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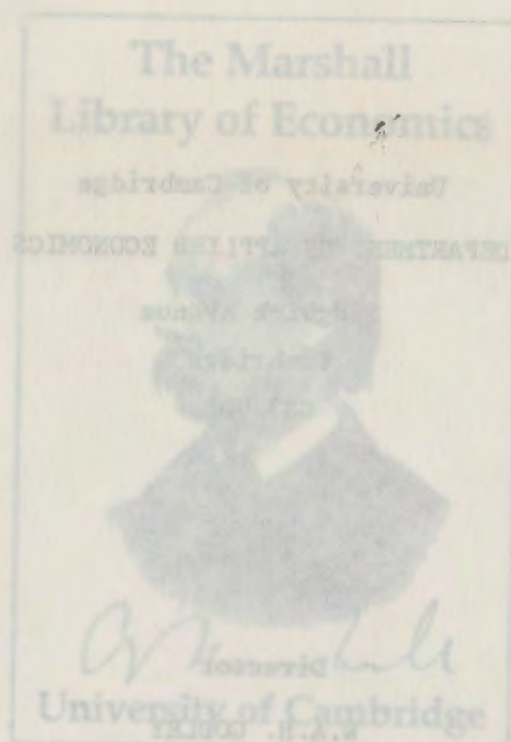
UNIVERSITY OF CAMBRIDGE

DEPARTMENT OF APPLIED ECONOMICS

NINETEENTH REPORT

ACTIVITIES IN THE PERIOD

OCTOBER 1978 TO SEPTEMBER 1979



NINETEENTH REPORT

ACTIVITIES IN THE PERIOD
OCTOBER 1976 TO SEPTEMBER 1979

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Committee of Management, January 1979

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NINETEENTH REPORT OF THE

DEPARTMENT OF APPLIED ECONOMICS

(covering the year October 1978 to September 1979)

I. RESEARCH ACTIVITIES

This section outlines the work done in 1978-79 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 This series has been replaced by a new series, Cambridge Studies in Applied Econometrics, in which three books have appeared: Models and Projections of Demand in Post-War Britain by Angus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 series has been taken over by Cambridge University Press and a further volume on exports by Alan Winters is to be published.

The other research staff working on the project during the period covered by this report were as follows: Mr J.A. Beath, Dr V.K. Borooah, Mr A. Lawson, Mr A.W.A. Peterson, Dr L.A. Winters, Mr R. Witcomb and Mr F. van der Ploeg. Dr D.A. Livesey, Dr G. Meeks and Mr D.A. Vines were associated with the work of the project.

The main research task of the project is the investigation of the present structure and future prospects of the British economy. The approach of the project has been to construct a computable, disaggregated model of the economy, a Multisectoral Dynamic Model (MDM), and to use it to demonstrate and analyse future growth paths under a variety of assumptions about the development of the world economy and the course of economic policy. The current version of the model (MDM4), which is estimated for 40 industries, with 1970 as the price base year, projects the dynamic time path of the economy over the period 1973-90.

The project has also developed a general International Dynamic Input-Output Model (IDIOM) computer package for solving and estimating large-scale models of the type constructed for the UK. It is intended that the next version of the UK model should be solved with this package.

The project works closely with Cambridge Econometrics, a limited company which has been established to provide a service for users of the project's model. The company is limited by guarantee with any surplus earned being covenanted to the University of Cambridge for the purpose of financing research in applied economics.

Besides the work on the dynamic model, members of the project have undertaken research in the following areas: industrial pricing and tax incidence, the behaviour of building societies, the theory of expectation formation, the modelling and projection of energy demand, the determinants of volumes and prices in foreign trade, and the formation of economic policy.

Publications, papers and conferences

The following books and papers reporting work of the project have been published during the year, or are accepted for future publication:

- Barker, T.S. (1978) Towards strategic paths in economic planning, pp. 84-105 in Richard Stone and William Peterson (eds.), Econometric Contributions to Public Policy, Macmillan, London.
- Barker, T.S. (1979) Economic policy formulation in a large-scale model, in S. Holly, B. Rustem and M.B. Zarrop (eds.), Optimal Control for Econometric Models: An Approach to Economic Policy Formulation, Macmillan, London.
- Barker, T.S. (1979) Identification of activity effects, trends and cycles in import demand, Oxford Bulletin of Economic and Social Research, pp. 63-68, February.
- Barker, T.S. (forthcoming) A priori constraints and the analysis of British imports, Publication des Actes du IIIème Colloque International d'Econometrie Appliquée, Brussels, February 1976, editor R. Courbis, I.N.S.E.E., Paris.
- Barker, T.S., A.W.A. Peterson and L.A. Winters (forthcoming a) The Cambridge multisectoral dynamic model: description and analysis, to be published in a volume edited by E. Fontela, ASEPELT.
- Barker, T.S., A.W.A. Peterson and L.A. Winters (forthcoming b) An International Dynamic Input-Output Model, to be published in a volume of proceedings by UNIDO, Vienna.
- Borooah, V.K. (1979) Starts and completions of private dwellings: four models of distributed lag behaviour, Journal of Economic Studies, November.
- Borooah, V.K. (forthcoming) Financial influences in the housing market: an econometric study for the UK, in R. Courbis (ed.), Volume of proceedings of a Conference on International and Financial Models, Rome 1979.
- Beath, J.A. (1979) Target profits, cost expectations and the incidence of the corporate income tax, Review of Economic Studies, July.
- Lawson, T. (1980) Adaptive expectations and uncertainty, Review of Economic Studies, January.
- Peterson, A.W.A. (1978) Policy choice using a large econometric model, in K. Cichocki and A. Straszak (eds.), Systems Analysis: Applications to Complex Programs. Proceedings of the IFAC/IFORS/IIASA Workshop, Poland, June 1977, Pergamon Press.

- Peterson, A.W.A. (1979a) Total factor productivity in the UK: a disaggregated analysis, in K.E. Schott and K.D. Patterson (eds.), The Measurement of Capital: Theory and Practice, Macmillan.
- Peterson, A.W.A. (1979b) Factor demand functions, in K.E. Schott and K.D. Patterson (eds.), The Measurement of Capital: Theory and Practice, Macmillan.
- Peterson, A.W.A. (1979c) Fuel use in the UK: a study of substitution responses, in A. Strub (ed.), Energy Models for the European Community, Energy Policy Special Issue, 1979.
- Peterson, A.W.A. (forthcoming) Capital goods and technical change: some theoretical problems, in T. Puu and S. Wibe (eds.), Technical Progress, Macmillan.
- Stone, J.R.N. and A.W.A. Peterson (eds.) (1978) Econometric Contributions to Public Policy, Macmillan.
- Winters, L.A. (forthcoming) Projecting Exports. Cambridge Studies in Applied Econometrics, Cambridge University Press, Cambridge.

The following papers have been presented at conferences:

VIIth International Conference in Applied Econometrics, Rome, February 1979.

V.K. Borooah Building societies and the market for new private dwellings

Seventh International Conference on Input-Output Techniques, Innsbruck, Austria, April 1979.

Terry Barker Investment-led growth in the UK 1980-1990

Terry Barker, William Peterson & Alan Winters The Cambridge multisectoral dynamic model: description and analysis

Terry Barker, William Peterson & Alan Winters IDIOM: an international dynamic input-output model

William Peterson Fuel consumption patterns in the British economy

Richard Stone Where are we now? A short account of the development of input-output studies and their present trends.

Alan Winters Aggregation in logarithmic models: some experiments with UK export functions

Conference on Industry and the Economy, Trinity College, Cambridge June 1979.

Terry Barker & Andrew Chapman The model: its assumptions and the logic of the projections

Vani Borooah & Hervey Gibson Macroeconomic projections and policy

William Peterson Employment

Alan Winters Exports

John Beath Taxing inflation

Andrew Chapman, Hervey Gibson, Tony Lawson & Neal Parry Industrial Projections 1979-1990

European Meeting of the Econometric Society, Athens, September 1979.

John Beath On models of price formation

VIIIth Conference on Problems of Building and Estimating Large Econometric Models, Polanica Zdroj, Poland, December 1979.

V.K. Borooah An application of Kalman filtering to econometric model building

The following papers have been presented at seminars:

Terry Barker 'The irrelevance of the neo-classical model of international trade' (given at the International Economics Seminar, University of California at Berkeley, November 1978)

'The Mexican National Plan of Industrial Development 1979-82' (given to the Cambridge Growth Project Seminar, May 1979)

'Investment-led growth in the UK 1980-90' (given to the Cambridge Growth Project Seminar, May 1979)

Terry Barker and Rick van der Ploeg 'The condensed form and other properties of MDM3' (given to the Cambridge Growth Project Seminar, February 1979 and H.M. Treasury's Academic Panel, 1979)

- John Beath 'Taxing inflation'
(given to the Cambridge Growth Project Seminar,
June 1979)
- 'Experiments on disaggregated models of price
formation'
(given to the Cambridge Growth Project Seminar,
March 1979)
- 'Short run variations in company profits'
(given to the Cambridge Growth Project Seminar,
October 1978)
- Vani Borooah 'Starts and completions of private dwellings:
four models of distributed lag behaviour'
(given to the Cambridge Growth Project Seminar,
March 1979)
- 'An econometric analysis of trends in cigarette
smoking in the U.K.'
(given to the Cambridge Growth Project Seminar,
November 1979)
- Tony Lawson 'Technology growth and employment'
(given to the Faculty Members; Queens' College,
February 1979)
- William Peterson 'Fuel use in the UK'
(given to the Faculty Seminar at Churchill College)
- 'IDIOM: an International Dynamic Input-Output Model'
(given to the Cambridge Growth Project Seminar,
February 1979)
- Alan Winters 'UK export pricing'
(given to the SSRC Economic Modelling Study Group,
LSE, December 1978)
- 'Exports'
(given to the Faculty Seminar at Queens' College,
Cambridge, January 1979)

EFFECTS OF ECONOMIC POLICY

Work on this related group of projects, which was partly financed by the SSRC, continued throughout 1978/9 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 D. Basu, Mr K.J. Coutts, Mr T.F. Cripps, Mr M.J. Fetherston, Mr G. Gudgin, Mr B.C. Moore, Mr J. Rhodes, Mr R. Tarling, Mr T.S. Ward, Mr S.F. Wilkinson.

The main objective of this project, as for many years in the past, has been to develop a system of information which can be used to simulate the medium-term developments of the UK economy and to display the consequences of alternative assumptions about macroeconomic policy strategies. Once again the computer model of the economy underwent minor modifications and was the basis for alternative medium-term projections and policy analysis which was published in the Economic Policy Review (EPR) No. 5, April 1979. EPR5 also contained a new model of world trade and its relationship to output in major countries and country blocs.

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 contributions should be properly grounded in empirical research.

Bibliography

Economic Policy Review, No. 5, April 1979, for which the CEPG took joint responsibility, contained the following:

Summary and Policy Assessment

World recession and policies for recovery

Hypotheses and main conclusions - World markets and recession since 1973 - The USA - Japan - OPEC - EEC - Other developed and developing economies - Centrally planned economies - Growth of the world system as a whole - The main factors - The worst case: US deflation - A second worst case: US deflation moderated - Oil prices - Effects of exchange rate changes on shares of trade - Reflation led by Japan and the EEC - US protection - A Growth-Inducing System of Trade

Policies of the EEC

Concepts - Measurement of EEC transfers - Future policies in the EEC

Prospects for management of the UK economy

Outline of analysis - the lessons of the recent past - The scale of future problems - Counter-inflation policies - The high exchange rate prescription - Policies for economic growth - Devaluation - Import controls - Background to the policy assessment - Productive potential and unemployment - Balance of payments constraints and North Sea oil - Real income and its distribution - Taxation and public expenditure - Inflation

Appendix A Historical data and projections of world trade

Appendix B Historical data and projections for the UK economy

Technical Manual on the CEPG model of the UK,
4th edition, May 1979

K.J. Coutts and
M.J. Fetherston

Technical Manual on the CEPG model of World
Trade, June 1979

G. Gudgin, B.C. Moore
and J. Rhodes

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

'Future energy policies for the UK; an optimal control approach' (to be published by Saxon House)

D. Basu

'Regional employment change: a sub-regional explanation', Progress in Planning, vol. 12, part 3, 1979

G. Gudgin with
S. Fothergill

'In defence of shift-shove', Urban Studies, vol. 16, no. 3

G. Gudgin with
S. Fothergill

'Seats, votes and spatial organisation of elections', Pion, 1979

G. Gudgin with
P. Taylor

'The impact of regional policy', Open University Unit in the third level course on Political Economy and Taxation, June 1979

B.C. Moore and
J. Rhodes

'Methodologies for evaluating population decentralisation policies in developed economies', paper for the United Nations Conference on Population Dispersed Policies, Bangkok, Sept. 1979

B.C. Moore and
J. Rhodes

'Independent monetary policy and the monetary approach to the balance of payments: the case of the United Kingdom': paper presented to Money Study Group at LSE, and Bocconi University, Milan

P.E. Atkinson

'Review of setting national priorities: the 1979 Budget' (ed. J. Pechman, Brookings) in Political Science Quarterly, 1979

P.E. Atkinson

Work completed 'Official Foreign Borrowing' SSRC project, dissertation submitted to and accepted by Cambridge University

P.E. Atkinson

'EEC membership and UK trade in manufactures', Cambridge Journal of Economics, vol. 3, no. 4, 1979

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

'Dynamic simulation error for the CEPG model' prepared for SSRC Economic Modelling Study Group Workshop on Dynamic Simulation Errors

M. Fetherston

'L'Analisi dinamica dei processi di agginstamento', in Disoccupazione e Pieno Impiego, Geronna, P. (ed.), Venezia, 1979

R.J. Tarling

'A framework for the analysis of activity rates' The Commission of the European Communities. V/509/79, Study No. 77/22

R.J. Tarling with
Professor J. Zighera

'Industrial relations and uneven development: a comparative study of the American and British steel industries', Cambridge Journal of Economics, vol. 3, no. 3, 1979

B. Elbaum and
S.F. Wilkinson

The Effects of the Abolition of Wages Councils:
Final Report to the Department of Employment

R.J. Tarling, J.C. Craig
J. Rubery and
S.F. Wilkinson

'Short-run employment functions: their evolution, failure and replacement' R.J. Tarling

'Planning public expenditure: the UK's case', W.A.H. Godley
Conference paper at Trento, Oct. 1978

'Drinking the oil in earnest', article for W.A.H. Godley
Vickers da Costa, Nov. 1978

'Protectionism versus the management of free trade', article for Vickers da Costa, W.A.H. Godley
Sept. 1979

'Britain's chronic recession - can anything be done?' Paper given to the British Association (Section F), Bath W.A.H. Godley

'Wages and unemployment - a non-monetarist rejoinder', Cambridge Journal of Economics, vol. 3, no. 2, 1979 T.F. Cripps

Conferences and seminars

IDS, Sussex May 1979, Economic Integration and Unequal Development - The Experience of W. Europe. Paper: 'Some Effects of EEC membership on the UK economy', by T.F. Cripps, M. Fetherston, B.C. Moore and J. Rhodes. Proceedings to be published by Macmillan

Conference attended by CEPG, Sicily, July 1979. Paper given: 'Policy choices for the European Community from a regional perspective', by T.F. Cripps with P. Formica and E. Wolleb

University of Brasilia, Sept. 1979. Paper: 'Alternative solutions to the problems of world trade', by T.F. Cripps

EEC Study Group on the Regional Impact of External Trade Policy. Cripps and Gudgin prepared various papers and attended meetings as UK members of this group

SSRC Regional Workshop, Birmingham, Nov. 1978. B.C. Moore

SSRC Regional Workshop, Newcastle, May 1979. Paper on 'Regional growth and productivity' by B.C. Moore and J. Rhodes

OECD Urban Management Conference, Copenhagen, December 1978. Paper presented by B.C. Moore and J. Rhodes

United Nations Conference on Population Dispersal Policies, Bangkok, September 1979. Paper presented by B.C. Moore and J. Rhodes

Scottish Economic Society at Strathclyde University, Nov. 1978. Talk on CEPG model by M.J. Fetherston

Conference at Wye College, March 1979 on the EEC Budget and the CAP by W.A.H. Godley

National Institute Conference on Britain's Trade and Exchange Rate Policy, Chatham House. W.A.H. Godley

Brookings/NIESR conference at Ditchley Park, May 1979. W.A.H. Godley

Talks on economic policy to: Conference of Under-Secretaries, Sunningdale and the German Chamber of Commerce, by W.A.H. Godley

H.M. Treasury, Department of Employment and Manpower Services Commission, conference on the labour market, Sept. 1979, at Magdalen College, Oxford. Discussant note on Brian Henry's paper by R.J. Tarling

US Department of Labor/Manpower Services Commission conference on unemployment and unemployment policy: London, May 1979. R.J. Tarling

History faculty, Cambridge, and University of Warwick: seminars on industrial relations in the steel industry, by S.F. Wilkinson

Polytechnic of the South Bank, London: seminar on the impact of incomes policies on inflation, by S.F. Wilkinson

Queens' College, Cambridge: seminar on Incomes Policy, by R.J. Tarling and S.F. Wilkinson

Ashridge Management College: seminar on the labour market consequences of recession, by R.J. Tarling

Department of Employment: seminar on the abolition of wages councils, by J.C. Craig, J. Rubery, R.J. Tarling and S.F. Wilkinson

Harlow Labour Party: seminar on British economic policy, by S.F. Wilkinson

Many newspaper articles by members of the group

September-December 1979. P.E. Atkinson acted as a consultant to the Monetary and Fiscal Policy Division of OECD on the subject of 'Budget finance and monetary control'. Work continuing during 1980

December 1978 and June 1979. M. Fetherston was a Consultant to the Mexican Economy Group at CIDE, Mexico City

B.C. Moore and J. Rhodes were members of the Department of Environment Working Group on the Needs Element of the Rate Support Grant

LABOUR MARKETS IN DECLINING INNER CITY AREAS

The aim of this project, being carried out by Barry Moore and John Rhodes, is to monitor the nature and speed of economic decline in all the major inner city areas of the UK, to analyse so far as possible the main processes at work in encouraging the decentralisation of people and jobs away from the conurbations, and to discuss changes in government policy which may be helpful in alleviating the problem.

Work is completed on labour market 'balance sheets' for inner city areas, outer city areas and for smaller towns and more rural areas. An analysis of employment changes in various industrial and service sectors has also been made. The results are being written up for publication. The research has revealed a substantial and continuing desertion of inner city areas by manufacturing industry. This has had important implications for the growth of employment in other sectors. Unemployment rates amongst those who live in inner city areas have increased rapidly and now exceed the rate of unemployment in the traditionally deprived regions of the UK.

THE EFFECT OF THE ABOLITION OF WAGES COUNCILS

This project, financed by the Department of Employment, started on 1st October 1976, and has been carried out by Christine Craig, Jill Rubery, Roger Tarling and Frank Wilkinson. The project has involved considering pay, conditions of employment and collective bargaining arrangements in six industries where wages councils have recently been abolished, and is now almost complete. All the fieldwork and analysis have been finished, and some separate industry reports submitted to the Department of Employment together with a final report based on the findings from all six industries. This final report on the project was presented at a Department of Employment seminar, and was very well received.

The only outstanding commitment is the revision of the separate industry reports for publication in the Department of Employment's Research Paper Series. Reports on the Jute Wages Council and the

Paper Box Wages Council are in the process of being printed, and reports on three more industries are due to be published in 1980. We also plan to revise and extend the final report for publication.

The overall conclusions of our research were that there was still a problem of low pay and inadequate collective bargaining in these industries where wages councils had been abolished, and that in some instances abolition had exacerbated the problem. There had been little change in methods of wage determination, organisation and collective bargaining within the industries, and consequently there were few benefits to offset the problems arising from the removal of legal protection. However, we identified the causes of low pay as rooted in the product market and systems of industrial organisation rather than in institutional failure. The problems of low pay found in the industries we studied were unlikely to be confined to ex-wages council industries. We therefore considered that legal protection should be more comprehensive than under the wages council system, possibly taking the form of a national minimum wage.

Seminars and conferences

Papers given at the international conference on low pay and labour market segmentation, held in Cambridge in September 1979, as part of the research team's interest in the causes of low pay:

- 1) 'Minimum wage legislation and labour market segmentation'
- 2) 'Notes on the nature of the labour process in the secondary labour market'

Seminar at the Department of Employment: 'The effects of the abolition of wages councils: final report to the Department of Employment'

Seminar at the House of Commons to a meeting of Wage-line: 'Low pay, industrial structure and minimum wage legislation'

THE ECONOMICS OF INSTITUTIONALISED WAGE DETERMINATION

The analysis undertaken during this project was completed during the summer of 1979 and papers have been written during the second half of the year. A final report is nearing completion and will be submitted shortly to the SSRC. The project gave rise to 13 separate papers, only two of which have so far been published. One paper attempts an explanation of earnings changes in the second half of the nineteenth century, relating changes in earnings to changes in retail prices, unemployment, productivity and the terms of trade. A series of 6 papers discusses the pattern and nature of settlements in the post-war period for over 100 individual groups bargaining for national minimum wage rates, with or without cost-of-living clauses, and sets out to test a number of hypotheses. Four additional papers investigate the behaviour of earnings at the MLH level of disaggregation of the SIC during the post-war period (one of which focuses on the public sector), and are concerned with the issue of the stability of the industrial structure of earnings and explanations of differential rates of change. The remaining two papers have both been published, the first concerned with the role of incomes policy and the second with the evolution of industrial relations through a comparative study of the American and British steel industries.

The main conclusions arising from the work are that the principle of compensation for price change has always been a major factor in wage bargaining and, although this generates an apparently stable inter-industry wage structure, there are inter-industry wage changes which can be related to relative industrial performance as indicated either by productivity or by profit margins. The industrial relations framework in which these changes take place is a continuously evolving one, as are the nature and extent of labour market segmentation. The dynamic process is, however, a complex interactive one between product market changes, employer cohesion, employee action and labour market segmentation, with a crucial macro-economic role being played by the terms of trade, between primary and industrial commodities as well as the external terms of trade, and (in the post-war period) the government's fiscal stance.

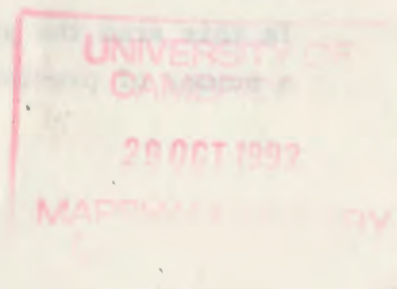
In addition to summarising the findings as written up in the various papers, the final report also contains discussion of the inter-war period (along the lines of the earlier historical paper) and a particular study of bargaining in the engineering industry, for which the work has been carried out but papers have not yet been written. It is hoped that in due course the papers referred to will be collected together and published as a single book.

A STUDY OF THE EFFECTS OF THE TEMPORARY EMPLOYMENT SUBSIDY

The purpose of this study is to estimate the effects of the Temporary Employment Subsidy (TES) upon firms and the economy. The principal effects of TES which have been studied and estimated are as follows:

1. The direct effect upon employment across industry less the estimated 'deadweight' effect of supporting jobs which in the absence of subsidy would not have been lost.
2. The indirect effects upon jobs in non-subsidised firms which were displaced by the price and other market effects arising from subsidised firms and, additionally, the indirect effects which took the form of firms taking the subsidy because of these same market effects.
3. The net positive job-creating effects of the subsidy upon firms supplying goods and services to subsidised firms.
4. The overseas trade effects in the form of changes in export performance and import penetration.
5. The macro-economic effects upon prices, output, national income, and the government sector to satisfy a balanced-budget condition, with a consideration of alternative assumptions.

The employment- and cost-effectiveness of the subsidy has been estimated from the aggregate effects of the subsidy at a point twelve months from the date of initial support.



The research involved is being undertaken by Mr B.M. Deakin and Mr C.F. Pratten. Several discussion meetings at the Department of Employment have been attended by those involved, and plans have been made for the publication of results in 1980.

EVALUATING INDUSTRIAL PERFORMANCE AND PROSPECTS

The objective of the research is to monitor and forecast the detailed development of UK manufacturing industry. An analytical framework is provided by a computerised dynamic input-output model, developed for the Department of Industry, which distinguishes 90 sectors for domestic demand and foreign trade.

The research is undertaken by Mr V.H. Woodward and Mr I.G. Begg.

Conference papers:

'The impact of electronics technology on UK employment', in University of Sussex SSRC/IDS conference on employment projections

Publication:

'The British dilemma', Management Today, March 1979

ANALYSIS OF THE CAUSES AND EFFECTS OF MERGERS

Project members: M. Kumar (full-time), A. Cosh, A. Hughes, A. Singh. Since the last Report, the Cambridge Mergers Project has been extended for a further two years with a grant from the SSRC.

1. Introduction

The new research will be concerned with the investigation of certain central issues in the analysis of the causes and effects of mergers. In this area the proposed work provides, firstly, for an examination of a number of previously ignored empirical questions about the impact of

management control upon the frequency and financial implications of mergers (including the impact upon corporate profitability), and about the impact of mergers upon managerial salaries and remuneration. Secondly, it provides for an analysis of the profitability effects of mergers by all quoted companies (whether management-controlled or not), which builds upon and extends the authors' previous work in this area. Finally it provides for an investigation of a fresh range of questions about the economic impact of mergers which arise from an entirely new approach to the definition of economic efficiency. This approach emphasises the disequilibrium nature of the UK's economic position, and the necessity to define efficiency and assess the impact of mergers within that context. The development of this approach is of major importance in the assessment and evolution of an appropriate competition policy.

2. Results presented and conferences attended during 1978-79

Mr Hughes, Dr Cosh and Dr Singh presented the following papers at the International Mergers Conference in Berlin, and at the Annual Conference of the European Association for Research in Industrial Economics in Paris in September 1979:

A. Hughes, D. Mueller and A. Singh, Mergers in advanced capitalist economies: an international perspective

A.D. Cosh, A. Hughes and A. Singh, The causes and effects of takeovers in the United Kingdom. An empirical investigation for the late 1960's at the microeconomic level

A. Hughes, D. Mueller and A. Singh, Competition policy in the 1980's: the implications of the international merger wave

3. Working Papers and Publications

The three papers listed under (2) above and the following paper are forthcoming in D.C. Mueller (ed.), The Causes and Effects of Mergers: An International Comparative Study of 7 Nations:

A. Hughes, D.C. Mueller and A. Singh, Hypotheses about Mergers

Further results of SSRC project will be published in the form of journal articles and a monograph.

Since the last report, Dr Cosh has been appointed to a University Lectureship; in his place Mr M. Kumar was appointed a Junior Research Officer on the project from 1 October 1979.

IMPACT OF TRADE WITH THE DEVELOPING COUNTRIES ON THE UK ECONOMY

This research, by Dr A. Singh, forms a part of a wider project sponsored by the United Nations Industrial Development Organisation in Vienna, on the impact of the industrialisation of the Third World on the economies of the advanced countries. Research teams from France, the United States, the UK, Belgium, the Netherlands, Austria, Switzerland, West Germany, Sweden and Austria are studying problems of structural adjustments in advanced economies as a result of trade and economic growth in developing countries.

Due to administrative reasons, the work on the UK study could not start until April 1979. Dr Singh presented a paper based on preliminary findings at the International Seminar on Structural Change, in Vienna in October 1979. This paper argued that present unemployment in the UK was indeed being caused in large measure by trade; however, it was imbalances in trade in manufactures with the other advanced countries, rather than with the third world, which was leading to unemployment.

Further research is being carried out at a more disaggregated level in relation to both trade and industrial structure.

COMPANY FINANCE AND PERFORMANCE

This project is a joint venture with Professor G. Whittington of Bristol, and was established in October 1977 with the support of the Esmée Fairbairn Charitable Trust to extend previous work on company accounts which had been carried out at Cambridge, Edinburgh and Bristol. It aims to develop earlier studies of company finance and performance; to maintain and update the data bank of quoted companies' accounts created by the predecessor projects; and to coordinate work on companies' financial behaviour with the Cambridge Growth Project (CGP). This last part of the work involves estimating models of financial decisions for individual companies and integrating

them with the CGP's large-scale model of the British economy.

Mr A.W. Goudie, a member of the DAE research staff, works full-time on the project. Dr G. Meeks, a faculty officer, is involved in the work; and Dr L.J. Slater of the DAE has contributed regularly. Also associated with the project are Dr J.G. Meeks of Oxford, Professor Sir Richard Stone and Professor G. Whittington of Bristol.

In the second year of this four-year project, some results of the work have been presented in the following forms:

- 1) a booklet, 'Public Money in Private Industry', prepared by G. Meeks and J.G. Meeks, in collaboration with Messrs. Moore and Rhodes of the CEPR and published by Open University Press.
- 2) a paper, 'Medium-term projections of companies' financial flows', by A.W. Goudie and G. Meeks, presented to the CGP conference on industrial projections and forthcoming in Accounting and Business Research.
- 3) a talk on merger policy given by G. Meeks to the Institute of Fiscal Studies.

PRICING, EMPLOYMENT AND WAGES IN SERVICES

During the year, work on this project concentrated upon resolving the discrepancy between the different sources on employment in retail distribution, amounting in 1971 to 10 per cent of the workforce, which is a major obstacle to any analysis of employment behaviour in this sector. To this end, discussions were held with officials of the Department of Employment who then carried out an examination of the raw data collected by the Censuses of Distribution and Employment for 1971. A sample of 700 returns were compared and these indicated that, in a number of cases, different employment figures were reported by the same concern to the two enquiries, with the returns to the Census of Distribution showing in aggregate a higher number of employed

in retailing than did the Census of Employment. The difference of four months or so in reporting dates seemed to explain a few, but by no means all, of these discrepancies. In many cases, however, no reason was apparent and there really was no feasible way of explaining matters further without incurring prohibitive costs. It was therefore reluctantly decided to abandon most of the intended analysis of employment behaviour, on the grounds that there was no firm basis for choosing between the two alternative data sources and the results would vary enormously depending on which was used.

In consequence, the scale of the project (and finance) was reduced. It is now concerned primarily with pricing and wages in distribution and data have been compiled with the object of analysing changes in distributive margins over recent years for a selected number of product groups, as well as the movement of pay in relation, for example, to variations in demand, import penetration and costs.

The research is being carried out by Mr T.S. Ward and Professor R.R. Neild.

Other work

Mr T.S. Ward continued to act as specialist adviser to the General Sub-Committee of the House of Commons Expenditure Committee and helped the Committee in their examination of the European Monetary System and the January 1979 public expenditure White Paper.

Publications during the year

T.S. Ward and R.R. Neild (1978) The Measurement and Reform of Budgetary Policy, IFS-Heinemann, December

First Report from the Expenditure Committee, Session 1978-79, The European Monetary System, H.C. 60, November 1978

T.S. Ward (1978) 'The effect of EMS on output and employment' in First Report from the Expenditure Committee

T.S. Ward 'The government's expenditure plans, 1979-80 to 1982-83: an appraisal of Cmnd. 7439', in Fourth Report from the Expenditure Committee Session 1978-79, H.C. 237

Gareth Locksley and T.S. Ward (1979) 'Concentration in manufacturing in the EEC', in Cambridge Journal of Economics, March

Outside lectures

During the year, Mr T.S. Ward gave a lecture to senior civil servants at the Civil Service Staff College, Sunningdale, on budgetary policy, and a lecture to a summer school for senior management at Merton College, Oxford on the Cambridge view of economic problems and prospects.

THE BEHAVIOUR OF PROFITS IN THE TRADE CYCLE

The aims and methods of this project were described in the Eighteenth Report.

Attention was concentrated on testing a hypothesis due to A.J.B. Wood that the increase in export profit margins caused by a fall in the 'real' exchange rate will tend to be offset by a reduction in domestic margins, implying that the shift in the distribution of income towards profits may be less than is commonly thought. The study looked both at changes in profit margins and at the mark-up of domestic price over costs to test the Wood hypothesis and found some evidence consistent with this view.

The work is completed and will be written up as three papers: the first will look at the Wood hypothesis; the second will extend the results of Godley and Nordhaus on the normal price hypothesis up to 1979, a period providing a severe test of the hypothesis; and the third will be an expository paper on the important issues which have emerged from accountants and economists on inflation accounting and the measurement of profits.

STAGFLATION: A MACROECONOMIC POLICY TO RECONCILE FULL EMPLOYMENT AND PRICE STABILITY

The project is being carried out by J.E. Meade and David Vines. Its purpose is to examine the technical economic-administrative feasibility (but not the political acceptability) of an anti-stagnation policy consisting of two basic elements:

(1) a finely tuned demand-management use of monetary and fiscal policies to keep the level of the total national money demand for goods and services on a steady 5 per cent per annum growth path; and

(2) a consideration of the various ways in which present wage-fixing arrangements might be recast so as to ensure 'full employment' against the background of a steady growth in the total national money wage bill.

(1) Demand Management

David Vines has been concentrating on this part of the work. He was appointed Research Officer in the DAE from 1 January 1979 and elected to an Official Fellowship and appointed Assistant Director of Studies in Economics at Pembroke College from the same date.

He has been working in close cooperation with the Treasury economists; and since June 1979 he has been working with them in the Treasury. This started with the formulation by David Vines of a simple simulation model which he has written up in a paper entitled 'A complete empirical macroeconomic model for the analysis of economic policy', DAE, 1979. This model was presented and discussed at a Seminar at the Treasury. As a result of this and other discussions David Vines in the SD2 division of the Treasury is in the process of constructing a somewhat expanded quarterly simulation model which utilizes estimated equations taken direct from the Treasury's large econometric model and which will be used to investigate the short-term responses of the economy to shock and policy changes. In this he has been assisted by a vacation Physics student whom the Treasury generously allocated to him for a month.

The Treasury was interested in constructing and using a small simulation model in order to increase the understanding of the properties of the large Treasury model. An Economic Adviser has been appointed in the Treasury for this purpose and David Vines hopes to work closely with him.

Jan Maciejowski of Pembroke College has developed a set of computer programs for the analysis of feedback control rules for simulation models. David Vines has been making plans with Maciejowski for the use of these computer programs for the devising of feedback control rules for the small quarterly simulation model and also for trying out these rules on the large Treasury model.

J.E. Meade has continuously discussed the work of David Vines with him and in the course of such discussion has prepared some working papers, in particular 'A model of the dynamic macroeconomic relationships in the UK economy' and a 'Note on targets and weapons in short-term macroeconomic stabilisation'. He has also reviewed for the Economic Record 'The Macroeconomic Mix to Stop Stagflation' by J.O.N. Perkins.

In addition to the basic work on the dynamic problems of macro-economic control there are two further important subsidiary problems for demand management:

(i) An investigation of the statistical problems in the choice of series of total money expenditures to take for the target for stabilisation on a steady 5 per cent per annum growth path. How frequently and how promptly are the figures available? How much are they liable to revision or subject to seasonal variation? etc. David Vines has had discussions on this part of the work with officers in the Treasury and in the CSO who have undertaken to help with the investigation.

(ii) A consideration of the administrative and economic problems involved in the choice of particular taxes or other fiscal instruments for frequent and prompt changes for the regulation of demand. The Institute for Fiscal Studies is considering setting up a small committee

of which J.E. Meade and David Vines would be members, in order to examine this question. Meanwhile J.E. Meade has considered VAT from this point of view and has prepared a paper on 'Notes on the use of VAT as a regulator' after discussion with Mrs Dorothy Johnstone a (now retired) senior official of the Customs and Excise who was closely concerned with the introduction of VAT in this country.

In addition to the basic paper on the macroeconomic simulation model mentioned above, David Vines has written:

- (i) 'Technical progress, uneven international growth, and balance of payments surpluses: a comment on Schmitt on mercantilism' presented at a seminar at Bocconi University, Milan, and to appear in the Manchester School;
 - (ii) 'Cambridge and Chicago on the balance of payments' (joint paper with J. McCallum of Simon Fraser University), presented at seminars of the SSRC Money Study Group, Bocconi University, and Manchester University;
 - (iii) 'A framework for a financial sector for a small model', a working paper;
- and
- (iv) Reviews of 'Macroeconomic policy in Australia, 1972-76' by Ainslee Jolley and of 'Current issues in fiscal policy' edited by S.T. Cook and P.M. Jackson, both to be published in Manchester School.

(2) Wage-Fixing

J.E. Meade has concentrated on the wage-fixing element in the project, considering the institutional problems which would be involved in any attempts to tackle the problem through (i) increased competition in the labour market; (ii) the institution of labour-managed labour-owned cooperation; (iii) centralised agreements on wage-fixing between the CBI and the TUC; (iv) a centralised governmental fixing of incomes; and (v) various forms of compulsory or near-compulsory arbitration.

In the course of this work he has prepared the following papers:

- (i) A DAE paper on 'The fixing of money rates of pay', a general survey of the issues, presented at seminars of the Civil Service College and of the SSRC Labour Studies Group;

- (ii) A Working Paper on 'Legal provisions affecting trade union bargaining power' which he has discussed with Dr Elias of Pembroke College;

- (iii) 'Labour co-operation, participation and profit-sharing', a paper to be published by the Oxford University Press in a book of essays on the subject;

and

- (iv) 'The adjustment processes of labour co-operatives with constant returns to scale and perfect competition', published in the Economic Journal.

HOUSING MARKETS AND LABOUR MOBILITY

This project started in April 1979; it is financed by the Department of the Environment and is directed by Dr G.A. Hughes and Dr B. McCormick. Its purpose is to examine the hypothesis that the British housing system discourages labour mobility by increasing the cost of moving from one part of the country to another. In particular, it will focus on the mobility of public sector tenants and of households who wish to enter the public rented sector of the housing market. The work of the project is both theoretical and empirical, since it is necessary to construct better analytical models of the relationship between housing and migration in order to obtain appropriately specified hypotheses which can be tested empirically. The statistical work of the project will largely be carried out using the General Household Survey data on past movement and households considering moving in the future, but other parts of the investigation will draw on Department of Environment surveys of new building society mortgages, of housing tenure and conditions, and of recent movers.

During 1978-79 the project's work was mainly concerned with organising the survey data into a usable form and producing a descriptive analysis of the links between housing tenure, labour mobility and interregional migration. Work was also done on various theoretical aspects of the project - focusing especially on the role of the public rented sector and the effects of the subsidies provided to households

in different tenures, both directly and via the tax system. So far the preliminary results of the project suggest that the mobility of local authority tenants is substantially lower than for households in other tenures. In addition, some empirical work on the distribution of housing subsidies across households has shown that this is very erratic and that these subsidies contribute little to the achievement of a more equitable distribution of real income while clearly causing large distortions in the housing market.

Publications and conferences

The following papers reporting work of the project have been published or accepted for future publication during the year:

G.A. Hughes (1979) 'Housing income and subsidies', Fiscal Studies, vol. 1, November

G.A. Hughes (forthcoming) 'Housing and the tax system', to appear in G.A. Hughes (ed.), Public Policy and the Tax System, Allen and Unwin

The following paper was presented at the Centre for Environmental Studies Conference on Urban Economics in July 1979:

B. McCormick 'Council housing, labour mobility and the spatial distribution of unemployment: theory and evidence'

RISK, INFORMATION AND QUANTITY SIGNALS IN ECONOMICS

The aims of the project are to investigate, both at a fairly general and an abstract level, and in particular contexts, the consequences of 'missing markets' asymmetric information, market dependent information, quantity signals and constraints. The theory which is emerging has strikingly different implications than does the Walrasian theory (on which, for instance, much government and monetarist policy is based).

The work of the project has aimed at an understanding of what really is required to make the traditional theory work (i.e., 'no surplus',

'adding up', etc.), in particular when the number of firms is taken as endogenous, as is product variety. This work - which is rather different from the Core approach - has given the research staff a satisfactory benchmark for their more ambitious departures from Arrow-Debreu.

This project began in October 1978, and is financed by an SSRC grant. The research staff involved are Professor Frank Hahn, David Newbery, Oliver Hart, S.M. Kanbur and Louis Makowski. Visitors to the project during the year included David Kreps, Roger Guesnerie, Joe Ostroy, Richard Gilbert, William Novshek and Jerry Green.

The project held a conference in December 1978, at Churchill College, Cambridge, entitled Workshop on the Economics of Uncertainty, Information and Quantity Signals.

It is proposed to publish a collection of papers resulting from this project in book form in 1982, under the unifying theme of the project title.

SOCIOLOGY GROUP

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.

The main report of the project, R.M. Blackburn and M. Mann The Working Class in the Labour Market (Cambridge Studies in Sociology), Macmillan, was published during the year. 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 'Constraint and consciousness: the market experience of the working class' at the University of Aston.

This project is now largely completed, although work continues on one or two specific problems.

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 monograph entitled White Collar Work: Collective and Individual Responses is due to be published in Cambridge Studies in Sociology in the coming year.

REPRODUCTION OF SOCIAL INEQUALITY

This project commenced in May 1978. It is being carried out by Dr R.M. Blackburn, Dr K. Prandy and Mr A. Stewart, and is designed to extend the research of earlier projects, drawing on both the intellectual and data resources of the previous work. It has absorbed the earlier projects on Social Inequality and Career Structures, described in the Eighteenth and earlier Reports, so that any publications or papers arising from those projects are now included here.

Mr D. Donald, who has been associated with the research for several years, worked on the project during the latter part of the year, while a visitor to the Department. Mrs R. Volpato also joined the team during the year.

The project is concerned with the general area of social inequality and social change, addressing a number of problems of theoretical and practical importance. A basic feature is the attempt to move towards a more dynamic model of social stratification which takes account of processes of reproduction of societies.

During the year the following papers were published:

K. Prandy (1979) 'Ethnic discrimination in employment and housing', Ethnic and Racial Studies, January

A. Stewart, K. Prandy and R.M. Blackburn (1979) 'Stratification and careers into management' in Management and Industrial Relations, Proceedings of the University of Wales Colloquium. (It is also intended to include this in a projected book edited by R. Mansfield and M. Poole and published by Teakfield).

In addition a number of papers were with journals awaiting publication, as follows:

R.M. Blackburn, A. Stewart and K. Prandy 'Part-time education and the "alternative route"', Sociology

J.M. Holmwood and A. Stewart, 'Central issues in British stratification theory and research', British Journal of Sociology

K. Prandy, 'Residential segregation and ethnic distance in English cities', Ethnicity

K. Prandy 'Alienation and interests in the analysis of social cognitions',
British Journal of Sociology

A book, A. Stewart, K. Prandy and R.M. Blackburn, Social Stratification and Occupations, was originally expected to be published by Macmillan, during the year, but will now appear early in 1980.

Dr Blackburn was the invited speaker at the University of Wales colloquium on Management and Industrial Relations, and also gave a paper at the University of East Anglia on 'Some myths of stratification'.

Dr Prandy presented a paper on 'The recovery and discovery of variables' to the BSA/SSRC Conference on Methodology and Techniques of Sociology at the University of Lancaster, and one on 'Class location and social cognitions' to the BSA State and Economy Study Group.

Mr Stewart, with Mr J. Holmwood, gave papers to the Sociological Association of Australia and New Zealand on 'Science, society and social action', and to the SSRC Social Stratification Seminar in Cambridge on 'Central problems in British stratification theory and research'.

Mr Donald and M.A. Hutton presented a paper at Leeds Polytechnic on 'Urban deprivation in Glasgow'.

CHILDHOOD SKIN DISEASES

This project began in 1976 and is being carried out by Mr R.G. Jobling. The original 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;
- (d) self-help and mutual aid.

Mr Jobling has acted as consultant and joint editor of Slide/Tape Programmes for medical professional and patient education, produced by the Departments of Medical Illustration and Dermatology (Radcliffe Infirmary), Oxford. He also served as professional advisor to the Disabled Living Foundation on social aspects of dermatology and skin problems.

Mr Jobling has edited and contributed articles to the journal of the Psoriasis Association and provided reports for this organisation. He has also contributed to the IFPA Bulletin. Mr Jobling has edited the new journal, Sociology of Health and Illness.

OTHER ACTIVITIES

External

The group has maintained its association with colleagues in other institutions. In particular Dr M. Mann of the London School of Economics, Mr J. Holmwood of the University of Tasmania, and Mr D. Donald and Mr A. Hutton of the Policy Analysis Research Unit at Glasgow College of Technology have collaborated in our work. Mr Donald was a visitor to the Department.

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

Mr A. Stewart was invited to be the Drapers Company Visiting Lecturer at the University of Tasmania.

Mr A. Stewart acted as consultant to the 'Open Door' scheme run by the Management and Industrial Relations Committee of the SSRC.

Dr R.M. Blackburn continued to act as the local sociology representative for the SSRC Survey Archive.

Dr R.M. Blackburn continued to act as external examiner for the B.Sc. in Sociology, Hatfield Polytechnic.

The monograph series Cambridge Studies in Sociology is edited by the group.

University and Colleges

Members of staff served on University committees, including the Social and Political Sciences Management Committee.

During the year, members of the group gave lectures on 'Processes of stratification in industrial society' for the Social and Political Sciences Committee, the Faculty of Economics and Politics and the Faculty of Archaeology and Anthropology. They also examined in Social and Political Sciences, and Archaeology and Anthropology. Data from the group's research were used for teaching in Social and Political Sciences.

The research staff supervised a number of postgraduate students.

Members of the group acted as Directors of Studies in Social and Political Sciences, and supervised students reading this subject, Economics and Politics, and Archaeology and Anthropology. They also provided one college tutor.

II PUBLICATIONS

ECONOMIC POLICY REVIEW

The fifth issue of the Review, with the Cambridge Economic Policy Group's annual review of Britain's economic prospects, was published in April 1979. This issue also included a new model of world trade.

DAE MONOGRAPHS

This series contains investigations by members of the Department's staff and its associates, and is published by Cambridge University Press. No new titles were added to it this year.

DAE OCCASIONAL PAPERS

No new titles appeared in this series this year.

CAMBRIDGE STUDIES IN APPLIED ECONOMETRICS

This series, published for the Department by Chapman & Hall, provides an outlet for the results of the research undertaken by the Cambridge Growth Project. No new titles were added to it this year.

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. 4 Africanisation, nationalisation and inequality: mining labour and the copperbelt in Zambian development, by P. Daniel (published September 1979).

CAMBRIDGE STUDIES IN SOCIOLOGY

This series includes works of theoretical and social interest based on the findings of empirical sociological investigations. The books may originate anywhere, but those arising from the sociological work of the Department will normally be included.

The editors are Dr R.M. Blackburn and Dr K. Prandy and the series is published by Macmillan.

During the year the following study was published:

R.M. Blackburn and M. Mann, The Working Class in the Labour Market.

The following are accepted for publication:

- A. Stewart, K. Prandy and R.M. Blackburn, Social Stratification and Occupations.
K. Prandy, A. Stewart and R.M. Blackburn, White-Collar Work.
C. Littler, Control and Conflict.

DAE ECONOMICS REPRINTS

This 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 following titles were added to it during the year:

28. Industrial policy and economic development: the experience of Northern Ireland and the Republic of Ireland, by B. Moore, J. Rhodes and R. Tarling, Cambridge Journal of Economics, March 1978.
29. The accounting framework of certain balance of payments theories: a didactic note, by L.A. Winters, Journal of Economic Studies, May 1978.
30. Policy choice using a large econometric model, by W. Peterson, from Cichoki and Straszak (eds.), Systems analysis: applications to complex programs, Pergamon Press, 1977.
31. Control of imports as a means to full employment and the expansion of world trade: the UK's case, by T.F. Cripps and W.A.H. Godley, Cambridge Journal of Economics, September 1978.
32. Economic and financial implications of devolution, by B. Moore and J. Rhodes, from Nevin (ed.), The Economics of Devolution, University of Wales Press, 1978.

DAE SOCIOLOGY REPRINTS

No new titles were added to the series this year.

III OTHER ACTIVITIES

DAE LIBRARY

During the period October 1978 to September 1979 the Department has received 139 periodicals; 16 of these were in exchange for the Department's reprint series and 46 were gifts, the remainder being purchased. The library has acquired 91 books, 809 pamphlets and reprints, the 463 British government publications.

COMPUTING UNIT

The unit, under the direction of Dr L.J. Slater, continued to provide help for almost all of the projects in the Department, in their programming and calculating problems. The Economic Policy Group and the Cambridge Growth Project were the heaviest users. There are now five direct links to the main University computer, which are heavily used by all members of the research staff. The equipment of the unit was improved by the delivery of a small computer, a RAIR 'black box', with 64K high-speed store, a VDU for input and output, a matrix dot printer and a backing disc store of two drives of 250K bytes each. It also has a Fortran compiler.

Advice and help were given to many members of the Faculty of Economics and Politics, to research students and to other institutions and individuals both inside and outside of the University. The number of staff in the unit remained constant (6), with Mrs Coe as the head of the data preparation room.

Activities

Dr Slater attended the British Association for the Advancement of Science Conference at Edinburgh in September 1979. Roger Smith attended several exhibitions of computing equipment in London, while

preparing a report on the purchase of the new computer. Dr Slater has written a book, Dynamic Regression, in collaboration with Dr M.H. Pesaran, which will be published in March 1980.

Dr Slater also gave several lectures for the new students in the M.Phil. degree course for the Faculty of Economics, and ran some informal seminars on computing problems in economics.

UNIVERSITY RELATIONSHIPS

Several members of the Department's research staff served on University committees during the year, including the Faculty Board of Economics and Politics and the Social Sciences Committee.

TEACHING FOR THE UNIVERSITY AND FOR COLLEGES

During the year members of the research staff gave 65 hours of lectures for the Tripos in various fields, including applied economics, labour economics, current economic policy issues, international trade and economic statistics. They also supervised postgraduate students and gave seminars for them.

Most members also undertook for Colleges the supervision of undergraduates. Eight of the members were Directors of Studies in Economics, and two in Social and Political Sciences.

IV FINANCE

During the financial year (1 August 1978 to 31 July 1979), the Department's annual expenditure was £371,612, compared with £309,018 in 1977. 90% of the expenditure was on stipends and wages.

The University grant rose from £121,838 in 1977-78 to £139,998 in 1978-79, an increase of £18,160. Expenditure went up by £62,594.

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	354,269
Department of Industry	21,562
Department of Environment	16,500
U.N.I.D.O.	8,000
European Economic Community (Brussels)	7,900
Department of Employment	6,317
	£ 414,548

V STAFF

RESEARCH STAFF

Director	W.A.H. Godley, MA (Cantab), MA (Oxon), Fellow of King's College
Assistant Director	B.M. Deakin, MA (Cantab), MA (Oxon), Fellow of Magdalene College
Special Appointment	Miss L.J. Slater, ScD, PhD (Cantab), D.Litt, 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, Head of Sociological Research
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 Catherine's College
S.F. Wilkinson, MA (Cantab), Fellow of Girton College
V.H. Woodward, MA (Cantab), BA (Nottingham), St Catherine'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), MA (Southampton), PhD (Southampton)

T. Brown, BSc (Southampton), MA (Univ. East Anglia), BA (Open University)

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

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

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

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

G.H. Gudgin, BA (London), BA (Open University), PhD (Leicester)

A. Lawson, BSc (London), MSc (London), King's College

L. Makowski, MA (UCLA), PhD (UCLA)

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

D. Vines, BA (Melbourne), BA (Cantab), Fellow of Pembroke College

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

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

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

JUNIOR RESEARCH OFFICERS

D.R. Basu, MA (Univ. of Calcutta), MA (Essex), PhD (Birmingham)

I.G. Begg, BA (Strathclyde), Darwin College

A.W. Goudie, BA (Cantab)

D.M. Kreps, MA, PhD (Stanford)

J. Rubery, MA (Cantab), Fellow of New Hall

F. van der Ploeg, BSc (Sussex)

PUBLICATIONS SECRETARY

Ms J.M. Bradley, MA (Oxon.)

RESEARCH ASSOCIATES

Mr D. Donald

Professor F. Hahn

Dr O.D. Hart

Mr A. Hughes

Dr G. Hughes

Professor the Lord Kaldor

Dr D. Livesey

Professor J. Meade

Dr B. McCormick

Dr G. Meeks

Professor R. Neild

Dr D. Newbery

Mr P.M. Nolan

Dr H. Pesaran

Dr A. Singh

Professor J.R.N. Stone

RESEARCH ASSISTANTS

Mrs R. Volpato

Ms S. Macek

VISITING SCHOLARS, OCTOBER 1978 - SEPTEMBER 1979

Mrs V.K. Borooah, University of Southampton
 Professor S. Bruno, Università degli Studi di Roma, Italy
 Professor A. Caracciolo, University of Ancona, Italy
 Mr W. Clement, University of Economics, Vienna, Austria
 Professor T. Cozzi, Fondazione Luigi Einaudi, Torino, Italy
 Mr D. Donald, Glasgow College of Technology
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 Mr Adrian Han, Alcan (UK) Ltd., London
 Mr P.J.T. Korpinen, Economic Research Institute for the Labour Movement, Finland
 Mrs U. Korpinen, Ministry of Labour, Finland
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 Professor A. Majocchi, University of Pavia, Italy
 Professor J. Ostroy, University of California at Los Angeles
 Dr T. Penna, Università degli Studi di Messina, Sicily
 Mr G. Petrovich, Università degli Studi di Venezia, Italy
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 Professor B. Singh, Bucknell University, U.S.A.
 Professor A.P. Thirlwall, University of Kent at Canterbury
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