occasional papers and conference reports successfully disseminated other research.

In 1965 Saunders was succeeded as Director by David Worswick who, unlike his two predecessors, had an academic rather than a civil service background as Fellow and Tutor of Magdalen College Oxford. In 1982 the Institute reverted to a Director with a civil service background with the appointment of Andrew Britton. Thirteen years later in 1995 Martin Weale of Cambridge University succeeded Britton. In the 1970s and 1980s the main emphasis of the research programme continued to be on the British economy, with other projects more broadly related to the world scene. Following a decision by the Executive Committee in the 1970s, the macro-economic programme was kept to about half the Institute's total activity. The industrial programme was greatly strengthened and the number of projects outside these two broad programmes was gradually expanded. During the late 1980s and the 1990s there was increased emphasis on problems related to Britain's membership of the European Union. By the 1990s the emphasis had shifted away from the study of the British economy to a more comparative analysis in which economic and econometric issues of importance were assessed, sometimes with British data and sometimes with data covering a number of different countries. Before describing the achievements since the mid-1960s, it is of interest to examine the problems of managing social and economic research and how these were solved at the National Institute.

# 3
# THE MANAGEMENT OF RESEARCH

## Sources of funds

At the time of Worswick's appointment as Director in 1965 the Executive Committee was still anxious about finance for the *Review*, but the outlook was much more hopeful. In 1963 the government had set up a committee 'to review the research at present being done in the field of social studies in government departments, universities and other institutions and to advise whether changes are needed in the arrangements for supporting and coordinating research'. The problems of the independent research institutes were not ignored and evidence was invited from the National Institute. The outcome of this committee, the Heyworth Report in 1965, proposed the setting up of a Social Science Research Council, grants from which were to prove a major source of finance for the work of the Institute.

In 1966 this newly established body began to make grants to support a programme of research and editorial work for the *Review*, grants which have been regularly renewed up to the present. There have also been many grants for individual projects and for a programme on comparative industrial structure and productivity. The first Chairman of the SSRC, Michael Young, introduced the idea of programme grants, which were to cover a series of linked projects and were well suited to work on analysis, forecasting and the *Review*.

Another change which was hopeful in the mid-1960s was the creation of the Department of Economic Affairs with a research budget. A grant of £30,000 a year for three years continued the earlier Treasury grant for research into longer-term prospects. The department's grant was for the support of a programme of research into problems of short-term analysis and forecasting, into the competitiveness of sections of British industry and into problems of social expenditure; and there was also an additional grant for the regional economic development research described above. Other research projects financed by departments included further work on urban renewal, work on exports of the sterling area, a survey of the chemical plant industry, work on concentration and mergers, poverty and the life-cycle of earnings and employment.

When the Department of Economic Affairs was wound up in 1969 the Institute grant was taken up again by the Treasury, which continued to finance projects both within the macroeconomic programme and outside it until these were phased out between 1980 and 1983. Thus there was continuous Treasury/DEA/Treasury support for 18 years.

The other main sources of project income were the charitable foundations. The Nuffield Foundation financed research for urban development and industrial mergers and concentration. The Leverhulme Trust continued to support the Institute with grants for a succession of projects. The new Anglo-German Foundation and the Volkswagen Foundation in Germany also provided support. However, the Ford Foundation ceased to be a source of finance during the early 1970s, when it began to confine its research grants to United States problems and opportunities. The ending of financial support from the Ford and Rockefeller Foundations meant that the charitable foundations provided a smaller share of Institute income thereafter.

One of the financial problems which had become more acute in the mid-1960s was finance for staff between projects when working out new ideas and for taking on new senior staff to work up an application with which the Director and Secretary could then seek support. The Institute entered a halcyon phase when the SSRC awarded two five-year development grants to assist forward planning and to enable the Institute to appoint and retain key personnel in the intervals between research projects. These proved invaluable for bridging projects and taking on new staff to start up new ones. In the early days of the SSRC the Institute undoubtedly benefited from the fact that applications for research grants were not much above the funds available. Later, as applications rose to a level much higher than the funds available, it became more difficult to renew the programme grant and the development grant.

In the early 1970s another anxiety about public money for economic research began with the publication of a report by Lord Rothschild on the organisation of government research. One of his recommendations was that applied research commissioned by the government should be controlled in accordance with a customer/contractor principle. His report also considered the implications of such a principle being adopted by the research councils. Within a year the government's decisions were issued confirming the application of the customer/contractor relationship to government departments. No change was proposed in the arrangements for financing the SSRC, but departments were to be more closely associated in framing the programme and to be directly represented on the Council.

As far as the Institute was concerned these changes worked through gradually. They were first felt in a tightening-up of conditions in the grant award letters from departments, particularly in the matter of claiming crown copyright in all publications. Rights over any commercial exploitation of research output were then inserted into SSRC award letters. In practice, as far as the National Institute was concerned, actual restrictions on copyright were not applied. But these moves heralded the decline in government department research grants which were to affect the Institute severely in the 1980s.

## A shortage of good economists

While the problem of financing the research programme was eased between the mid-1960s and the mid-1970s, the Institute was faced with staffing difficulties. From its foundation in 1938 research staff were appointed on short-term contracts. At the start their salaries were linked to university scales and membership of the Federated Superannuation System for Universities was negotiated for such staff.

The Institute had benefited during the 1950s and early 1960s from a number of civil servants taking up research posts either on resigning from the service or on secondment. This followed secondment of civil servants – Hopkin and Saunders – to become Directors. However, recruitment from the civil service dried up during the mid-1960s when the government economic service expanded at the same time as a rapid expansion in the universities, so that it became increasingly difficult to recruit staff with research experience. Moreover once good young staff had established their names at the Institute they began to receive attractive offers. While it was flattering that the government economic service and the universities were eager to take so many of them, it was clear that something had to be done. The government economic service with higher rates of pay was still expanding. The universities offered tenure and greater freedom of choice.

In 1974 the author, who had been appointed Secretary in 1968, visited the Brookings Institution and the National Bureau of Economic Research in the United States and became acquainted with the American system whereby research institutes pay university salaries plus two ninths. Although American academics are paid for a nine-month year, not a twelve-month one as in Britain, it looked as if such a system might be appropriate to the National Institute.

Salaries at the Institute are legally a matter for the Institute to decide, but it would have been unwise to introduce such a change without consulting the main grant-givers at the time, the SSRC and HM Treasury. In the event the plus two ninths formula proved unacceptable. The Treasury put forward the alternative of a change to a link with scales in the government economic service for the Institute's research staff, together with the undertaking that these would be recognised by government departments and the SSRC in the future. The change was made in January 1975 and from then on recruitment improved although there was still a problem of recruiting and holding senior staff.

In 1965 the majority of the staff were housed in Dean Trench Street but in very cramped conditions. Because of the expansion of the staff in the previous ten years, the Institute also rented a variety of small office units around Dean Trench Street but not always very near to it. In 1971 the lease of the next door house was acquired, vacant possession was obtained in 1973 and access made on each floor. This enabled the Institute to dispose of most of the outside offices and concentrate in the main building and offices just across the road. In 1979 the leases of the premises were extended to the year 2078; and in 1986 the freehold was acquired. The Institute had come a long way from renting two rooms at 32 Gordon Square.

## Changes in the financial situation

In the second half of the 1970s the *Review*'s dominance gradually declined as other publications such as the London Business School's *Economic Outlook* and the *Cambridge Economic Review* appeared, supported by forecasting models or new doctrines. Stockbrokers too entered the field. As monetarist views took hold, the Institute was increasingly described as Keynesian,[3] although by then monetary variables had been introduced into the model. Since the 1960s it had been recognised that the attempt to manage the economy by means of fiscal and credit policies alone had shown them to be inadequate, and this recognition had found expression in the *Review*.

Subscriptions to the *Review*, in common with many other periodicals, began to fall in 1979. The fall affected all groups of subscribers, but the greater part of it seems to have been associated with the drive for economy in the public sector. Other factors may have been the economic recession which began in 1979; a rise in price in 1980 following a sharp increase in production costs; an increase in photocopying instead of the purchase of multiple copies; the competition from other periodicals; and the extensive press coverage itself which meant that readers who did not need all the detailed analysis could obtain the breakdown of the forecast without purchasing the *Review*.

The SSRC grants for the macroeconomic programme were renegotiated twice during this period. The negotiations which began in 1976 for the renewal of both the programme and the development grant in 1978 were especially difficult. The development grant was not renewed. An application for another five-year programme grant at first met with an award for only two years, at 10 per cent less than the annual rate applied for. Moreover there were a number of conditions attached to the grant, in particular that every effort should be made to appoint a senior econometrician and that SSRC support of the world economy work should be phased out. There were also a number of financial conditions. After protracted discussions between the SSRC and the Institute, the financial conditions were met and the question of a senior econometrician was resolved with the appointment of Brian Henry. The Institute convinced the SSRC that work on the world economy was an integral part of the economic analysis and forecasts for the British economy. Once the conditions were agreed, a new application for a grant for 1980–83 was made and quickly approved. In 1981 the SSRC set up a Macroeconomic Consortium with the object of deciding on grants to all the teams engaged in this work and a further award was made in 1982 for the four years 1983–7.

Further apprehension about finance was created while the Rothschild Enquiry into the SSRC was proceeding early in 1982 and rumours flew around that the Secretary of State for Education, Sir Keith Joseph, wished to abolish it. The terms of reference were to conduct an independent review of the scale and nature of the council's work and were broadly drawn. Fortunately for social and economic research in general and the National Institute in particular, the recommendations included one that the SSRC should not be 'dismembered nor liquidated and that its budget should not be reduced in real terms below its 1982–3 level for three years'.

While the growth of public funds for research into the social sciences was very helpful to the Institute, the growth of funds from the private sector did not keep pace, so that the share of public funds in the Institute's

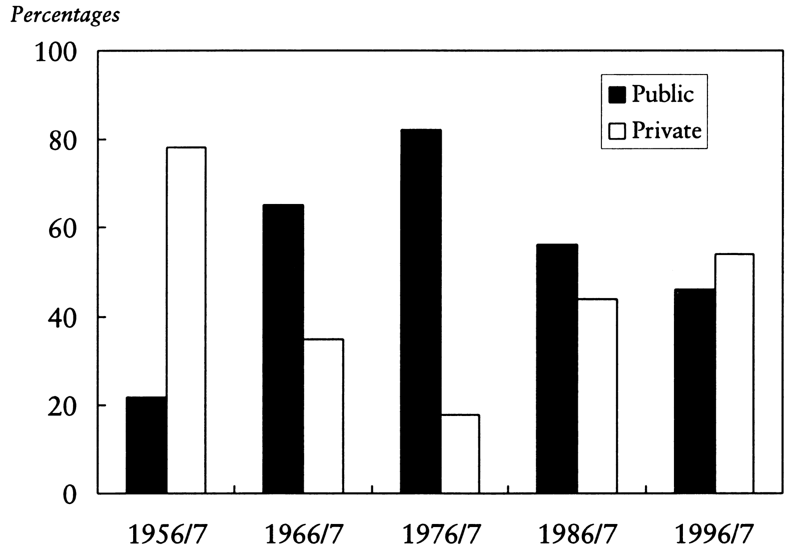


*Chart 1 Sources of income*

total income rose and by 1975 was about 80 per cent, about half of which was directly from government departments and half from the SSRC (see chart 1). The business money, which had been very important in the early 1960s, had not kept up well and Sir Hugh Weeks, Chairman of the Executive Committee from 1972 to early 1974, had initiated an inquiry into the possibilities of raising it. A steering committee was set up in 1975 consisting of Sir Donald MacDougall, who had succeeded Sir Hugh Weeks as Chairman; Lord Roll, President of the Institute; Sir Hugh Weeks; Tad Rybczynski; and the Secretary of the Institute. A meeting of business donors was held at the Institute in 1976 and a number of them agreed to help. A series of informal gatherings were held at which the President, Chairman, Director and Secretary presented the Institute's case for increased funds from non-government sources. The objective was to increase the regular annual contributions from companies rather than to raise a large one-off sum. As a result, income from business sources was doubled between 1974/5 and 1977/8. But with continued rapid inflation and the recession it became increasingly difficult to maintain the improvement in real terms.

Following this, renewed efforts were made to increase project income from the charitable foundations. By 1982, when David Worswick retired, income from official sources had fallen back to 70 per cent while the foundations and businesses were the source of 20 per cent of Institute funds. The balance came mainly from investment income. But total income in real terms was nearly 10 per cent less than in 1975/6. Costs had been cut in many areas, but the research programme had been well maintained.

## Developments in the past fifteen years

When Andrew Britton succeeded David Worswick as Director in 1982, the Institute was facing more serious financial problems than for some time. In particular, the outlook for finance from public sources was not good. As it turned out, since 1982/3 there has been a continuous fall in this income, operating first on income from government departments. Income from the SSRC/ESRC reached a peak in 1983/4 and then declined.[4] An increase in income from the Foundations beginning in 1984/5 partially offset this fall in public funds.

The negotiation for the renewal of the ESRC grant in 1983 resulted in a very small increase in real terms, while there were sharp reductions in the Treasury grant for the macroeconomic programme in both 1982 and 1983 when it ceased altogether. The 1986 negotiations with the ESRC resulted in a substantial reduction in the grant for 1987/91 as the macroeconomic consortium decided it would no longer finance the actual domestic forecasts published in the *Review*; and these were specifically excluded under the terms of the grant. Even so, NIESR received the largest grant awarded in the face of keen competition, reflecting the respect for its work in academic circles.

By 1987, total income in real terms was about 30 per cent less than at its peak in 1975/6 and public funds provided just under half the total compared with 80 per cent twelve years earlier. When David Savage, who was Editor of the *Review* for five years, left in early 1987 to take up an appointment at the Treasury, the Director decided not to appoint a new Editor but to take over the editorial work himself.

The upshot of the reduction in funds from public sources was a renewed effort in the late 1980s and in the 1990s to raise more finance from other sources. A determined attempt was made to increase business income after a rather sharp decline between 1990 and 1993. This culminated in the launching of a corporate membership scheme in 1994, designed to facilitate closer links between the Institute and its major corporate supporters. These numbered 26 in 1996 and there were also some 50 more who contributed to the Institute funds. As a result business income was restored to some 10 per cent of total income in 1996/7, a vital contribution to the Institute's independence. The campaign was led by Ronny Utiger who had succeeded Lord Roll as President in 1986 and Kenneth Berrill who had succeeded Donald MacDougall as Chairman in 1987. They were assisted first by Hilary Steedman, who became the Secretary on the retirement of Kit Jones in 1990, and then by John Kirkland, who succeeded her in 1994. There was also useful income resulting from money invested during the 1970s.

A determined effort was made to revive research grants from government departments as well as to raise more research money from other non-public sources including sources outside the United Kingdom. In spite of the success of the campaign, severe competition for research finance led to smaller and smaller grants and there was a constant danger that NIESR would seek support, much more than it had ever done before, on the principle of doing whatever sponsors would pay for. This had disadvantages for the quality of work as more and more time was spent applying for grants which were smaller and spanned a shorter time. To some extent, in spite of the attempt to maintain 'linked projects', there was a tendency for projects to become narrower and time was spent preparing documents for research funders at the expense of more serious research papers and books.

The Institute's strength and high reputation was built on larger projects, as well as on meticulous detailed statistical research, and this was continually in mind but difficult to achieve. Nevertheless a number of programmes were maintained, even though financed from more than one source. These include the macroeconomic programme, the industrial productivity research and work on the international economy and European integration.

There were also a significant number of staff changes during the late 1980s as senior staff who had been at the Institute since the 1950s or 1960s reached retirement age. These included George Ray, Robin Major and Ann Morgan. Brian Henry also left to go the Bank of England. The appointment of senior staff capable of leading projects has always been a problem and all these were difficult to replace. In spite of this a large programme of new work was initiated in the 1990s following the appointment of new senior staff first under Andrew Britton's direction and then under Martin Weale. The following chapters describe some of the main lines of research from the mid-1960s to the mid-1990s. We start with the macroeconomic models.

# 4
# THE MACROECONOMIC MODELS

## Development of the domestic model

The early analyses and forecasts published in the *Review* were based on forward estimates for the main components of GDP, wages, other incomes and prices, but there was not much use of equations. An assessment of the forecasts made by the Treasury, National Institute, the London and Cambridge Economic Service and the Oxford Econometric Model developed by Klein was published in the *Review* in 1961. Neild and Shirley found that the econometric forecasts, using the Klein model, were further from the mark than the other three. Nevertheless they pointed out that the differences of approach of the 'econometric model' and the less formal methods of the rest were not as great as sometimes supposed.

National Institute forecasting took a distinct step forward with Wynne Godley's secondment from the Treasury in 1963. He put the iterative process of reconciling preliminary national accounts figures for income and expenditure on a more systematic basis, introducing a 'compromise GDP', to take into account discrepancies between official estimates of national output and income and expenditure. He also introduced equations relating the growth of output and employment and output and imports; and for the analysis of the effects of tax changes. Consequently, when Godley returned to the Treasury in 1965, he left the framework of a systematic procedure for the preparation of quarterly forecasts. This framework also indicated the directions in which future research might go and enabled the team to engage in a continuous review of all equations in current use and to develop new ones as relationships broke down.

The Social Science Research Council which was established in 1966 was immediately confronted with the question of support for econometric modelbuilding. Influenced by the example of the US Social Science Research Council, which had promoted the Brookings quarterly econometric model of the United States published in 1965, the British SSRC made grants to a number of academic bodies working in this field. The leading ones were the National Institute, the London Business School and Southampton University. A condition of these grants was that the recipients should exchange information about their methods and results, so that a number of conferences were held to do this.

The methods in use at the National Institute in 1966 included a number of partial econometric relationships, but the procedure was not set up as a complete model. During 1967 an attempt was made to develop a small-scale computable model which it was intended to use to make forecasts in parallel with the informal methods already in use. Various partial relationships were re-examined. For example those on personal incomes and consumers' expenditure had been based on the work of Stone and Rowe and an attempt was made to incorporate the influence of hire purchase debt and bank advances; and the import equations initially prepared by Godley and Shepherd were respecified.

In 1968 Michael Artis succeeded Frank Blackaby as Editor of the *Review* and Conrad Blyth was appointed Deputy Director. An Editorial Board was set up to manage the *Review* programme, consisting of the Director, Deputy Director, Editor, Robin Major, George Ray and the author, who had become the Institute's Secretary the same year. The forecasting of commodity prices was made more systematic by Blyth and Ray and, in an attempt to improve the import forecasts, a study of the growth of imports over the previous decade was undertaken and a disaggregated import model was developed.

The building of a complete model proceeded and the first versions were derived from the existing procedures, although modifications were envisaged at an early stage. However, this approach did not appear very promising. In particular many of the relationships were non-linear and these produced a poor model when linearised. In 1968 it was decided to embark on the ambitious task of constructing an entirely linear model. It eventually became clear that the difficulties of doing this were very great and, when the first version of the new model had been estimated and proved unsatisfactory, it was decided to make a further effort to computerise the existing forecasting method. By keeping this model small and using simple estimation techniques it was found that a suitable simulation programme could be developed for a non-linear system. This was done and used successfully to produce the forecasts in the August 1969 *Review*. This was the first time such a model was used in generating a forecast in the UK. The model was very small with a mere eleven behavioural equations. The Treasury model had roughly 50 equations and was used operationally in 1970.[5]

The attempt to build a completely new model was finally abandoned and from then on the research programme was designed around this new small model. Where the results of the research proved fruitful they were incorporated into the model, which was gradually extended both by disaggregation of some relationships and by the introduction of new relationships and new variables. Weak relationships were respecified. It became evident that, after the publication of the annual revisions to the national accounts each autumn, the model would need to be re-estimated and some of the equations respecified. It became apparent that modelbuilding was not something to be done once-for-all, but was a continuous process. From this time onwards a large effort was directed towards maintaining the model and increasing its efficiency through the study of its properties, the appraisal of its forecasting ability and the re-estimation of relationships as data were revised and specifications changed when underlying economic behaviour altered. The results of much of this work were published in special articles in the *Review*, and in 1971 an occasional paper was published containing an account of the econometric model and its relationship to the forecasting process.

From the beginning the *Review* had made use of an annual industrial inquiry. Members of the Review team approached about 130 companies and interviewed management about production and export prospects, investment intentions and factors likely to limit the growth of sales, including the degree of capacity utilisation and labour shortages. The inquiry had been confined to the engineering, motor vehicle, chemical and paper industries and with a large number of mergers in the 1960s biases crept into the sample. Moreover during the 1960s two broader inquiries had begun, one by the Board of Trade and one by the CBI. It was therefore decided to discontinue the Institute's survey in 1969. The opportunity was taken to make use of the goodwill that had been accumulated by creating in its place a panel of firms which would be prepared to respond quickly to any special inquiry conducted by the Institute.

At about the same time, the first of a series of attempts was made to evolve a suitable methodology for making quarterly forecasts of industrial production, testing the value of business opinion and expectations data in forecasting production. A workable partial model was eventually achieved which, as a satellite of the main model, used the central forecasts of income and final demand by major components as the basis of its projections. This was subsequently abandoned when the pressure on resources became too great to give it the attention needed to maintain and improve it.

In 1970 work began on the influence of financial and monetary factors on real expenditure decisions, following a study by Artis and Nobay published in the *Review* in the previous year on aspects of the monetary debate. During the early 1970s, while John Bispham was the Editor, financial and monetary variables were incorporated into the investment and consumption equations. Substantial efforts went into improving the investment sector and further work was done on the consumption equations, especially on the demand for consumer durables.

During the 1970s, the growing expertise of the Institute's research team, combined with the steady improvement in the scope and capacity of computers, might have indicated a steady improvement in forecasting performance. But there were currents flowing in the opposite direction. The team became increasingly familiar with the breakdown of relationships hitherto thought to have been robust. Some of these were symptoms of the turbulence experienced by major economies in the 1970s. During the 1960s, there had been price rises in many countries, but at low annual rates, usually less than 5 per cent, and considered politically acceptable. But, in the 1970s, inflation jumped to rates of 10, 15 or 20 per cent and even higher, given impetus by the jumps in oil prices in 1973 and 1979. Moreover, these higher inflation rates were often accompanied by higher, and not lower, unemployment rates. These dramatic developments were accompanied by new developments in economics: monetarism, the New Cambridge ideas relating the budget deficit to the balance of payments, and rational expectations. Whereas in the early 1960s it might have been possible to conceive of the research programme as one of seeking incremental improvements in a well established procedure, it now became necessary to engage in more radical restructuring.

Research to improve the model ranged widely. Particular difficulties were encountered with the employment/output and employment/wage relationships, investment and stockbuilding and the import equations. In 1975 the extensive programme of research that had been going on led to the construction of a new model. After consideration only certain features of this were incorporated into the model used for forecasting. Research on the role of expectations was revived, their importance tested in a number of relationships and the appropriate ways to model them considered. The computer programmes were improved and a databank was integrated into the system. A systematic comparison of the National Institute, London Business School and Treasury models was undertaken. By the end of the 1970s the staff were cooperating with Imperial College in setting up a model for optimal control exercises.

Throughout these years too a more sophisticated model of the income tax system was constructed both as an aid to the short-term forecast and for a better appraisal of fiscal policy. A model of the full-employment budget balance was constructed. The short-term effects of a value added tax on prices, investment, the balance of payments and the distribution of income were also investigated. By 1978 a new fiscal sector of the model made it possible to identify and estimate the discretionary and built-in policy effects as well as to forecast public sector revenues. The construction of a new monetary sector had proceeded at the same time.

The period was one of rapid change in modelling practices. The emphasis was on applying modern estimation methods, with close attention to the nature of policy properties implied by the model as a whole. Model 6 marked a break in fully endogenising wage and exchange-rate movements in the model with a considerable degree of success. A major change occurred with Model 8, which incorporated forward-looking expectations into many of the equations in the model. The model and its properties were fully documented in an occasional paper edited by Andrew Britton, who had succeeded David Worswick as Director in 1982.

During the 1980s research relating to the model continued to be concerned with the relationship between economic variables such as national output, employment, interest rates and inflation. As unemployment rose, a focus on the labour market was appropriate. Several econometric studies of wage determination were published, and a variety of different approaches to the modelling of employment were investigated. For several years employment and unemployment were rising simultaneously, and this led to an investigation of the relationship between the composition of the demand for labour and participation rates.

The autumn of 1983 saw the setting up by the macroeconomic consortium of the ESRC of a Macroeconomic Modelling Bureau at Warwick University. The objects were to improve the efficiency and value of the models of the British economy produced by the programmes financed by the ESRC and to increase general understanding about them. It was hoped it would increase the accessibility of the models by developing software, improving appraisal techniques and providing a forum for discussing them. The Institute immediately began to collaborate with the Bureau, attending these discussions and lodging the model there, where it was found in one of the Bureau's published reports to be the most 'data coherent' of the models they examined. Techniques were substantially improved: one consequence was, as reported on one occasion by the Bureau, that the National Institute forecasts were less affected by residual and judgemental interventions, and more dependent upon the model research, than other forecasts they examined.

The model of the domestic economy became available on disc for use with a personal computer. In this form it has been used in a number of universities both for research and for teaching. It has also been bought by some commercial users for forecasting and the analysis of alternative scenarios, but sales have been small, probably because there is a plethora of models of the domestic economy.

In the second half of the decade the Institute continued its investigations into the behaviour of the British economy, in terms of output, growth, inflation, unemployment and so on, in particular by the application of the consistent or rational expectations hypothesis to the model. New versions of the model took account of this research and also of other studies on fixed investment, wages and prices.

A large number of discussion papers were issued on different aspects of modelling the economy and many articles by the staff were accepted by academic economic journals. Brian Henry and Stephen Hall completed a book drawing together much of the innovative work done at the Institute between 1982 and 1987 before they both moved to the Bank of England. This was published by North Holland in 1988.

Today, the model can be described as having Keynesian features in the short term, with output determined mainly by demand, but with classical long-run properties such that output is determined by the size of the labour force and the state of technology. Recent research has continued to refine the model along a number of different lines, each combining empirical validity with theoretical rigour.

A substantial proportion of the modelling team's work in recent years has been concerned with supply side issues. In particular, different models of the production function have been evaluated. For some time, a vintage model provided the framework that underlay the modelling of firms' employment, investment and pricing decisions. But dissatisfaction with this approach led to its abandonment in 1996. It was felt that it did not offer enough theoretical or empirical insights to compensate for its unwieldy complexity which was slowing the pace of further research in this area. The vintage system was replaced with a simpler model of adjustment to a similar underlying production function. In the new system, fixed investment is now determined entirely by expectations of the difference between the marginal product of capital and its user cost. Hours of employment are assumed to be determined by firms' needs to produce the demand determined level of output in accordance with the production function and the existing capital stock.

A key element in the supply side of the model is the labour market. The model incorporates the property that unemployment over the long run tends to its natural level determined by the equilibrium of the wage and price equations. Adjustment in the short term is held up by nominal inertia due to the presence of overlapping wage contracts. Recent cross country analysis of the structural determinants of unemployment has highlighted an important role for real interest rates, but it is fair to say that a complete explanation of the behaviour of unemployment has been elusive.

On the demand side, there has been some innovative research on the determinants of consumers' expenditure in a changing financial environment. This has taken account of the relationship between changes in consumption and consumer credit. Central to this research has been a recognition of the important role of the housing market in determining expenditure decisions through wealth effects and access to credit through mortgage equity withdrawal. This research also led to a model of house prices explaining rapid growth in the mid-1980s, and the depth and longevity of the recent downturn.

Other recent research has used the model to consider a number of policy issues including the behaviour of the economy under inflation targetting and the effects of government borrowing. Government borrowing can be seen as a way of allowing higher consumption in the short term at the expense of less when taxes are higher in the future. Simulations on the model suggested that the real social cost of such borrowing, at 3.25 per cent, is close to the real interest rate in the market.

## Development of a world model

During the 1970s and the first half of the 1980s the regular assessment of the world economic situation was in the charge of Robin Major. Special studies were undertaken as problems arose from the influence of developments on the United Kingdom's external economy. The OECD trade model was adapted for use at the Institute in forecasting international trade flows. Certain aspects of the relation between Britain and the European Community and the costs of entry by Britain were studied, in particular an analysis of UK–EC trade and structural problems including the common agricultural policy and the Commission's role in trying to coordinate fiscal and monetary policies. There were also attempts to improve the import forecasts with the use of the disaggregated import model; and work was done on the forecasting of export sales and pricing behaviour. The effects on trade of the realignment of exchange rates were examined; and the effects on imports of changes in tariffs were investigated.

A systematic exchange of forecasts had been launched by the Association of European Research Institutes in 1965. This was a result of a proposal by the Institute and from then on an assessment of the European economic situation and outlook was made every six months based on questionnaires completed by each of the member institutes. The Institute continued to cooperate with the Association, taking part in the preparation of reports on commodity prices and in a working group on trade as well as in preparing the main report on the outlook for the components of European GDP.

In the mid-1980s, with ESRC support, the Institute embarked on a new approach to world economy forecasting and the analysis of the possibility for policy cooperation between the major countries. This involved the development of NiGEM, the global econometric model, devised by Simon Wren-Lewis. The starting point was the Treasury's world model, which was adapted and expanded in various ways. The coverage of the world economy in the *Review* was continued and, in addition, the Institute participated with other world modelling teams in discussion of the steps necessary to restore a better balance of trade between the United States and the other major industrial countries.

The model was improved and updated and in 1989 it became available on diskette for forecasting and simulation analysis with a user friendly 'front end' designed for use by economists in government and business. NiGEM quickly became the leading world model developed in the UK and one of the leading world models used internationally.

The 1990s have seen major advances in the specification of the world model in cooperation with the London Business School, with Ray Barrell in charge of this work at the Institute. A network of European research bodies was set up, with a grant from the European Commission, which enabled the Institute to compare policy across models. The possibility of European economic and monetary union led to discussions on the theory of monetary unions and obstacles they faced and consideration of their costs. Much of this work was based on the world model. It also included an investigation on the implications of the adoption of the ECU as the single currency of Europe and the progress of moves towards convergence in Europe, which had been helped by virtually worldwide stability and an inflationary impetus in Germany caused by reunification.

## Success of the models for forecasting

Towards the close of the 1990s, the Institute remains the UK's leading producer of macroeconomic models. It enjoyed outstanding success with its forecasts for 1995 and 1996. Garry Young of the Institute was awarded the 'Golden Guru' award of the *Independent* newspaper for both those years and the Institute came top of the *Sunday Times* table of 45 forecasters for those two years.

These successes have not led to any complacency and the Institute continues to be wary about claiming any continuous superiority in its forecasting. The team conducted an examination of the distinction between the usefulness of macroeconomic models in understanding the working of the economy and their use for forecasting and concluded that the domestic model was disappointing in forecasting both the boom of the late 1980s and the recession which began in mid-1990. This led to a decision to give more emphasis to the discussion of risks and uncertainties and to publish a range of probabilities with the forecasts. The conclusion was that the patient effort that was devoted to econometric modelbuilding does pay off in a better understanding of the way in which the economy works. However as a result of deregulation and European integration the behaviour of the economy is changing more rapidly than the knowledge of its working can accumulate.

# 5
# THE NATIONAL INSTITUTE ECONOMIC REVIEW

In 1969 the *Review* completed ten years of publication and reached its 50th issue. Circulation had reached about 4,500, which was very nearly the peak. Sales of the *Review* were divided roughly into three among companies, banks and financial institutions; central and local government; and educational institutions including individuals connected with them. About one third of all the subscribers were foreign, with nearly half of those being universities.

The *Review* attracted a large amount of press comment and influenced the outlook in the City and in industry. The Institute was frequently if rather tiresomely described as 'prestigious'. Teams from OECD and the IMF made regular visits and the Director and Editor were increasingly in demand to lecture on the economic situation and outlook. Members of the Review team were also invited to lecture and hold seminars in the universities and to present papers at academic conferences. The influence of the *Review* thus spread into the education field and the teaching of economics as well as to government and the business world.

The 50th issue was marked by a change of cover and layout, an introduction by the Chairman, Sir Robert Hall, and an article on nine years of forecasting. This concluded that the forecasting record for GDP was reasonably good and had improved over the period, but that for the separate components of GDP no such improvement could be found. The rather good performance with GDP had apparently been reached by a tendency for errors in one direction in the exogenous forecasts to be offset by errors in the opposite direction in the endogenous forecasts. This was based on the Institute's own regular assessments of its forecasting performance published from time to time in the *Review*. These had begun in 1961 with an assessment by Robert Neild and Edward Shirley and show how the Institute has always approached forecasting as a scientific exercise. The assessments are still published.

In addition to articles arising from the research related to the model described in the last chapter, a range of topics was covered in special articles and notes. Some of these arose out of other research going on at the Institute. Others were on subjects of topical interest. The following are some early examples: the productivity effects of selective employment tax; another look at the Common Market; incomes policy; and inflation.

The practice of discussing the policy implications of the forecast continued. The need to preserve the competitive advantage bought with the 1967 devaluation and the consequent need to restrain the growth of incomes led the team to examine previous wage and price controls and to conclude that their record was not encouraging. For the most part they had led to a postponement of inflation, not a permanent effect. The institutional framework was blamed for this and various possibilities were examined. From time to time during the 1970s it was felt most important to devise a further stage of incomes policy.

From 1969 to 1972 attention was drawn to the growing gap between output and productive potential and the Institute advocated a series of small injections of purchasing power to edge the economy back on to the desired path without the risk of overheating. Concern was expressed that the attempt to control inflation by fiscal and monetary policy would entail abandoning targets for output and employment. A series of articles on some aspects of index-linking in 1974 included an extensive survey of the historical experience in many countries which concluded that it appeared to have done little harm and equally little good by various economic criteria. This was followed by an examination of the implications of indexation both for the income tax system and for mortgages.

Coverage of the *Review*, under the editorship of Michael Artis (1967–73), John Bispham (1973–5), Patrick Minford (1975–6), Michael Surrey (1977–9), David Mayes (1979–81) and David Savage(1981–7), continued to reflect the problems and policies of the time. The oil crisis of 1973–4 led to recommendations for a British initiative on an international agreement to recycle the Arab funds and provide aid to the developing countries. Warnings were issued about the deflationary consequences of the rise in the price of oil and the need for action to stop unemployment rising. In fact 1975 produced the deepest recession since the war and the most depressing forecasts since the *Review* began.

From 1977 when North Sea oil began to flow the *Review* was arguing that the exchange rate should be managed so as to preserve non-oil competitiveness if North Sea oil was not to mask a progressive decline in British manufacturing industry. This implied a substantial accumulation of reserves. The control of inflation remained a key problem, but no upward movement of the exchange rate was justified. The decision to let the exchange rate rise in order to prevent foreign currency inflows over-expanding the money supply was deplored in that it would lead to a decline in competitiveness of exports and greater import penetration.

The sharp fluctuations in exchange rates, especially the appreciation in 1979–80, caused concern through the effects both on exports and the loss of productive capacity, and on inflation with money wages more flexible upwards than downwards. The need for a rule designed to moderate exchange-rate fluctuations was stressed.

In the late 1970s and early 1980s, doubts about the usefulness of monetary policy in controlling inflation were expressed. These were related to the use of a monetary target as the most appropriate vehicle for monetary policy. Although a restrictive monetary policy would moderate price rises, it would do it only through deflation and the creation of unemployment; there was no way the system could be made to operate satisfactorily using monetary control as the only instrument. Moreover, at a time when greater investment was needed against the day when North Sea oil diminished, high interest rates were reducing investment and would have severe effects on weak industries. Unemployment had risen to unacceptably high levels and future output was being affected. The search for alternative policies should be renewed. The *Review* team continued to express scepticism about the monetarist experiment.

As inflation fell back from its peak and unemployment rose throughout the early 1980s, concern about the level of output and the need for some expansion to improve employment prospects continued to be expressed. The search for evidence of a structural change in wage behaviour as a result of the high level of unemployment was unceasing; but no relationship between unemployment and inflation seemed to fit the facts. The medium-term financial strategy came under heavy criticism.

Concern over Britain's productivity record led to a new study on recent trends in productivity, the results of which were included in a special issue of the *Review* in August 1982. The occasion of the 100th issue of the

*Review* in May 1982 was marked with the publication of short essays on forecasting and economic policy by five former editors, and an introduction by Worswick.

The *Review* continued to assess the home and world economies and throughout 1983 and 1984 to search for signs of recovery. Only modest growth was found, which was insufficient to reduce unemployment. The merits of a reflationary programme were discussed and the effects of alternative policies were estimated. With concern about the need to improve employment prospects in the private sector to absorb the increase in the labour force, the *Review* entered the debate on the relationship between employment and real wages.

Early in 1985 it was noted that the conflict between low inflation and high employment appeared more acute than ever and the medium-term financial strategy again came under criticism as being too constricting. Another topic discussed was the damaging effect of large fluctuations in the exchange rates. This led to a further examination of the merits of joining the European monetary system as a better basis for stability than the medium-term financial strategy. Forecasts for the balance of payments for 1986 showed a deficit for the first time since 1979. A warning was sounded about Britain's future trade performance and the importance of reversing the decline in manufacturing industry. The need for measures to strengthen the supply side of the economy, particularly through training and retraining as well as investment, was increasingly emphasised.

A fall of more than one third in oil prices early in 1986 changed the economic outlook, leading to immediate downward pressure on sterling but giving some stimulus to the flagging world economy. The possible consequences of the fall were carefully examined in special articles and the *Review* joined in urging Japan and Germany to expand demand. The reversal of the rise in unemployment in 1986 was welcomed, although it was noted that it had come about partly because the monetarist approach had been modified rather than because it had been successful, and mainly as a result of an increase in special measures.

An important piece of policy analysis in the late 1980s used the model to analyse the choice of the appropriate level of entry of sterling into the exchange rate mechanism (ERM). This suggested that the entry rate subsequently chosen by the government was very high and that a regime where sterling maintained a fixed parity with the DM would run into difficulties. Another analysis showed that a major factor behind the rise in unemployment in the 1980s was a decline in productive capacity.

In 1992 the model was used to estimate the impact of the policy proposals by the main political parties and also to quantify the effects of devaluation both before and after the sterling crisis in September when Britain withdrew from the ERM. Another issue for analysis was the relationship between consumer spending and the housing market which made a major contribution to the depth and persistence of the recession in the early 1990s.

In January 1993 the Director was appointed to the Treasury panel of independent forecasters. This group was given a very high profile by the media and gave Andrew Britton excellent opportunities to present the results of the Institute's research to a wide audience through many appearances on radio and television. The same year the Institute distinguished itself by forecasting correctly the timing and scale of the recovery when other forecasters were too pessimistic.

Policy issues addressed by the world economy programme included the effects of alternative exchange rate regimes on European labour markets and the conditions necessary for improved fiscal balance in the main European countries. Calculations suggested that the improvement following the 1990 recession might be insufficient to achieve the fiscal targets required by the Maastricht Treaty before a move to monetary union could be contemplated.

On the domestic front there was an account of recent trends in public sector borrowing with projections on various assumptions about tax changes and an analysis of the use of interest rates to target inflation. A particular concern through the years has been the need to reduce structural unemployment. The concept of full employment and the policies necessary to achieve it has been a continuing concern since the Institute's origin and has been taken up in various studies in the 1980s and 1990s. In 1994 for example this took the form of investigating how flexibility in the supply and demand for labour is compatible with the full participation of all those seeking work in the productive economy. Over the years the UK government has tried out a great variety of active labour market policies. While it can be shown that these have helped a large number of individuals, the Review team did not find it easy to estimate their impact on the economy as a whole or on the aggregate supply and demand for labour.

The main thrust of the work on the UK economy when Martin Weale took over as Director in 1995 was on the functioning of monetary and fiscal policy, with attention being paid to the role of simple rules as tools for enhancing the credibility of monetary policy; and this led on to a more comprehensive analysis of inflation targeting.

A more specific study of the 1990–92 recession considered the consequences of banks' bad debts in recent years. Poor lending decisions in the 1980s led to increased caution in lending policies which depressed the growth rate, the implication being that there might be substantial benefits from an improvement in the regulation of the banking system.

Closely allied with work on macroeconomic policy were projects on economic statistics. The National Institute was one of the pioneers of work on economic statistics and continued to take the view that the development of economic analysis required continuous work on measurement problems. In particular, in the 1990s it collaborated with the Central Statistical Office (now the Office of National Statistics), in research on the estimates of the capital stock. This followed earlier work by Tibor Barna and Tony Smith. The recent study concluded that the capital stock of plant and machinery had been substantially overstated because not enough attention had been paid to premature scrapping associated with company liquidations. Another concern was the allowance for quality changes when compiling producer price indices for materials and fuels. This research led to several proposals for changes in current procedures. Another project was designed to set up a longitudinal data base from the Census of Production. This is available to individual researchers.

The *Review* has continued to address a wide variety of policy issues. In addition to macroeconomic policy generally these have included North Sea oil and exchange rate policy, the possibilities of moderating the growth of credit to the personal sector, the deregulation of consumer credit, the housing market and the use of interest rates as an instrument of demand management.

In addition to the appraisal and analysis of the current economic situation and the forecasts up to two years ahead, the *Review* continued to include special articles. At first these were almost all produced in-house, but in the 1980s the Editorial Board decided to invite and encourage outside authors to submit research articles. It also became the practice to publish articles by the Clare Group and once a year to carry an article by the ESRC Macroeconomic Modelling Bureau on the comparative properties of the models of the UK economy financed by the ESRC, together with that of the Treasury.

# 6
# INDUSTRIAL STRUCTURE, PRODUCTIVITY, TRAINING AND EDUCATION

The Institute's records show a continuous interest in various aspects of industrial economics, and there has been a great range of research during its sixty years of existence. Some projects have been detailed studies of individual industries; others have attempted more general explanations of Britain's poor performance in terms of economic growth and productivity. Early work has been described in chapters 1 and 2. Here we take up the story from the mid-1960s.

## Innovation growth and monopoly

In 1965 the industrial programme comprised the work begun by Neild and Brechling on strategic factors in growth, with studies on textiles and the electricity generating industry still in progress; and work on technological developments, which continued until 1968 with studies by Christopher Freeman of the plastics industry, the electronic capital goods industry and the chemical plant industry, the latter in cooperation with research groups in France and Germany. These studies drew conclusions about the organisation of these industries and pointed to possible ways of improving performance and stimulating cooperation in process innovation. This work continued at Sussex University when Christopher Freeman left the Institute to become the Director of the newly established Science Policy Research Unit.

New projects in the second half of the 1960s were on the competitiveness of British industries and the diffusion of new technological processes. The first involved the collection of information and opinions about the competitiveness of British goods from buyers in East European countries, chosen because of the simplicity of identifying the state buyers of specific types of imported goods. This was followed by a case study on the office machinery industry.

The second project was more ambitious and involved the unique collaboration of George Ray and his colleagues with five overseas research institutes. Data on the diffusion of ten relatively new and important processes were collected by six European institutes (later joined by the National Bureau of Economic Research, New York). A pilot study was followed by a detailed investigation of the problems associated with the diffusion of eight of the processes. Each institute was in charge of one or more processes, analysing the results of the inquiry conducted in its own country by each institute. This was a fruitful exercise in joint international research and culminated in a book, *The Diffusion of New Industrial Processes* (Nabseth and Ray, 1974). One of the important conclusions for Britain was that while innovations took off well, diffusion slowed down more quickly than in other countries and there was a long tail of companies where the introduction of new processes lagged behind. This subject was revisited in the 1980s and showed little change in this situation.

Further research on the innovation process in the industrial countries with special reference to the energy sector was undertaken in the 1970s, led by George Ray in cooperation with institutes in Munich and Stockholm and sociologists from Hamburg University. A report was published in German and a shorter English version was published by the Institute. The latter concentrated on innovations in the energy sector, presenting the results of a cluster analysis of 218 cases of innovation in the three countries.

In 1970 new work began in the field of industrial structure and competition policy, led by Peter Hart. This set out to measure and explain the change in business concentration since 1951 and to examine the parts played by mergers and by differential internal growth rates in the change. This followed the lines of the work done by Evely and Little in the 1950s and relied heavily on case studies to update *Census of Production* information. A series of occasional papers emerged on trends in monopoly, the role of mergers, and concentration in British industry 1935–75.

Alan Neale undertook second and third editions of *Antitrust Laws of the US*, and these were published in 1970 and 1980. Each edition brought up to date the United States law on mergers and acquisitions and assessed the continuing value and meaning of the antitrust system. The third edition also compared it with the developing body of competition law in the EEC.

Other research in the field of concentration and monopoly was undertaken by Ann Morgan and Michael Utton. A study on diversification in British manufacturing industry examined the reasons for diversification and the likely effects on competitive behaviour and performance. A second study was concerned with the ways in which international trade might modify the competitive behaviour and market performance of industries in Britain. A third focused on the shares of dominant firms and the level of profits; and a fourth examined the growth of import penetration in the British market for consumer goods with particular reference to retailers' motives for purchasing imports rather than domestically produced goods.

In 1971 Sig Prais rejoined the Institute and began a major study of the long-term changes in the shares of the largest and smallest firms in the economy. The research was designed to elucidate the factors governing the growing predominance of the 100 largest industrial firms. Increases in plant size were not found to be of great significance but the number of plants owned by the largest companies had risen sharply. It was found that technological factors had played a relatively small part in encouraging the growth of large firms, but important contributions had been made by financial factors and by 'spontaneous drift'.

## Productivity training and education

Sig Prais's project on the evolution of large firms was followed by one comparing productivity and industrial structure in Britain, Germany and the United States. Detailed studies were made of ten industries and a number of possible sources of the productivity differences in the three countries were examined. Both studies were published in the Institute's series of economic and social studies and aroused wide interest.

Research on productivity and the productivity gap has spanned the life of the National Institute which has been a leading British centre of research in this field. By 1978 it was 30 years since the publication of Rostas' pioneering study on productivity in British and American industry; and it was 20 years since the OECD published *A Comparison of National Output and Productivity* by Deborah Paige and Gottfried Bombach. The Institute decided to attempt another systematic comparison between Britain, the United States and West Germany of productivity by industry of origin and this was put in the charge of Tony Smith. A first study was made of the industrial sectors of the economy: manufacturing, agriculture, mining, construction, public utilities and transport; this was followed by a similar study on the distributive trades. A further study on the causes of low productivity in manufacturing was carried out by Steve Davies and Richard Caves.

In 1980 Prais' work on comparative structure and efficiency was recognised by the SSRC with the award of a designated research centre grant. After four years this was converted to a programme grant, and the work continued. Increasingly the emphasis shifted towards the importance of skills in the labour force and the deficiency of Britain in this respect compared with Germany, France, Switzerland and Japan.

International productivity differences can arise for many reasons and an exhaustive explanation may never be possible. Nevertheless detailed studies began to show that training was the key to higher productivity in many industries and occupations. Prais' programme on comparative productivity concentrated its research effort on comparisons of the machinery and the skills of the labour force in a number of industries in Britain and Germany; on comparisons of vocational training in France, Germany, Japan, Switzerland and the Netherlands; and on the schooling systems of Britain, Germany, France and Japan.

Matched samples of manufacturing plants formed the foundations of the comparisons between Britain and Germany. Following research on metalworking plants, the programme turned to industries requiring less technical precision such as fitted kitchen furniture, clothing and food manufacturing. But the same kind of story emerged, with Britain lagging behind in training in these industries also. In the manufacture of fitted kitchen cabinets the differences in training were even greater than those found in metalworking plants. In clothing too, longer and more intensive training is given to machinists in Germany than in Britain, covering a fuller range of skills, which enables them to switch more easily from one operation to another. Comparisons have been drawn on the training of craftsmen and skilled operatives and also at the supervisory level, focusing on the *Meister* in Germany and foremen in Britain. The work attracted much interest among the public, including a full-length programme on Channel 4 television, and amongst policymakers.

The team also examined the foundations laid by schooling systems to see which aspects of schooling might contribute to differences in subsequent vocational qualifications and thereby affect industrial productivity and living standards. They noted in particular that in basic mathematics Britain lags behind a number of other leading industrial countries; and that the lag is particularly great for the lower half of the ability range. In 1986 the Department of Education became interested in the policy implications of the research for schooling. In 1987 Sig Prais and Hilary Steedman were invited to join the government's working groups on the national curriculum on mathematics and assessment methods respectively. After issuing a note of dissent to the interim report, Sig Prais resigned as he was not satisfied that the issues were being tackled adequately.

A comparison of teaching methods in Britain with those of other European countries led to a study of mathematics teaching in primary schools with the aim of seeing what could be done to improve attainments generally and particularly of less able pupils. In 1995 an experiment began initially in six primary schools in Barking and Dagenham based on the Institute's research and a series of team visits to continental schools; by the end of 1997 some 3,000 pupils were involved and other local education authorities were planning to join the experiment.

A separate area examined was a detailed study of graduate recruitment. Geoff Mason found that 20 per cent of new graduates in the steel industry had replaced less qualified staff but jobs had been upgraded to take advantage of graduate-level skills and knowledge. In the financial services industry there was less evidence of upgrading.

Proposals for future policy towards vocational training and education have been based on the interpretation of these and their relationship to the differing needs for skills following the advance of automation which has led to a reversal in the demand for labour, in contrast to earlier mechanisation which increased it. The emphasis has now shifted back – albeit hesitantly – to a greater vocational and technical bias in the national curriculum of secondary education.

The National Institute's research has been an important factor in raising awareness, both among policymakers and the public, of the need to raise Britain's educational standards. Doubts have been raised as to whether Britain's schooling system provides an adequate foundation for the workforce skills required in a modern technological world. More specifically, the researchers concluded that there was a need to raise the standard of mathematics teaching with greater emphasis on arithmetic. The underlying issues were discussed in *Productivity, Education and Training* by SJ Prais, published in 1995. Many of the detailed research studies were published in the *National Institute Economic Review* and subsequently reissued in two accompanying volumes. All the investigations were extremely detailed and thorough and a large body of evidence has been built up on the differences between British practices and those of countries with higher levels of productivity.

## International statistical comparisons of productivity

Separate lines of enquiry on productivity undertaken between 1985 and 1998 by Nicholas Oulton and Mary O'Mahony were concerned first with statistical comparisons, using data from Censuses of Production, between Britain and Germany, where there was a narrowing of the productivity gap in the 1980s; and secondly looking at separate branches of manufacturing industry. It was found that a large proportion of the difference could be explained statistically by higher labour force skills rather than by greater capital intensity. An examination of productivity growth between 1954 and 1986 considered the role of energy and material prices in causing the slowdown after 1973. An exceptionally good database was assembled to investigate these matters which provided new estimates of productivity and unit labour costs in Britain and other major industrial countries.

Developing the concept of detailed comparisons, an investigation was carried out into the quality of manufactured products in Britain and Germany, which concluded that in general the average quality of goods produced was substantially higher in Germany than in Britain. This was followed by research designed to understand the sources of continued US productivity leadership; and in particular the links between relative productivity performance and inter-country differences in the quality and utilisation of physical and human capital inputs. It emerged that the potential for economies of scale and the quality and usage of capital contributed greatly to US leadership.

A further project was to build up a database of some 140,000 UK companies which demonstrated a large gap between the best and worst performers – the leaders and laggards. In 1993, the dispersion of labour productivity was twice as wide as that of weekly earnings across individuals.

## Productivity in the service sector

The prospect of the single European market in the early 1990s stimulated interest in the competitiveness of Britain's financial service industries relative to those of other member countries. The result was another in the series of studies, undertaken by the National Institute, focussing on inter-country sectoral comparisons. Work which had concentrated essentially on manufacturing and industrial activities had already been extended to the distributive trades in the 1970s. A new study by Tony Smith broadened this line of research to cover international performance of national financial services (commercial banks, investment banks and security houses) and sought to explain contrasts in national performance in a variety of factors such as economies of scale, labour and capital inputs, innovation and technology.

More recently, a study of broad groupings in the service sector found that the UK's productivity gap in services was greater than in manufacturing when compared with France and Germany, though smaller compared with the US.

An approximate measure of national shares in the global market suggested that US institutions account for no less than two-thirds of the total with British firms taking a further 17 per cent. The research unearthed a whole series of factors responsible for US domination; and in the case of Britain perhaps to the essentially unrestricted competition in domestic and international markets from the best financial institutions in the world.

A more recent study of broad groupings in the service sector found that the UK's productivity gap in services as a whole was greater than in manufacturing when compared with France or Germany, though smaller compared with the US.

# 7
# ISSUES OF PUBLIC ECONOMIC POLICY

This chapter brings together research projects which do not fit into Chapters 4, 5, and 6 but all are relevant to public economic policy and many have had a strong influence on it.

The series of studies on *urban redevelopment*, begun in 1963, continued until 1969, but was then wound up for lack of funds. In the event two books by Peter Stone were published. The first on population trends and housing estimated the demand for dwellings to the end of the century and concluded that if demands were to be met, both an increased proportion of national output devoted to building and substantial changes in the social and financial basis of housing supply would be needed. A second book, on the structure and costs of urban settlements, examined the effects of size, shape and form on the costs of construction and operation for various model settlements. It considered the facilities needed, different transport systems and the advantages of expanding existing settlements rather than developing new sites.

Among research projects on social questions a study of *commonwealth immigration* was published in 1970. This assessed the economic impact, concluding there had been no depressing effect on wages and no reduction in output per head. But some of the costs in terms of social capital were still to come and policies to encourage residential dispersion were desirable. The study by Kit Jones and Tony Smith received considerable publicity and was influential in reducing controversy on this subject. The following year a study on *poverty* was begun; this surveyed the various standards used to measure poverty, examined developments between 1953 and 1973 and analysed the characteristics of the poor in an attempt to determine the extent to which households with certain characteristics were in danger of being in poverty and how far those characteristics were responsible for poverty. The poverty study was followed by an examination of the variations in earnings, unemployment and sickness of several cohorts of adult males in the period 1963–73. The object was to provide a better measure of *inequality* and to examine various policy issues involving unemployment and sickness insurance, pension schemes and taxation policy. A number of journal articles were published, along with an occasional paper on *state pensions*.

Another subject researched between 1966 and 1970 was *regional economic development*. Arthur Brown's aim was to build up a theoretical and empirical framework for the analysis of regional economic growth and the consideration of regional economic policy, especially in relation to national economic development. In addition to a book in the Institute's series of economic and social studies, three volumes of regional papers were published. The book started with a discussion of the objectives of regional policy and examined interregional economic differences, regional social accounts and interregional transfers. It attempted to relate the growth of regions to a simple growth theory and analysed the difference between regional labour markets and the interregional flows of capital and labour. Regional policy was found to be necessary and worthwhile in terms of national economic development as well as for social and political reasons.

In 1971 Frank Blackaby returned to the Institute as Deputy Director and took charge of a study of *British economic policy in the 1960s*. This took up the story where Dow had left off in 1960, but the aim was to cover a wider field than demand management alone. Seven members of the staff were involved as well as two former members. In the event the study was a very detailed analysis of the period up to 1974. It covered public expenditure and budgetary policy, monetary policy, the balance of payments, incomes policy, industrial policy, planning and induastrial relations, the nationalised industries and commercial policy. One lesson of those years, highlighted in Blackaby's general appraisal, was the damaging effect of frequent policy changes and reversals. Another was the increasing difficulty of combining full employment with an adequate balance of payments. He also discussed the tendency for the British form of collective bargaining to lead to excessive increases in money earnings and the consequent attempts at incomes policy. He concluded that the problem of devising policies appropriate to a country with a relatively inefficient manufacturing sector and an unreformed pay bargaining system remained unsolved.

Towards the end of the 1970s the growing concern about the effects of oil on the British economy, the price of energy and inflation resulted in three new projects. On his retirement from the post of chief economic adviser to the Treasury, Sir Fred Atkinson joined the Institute to lead a *study on oil*, the aim of which was to determine the impact of the newly emerged North Sea oil and to discuss the problems posed for British economic policy. A study on the *real price of energy*, led by George Ray, analysed the development of prices paid by final consumers for different fuels with the object of making realistic assessments of the energy conservation that could be expected by 1990. The study of *world inflation* was more ambitious. Arthur Brown's plan was to follow the lines of his earlier work *The Great Inflation 1939–51* and to identify and assess the main processes of inflation in the world economy as a whole since 1951 by an analysis of the mechanisms, including labour market behaviour, monetary influences and import prices. When published in 1984, this was a major comparative study of the origins and experience of inflation in the United States, Japan, the United Kingdom, France, West Germany and Italy and less intensively in a number of other countries, as well as the world as a whole. The central message was that inflation is mainly a labour market phenomenon.

Another topic which had been researched earlier in the Institute's history was revisited: *Industrialisation and the basis for trade* (Roy Bachelor, Robin Major and Ann Morgan) was a sequel to Maizels' earlier work. It analysed the exceptionally rapid growth of world trade since 1960 and concluded that tariff reductions and the rise of multinational corporations had been the main factors. The main influences on a country's international trade were analysed in terms of a classification into 'clusters' according to similarity of economic structure.

## Joint studies in public policy

In 1976 the Institute launched a series of conferences on important issues of national and international economic policy. The idea was derived from the Brookings Panel in Washington and the accompanying Economic Activity Papers, although the Institute series was more modest, partly because it proved impossible to raise a grant large enough to provide the sort of resources involved in the Brookings Papers. It was not the Institute's first venture into the conference field, but until 1976 conferences had never been held on a regular basis. One-off conferences had included subjects such as incomes policy in 1972 and medium-term modelling in 1973, both of which led to books. Three titles were published in a series of Economic Policy Papers, all of which attracted a great deal of attention: *Demand Management* (ed. Michael Posner), *Deindustrialisation* (ed. Frank Blackaby) and *Britain's Trade and Exchange Rate Policy* (ed. Robin Major).

At about this time a feeling developed that there should be more cooperation among research institutes. This led to a decision by the Directors of the Institute, the Policy Studies Institute and the Royal Institute of International Affairs to intensify their joint activities. This was partly the consequence of proposals which had been widely circulated to set up a London institute for 'the study of the predicament' which subsequently became known as a British Brookings. Existing institutes were not unnaturally somewhat concerned that this proposal might draw both limited research funds and research staff away from them and decided to take defensive action. In the event a much more modest proposal emerged in the setting up of a technical change centre.[6]

The Directors of the three institutes agreed to examine the possibilities for cooperation under three headings: research programmes; meetings and conferences; and publications. The main outcome was a decision to widen the Institute's series of economic policy conferences, under the general editorship of Frank Blackaby, to cover major policy issues in which all three institutes should have some degree of interest, even if for one or two of them it was only a minor interest. A grant was raised from the Nuffield Foundation and the series was launched in 1979. It was called Joint Studies in Public Policy. By the end of 1987 twelve conferences had been held and books published. Topics ranged from slower growth in the western world to the constitution of Northern Ireland. They were all on subjects of current policy interest and debate. The series then ceased for lack of finance and from then on the National Institute itself continued to hold conferences and to publish the series of papers presented.

## Macroeconomic policy and public expenditure

In addition to the research carried out under the macroeconomic programme by the Review team described in chapters 4 and 5, the Institute continued to embark on a number of longer-term projects in the 1980s and 1990s.

Malcolm Levitt joined the Institute on secondment from the Treasury to initiate a series of linked studies on public expenditure, including a comparison of its past growth in Britain compared with other OECD countries and detailed studies of growth, efficiency and productivity in public spending on defence, education, health, law and order and social security. There were also comparisons of systems for managing and measuring productivity in various government departments and private firms.

Christopher Dow returned to the Institute in 1983 as a Visiting Fellow to lead a research project on monetary theory and monetary policy. The analysis led to the main conclusion that the ten-year experiment with monetary targets was the pursuit of a false trail and that the real role of monetary policy is the management, not of demand, but of the exchange rate. Following the publication of his book, Dow then proceeded to a study of the five major recessions in the UK since 1920, sifting out the causes of each and considering policies to prevent or mitigate major recessions.

A study of the trade cycle by Andrew Britton considered the significance of variations in the rate of output growth and other economic indicators in Britain, which for much of the postwar period had followed an irregular but apparently recurrent pattern. A year-by-year account of the course of the trade cycle from 1958–82, using a simple model and contemporary commentary, showed why events did appear to repeat themselves at intervals of roughly five years.

In 1991, the Institute published the third in its major historical studies of economic policy since 1945. Following the earlier studies by Dow and Blackaby, Andrew Britton covered policy from 1974 to 1987. The resulting book, after a narrative of events and a history of ideas, examined the conduct of policy and the outcome for policy objectives. An attempt was made to draw out some lessons from history, one of which was that keeping the pressure of demand low for most of the period did not promote the growth of productive potential and almost certainly raised, for the foreseeable future, the sustainable level of unemployment. If this interpretation of the evidence had been available and accepted by the policymakers at the time, it is possible that they would have opted for a higher pressure of demand and a more gradual reduction in the rate of inflation.

## Demographic change and the UK labour market

A variety of issues of public interest were visited in the 1980s. There was an examination of trends in employment over the age of 55 and in particular the trend to earlier retirement. This was followed by a more comprehensive project on the economic aspects of demographic change by John Ermisch, which discussed the implications for the labour and housing markets, health care and pensions of prospective changes in the age distribution of the population. Another study analysed flows into and out of lone parenthood. Peter Hart examined youth unemployment; and a model of regional unemployment was built under the direction of Paul Gregg.

One of the most comprehensive studies was that by David Worswick on the explanations advanced for the high level of unemployment in the 1980s. The analysis examined the link between real wages and employment, the role of technical and structural change, including the influence of regional, occupational and industrial mismatches, the effects of macroeconomic policy and the international dimension. The study provided a penetrating analysis of unemployment. One message that emerged was that if Britain was to continue using interest rates as the sole instrument to manage the economy, unemployment might remain high for many years. Moreover even three million unemployed appeared to have had limits in bringing down wage inflation. Believing that ministerial appeals for wage restraint are likely to be ineffective, Worswick considered the time was ripe to reopen the question of incomes policy.

Further work was done on wage-setting behaviour and trade union pressure using survey methods and merging the data collected with company accounts data. This was used to examine the degree of change that occurred in the mid-to-late 1980s, providing evidence that trade unions were not the driving force behind real wage growth, which continued despite high unemployment. The framework of wage bargaining was radically changed during the 1980s and the dispersion of wages widened significantly, implying that the problem of reconciling growth in demand for labour with wage moderation was still unsolved.

The concept of full employment and policies necessary to achieve it provided a main theme of public debate in 1994 – the fiftieth anniversary of the postwar White Paper – and was taken up by the Institute in a study by Andrew Britton of the substantial changes in patterns of work and how far greater flexibility in the supply and demand for labour is compatible with the full participation of all those seeking work. The analysis concluded that industries which used unskilled labour relatively intensively were more prone to decline than those which used skilled labour.

# 8
# BRITAIN IN EUROPE

In the late 1980s the Institute began major work on the impact of closer European integration on the economy. The programme was led by David Mayes, who became the coordinator of the ESRC initiative on the single European market. The research at the Institute covered a wide range of issues and was financed from a number of sources. Many of the staff contributed to the work and outside researchers in the universities were involved under the ESRC initiative.

The pace of change in Europe, both with the political transformation in the east and the acceleration of the process of integration in the west, meant that only some of the issues could be researched. The programme focussed on the path to economic and monetary union, the impact of the completion of the single internal market on firms and their reactions to it and the external implications of closer European integration.

## Monetary union

The economic case for European monetary union has continued to be the subject of much controversy and the Institute has organised conferences and contributed papers and articles. A first concern was to develop a strategy for moving the whole community to monetary union in a manner that was both economically efficient and politically feasible. It was determined at an early stage that the main gains would only be achieved once there was a single currency and the research focussed on the role of the ECU as a path forward.

The team then turned to the problems of the transition to economic and monetary union and the nature of the final system. A further study was undertaken on the effects if only a minority of countries were to become members of EMU in stage 2. A succession of articles drew attention to the main problems to be faced and the ways of tackling them. Progress towards convergence was assessed at intervals. After it was announced that the new currency would be the euro, the team concluded that the replacement of the national currencies with the euro was a huge and complex task in the time available; and attention was drawn to problems which could magnify the potential weaknesses of the new arrangements. The research drew on the experience of monetary union in Germany and decimalisation in the UK.

The world economy team also made a number of interventions in the policy debate on Europe, for example on the targets for fiscal deficits where they argued that fiscal tightening would be required in many European countries even if there were no Maastricht Treaty commitments. Research suggested that in some countries, such as Greece and Italy, attempting to cut government deficits to achieve the targets might well raise unemployment for some time.

The discussion of monetary union required the calculation of equilibrium real exchange rates and the world economy team made several attempts to do this. At the end of 1996 Europe looked as if it was closer to sustainable exchange rate levels than it had been for some time.

## The impact of the single market

One concern of the research was how the regulatory framework in Europe could help to achieve the improvement in competitive performance hoped for in a single market. This led to a study of the ways individual companies could improve performance both by internal action and through mergers and acquisitions. A joint project with the IFO Institute in Munich on the way in which the single European market would impact on various industries in Britain and Germany covered pharmaceuticals, retailing, machine tools and insurance. The extent of the immediate impact was in some cases rather modest – at least in the UK. The influence was examined through a variety of routes. In every case it has been important for firms to reassess their business strategy in the light of new threats and new opportunities. The style of corporate governance could influence the choice of strategies adopted by firms in response to the new situation.

A study of the impact of the new rules in the financial services analysed the impact of new legislation on leasing and concluded that relatively high levels of competition were occurring as had been intended by the legislation.

A study of the scope for competition through the opening up of public procurement to cross-border competition and how far it could be inhibited by exchange risk was also undertaken.

Among other studies of the impact of the single market were the effects of integration on labour market regulations. The aspects covered included health and safety, migrant workers, and the role of the Commission and national governments in initiating new rules and regulations. Contrasts were drawn between the approach to social policy in Britain and other countries. A related study compared redundancy regulations in Britain, America and the main countries of continental Europe. Countries were ranked in terms of the stringency of the rules, but it was stressed that their effect would also depend on the accompanying social security system.

## External implications of closer European integration

A first area of research was on the determinants of direct investment flows and a specific study of investment by German and British firms suggested that the completion of the internal market had resulted in increased foreign direct investment by Germany and the UK, particularly by transport and financial service industries. However there was no evidence of diversion of investment which would otherwise have gone to other destinations.

It was also found that the single market programme has raised the level of investments in other European Union countries by British and German companies. Firms in sectors such as financial services have been able to enter national markets previously closed to them as technical regulations have been harmonised.

## Role of the National Institute

As a result of David Mayes becoming the coordinator of the single market research programme financed by the ESRC, the Institute has become a centre of expertise on European institutions and European economies. Mayes' position put him at the hub of a large wheel and gave the Institute access to an unrivalled network of researchers throughout Europe. He led an extension of that initiative which embraces research councils in twelve other European countries through COST (Cooperation on Science and Technology). The Institute hosted a meeting to launch a book on the single market edited by Mayes for the Andrew Shonfield Association. Another book was concerned with the external effects of European integration on the United States, Japan, the South-East Asian countries and Australia and New Zealand.

## European integration and capital markets

A new programme was begun in 1995 led by John Arrowsmith who joined the Institute from the Bank of England. This was designed first to examine the impact of the single market and closer monetary coordination on financial institutions and markets; and secondly to consider the further effects that might be expected if some states proceeded to full monetary union.

Despite a considerable degree of liberalisation in recent years, it was found that capital was not yet fully mobile by 1996. Even in the countries which had few external controls on the free movement of capital – the UK, Germany and the Netherlands – national regulation rules and differences in national tax regimes have continued to form barriers to capital mobility; and increased exchange rate uncertainty after 1992 appears to have formed a different sort of barrier. The elimination of some of the fiscal restraints would need a greater degree of tax harmonisation than was envisaged in 1997. In the absence of monetary union, exchange rate uncertainty would also continue to be a major factor inhibiting capital flows and preventing the efficient allocation of capital within the single market.

# 9
# CONCLUSIONS

Over the past sixty years Britain's economic circumstances have altered but, with some long-term problems seemingly intractable and the emergence of new ones, the need for economic research is as great as it was in the 1930s. We have not yet found ways of attaining a steady rate of growth with full employment and without inflation; nor have satisfactory improvements in Britain's relative productivity performance yet been achieved. Although these problems are now widely recognised and discussed, insufficient resources have been devoted to economic research.

Difficulties with finance at the Institute reflect the shortage of finance for research in the social sciences as a whole, which were partially and temporarily eased in the early days of the Social Science Research Council from the mid-1960s to the mid-1970s. The implication of this shortage for the Institute and others has been that a great deal of time and energy has had to be spent in raising funds for projects or programmes; and the scale of activity has often had to be restricted when the funds available were less than the estimated cost. Moreover there have been many topics which should have been but have not been researched for lack of funds.

This situation contrasts starkly with similar institutes in Europe where far more public money is available for economic research, so that institutes, especially in Germany and France but in other countries also, are much larger and have much greater security of income. Four of the five German *Konjunktur* institutes have staffs between 190 and 300, compared with NIESR's 45; and four out of five obtain over 90 per cent of their income from public sources. In France four out of six obtain more than 90 per cent of their income from public sources.

If more money had been available it might have been easier for the Institute to recruit and hold experienced staff. Greater risks could have been taken in employing researchers in advance of raising project grants and more security could have been offered to staff. But it is unlikely that this would have solved completely the difficulties faced in this matter by independent institutes outside the universities. University life has some special attractions for staff, while the opportunities for employment of economists, for example in the government economic service and more recently in the city with its tempting salaries, have been numerous. At the same time the Institute can take pride in the number of staff who have moved on to chairs in several British and overseas universities and senior posts in the government economic services, the Bank of England, OECD and other international organisations.

Throughout its 60 years the Institute has concentrated on applied economic research and the subjects chosen for study have been ones important for policymakers and for business firms. All the work is intended for publication; the Institute has never engaged in contract work. The programme has always been flexible and has ranged over a large number of issues but, although the emphasis has shifted as problems changed, it has remained closely related to matters of public concern. The focus on the current economic situation and forecasting in the macroeconomic programme on the one hand, and on the longer-term problems investigated in the industrial programme and other projects on the other, has provided a valuable coherence and continuity to the studies, so that there is a feeling that there is a National Institute view on many issues. While not without its dangers, this has probably led to a greater public awareness of research emanating from the Institute and its implications for economic policy.

When the first steps were taken to establish the National Institute of Economic and Social Research in 1935 and 1936, it was recognised that it was an experiment. One of its aims was in fact abandoned after the war when the Executive Committee ceased to try to organise and finance studies outside the Institute. The budget for external studies was run down and research concentrated within the Institute. The early programme was an ambitious one and many of the subjects chosen for research were raised to a new importance by the war. Some of the measurement studies were then taken over by government departments with resources that no private body could command. The Institute therefore moved to others. Wartime controls greatly increased the economic data available and extended the scope for collecting and analysing them. The National Institute took full advantage of this to extend its own programme and adapt it to postwar problems.

The establishment of strong links with government departments during the war undoubtedly paid dividends in their cooperation on many projects, especially in the provision of data. It was regarded as important not to make unreasonable requests for data to government departments. The close relationships established led to respect for the Institute's work. Even when, as later with the *Review*, the Institute was sometimes critical of government policy, that respect was retained. A difficulty of a different kind has arisen more recently on grants from government departments and other public bodies. This relates to the terms on which grants are awarded rather than to the amounts involved. The terms of contracts, particularly in controls over publication and the monitoring of progress, are being tightened in a way that could prejudice the independence of the research worker in carrying out and publishing research free from the influence of those financing it.

The links forged with industry also helped to strengthen the work. The majority of firms approached on special inquiries were ready and willing to cooperate, even when they were under pressure with what was regarded as far too much form filling. Again staff were careful not to make troublesome requests. When the *Review* and forecasting activity began to be closely followed in the City, the links with financial institutions were strengthened so that the Institute's influence spread through a new channel.

Other economic research institutes have been set up in recent years and many other bodies are now engaged in economic forecasting, but the National Institute can claim to have had a special role. It also led the way in a number of detailed statistical studies of topics related to economic efficiency. It pioneered work on such subjects as company accounts, seasonal corrections and industrial inquiries. A special feature of much of its work has been the analysis of British performance, problems and policies in the light of comparable experience in other countries, and helping to overcome the prejudice that existed for a long time that Britain had nothing to learn from other countries.

The Institute has also had an educational role. Christopher Dow's book on *The Management of the British Economy* was used extensively in university economics courses, while the *Review* also had an influence on the way that economics was taught. The Institute was the first to produce and publish economic forecasts. It was not surprising that the other forecasters appeared; what was surprising was that they appeared only slowly. In the meantime the *Review* provided a unique service and at the same time raised standards of intelligibility in its presentation of economic analysis and policy proposals. More recently the publishing of the domestic and world models has led to the satisfaction of seeing the Institute's good quality scientific work made use of by governmental and financial institutions.

In other countries of the world, the National Institute's aims and organisation were copied. Staff came from a number of them to spend time in London and learn the methods. The responsibilities of an independent institute were always stressed with the importance of high standards of scholarship and detachment.

The Institute's influence cannot in the nature of things be measured. But it can be seen in many ways. The results of the researches have appeared in 86 books, many conference volumes, and more than 200 special articles in the *National Institute Economic Review*, in addition to many in other journals. The *Review* has now been published for nearly 40 years. Relations with the press have always been good and there has been extensive media coverage of the *Review* and the other longer-term studies in the books and occasional papers which has brought the name of the Institute to a very wide audience.

The distinctive research programme has evolved over the years in response to new events and new ideas. But the overall objective has not changed. It is and always has been to improve understanding of the economic and social conditions that contribute to growth and prosperity and to identify those characteristics and circumstances that inhibit such growth. As described in previous chapters, a number of main themes emerged. Some of them began very early in the life of the Institute: for example, productivity studies started with Rostas' pioneering work in the 1940s. Research on the conditions for sustained growth and the policy framework needed for financial and economic stability have also been themes for many years. More recently European integration and its problems and consequences have joined the research programme and seem likely to remain among the main programmes for many years to come.

# NOTES

1 Bowley's book was first in the series of economic and social studies. In view of the extensive literature that has emerged from the Institute, there is no attempt to list the publications in the text of this history. A full list of the Institute's publications is available on application to the Secretary. In addition there have been hundreds of articles published in the academic journals and other periodicals as well as over 200 published in the *National Institute Economic Review*.

2 Since the mid-1950s the Institute's series of economic and social studies and occasional papers have been published for the Institute by the Cambridge University Press under a commission agreement. Conference papers were published first by Heinemann Educational Books, Gower Publishing Company, Sage Publications and more recently by Cambridge University Press.

3 It seems probable that Keynes himself would have disapproved of his name being associated with the Institute in this way. In 1942 he was invited by Sir Henry Clay to become the President of the Institute following the death of Lord Stamp. He declined partly because he was too busy but also on the grounds that he was 'only in limited sympathy with the work of the Institute as it has been carried out so far'. He recognised that the war probably had something to do with this, but in his reply to Sir Henry Clay he expressed his view that 'money has been spent in paying people to write books of no great value which it is much healthier they should write on their own responsibility in their spare time whilst earnings their living in some other way. Books written for

pay are seldom any good as compared with the works that an author simply cannot help writing.'

4 The Social Science Research Council was renamed the Economic and Social Research Council in 1984.

5 At this time the Institute had no in-house computer facilities and the forecasting team used to leave Dean Trench Street for two or three days to use the London University Computing Service. It was not until the appearance of personal computers in the 1980s that all the work could be done in-house.

6 The Technical Change Centre was wound up in 1987 when the ESRC did not renew its grant.

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This history traces the origins of the National Institute of Economic and Social Research and outlines the vast amount of research which has taken place during its sixty years existence. It describes some of the difficulties it has faced and attempts to assess its contribution to our understanding of the workings of the economy. Finally it considers the Institute's influence and educational role.

Kit Jones joined the National Institute of Economic and Social Research in 1961, where she wrote mainly on the economics of social expenditure and immigration. She became the Secretary of the Institute in 1968, a post she held for twenty-two years until she retired in 1990. She then became a Governor of the Institute and continued her association with it in a number of ways. Her book, *An Economist among Mandarins: A Biography of Robert Hall 1901–1988*, was published by Cambridge University Press in 1994.

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