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UNIVERSITY OF CAMBRIDGE

DEPARTMENT OF APPLIED ECONOMICS

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SEVENTEENTH REPORT

S. SIBSON-TURNHILL (Secretary)

ACTIVITIES IN THE PERIOD

OCTOBER 1976 TO SEPTEMBER 1977



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S E V E N T E E N T H R E P O R T

A C T I V I T I E S I N T H E P E R I O D

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SEVENTEENTH REPORT OF THE

DEPARTMENT OF APPLIED ECONOMICS

(covering the year October 1976 to September 1977)

I. RESEARCH ACTIVITIES

This section outlines the work done in 1976-77 on the research projects being conducted in the Department, including the new projects started in the current academic year.

ECONOMICS

GROWTH AND FLUCTUATIONS IN THE BRITISH ECONOMY: PROJECTIONS FOR PLANNING

This project is under the direction of Professor Stone and Dr Barker. The main results of the research were previously published in the series A Programme for Growth (London, Chapman and Hall) in which twelve volumes appeared. This series has been replaced by a new series, Cambridge Studies in Applied Econometrics, in which three books have appeared: Models and Projections of Demand in Post-War Britain by Angus Deaton (1975), Economic Structure and Policy by members of the project, edited by Terence Barker (1976) and Public Policy and the Corporation by Mervyn King (1977).

The other research staff working on the project during the period covered by this report were as follows: Mr J.A. Beath, Mr A.W.A. Peterson, Mr L.A. Winters, Mr R. Witcomb and Mr V.H. Woodward.

Visitors to the project during the year included Professor Finn Försund, University of Oslo, and Professor Bryan Philpott, Victoria University of Wellington, New Zealand. Dr D.A. Livesey, Dr G. Meeks and Mr D.A. Vines were associated with the work on the project.

The main research of the project is the investigation and analysis of the present structure and future prospects of the British economy. The approach of the project has been to build a computable, disaggregated model of the economy and use it to demonstrate possibilities for the future. The model is now dynamic. It provides and maintains coherence and consistency between different proposals and policies. It is estimated for 40 industries, with 1970 as the price base year, and uses the 1968 SIC. This model projects the economy over the period 1973-85 under a variety of assumptions about economic policy and other exogenous variables.

Besides the work on the dynamic model, research has been concentrated in five areas: industrial pricing, consumers' expenditure behaviour, financial behaviour in the company sector, investment and employment functions and the determinants of volumes and prices in foreign trade.

Papers presented at conference by members of the project were as follows:

Conference on Modelling the Economy, Warwick University, April 1977.

T.S. Barker Time trends versus activity effects in the explanation of imports.

Conference on Recent Developments in Economic Policy Formulation, Imperial College, London, April 1977.

T.S. Barker Economic policy formulation in a large-scale model.

IFAC/IFORS/IIASA Workshop on Systems Analysis Applications to Complex Programs, Poland, June 1977.

William Peterson Policy choice using a large econometric model.

Fifth World Congress of the International Economic Association, Tokyo, 1977.

J.R.N. Stone Comments on Moses Abramovitz's paper.

Conference on Modelling the Economy, Warwick University, September 1977

Alan Winters Lagged responses to prices: the case of UK visible exports.

The following books and articles by members of the project were published during the year:

Barker, T.S. (1976) Projecting alternative structures of the British economy. pp. 3-25 in K. Polenske and J. Skolka (eds.), Advances in Input-Output Analysis, Ballinger, Cambridge, Mass.

Barker, T.S. (1977) International trade and economic growth: an alternative to the neo-classical approach. Cambridge Journal of Economics, Vol. 1, No. 2, June 1977.

Barker, T.S. (1977) Making the Cambridge Growth Project model dynamic. Medium Term Dynamic Forecasting, edited by W.F. Gosling, Input-Output Research Association, London.

King, M.A. (1977) Public Policy and the Corporation, Cambridge Studies in Applied Econometrics Number 3, Chapman and Hall, London.

Livesey, D.A. (1976) A minimal realisation of the Leontief dynamic input-output model. pp. 527-541 in K. Polenske and J. Skoldka (eds.), Advances in Input-Output Analysis, Ballinger, Cambridge, Mass.

Meeks, G. (1977) Disappointing Marriage: A Study of the Gains from Merger, D.A.E. Occasional Paper 51, Cambridge University Press.

Meeks, G. (1977) Time to shift the onus of proof (with J.G. Meeks), The Guardian, 14.7.77.

Stone, J.R.N. (1977) Major accounting problems for a world model. In Problems of World Modelling, Ballinger, Cambridge, Mass., 1977. Hungarian translation: Demográfia, vol. XX, no. 1, 1977, pp. 23-55.

Stone, J.R.N. (1977) The evolution of the Cambridge Growth Project. In Beiträge zur Strukturpolitik, Materialien zum Siedlungs- und Wohnungswesen und zur Raumplanung, no. 18, Münster, 1977.

Stone, J.R.N. (1977) Introduction to Inland Revenue Report on National Income, 1929. Department of Applied Economics, University of Cambridge, 1977.

Vines, D.A. (1976) Economic Policy for an Open Economy: Resolution of the New School's Elegant Paradoxes. Australian Economic Papers, Dec. 1976, pp. 207-229.

The following seminars and lectures were given by project members during the year:

- T.S. Barker 'The irrelevance of the neoclassical theory of international trade' (given at the Faculty Seminar at Queens').
- T.S. Barker 'Economic policy formulation in a large-scale model' (given to the Cambridge Growth Project).
- T.S. Barker 'Time trends versus activity effects in the explanation of imports' (given to the Cambridge Growth Project).
- T.S. Barker 'Convergence, stability, pure dynamic multipliers and price homogeneity: some properties of the Cambridge multisectoral dynamic model' (given at the University of Warwick).
- T.S. Barker 'The experience of a year's operation of the Growth Project's model in its dynamic form' (given to a meeting of the Input-Output Research Association, London, May 1977).
- John Beath 'A comparison of alternative models of price formation in a multisectoral dynamic model' (given to the Cambridge Growth Project).
- John Beath 'Factor shares and the shifting of the corporate income tax' (given to the Research Students' Seminar, University of Cambridge).
- G. Meeks 'Fixed investment and cash flow' (given to the Cambridge Growth Project and at the University of Liverpool).
- A.W.A. Peterson 'Optimising consumption using the MDM' (given to the Cambridge Growth Project and to the Faculty Seminar at Queens').
- J.R.N. Stone 'The evolution of the Cambridge Growth Project' (given at the Institut für Siedlungs- und Wohnungswesen der Westfälischen Wilhelms-Universität, Münster).
- D.A. Vines 'An econometric study of annual wage inflation in the UK 1954-1975' (given to the Manpower Research Group, University of Warwick).
- L.A. Winters 'Lagged responses to prices: the case of UK exports' (given at the University of Surrey).
- L.A. Winters 'The determinants of UK visible export prices' (given at the Research Students' Seminar, University of Cambridge).

L.A. Winters 'Factors affects UK exports' (given to the Cambridge Growth Project)

R.M. Witcomb 'A model of stockbuilding' (given to the Cambridge Growth Project).

EFFECTS OF ECONOMIC POLICY

Work on this related group of projects, which was again mainly financed by the SSRC, continued throughout 1976-77 under the general direction of Mr W.A.H. Godley. Research staff working on the project (the Cambridge Economic Policy Group, CEPG) all or part of the time were as follows: Mr P.E. Atkinson, Mr K.J. Coutts, Mr T.F. Cripps, Mr M.J. Fetherston, Mr B.C. Moore, Mr J. Rhodes, Mr R. Tarling, Mr T.S. Ward, Mr S.F. Wilkinson.

The general objective has been to develop a system of information which can be used to simulate the medium-term developments of the UK economy on alternative assumptions about macro-economic policy strategies.

The computer model of the economy underwent minor modifications and was again the basis for alternative medium-term projections and policy analysis which was published in the Economic Policy Review, No. 3, March 1977. In addition several members of the group were involved in the preparation of papers for the Demand Management Conference hosted by the National Institute (NIESR). The conference was concerned with the general analysis of economic policy in the UK in the period 1964-75 and how past policy could have been improved. The computer model was used to generate simulations of alternative policies, both those advocated by the CEPG and by other participants in the conference, and to quantify the responses of model variables to changes in conditions.

As in previous years the CEPG deliberately intervened on a number of occasions in the public discussion on economic policy, sometimes in the form of newspaper articles; more fundamental research, of a kind which it is hoped will make a significant contribution to knowledge, has underpinned these contributions to the public discussion and the research priorities have always been dictated by the requirement that these should be firmly

grounded.

An analysis of the impact of regional policy in the 1970s by Barry Moore and John Rhodes was completed and this is to be incorporated in the final draft of a book covering the evolution of regional policy in the UK throughout the post-war period. A short study of the impact of industrial and regional policy in the Republic of Ireland was also completed.

A final manuscript of the study on UK industrial pricing by K.J. Coutts, W.A.H. Godley and W.D. Nordhaus was completed in March, to be published as a monograph in the Spring of 1978.

BIBLIOGRAPHY

Economic Policy Review, No. 3, March 1977, containing the following:

General review and policy analysis

The macroeconomic implications of devaluation and import restriction

W.A.H. Godley
R.M. May

The cost of food and Britain's membership of the EEC

A. McFarquhar
W.A.H. Godley
D. Silvey

The role of monetary policy in economic management

T.F. Cripps
M.J. Fetherston

Inflation and money supply

R.J. Tarling
S.F. Wilkinson

Manufacturing export shares and cost competitiveness of advanced industrial countries

M.J. Fetherston
B.C. Moore
J. Rhodes

Public expenditure plans and fiscal policy

T.S. Ward

Recent changes to the treatment of nationalised industries and trading activities in the public sector accounts

T.S. Ward

The accounting framework for the North Sea with some new projections

P.E. Atkinson

Post mortem on five years of CEPG forecasting

K.J. Coutts

Statistical Appendix

Technical Manual on the CEPG Model (2nd edition) M.J. Fetherston

Other papers (including some on which work was done in the period but which are published later or still forthcoming):

'Simulations with the CEPG Model' (paper prepared for National Institute of Economic and Social Research Demand Management Conference, held in December, 1977, to be published in 1978)

M.J. Fetherston
T.F. Cripps
W.A.H. Godley

'New Cambridge macroeconomics and Global Monetarism' (paper presented to the Carnegie-Rochester Conference Series on Public Policy, to be published 1978)

W.A.H. Godley
M.J. Fetherston

'A monetary perspective of the UK Economy' Scottish Journal of Political Economy, No. 3, November 1977

P.E. Atkinson

'Independent monetary policy and the monetary approach to the balance of payments: a model of the monetary sector of the United Kingdom' (paper presented to the Churchill Seminar, Cambridge and the Monetary Studies Group, LSE)

P.E. Atkinson
A. Blundell-Wignall

'Evaluating the economic effects of regional policy' (in the report on methods of measuring the effects of regional policies) OECD, 1977

B.C. Moore
J. Rhodes

'Regional and industrial policy in the Republic of Ireland' (conference paper presented to the Regional Studies Association, Bristol)

B.C. Moore
J. Rhodes

'Ulster: economic package unlikely to reduce unemployment levels' The Times, August 1977

B.C. Moore
J. Rhodes

'Regional and industrial policy in the Republic of Ireland' (to be published 1978)

B.C. Moore
J. Rhodes
R. J. Tarling

'The Economics of Devolution' (paper presented to the British Association for the Advancement of Science, to be published April 1978)

B.C. Moore
J. Rhodes

'The impact of regional policy in the 1970s' B.C. Moore
Centre for Environmental Studies Review, No. 1 J. Rhodes
P. Tyler

'The CEPG "ready reckoner" 1977-80' K.J. Coutts
(paper prepared for the NIESR Demand T.F. Cripps
Management Conference, held in December 1977)

'The behaviour of profits in the trade cycle' K.J. Coutts
(paper prepared for SSRC application, to be
published 1978)

'North Sea Oil and Economic Strategy - the W.A.H. Godley
dangers of going for the soft option'
(article for Vickers da Costa, April
1977)

'Strategy Zero and the deepening recession' W.A.H. Godley
(article for Vickers da Costa, August
1977)

'The money supply, wages and inflation' T.F. Cripps
Cambridge Journal of Economics, No. 1,
March 1977

'The Social Contract: post-war incomes R.J. Tarling
policies and their inflationary impact' S.F. Wilkinson
Cambridge Journal of Economics, No. 4,
December 1977

SEMINARS given by members of the CEPG

K.J. Coutts 'Pricing in the trade cycle' Cardiff University
'The normal price hypothesis' Essex University

M.J. Fetherston 'The Cambridge Economic Policy Group Model'
(given to the LSE Monetary Economics Seminar,
and to the South Bank Polytechnic Staff Seminar)

R.J. Tarling and 'Wage differentials: an inter-industry study'
S.F. Wilkinson (given at the LSE)

Wage settlement behaviour' (given at Warwick
University)

T.S. Ward 'The budgetary situation: an appraisal'
(given to Queens' Faculty Seminar, Cambridge,
to a Faculty Seminar, Liverpool University
and to the Civil Service Staff College,
Sunningdale)

T.S. Ward 'Measuring budgetary policy' (given to the
Institute of Fiscal Studies and to the Bank
of England)

B.C. Moore and papers presented to Regional Studies Association,
J. Rhodes Bristol.

FULL EMPLOYMENT BALANCE IN THE BUDGET

Work on this project, being carried out by Professor R.R. Neild and
Mr T.S. Ward, is now nearing completion.

The central aim is to devise methods of estimating what the public sector
financial balance would be if the economy were at full employment, and
thereby to explore the usefulness of the concept as a measure of fiscal
stance and as a guide to policy. An account of the project so far was
given in the Fifteenth and Sixteenth Reports of DAE Activities.

During 1976-77 the statistical and analytical work was completed. The
results will be published in a book produced by the Institute of
Fiscal Studies in the coming year. An article based on the research
"Public Expenditure Plans and Fiscal Policy" by T.S. Ward was included
in Economic Policy Review, No. 3, published by the Department in March
1977.

During the summer two seminars were given at which Messrs Neild and Ward
presented the results, first at the Institute of Fiscal Studies and
secondly at the Bank of England. The first seminar received wide
publicity and is evidence of the interest shown in the results.

T.S. Ward: Additional Publications, 1976-77

'The Chancellor's December Measures and Economic Strategy', Expenditure
Committee (General Sub-Committee), Minutes of Evidence, 20 December 1976,
H.C. 79-i.

'The Government's Plans for Public Expenditure : An Analysis of Cmnd.
6721', Fourth Report from the Expenditure Committee, Session 1976-77,
March 1977, H.C. 258

'The Iron Hand of the IMF', The Bankers' Magazine, April 1977

EXTENSION AND DEVELOPMENT OF THE SALTER/REDDAWAY ANALYSIS OF BRITISH INDUSTRIES

Research on this project has been undertaken during the year by Mr B.M. Deakin and Mr E.D. Bougourd, and the first stage was completed in September 1977.

The general aims of the research were stated in the Sixteenth Report. The original Salter/Reddaway sample of 28 British industries has been broadened to cover sectors of industry, such as electrical and mechanical engineering, which had not previously been the subject of this type of analysis. A total of 50 industries have now been included, and the time span has been extended from the most recent period previously covered (1954-63) to 1958-75, with analyses of the sub-periods 1958-68 and 1968-75. The results have been reported to the sponsor of this work, the Social Science Research Council.

CAPITAL ACCUMULATION

This project, under the direction of Dr Charles Feinstein, was described in the Sixteenth Report. A first version of the new estimates for 1960-1920 is now nearly finished. Plans are being made to publish these in book form.

EEC ENERGY MODEL OF THE UK

This project, which is associated with the Cambridge Growth Project, was begun in January 1977, to be completed by December 1978.

Work on the project is being carried out by Dr T.S. Barker and Mr A.W.A. Peterson.

The work is divided into two parts: first the construction of a static input-output model of the UK to conform with similar models for other EEC countries; and second the construction of an energy submodel of the UK intended to model the energy substitution possibilities for the main energy users.

The progress of the work has been reported in the Interim Report to the EEC Commission, August 1977, and the Final Report, February 1978.

The research on energy substitution has been presented in seminars and is being prepared for publication.

OFFICIAL FOREIGN BORROWING

This project, under the direction of Professor Reddaway and funded by the SSRC, started in January 1977. The Research Officer involved is Paul Atkinson. Its purpose is first to construct a framework in which the effects of foreign borrowing by governments can be analysed; then by using that framework to draw conclusions about how much of such borrowing is wise under various circumstances, and what policies should complement such borrowing. The project is intended to be an applied piece of work and abstract theorising has been kept to a minimum.

The methodology of the research is first to emphasise the fact that to analyse the effect of government borrowing abroad it is necessary to compare what will happen if the borrowing takes place with what would happen if it did not take place. It is intended to present a taxonomic discussion of the variables which must be considered and to emphasise the great diversity of possible alternatives. Second, the tools developed will be used to try to discern the effects of foreign borrowing by certain governments in cases where they have occurred. Finally, with the aid of these case studies we shall try to derive whatever lessons can be drawn and then make general recommendations which follow either on a priori grounds or from the empirical evidence.

At the time of the SSRC's acceptance of the research proposal a great deal of work had been done on the analytical work, and further work has been done during 1977. This advanced sufficiently that work was undertaken during the academic year 1976/7 on two case studies of governments which had borrowed heavily abroad: Australia during the

1920s and the United Kingdom during 1973-76. Research on these two case studies was largely completed during the year, and the present plan is to consolidate what has been done by writing a draft of the analytical sections and of the two case studies. At present the results of the research are contained in a number of working papers which are not suitable for dissemination.

There have been no publications arising from the project so far. It is envisaged that there will not be any publications until the project is complete, when the results will be published in book form.

LABOUR MARKETS IN DECLINING INNER CITY AREAS

This new project, which started in July 1977, is being carried out by Barry Moore and John Rhodes. The aim of the research is to find out quantitatively what has been happening to population and employment in all the major inner city areas of the UK, to assess the speed at which economic decline has taken place, to disentangle so far as possible the causes of this decline, whether arising from government policies, local authority policies or market forces, and to discuss the kinds of policy change which may be helpful in alleviating the problem.

One feature of the methodology is the setting up of 'control groups', such as outer city areas, smaller free-standing cities and new towns, so that relative changes taking place in each inner city area can be properly assessed. The data requirements for this project are large and it is on these that work has so far concentrated.

THE EFFECT OF THE ABOLITION OF WAGES COUNCILS

This is a three-year project financed by the Department of Employment, which started on 1 October 1976. The research staff involved are Frank Wilkinson and Roger Tarling (joint principal investigators),

Christine Craig and Jill Rubery.

The object of the project is to determine the effect of the abolition of wages councils on wage movements, wage structures and collective bargaining in selected industries. This is relevant both to Frank Wilkinson and Roger Tarling's work on the role of institutionalised wage determination in the inflationary process, and to Jill Rubery's work on low pay.

The research involves the study of six industries which had wages councils abolished between 1969 and 1975. These are paper box, cutlery, jute, baking, stamped or pressed metal wares, and industrial and staff canteens. Control data are being derived from a study over comparable periods of wage movements in other wages council industries, other low-paid non-wage-council industries and in manufacturing industry as a whole.

Work during the first year of the project has consisted of:

- (1) assembling and collating general background information, and some of the control data.
- (2) carrying out survey work in the cutlery, jute and paper box industries.

Reports have been written on the cutlery and jute industries for submission to the Department of Employment. Work proceeds on the other four industries, and reports on these will be completed during the next eighteen months. A final paper will be produced during the third year of the project, drawing together the results from the separate industries.

THE ECONOMICS OF INSTITUTIONALISED WAGE DETERMINATION

The project is being undertaken by Roger Tarling and Frank Wilkinson and began on 1 June 1977.

The purpose of the research is the development of a macro-economic model of wage determination based on a very detailed study of wage bargaining at the micro-economic level. The project consists of:

a study of the origins and historical development of institutional arrangements for collective bargaining in the context of changes in economic conditions at both industry and the economy level; a statistical analysis of wage movements in the post-war period in terms of individual awards subdivided into the main institutional categories; a study of the effects of differences in these institutional arrangements and their response to inflation; and the incorporation of the results into a model to determine the aggregate wage and salary bill within a fully specified macro-economic system.

During the first 3 months the data bank was reorganised, largely through the addition of separate files for skilled and unskilled men and women. A paper was written entitled 'Wage differentials: a interindustry study' which will form the basis for further papers. Work was also begun on a paper on The Social Contract; the paper was subsequently published in the Cambridge Journal of Economics (December 1977).

INTERNATIONAL COMPARISONS OF COMPANY PERFORMANCE

The purpose of the study was 'to make a contribution towards explaining the observed differences in the performance of UK and foreign industries'. In the event the limited resources provided by NEDO for the project were used to make a preliminary study of UK and West German companies - both the subsidiaries of international companies and independent companies were included.

The main focus of the study was the high level of R & D expenditure by many of the West German companies. The study suggested that the importance of R & D relative to investment in capital equipment has been underestimated. The adherence of West German companies to pay norms and the avoidance of effort bargaining were important differences between UK and West German companies.

During the project some preliminary comparisons of labour productivity in universities were made which showed productivity to be substantially higher in West Germany. Differences in the methods of controlling

expenditure on universities were also examined.

A report on the project was submitted to NEDO in February 1977 and another report, based on the study dealing with labour productivity in the machine building industries, was made to the Department of Industry in June 1977. It is planned to publish a report on the project in 1978.

STUDY OF THE TEMPORARY EMPLOYMENT SUBSIDY

This research, which is being undertaken by Mr B.M. Deakin and Mr C.F. Pratten, has been sponsored by the Department of Employment. It was started in July 1977.

The aim of the project is to assess the economic effects of the Temporary Employment Subsidy (TES) upon firms in selected British industries.

Questionnaires and tables for the collection of opinion and data were devised and tested in the field in August, and fully revised sets of questions and tables were sent to a stratified sample of TES-supported firms in September.

The work is divided into two parts. It is expected that some results will be published after the second part ends in 1979.

EVALUATING INDUSTRIAL PERFORMANCE AND PROSPECTS

This project, which commenced on 1 January 1977, is directed by Mr V.H. Woodward and funded by the Department of Industry. Mr I.G. Begg and Mr M.L. Mackie worked on the project part-time.

The objective of the research is to study problems and prospects for the UK manufacturing sector in an international context. A dynamic input-output model with 65 manufacturing industries was constructed during the year and established on the Department of Industry computer. Two conference papers were prepared by Mr Woodward using this model:

- (1) The pattern of final demand the sectoral composition of employment in the UK 1963-80 - presented at OECD experts' meeting on structural determinants of employment and unemployment, Paris, 7-11 March 1977.
- (2) A disaggregated simulation model of the UK electrical engineering industry - presented at conference on input-output and marketing, Bedford College, London, 20-22 September 1977.

Mr Woodward also presented a paper, Differences in the Import Penetration of Manufactured Goods in major EEC Countries 1960-74, at the 4th European Conference on Industrial Structure, Newcastle, 14-17 September 1977.

Publication:

Government policy and the structure of the economy, by V.H. Woodward, in Structure, System and Economic Policy, edited by W.W. Leontief, Cambridge University Press, 1977.

AN INTERNATIONAL COMPARISON OF THE DETERMINANTS AND EFFECTS OF MERGERS

The members of this project are A.D. Cosh (fulltime), A. Hughes and A. Singh. It constitutes the only international comparative study ever attempted in this field. Research teams in the Netherlands, Belgium, France, Sweden, Germany and the United States have collaborated with the project members to test a common set of hypotheses about the causes and effects of mergers in the 1960s. The specific contribution of the project is to analyse mergers in the UK in terms of these hypotheses. However, in view of the past research work of the project members in this area, and the richness of the data accumulated, the project also sets out to consider both earlier and later time periods in the UK, as well as attempting extensive multivariate analyses, in addition to the essentially univariate work required as an input to the international comparative study.

Results presented and conferences attended:

- (a) As a result of the work in 1976/7, the project members presented a preliminary analysis of UK mergers at a conference of the international project members in Berlin in June 1977.
- (b) A. Singh and A. Hughes also presented an analysis of the general relationship between mergers and economic efficiency, drawing on some of the international comparative results, at the National Economic Development Office, London.

Proposed Publications:

- (i) The international comparative work is to be published as a book consisting of a series of separate country studies, with introductory and summary chapters to which project members will also be contributing. This should be published in 1978.
- (ii) The extended analysis for the UK is also intended for publication in 1978, as is the work undertaken on the relationship between competition policy and merger activity.

Further work:

In the next year we shall complete our extended analysis of the UK merger movement and our specific contribution to the international project. This work will then represent a thorough analysis of the UK merger movement from the point of view of the characteristics of the firms involved, and the effect upon their performance of merger activity. We then propose to extend our analysis for a further one or two years to investigate a number of dynamic issues at the firm level, and the external effects of mergers on the economy as a whole, as a necessary addition to our existing work dealing essentially with allocative efficiency at the firm level (i.e. we propose to consider the relationship between mergers and internal investment in new plant and equipment, and between mergers and the rate of growth of efficiency at the firm level and also in aggregate).

SOCIOLOGY

SOCIAL AND INDUSTRIAL DETERMINANTS OF WORKERS' ATTITUDES

The aims and methods of this project, which began in October 1968, were described in earlier Reports. The project is being carried out by Dr R.M. Blackburn and Dr J.M. Mann, Reader in Sociology at the London School of Economics.

A monograph on The Working Class in the Labour Market was completed in readiness for publication. This examines processes within a section of the labour market, how these processes are structured and the way in which the market is experienced by those who come to form a non-skilled proletariat.

Dr Blackburn gave a paper on 'The Market Situation of the Non-Skilled Working Class' to a conference of the International Sociological Association in Dublin.

VARIATIONS IN TRADE UNION ORGANISATION AMONG WHITE-COLLAR WORKERS

The aims and origins of this project, started in October 1967, are described in earlier reports. It is being undertaken by Dr R.M. Blackburn, Dr K. Prandy and Mr A. Stewart.

Most of the work is completed and a final publication, a monograph provisionally entitled Mobility and Militancy: The Work Experience and Unionism of White-Collar Employees, is at an advanced stage of preparation.

SOCIAL INEQUALITY

This project, undertaken by Dr R.M. Blackburn, Dr K. Prandy and Mr A. Stewart, integrates research started under two separate projects, as described in the 15th and earlier Reports.

A paper on 'Women, Work and the Class Structure' by R.M. Blackburn and A. Stewart appeared in New Society.

Dr Blackburn gave a paper on Social Class to a seminar of the Social Survey Division of the O.P.C.S.

As in previous years, the sociology group were hosts to the SSRC Social Stratification Seminar.

CAREER STRUCTURES

This project started in April 1976 and is undertaken by Mr A. Stewart. The aims and origins are described in the 16th Report.

A paper outlining the general theoretical approach and reporting preliminary analysis, entitled 'Education Careers and Income' was given in Dublin to a conference of the International Sociological Association.

CHILDHOOD SKIN DISEASES

This project began in 1976 and is being carried out by R.G. Jobling. The field work has been completed, but the research continues, with three areas receiving special attention:

- (a) the introduction of new forms of therapy and their psycho-social implications;
- (b) the social organisation of dermatology;
- (c) the 'politics' of medicine, with special reference to dermatological problems.

The following papers have so far been published.

R.G. Jobling, 'Learning to live with it - an account of a career of chronic dermatological illness and patient-hood', in Davis and Horabin (eds.) Medical Encounters, Croom Helm

R.G. Jobling, 'Self-help and the politics of medicine', Spotlight, Vol. 2, no. 2, 1977.

Mr Jobling has also contributed articles to the journals of the National Eczema Society and the Psoriasis Association and provided reports for those organisations.

II. PUBLICATIONS

ECONOMIC POLICY REVIEW

The third issue of the Review, with the Cambridge Economic Policy Group's annual review of Britain's short-run economic prospects, was published in March 1977.

A CRITIQUE OF THE LAYFIELD COMMITTEE'S REPORT

Local government finance and its reform, by Francis Cripps and Wynne Godley, was published by the Department in November 1976. It covers the following topics: autonomy and accountability; local government and public expenditure; fairness between areas and individuals.

DAE MONOGRAPHS

No new titles appeared in this series this year.

DAE OCCASIONAL PAPERS

This series published like the Monographs by Cambridge University Press, is designed for the rapid publication of research results. The following title was added to it during the year under review:

- No. 51 Disappointing marriage: a study of the gains from mergers, by G. Meeks (published July 1977)

CAMBRIDGE STUDIES IN APPLIED ECONOMETRICS

This series, published for the Department by Chapman and Hall, provides an outlet for the results of the research undertaken by the Cambridge Growth Project. The following title appeared in it this year:

- No. 2 Economic Structure and policy, edited by T.S. Barker (published November 1976)

DAE PAPERS IN INDUSTRIAL RELATIONS AND LABOUR

This series is published for the Department by Cambridge University Press. It provides a medium for rapid publication of studies on issues in industrial relations and labour policy. The following title appeared in the series during the year under review:

- No. 3 Management characteristics and labour conflict: a study of managerial organisation, attitudes and industrial relations, by H.A. Turner, G. Roberts and D. Roberts (published September 1977)

CAMBRIDGE STUDIES AND PAPERS IN SOCIOLOGY

Nothing appeared in either series this year.

DAE ECONOMICS REPRINTS

This and the Sociology Reprints Series replace the original DAE Reprints. The Economics Series contains articles published by members and associates of the Department in journals, conference proceedings and elsewhere. It is distributed free of charge to libraries and academic institutions. The first titles in the series are:

1. Direct and indirect constraints in the adjustment of observations, by Richard Stone, from National accounts, models and analysis: to Odd Aukrust in honour of his sixtieth birthday, Central Bureau of Statistics of Norway, 1975
2. Did the agricultural surplus provide the resources for the increase in investment in the USSR during the first Five Year Plan? by Michael Ellman, Economic Journal, No. 85
3. Regional economic policy and the movement of manufacturing firms to Development Areas, by Barry Moore and John Rhodes, Economica, February 1976
4. A quantitative analysis of the effects of the Regional Employment Premium and other regional policy instruments, by Barry Moore and John Rhodes, in The economics of industrial subsidies, HMSO, 1976
5. Demographic variables in the economics of education, by Richard Stone, in Economic factors in population growth, Macmillan for the IEA, 1976

6. Projecting alternative structures of the British economy, by T.S. Barker, in Advances in input-output analysis, Ballinger, 1976
7. A minimal realization of the Leontief dynamic input-output model, by D.A. Livesey, in Advances in input-output analysis, Ballinger, 1976
8. Balanced development: Maoist conception and Chinese practice, by Suzanne Paine, World Development, Vol. 4, No. 4, 1976

DAE SOCIOLOGY REPRINTS

The first titles to appear in this new series, circulated at the Department's expense to libraries and academic institutions, were:

1. Measuring the class structure, by A. Stewart, K. Prandy and R.M. Blackburn, Nature, 26 October 1973
2. Concepts and measures: the example of unionateness, by K. Prandy, A. Stewart and R.M. Blackburn, Sociology, September 1974
3. The modern corporate economy: interlocking directorships in Britain, 1906-1970, by Philip Stanworth and Anthony Giddens, Sociological Review, February 1975.
4. The stability of structural inequality, by A. Stewart and R.M. Blackburn, Sociological Review, August 1975

III. OTHER ACTIVITIES

DAE LIBRARY

During the period October 1976 to September 1977, the Department has received 137 periodicals; 17 of these were in exchange for the Department's Reprint Series and 43 were gifts, the remainder being purchased. The library has acquired 63 books, 653 pamphlets and reprints, and 222 British government publications.

COMPUTING UNIT

The unit, under the direction of Dr L.J. Slater, provided services for almost all the projects in the Department, the Economic Policy Group and the Cambridge Growth Project being the heaviest users. There was an increasing use of on-line facilities operated directly by research staff. Advice and help were also given to members of the Faculty of Economics and Politics, to research students, and to other institutions and individuals in the University.

Activities

Dr Slater attended two conferences:

1. the British Association for the Advancement of Science at Lancaster in September 1976, where she studied the See Facs and View Data systems;
2. the SSRC conference at the University of Essex in July 1976 organised by the SCRC Data Archive of which she is the local representative.

She is at present completing a book about auto-regressive processes which will be published in 1978, and is adviser to the Economist Intelligence Unit helping them to implement the Treasury model of the British economy on an IBM 370/195 in Boston, USA.

Mr Roger Smith is a member of the Computer Service User Representative Committee Liaison Group.

The Department's staff now operate the Sidgwick Site outstation at least two days a week to relieve pressure on the resources of the Computer Laboratory.

Staff

Mrs Marion Hughes left in March 1977. Miss Diana Day has replaced her as head of the computing room.

A student from the Cambridgeshire College of Arts and Technology spent a month working in the computing unit to gain experience.

Equipment

The Department has bought an NL Newbury 24-80 Visual Display Unit. Two extra direct lines were installed for increased efficiency in on-line working to the IBM 370/165 computer.

SEMINARS

Research staff members of the DAE gave a number of seminars during the year at Cambridge and elsewhere. The papers read included the following:

- | | |
|-------------|---|
| T.S. Barker | 'The irrelevance of the neoclassical theory of international trade'
(given at the Faculty Seminar at Queens'). |
| T.S. Barker | 'Economic policy formulation in a large-scale model'
(given to the Cambridge Growth Project). |
| T.S. Barker | 'Time trends versus activity effects in the explanation of imports'
(given to the Cambridge Growth Project). |
| T.S. Barker | 'Convergence, stability, pure dynamic multipliers and price homogeneity: some properties of the Cambridge Multisectoral dynamic model'
(given at the University of Warwick). |

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|---------------------------------|---|
| T.S. Barker | 'The experience of a year's operation of the Growth Project's model in its dynamic form'
(given to a meeting of the Input-Output Research Association, London). |
| John Beath | 'A comparison of alternative models of price formation in a multisectoral dynamic model'
(given to the Cambridge Growth Project). |
| John Beath | 'Factor shares and the shifting of the corporate income tax'
(given to the Research Students' Seminar, University of Cambridge). |
| R.M. Blackburn | 'The market situation of the nonskilled working class'
(given to the International Sociological Association in Dublin) |
| R.M. Blackburn | 'Social class'
(given to the Social Survey Division of the Office of Population Censuses and Surveys) |
| M.J. Fetherston | 'The Cambridge Economic Policy Group Model'
(given to the LSE Monetary Economics Seminar, and to the South Bank Polytechnic Staff Seminar). |
| G. Meeks | 'Fixed investment and cash flow'
(given to the Cambridge Growth Project and at the University of Liverpool). |
| A.W.A. Peterson | 'Optimising consumption using the MDM'
(given to the Cambridge Growth Project and to the Faculty Seminar at Queens'). |
| A. Stewart | 'Education careers and income'
(given to the International Sociological Association in Dublin) |
| R.G. Tarling | 'Wage differentials: an inter-industry study'
(given at Leeds University) |
| R.J. Tarling and S.F. Wilkinson | 'Wage differentials: an inter-industry study'
(given at the LSE) |
| R.J. Tarling and S.F. Wilkinson | 'Wage settlement behaviour'
(given at Warwick University) |
| T.S. Ward | 'The budgetary situation: an appraisal'
(given to Queens' Faculty Seminar, Cambridge, to a Faculty Seminar, Liverpool University and to the Civil Service Staff College, Sunningdale). |

T.S. Ward 'Public expenditure planning and control'
(given to the Civil Service Staff College,
Sunningdale, and to a course on public sector
economics at Brunel University).

T.S. Ward and R.R. Neild 'Measuring budgetary policy'
(given to the Institute of Fiscal Studies and
to the Bank of England).

L.A. Winters 'Lagged responses to prices: the case of UK
exports'
(given at the University of Surrey).

L.A. Winters 'The determinants of UK visible export prices'
(given at the Research Students Seminar,
University of Cambridge).

R.M. Witcomb 'A model of stockbuilding'
(given to the Cambridge Growth Project).

UNIVERSITY RELATIONSHIPS

Several members of the Department's research staff are members of
University committees, including the Faculty Board of Economics and
Politics and the Social and Political Sciences Committee.

TEACHING FOR THE UNIVERSITY AND FOR COLLEGES

During the year members of the research staff of the DAE gave
lectures for the Faculty of Economics on 'Current Economic Problems'
(Part I); 'Problems in Applied Economics' (Part II); and in
Mathematical Economics. They also supervised postgraduate students
and gave seminars for them.

Most members of the research staff undertook for colleges the
supervision of undergraduates during the year. They also provided
for colleges nine Directors of Studies in Economics, and three in
Social and Political Sciences.

I V. F I N A N C E

The Department's annual expenditure decreased from £266,466 in
1975-76 to £252,464 in 1976-77. 89% of the expenditure was on
stipends and wages.

University grant rose from £99,701 in 1975-76 to £111,601 in 1976-66,
an increase of £11,900. Expenditure went down by £14,002.

The following are the principal new or additional payments by
outside bodies which have been accepted during the year, for
payment over various periods:

	£
Social Science Research Council	107,403
Department of Employment	42,504
Department of Industry	35,022
HM Treasury, DOI and CSO	37,500
Anglo-German Foundation	14,567
Nuffield Foundation	1,800
	<hr/>
	£238,796

V. STAFF

RESEARCH STAFF

Director W.A.H. Godley, MA(Cantab), MA(Oxon),
Fellow of King's College

Assistant B.M. Deakin, MA(Cantab), MA(Oxon),
Director Fellow of Magdalene College

Special Miss L.J. Slater, ScD, PhD(Cantab), D.Litt.,
Appointment PhD(London), Head of Computing

SENIOR RESEARCH OFFICERS

T.S. Barker, MA, PhD(Cantab), MA(Edinburgh), Downing College

R.M. Blackburn, MA(Cantab), PhD(Liverpool), Fellow of Clare
College

T.F. Cripps, BA(Cantab), Churchill College

B.C. Moore, MA(Cantab), MSc(Econ)(London)

K. Prandy, MA(Cantab), PhD(Liverpool), BSc(Econ)(London),
Fellow of Fitzwilliam College

C.F. Pratten, MA(Cantab), BA(Bristol), Fellow of Trinity Hall

J. Rhodes, MA(Cantab), BA(Liverpool), Fellow of Wolfson College

A. Stewart, MA(Cantab), BSc(Econ)(London), Emmanuel College

R.J. Tarling, MA(Cantab), Fellow of St Catharine's College

S.F. Wilkinson, MA(Cantab), Fellow of Girton College

V.H. Woodward, MA(Cantab), BA(Nottingham), St Catharine's College

RESEARCH OFFICERS

P.E. Atkinson, BA(Cantab), Trinity College

J.A. Beath, MA(St Andrews), M.Phil(London), MA(Penn),
St John's College

V.K. Borooah, MA(Bombay)

K.J. Coutts, MA(Cantab), Fellow of Selwyn College

Mrs J.C. Craig, MA(Cantab), BSc(London)

M.J. Ellman, MA, PhD(Cantab), MSc(Econ)(London),
Fellow of Fitzwilliam College,
left 31 December 1976 to become Reader
at the University of Amsterdam

A.W.A. Peterson, MA(Cantab), MA(Essex), Fellow of
Christ's College

T.S. Ward, MA(Cantab), MA(Econ)(Manchester), BA(Wales),
Fellow of Fitzwilliam College

L.A. Winters, MA(Cantab), BSc(Bristol), Fitzwilliam College

R. Witcomb, MA(Cantab), B.Phil(Oxon), Fellow of Gonville & Caius
College

JUNIOR RESEARCH OFFICERS

A. Cosh, BA(Cantab), Fellow of Queens' College

M.J. Fetherston, MA(Cantab), Fellow of Jesus College

PUBLICATIONS SECRETARY

Ms J.M. Bradley, MA(Oxon)

RESEARCH ASSOCIATES

Ms J. Rubery, BA(Cantab)

D. Vines

RESEARCH ASSISTANTS

I.G. Begg

N.D. Cumming

Miss A. Dundan

B. Lawson

M.L. Mackie

Mrs E.L. Scott

C. Sharp

A.G. Shelton

D.M.A. Taylor

D. Willson

VISITING SCHOLARS, OCTOBER 76 - SEPTEMBER 77

Dr Reiner Buchegger	Johannes Kepler Universitat Linz, Austria
Mr Vladimir Masat	Research Institute of the Federal Statistical Office, Prague, Czechoslovakia
Mr Massimo Salzano	Istituto di Finanza, Facolta di Economia e Commercia, University of Naples, Italy
Mr Gilberto Muraro	Istituto di Statistica, Facolta di Scienze Statistiche Demografiche ed Attuariali, Universita degli Studi di Padova, Italy
Professor Gardner Brown	University of Washington, Seattle, Washington, USA
Dr Jorge Torres	UNCTAD, Junta del Acuerdo de Cartagena, Lima, Peru
Mr Peter Whalley	Columbia University, USA
Professor B.P. Philpott	Victoria University of Wellington, New Zealand
Mr G.A. Dick	
Dr Francesco Silva	Universita Commerciale Luigi Bocconi, Milan, Italy
Mr Colin Gillion	Victoria University of Wellington, New Zealand

ASSISTANT STAFF October 1976 - September 1977

Mrs M.J. Barnett

Mrs J.S. Barringer

E.D. Bougourd

Miss M.V. Clark

Mrs R. Coe

Miss S.L. Dawson

Miss D.M. Day

Mrs M. Edwards
(from March 77)

Miss T.C. Gurner

Miss C.A. Hudson

Mrs M.R. Hughes
(left March 77)

Mrs J.M. Leverett

Miss A. Mason

Mrs A.L. Mills

Mrs S. Moore
(from Nov. 76)

Mrs O.E. Peppercorn

Miss S.D. Seal

Mrs S. Sibson-Turnbull

R.M. Smith

Mrs T.J. Sparkes

Miss L. Symonds

Mrs G.E. Simons

Mrs K.M. Wilson
(from March 77)