

BASEMENT

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75:1982-1983

UNIVERSITY OF CAMBRIDGE

DEPARTMENT OF APPLIED ECONOMICS

T W E N T Y T H I R D 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

O C T O B E R 1982 t o S E P T E M B E R 1983



University of Cambridge

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DEPARTMENT OF APPLIED ECONOMICS

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A. SINGH

M.R. WEALE

E. SCOTT (Assistant Staff Observer)

S. SIBSON-TURNBULL (Secretary)

TWENTYTHIRD REPORT

ACTIVITIES IN THE PERIOD

OCTOBER 1982 to SEPTEMBER 1983

UNIVERSITY OF CAMBRIDGE
DEPARTMENT OF APPLIED ECONOMICS
30, Avenue, Cambridge CB2 3RQ

Director: W.A.H. Godley

THE UNIVERSITY OF CAMBRIDGE

ACTIVITIES IN THE FINANCIAL

OF THE UNIVERSITY OF CAMBRIDGE

Committee of Management, January 1983

1 RESEARCH ACTIVITIES

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A. HUGHES (Chairman)

T. BARKER

I.G. BEGG

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B.M. DEAKIN (Assistant Director)

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M.R. WEALE

E. SCOTT (Assistant Staff Observer)

S. SIBSON-TURNBULL (Secretary)

Institutional investment, mergers and public policy

Conglomerate organisation and economic efficiency

Company finance and performance

Stagflation: a macroeconomic policy to reconcile full employment and price stability

Destocking during the recession

Supervision of operating businesses by holding companies

Adjustment problems and policy in an integrated world economy

80 C 75:1982-1983

Committee of Management, January 1983

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M.R. WEALE
R. SCOTT (Assistant Staff Director)
S. SIBSON-TURNBULL (Secretary)

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	<u>Project members</u>	
	The project is under the direction of Professor Sir Richard Stone and Dr Barker.	
	<u>Research officers:</u>	
	Terry Barker	
	Vanl Brown	
	Michael Landmann	
	William Peterson	
	Richard Pierce	
	Rick van der Ploeg	
	Andrew Soell	
	Martin Wells	
	<u>Research associates:</u>	
	Andrew Gouda	Junior Research Officer, DAE
	Tony Lawson	Faculty of Economics and Politics
	David Macey	Department of Engineering, University of Cambridge

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TWENTYTHIRD REPORT OF THE DEPARTMENT OF APPLIED ECONOMICS (covering the year October 1982 to September 1983)

I RESEARCH ACTIVITIES

This section outlines the work done in 1982-83 on the research projects being conducted in the Department.

A ECONOMICS

GROWTH AND FLUCTUATIONS IN THE BRITISH ECONOMY: PROJECTIONS FOR PLANNING

Project members

The project is under the direction of Professor Sir Richard Stone and Dr Barker.

Research officers: Terry Barker
Vani Borooah
Michael Landesmann
William Peterson
Richard Pierse
Rick van der Ploeg
Andrew Snell
Martin Weale

Research associates: Andrew Goudie
Tony Lawson
David Livesey
Junior Research Officer,
DAE
Faculty of Economics and
Politics
Department of Engineering,
University of Cambridge

	Geoffrey Meeks	Secretary to the Degree Committee, Faculty of Economics and Politics
	Hashem Pesaran	Faculty of Economics and Politics
SSRC Senior Research Fellow:	Terry Ryan	Trinity College, Dublin
Visitors to the Project:	Dr Bogdan Suchecki and Dr Andrzej Tomaszewicz, Institute of Econometrics and Statistics, University of Lodz, Poland	
	J.P. McAuley, State Bank of New South Wales, Sydney, Australia	
	P.L. Read, Department of Economics, Massey University, Palmerston North, New Zealand	

Rick van der Ploeg left the project on 30th September 1983 to take up a lectureship at the London School of Economics.

Funding

The present basis for funding the project is that 60% of the direct costs are financed by the SSRC whilst the remainder comes from Cambridge Econometrics, a company set up to provide a commercial service using the project's model, and from other sources.

The organisation of the research

The research activity of the project is organised around the multisectoral dynamic model (MDM) of the British economy designed to simulate the operation of the British economy for the purposes of forecasting and economic management. Each member of the project is expected to contribute towards the improvement of existing relationships in the model, the introduction of new ones and the examination of the overall performance of the model and its projections. During the period of this report, responsibility for research into various aspects of the model was allocated as follows.

Terry Barker	co-ordination of research; model solution; the accounting structure; export and import quantities and prices
William Peterson	model solution; employment, hours worked, investment and depreciation functions; the energy submodel
Vani Borooah	disaggregated consumers' expenditure functions; aggregate interest payment functions; the building societies' submodel
Michael Landesmann	stockbuilding equations
Martin Weale	industrial price equations; indirect tax parameters; rate of return and financial stock equations
Rick van der Ploeg	optimal control exercises; large scale matrix adjustment
Richard Pierse	financial stocks equations; aggregate consumers' behaviour
Andrew Snell	balance of payments flows (except exports and imports); the exchange rate

Progress of the research

The past year has seen the completion of two new versions of the model. MDM5 was the first version to run on the general software package IDIOM, developed by members of the project. It incorporated wage equations for individual industries, export equations for invisibles and benefit equations for certain social security payments. This version of the model was used as the basis of Cambridge Econometrics Forecast (CEF) 83/1. MDM6 further included disaggregated export price and quantity equations and a financial model in which the holdings of 32 financial assets and liabilities by 11 institutional sectors are explained. This model was used for CEF83/2 and CEF83/83. It has been further extended to include a re-estimated wage equation.

User Manuals for MDM5 and MDM6 are available and the latest version has been successfully transferred to the University of Warwick computer for use by the SSRC Centre for Macroeconomic Research. Members of the project have been working on a draft book to appear in the series Cambridge Studies in Applied Econometrics which consolidates the research on the dynamic model.

The data work of the project has continued with the further revision and balancing of a System of National Accounts for the UK in 1975 and the completion of the data series, partly in 1975 prices, 1954-81 used for estimating the equations of the model. This data is on the 1968 Standard Industrial Classification. Both the price base and the classification are being changed in the official statistics starting in the autumn of 1983.

The main applications of the model to questions of economic policy during the year have been reported in individual progress reports (available to those interested), conference papers and publications. The main ones are: application of optimising techniques; and the exploration of the Shore proposals for higher employment.

Other activities

The project continued the development of the software packages IDIOM and MREG for solving and estimating large-scale models. The project has run a full programme of seminars and workshops during term in Cambridge and in addition project members have given seminars to other groups in Cambridge and elsewhere. Members of the project have also given a number of lectures to undergraduates during the year.

Publications, papers and conferences

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

Barker, Terry and Vladimir Brailovsky (forthcoming). La política económica entre 1976 y 1982 y el Plan Nacional de Desarrollo Industrial, Nexos

Barker, Terry, Geoffrey Meeks and Andrew Goudie (1983). Why Labour Means Business. The Sunday Times 5.6.83

Barker, Terry, Frederick van der Ploeg and Martin Weale (forthcoming). A balanced system of national accounts for the United Kingdom. Review of Income and Wealth

Barker, Terry, William Peterson and Alan Winters (forthcoming). The Cambridge multisectoral dynamic model: description and analysis. To be published in a volume edited by E. Fontela, ASEPELT

Barker, Terry, William Peterson and Alan Winters (forthcoming). IDIOM - an International Dynamic Input-Output Model. To be published in a volume of papers from the Seventh International Input-Output Conference edited by UNIDO

Barker, Terry (forthcoming). Forecasting the economic recession UK 1979-82: a comparison of model-based ex ante forecasts. Journal of Forecasting

Borooah, V.K. and F. van der Ploeg (1982). The changing criteria of economic success: performance and popularity in British politics. The Manchester School, vol. XLX, no. 1, pp. 61-78

Borooah, V.K. and F. van der Ploeg (1982). British government popularity and economic performance: a comment. Economic Journal, vol. 92, no. 366, pp. 405-410

Borooah, V.K. and F. van der Ploeg (1982). Economic conditions, class and voter behaviour. Scottish Journal of Political Economy, vol. 29, no. 2, pp. 206-214

Borooah, V.K. and F. van der Ploeg (forthcoming). Analysis of the Cambridge multisectoral dynamic model. In J.J. Sztaudynger (ed.), Problems of Building and Estimating Large Econometric Models, North-Holland, Amsterdam

Borooah, V.K. and S.P. Chakravarty (forthcoming). An experiment in forecasting using the Kalman Filter. In J.J. Sztaudynger (ed.), Problems of Building and Estimating Large Econometric Models, North-Holland, Amsterdam

Borooah, V.K. and F. van der Ploeg (1983). Political Aspects of the Economy. Department of Applied Economics, Occasional Paper No. 55, Cambridge University Press

Landesmann, Michael (forthcoming). Disproportional growth and international competition in the European Communities. In Proceedings of the Input-Output Task Force Meeting, IASA, September 1983

Landesmann, Michael (forthcoming). Industrial policies in the UK. In a volume edited by A. del Monte on Industrial Policies in Europe.

Landesmann, Michael (forthcoming). Conceptions of technology and technological change in production analysis. In a volume edited by M. Baranzini and R. Scazzieri, Foundations of Economic Analysis, Blackwell

Peterson, William and Terry Barker (forthcoming). Disaggregated model-building using a software support system. To be published in Proceedings of 3rd IFAC/IFORS/SEDC Conference on the Modelling and Control of National Economies, Pergamon Press

Peterson, William, Terry Barker and Rick van der Ploeg (1983). Software support for multisectoral dynamic models of national economies. Journal of Economic Dynamics and Control, vol. 5, pp 109-130

Ploeg, F. van der (1982). Reliability and the adjustment of sequences of large economic accounting matrices. Journal of the Royal Statistical Society, Series (A), vol. 145, part 2, pp. 169-194

Ploeg, F. van der (1982). The industrial implications of an optimal reflationary mix for the British economy. Applied Economics, vol. 14, no. 4, pp. 355-373

Ploeg, F. van der (1982). Medium-term planning with a multi-sectoral dynamic model of the British economy. International Journal of Systems Science, vol. 13, no. 1, pp. 57-71

Ploeg, F. van der (1982). Government policy, real wage resistance and the resolution of conflict. European Economic Review, vol. 19, no. 3, pp. 181-212

Ploeg, F. van der (1983). Control of medium-term dynamic econometric models. Transactions of the Institute of Measurement and Control

Ploeg, F. van der (forthcoming). Macro-dynamic theories of cyclical growth. In Mathematical Methods in Economics, John Wiley, Chichester, UK

Ploeg, F. van der (forthcoming). Economic growth and conflict over the distribution of income. Journal of Economic Dynamics and Control

Ploeg, F. van der (1983). The principle of political-economic assignment: analysis of a macroeconomic model with political feedbacks. In T. Basar (ed.), Modelling and Control of National Economies, Pergamon Press, Oxford

Ploeg, F. van der (forthcoming). Predator-prey and neo-classical models of cyclical growth. Zeitschrift fur Nationalokonomie

Ploeg, F. van der (forthcoming). Generalized least squares methods for balancing large systems and tables of national accounts. Review of Public Data Use

Ploeg, F. van der (forthcoming). Optimal control methods for the formulation of economic policy. Systems Science

Ploeg, F. van der (ed.) (1984). Mathematical Methods in Economics, Handbook of Applicable Mathematics, John Wiley, Chichester, UK

Ploeg, F. van der (forthcoming). Government ideology and re-election efforts in a simple macroeconomic model. Oxford Economic Papers

Ploeg, F. van der (forthcoming). Risk and linear-quadratic stabilization. Economics Letters

Ploeg, F. van der (forthcoming). The implications of workers' savings for economic growth and the class struggle. In M. Kruger (ed.), Nonlinear Models of Fluctuations and Growth, Springer-Verlag, Berlin

Ploeg, F. van der and M.R. Weale (1982). Conflicts over North Sea oil profits and macro-economic policy. In R.F. Drenick and F. Kozin (eds), System Modelling and Optimization, Springer-Verlag

Stone, J.R.N. (1983). Accounting Matrices in Economics and Demography.

Weale, Martin (1983). Deflators in input-output tables. In Input-Output Modelling, ed. M. Grassini and A. Smyshlyaev, IIASA

Weale, Martin (forthcoming). The accounts of the UK public sector 1971-1981. Three Banks' Review

Weale, Martin (forthcoming). Quantity and price effects in a model of world trade based on an accounting matrix. Review of Income and Wealth

Weale, Martin (1982) (with Vince Cable). Trade and aid policy analysis: use of the Cambridge Growth Project model. Overseas Development Institute Review

Weale, Martin (forthcoming) (with Vince Cable). The economics of import controls in the UK. World Economy

The following papers have been presented at conferences during the year.

International Seminar on the Effects of Government industrial Policy on European Industry, organised by the European Institute for Advanced Studies in Management, May 1983

Richard Pierse and Michael Landesmann The effects of industrial policies in the UK, 1973 to 1979

3rd International Symposium of Forecasting, Philadelphia, USA June 1983

Martin Weale A simple disaggregate model of the UK financial sector

Cambridge Growth Project/Cambridge Econometrics Conference on Industry, Finance and the Economy, Jesus College, July 1983

Terry Barker Financial assets, liabilities and returns in MDM

Rick van der Ploeg Properties of MDM

Martin Weale	Financial models
Colin Hughes and William Peterson	The energy submodel The regional submodel
Michael Landesmann	Stockbuilding and liquidity
Vani Borooah	Housebuilding
Richard Pierse	Financial effects on the household sector
Terry Barker and Geoff Meeks	Alternative macroeconomic policies

3rd IFAC/IFORS/SEDC Conference on Modelling and Control of National Economics, Washington DC, July 1983

William Peterson and Terry Barker	Disaggregated model-building using a software support system
Rick van der Ploeg	The principle of political-economic assignments

10th EARIE Conference, Bergen, Norway, August 1983

Terry Barker and Irwin Fairclough	North Sea oil and the UK economy 1974-81
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Workshop on Forecasting Models and the Employment Problem, ILO, Geneva, September 1983

Terry Barker	The Cambridge multisectoral dynamic model and alternative strategies for full employment in the UK
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Input-Output Task Force Meeting: Institute for Applied Systems Analysis (IASA), Laxenburg/Austria, September 1983

Michael Landesmann	Disproportional growth and international competition in the European Communities
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SSRC Econometric Study Group Workshop, Warwick, 1983

Rick van der Ploeg	FIML-estimation of dynamic systems from inconsistent data
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The following seminars have been given:

Terry Barker	Mexican economic policy 1976-82. What went wrong? (given to the Centre for Latin American Studies, Cambridge, January 1983)
Michael Landesmann	Industrial structures and international competition in the European Communities (given at a seminar, University of Oxford, February 1983)
Terry Barker	Outlook for the UK economy: present policies versus the Shore proposals (given to the Society for Long Range Planning, Edinburgh, March 1983 and the Oxford Centre for Management Studies, March 1983)
Michael Landesmann	Industrial policies in the UK (given at a Workshop of economists working on industrial policies in Europe, Naples, March 1983)
Martin Weale	The Cambridge Growth Project model (given at a seminar on Economic Modelling, Civil Service College, May 1983)
Terry Barker	Debate on 'Cambridge versus Monetarism' with Professor Patrick Minford (Oxford University Business Summer School, July 1983)
Vani Borooah and Rick van der Ploeg	Lectures delivered to Zurich University on politics and the economy

Growth Project Papers (GPP)

532	Expectations in the fixed-interest market - a comment on 'A technique for extracting a measure of expected inflation from the interest rate term structure' by J.A. Frankel - Martin Weale
533	Rational forecasts from non-rational models - Andrew Snell
534	The accounts of the UK public sector 1971-1981 - Martin Weale
535	FIML-estimation of dynamic systems from inconsistent data - Rick van der Ploeg
536	Disaggregated model-building using the IDIOM Software System - William Peterson

- 537 Risk-sensitive stabilisation policy: complacency and neurotic breakdown - Rick van der Ploeg
- 538 The effects of industrial policies in the UK 1973 to 1981 - Michael Landesmann and Richard Pierse
- 539 A balanced system of national accounts for the United Kingdom - Terry Barker, Rick van der Ploeg and Martin Weale
- 540 A simple disaggregate model of the UK financial sector - Martin Weale
- 541 Government ideology and re-election efforts in a simple macroeconomic model - Rick van der Ploeg
- 542 The accuracy and error structure of the UK national accounts - Martin Weale
- 543 Consumers' expenditure estimates using the Rotterdam model - Vani Borooah

Sam Unit Papers (SUP)

- 113 Gross fixed capital formation 1954-1981 - William Peterson
- 114 UK import duties 1954-1981 for MDM6 - Terry Barker

Rocket Program Papers (RPP)

- 80 EEC structural data base available for use - Michael Landesmann
- 81 Balancing large systems of national accounts - Rick van der Ploeg

Growth Program Manuals (GPM)

- 5 MDM5 Users Manual - Terry Barker
- 6 MDM6 Users Manual - Terry Barker
- 6a The conversion to PHX2 - William Peterson
- 6b PHX2 commands for MDM - William Peterson

TRADE, AID AND BRITISH INDUSTRIAL STRUCTURES

Project member: Martin Weale

Associate member: Vince Cable, Overseas Development Institute

Sponsor: ESCOR

This project uses the Growth Project Model to investigate the effects of trade policies on the United Kingdom. A paper, 'The Economics of Import Controls in the UK' was presented to the SSRC International Economics Study Group and is appearing in World Economy. It investigated the effects of tariffs and quotas for the motor vehicle and textile industries under different assumptions about the response of domestic prices to changes in the price of competing imports.

A second paper describing a linear model of the world economy and using it to analyse the effects of aid policies at a global level is appearing in the Review of Income and Wealth.

Work is now proceeding on a detailed investigation of aid policies, using the Growth Project Model to look at the implications for the UK of a balance of payments constraint on the less-developed countries arising from the debt crisis.

THE EFFECTS OF ECONOMIC POLICY

This programme began in 1970 and has continued in varying forms since then, financed mainly by the Social Science Research Council. It is currently undertaken by ten members working on the programme and related projects under the direction of Wynne Godley. The programme has led to the development of a model of the UK economy

and also of world trade and regional labour markets, as well as a series of Economic Policy Reviews and research papers on particular issues.

Members of the Group

Iain Begg	Barry Moore
Kenneth Coutts	John Rhodes
Francis Cripps	Roger Tarling
Wynne Godley	Terry Ward
Graham Gudgin	Frank Wilkinson

In 1982/3 the major part of the work has continued to be financed under a four-year programme (agreed with the SSRC) which aims to develop an integrated analysis of economic policy extended to the international level within the EEC and to the regional level within the UK. A further source of finance has been a grant from the regional directorate of the EEC to fund work on an information system for the analysis of the impact of external trade on regional employment within the EEC.

The programme has developed in a number of different directions which have been identified as major deficiencies in the analysis of economic policy at international, national and regional levels.

The main areas of work over the year have been:

(a) Economic Theory (mainly Coutts, Cripps, Godley)

A body of macro-economic theory has been developed aimed at integrating stocks more firmly into macro-economics than is currently the case, while formally describing the temporal dynamics of economic change and providing a more coherent treatment of the effects of inflation. This work led to the

publication of Macro-Economics written by Godley and Cripps, and has continued to be developed since then, in particular to clarify the links between this and the existing body of macro-economic theory.

(b) Macro-Modelling (mainly Begg, Coutts, Cripps and Ward)

- (i) The CEPG model of the UK economy has been simplified and reformulated to be consistent with the accounting procedures developed in Godley-Cripps.
- (ii) The CEPG model of the world economy has been updated and documented in preparation for use as a common research facility at departments/institutes in several European countries.
- (iii) The model-processing system (MPS) used for CEPG models has been cleaned up and documented in preparation for eventual use by other researchers/institutions.
- (iv) A new system has been developed for handling complex multi-dimensional databases of the type employed in regional and industrial studies.

(c) Regional Forecasting and Policy (mainly Begg, Gudgin, Moore and Rhodes)

The model of regional labour markets in the UK was completed and used to produce forecasts up to 1990 under different scenarios for both national economic policies and regional policy. The second CEPG review on regional policy (Vol. 8 no. 2) incorporated these forecasts, together with articles on employment problems in inner cities, proposals for urban and regional policy in the 1980s and on the institutional framework for regional policy.

Publications and Papers

- Cambridge Economic Policy Review Vol. 8, No. 2, Dec. 1982.
Employment problems in the cities and regions of the UK: prospects for the 1980s Gudgin, Moore and Rhodes
- Anaydike-Danes, M. and Godley, W.A.H. 'Stock Flows and the Determination of National Income.' Paper for International Economic Association, Florence, September 1982
- Begg, I. Britain and Europe: time for reappraisal, forthcoming in Scottish Trade Union Review, No. 20, April 1983
- Cripps, F. Britain, Europe and Macroeconomic Policy, in Jenkins (ed.), Britain and the EEC, Macmillan, 1983
- Cripps, F. and Godley, W.A.H. 'No oil to pour on a Chancellor's troubled waters', The Guardian, March 14, 1983
- Cripps, F. and Ward, T.S. 'A way out of Crisis'. FERE Working Paper No. 1, forthcoming
- Cripps, F. and Ward, T.S. Government policies, European recession and problems of recovery, Cambridge Journal of Economics, March 1983
- Godley, W.A.H. and Cripps, F. Macroeconomics. OUP and Fontana, 1983
- Godley, W.A.H. 'Keynes and the Management of real national income and expenditure'. Paper for Keynes Conference, Kings College, Cambridge, June 1983
- Gudgin, G. 'The CEPG Regional Model of Employment and Unemployment'. Paper for British Society for Population Studies Conference, Durham, 1982
- Gudgin, G. Employment Prospects in the Thatcher-Era, Journal of the Royal Town Planning Institute, Vol. 69, No. 5, September 1983
- Gudgin, G. and Fothergill, S. 'Small Hope for Small Firms'. Article commissioned by New Society
- Gudgin, G. and Fothergill, S. Trends in Regional Manufacturing Employment, in Goddard (ed), The Urban and Regional Transformation of Britain
- Gudgin, G., and Fothergill, S. Research into Urban Employment Decline. Paper written for SSRC Inner Cities Programme

- Gudgin, G., Moore, B. and Rhodes, J. 'The Great Divide', Observer, Jan 16, 1983
- Ward, T.S. Autumn Statement, 1982: Comment, in Report from the Treasury and Civil Service Committee, Session 1982-83, 'The Government's economic Policy, Autumn Statement, HMSO, Dec. 1982
- Ward, T.S. The Government's Expenditure Plans, 1983-84 to 1985-86, in Third Report from the Treasury and Civil Service Committee, Session 1982-83, HMSO
- Ward, T.S. Budget changes to Public Expenditure, in Fourth Report from the Treasury and Civil Service Committee, Session 1982-83, HMSO, April 1983
- Ward, T.S. Parliamentary Control over Government Borrowing, in First Report from the Select Committee on Procedure Finance, Session 1982-83, HMSO, June 1983
- Ward, T.S. Cash Planning, Public Administration, Spring 1983
- Ward, T.S. PESC in Crisis, Policy and Politics, April 1983
- Ward, T.S. and Cripps, F. Planning our way to jobs, New Socialist, July/August 1983
- Members of the Policy Group, CEPG Bibliography 1979-1982 (DAE mimeo), March 1983.

Other activities

- F. Cripps and T. Ward attended the Sortir de la Crise conference in Paris in March 1983, and the Federation Europeenne de Recherches Economiques conferences in Brussels in January 1983, Bolsena, Italy in May 1983 and Bremen, Germany in September 1983. I Begg attended the FERE conference in Bolsena.
- K. Coutts gave a paper at the International Economic Association conference in Florence in September 1982.
- G. Gudgin gave papers at the British Society for Population Studies Annual Conference, Durham, October 1982, at the University of Paris Conference on Employment in Small Firms, Nov. 1982, and the Regional Studies Association, East Anglian Branch Conference,

Cambridge, June 1983. Other activities include evidence given to the CBI seminar on regional policy, and the Regional Studies Association inquiry into the future of regional policy. Also, introductory and summary papers were given (with R. Tarling) at the SSRC Workshop on Job Generation, Selwyn College, Cambridge, September 1982.

T. Ward attended the conference 'Problemi della Ripresa Europea e del Nuovo Ordine Economico Internazionale', University of Modena, November 1982, and presented a paper. He also presented papers to seminars at Federal Trust (December 1982), University of Kent (February 1983), University of Nottingham (March 1983).

He continued to act as a specialist adviser on economic policy to the Treasury and Civil Service Committee and assisted the Committee on its enquiries into the Government's 1982 Autumn Statement, the public expenditure White Paper of February 1983 and the March 1983 Budget. He also provided evidence to the Select Committee on Procedure (Finance) in their examination of Parliamentary control over government borrowing, public expenditure and the budgetary process.

ASSESSMENT OF THE REGIONAL IMPACT OF THE EUROPEAN COMMUNITY'S EXTERNAL COMMERCIAL POLICIES

Project members: Francis Cripps and Iain Begg, with assistance from T. Ward, B. Moore and G. Gudgin

Sponsor: EEC Commission

This study, which began in January 1982, is intended to develop statistical databases and analytic methods for monitoring the actual or potential impact of extra-Community trade on regional problems within the Community.

The study is now largely complete and a final report will be submitted before the end of 1983. The statistical system developed in the course of the study will be handed over to the European Commission at the beginning of 1984.

LABOUR STUDIES GROUP

Research Staff: Christine Craig, Jill Rubery, Roger Tarling, Frank Wilkinson

Research Associate: Elizabeth Garnsey

1. The determinants of informal payment structures

The aim of this project was to explore the relationship between workforce characteristics, the structural constraints within which firms operate, and the development of payment structures. The emphasis was on the employment of women in small firms which tend not to have formalised payment systems. A full description of the background to the inquiry and of the scope of the investigation is contained in the 21st Annual Report.

The final report was accepted by the Department of Employment in December 1982 and a seminar held to present the results to the

Department and the Equal Opportunities Commission. The report is now being revised for publication as a Department of Employment Research Paper. An article based on the report has already appeared in the Department of Employment Gazette.

2. International Working Party on Labour Market Segmentation

The Labour Studies Group continued its active involvement with the International Working Party throughout the year.

The fifth conference of the International Working Party was held in Aix-en-Provence on Government Policy and the Labour Market. Papers were presented by the Labour Studies Group on Government Policy and the Labour Market in the UK.

3. The Impact of the Retail Trade Wages Councils

This project was commissioned by the Department of Employment with the aim of assessing the effects of changes in statutory minimum wage rates on earnings and employment in the Retail Trades.

The project was fully described in the 22nd Annual Report. The work has now been completed and the first draft of the final report has been submitted to the Department of Employment.

4. Employment consequences of changes in the manufacturing production process

Sponsor: SSRC

This research project is concerned with managerial response to product market, technological and institutional conditions and the impact of these responses on the level of employment, the nature of skills, the system of work organisation, industrial relations and the terms and conditions of employment.

To study these developments, we are using a case study approach at the industry level and have selected industries with quite diverse technical features, industrial and employment structures and recent market experience. Our initial work has included a trawl of relevant literature (not yet written up), a collation of official statistics on each industry (six industries have been written up) and a number of interviews with one or two major companies in each industry. Although mostly local, access has not been a problem and we aim to define and carry out the full interview schedule from October 1983.

The remainder of the first year has been taken up by theoretical work. Firstly, we have surveyed two bodies of literature (labour market segmentation theory and organisation theory) to compare and contrast their main features and significance for this project.

Secondly, we have written two papers which attempt to give some precision to the concepts with which we are building our framework of analysis.

Working papers:

- (1) Labour market segmentation theory in the 1980s
- (2) Working paper on organisations and industrial structure
- (3) Production systems
- (4) The level and flexibility of costs of production

Publications and Papers

- R. Tarling and S.F. Wilkinson (1982) Changes in the inter-industry structure of earnings in the post-war period. Cambridge Journal of Economics, Vol. 6 No. 3; September
- C. Craig, E. Garnsey and J. Rubery (1983) Women's pay in informal payment systems, Department of Employment Gazette, April
- J. Rubery, R. Tarling and S.F. Wilkinson (1983) 'Social welfare provision and employment: a case for income maintenance'. Paper for European Centre for Work and Society Conference in Dublin, in L. Bekemans (ed.), Social Security and Employment: New Patterns in Employment, No. 5, The Netherlands, Vangarain Essen
- J. Rubery, R. Tarling and S.F. Wilkinson (1983) Industrial Relations Issues in the 1980's, in M. Poole et al. The Future of Industrial Relations, London, Routledge and Kegan Paul (forthcoming)
- R. Tarling and S.F. Wilkinson (1983). 'Income distribution, wage income and the role of the State: some policy issues in the Greek labour market'. Report of the Centre of Economic Planning and Research, Athens (forthcoming)
- S.F. Wilkinson (1983) Review of Gordon, Edwards and Reich 'Segmented work, divided workers: the historical transformation of labour in the United States'. Contributions to Political Economy, Vol. 2, March
- M. Pesaran and R. Tarling (1983) 'Changes in the UK male labour force in the post-war period', DAE mimeo
- S.F. Wilkinson and S. Brusco (1982) 'Welfare State expenditures, the Labour Market and Economic Crisis: A Comparison of UK and Italy'. Paper given to Conference in Modena, November, 1982
- S.F. Wilkinson (1983) 'Worker Organisation, State Expenditure and Capitalist Crisis'. Paper given to Conference in Trieste, September 1982
- J.C. Rubery, R. Tarling and S.F. Wilkinson (1983) 'Government Policy and the Labour Market, the case of the UK': paper to Aix-en-Provence Conference
- S.F. Wilkinson (1983) Productive Systems, Cambridge Journal of Economics, Vol. 7, Nos. 3 & 4.

Other Activities

- Jill Rubery Member of the Labour Party National Executive Committee Sub-committee on employment. Co-author with Chris Pond of the Low Pay Unit of a paper on the case for a national minimum wage
- Roger Tarling Member of SSRC Industry and Employment Committee
Member of Joint SERC-SSRC Committee
Member of Advisory Board of the IRRU, Warwick
- Frank Wilkinson Course of six lectures on labour market segmentation, Modena University, March/April 1983
Participation as lecturer in an international school in Trieste, September 1983

Seminars and Conferences

SSRC Employment/Unemployment Workshop

Department of Employment Seminar (Payment Structures)

European Centre for Work and Society; Conference in Dublin on Social Security and Employment

Modena, Italy, November 1982: State Expenditure and the Labour Market

Athens, November 1982: Impact of Thatcherite Policies on the Labour Market

Hamburg, May 1983: A Keynesian Approach to Thatcherite Labour Market Policy

Trieste, September 1983: International School: Contributions on the balance of payments constraint and state expenditure and the restructuring of the labour market

ECONOMIC POLICY IN NORTHERN IRELAND

Project members: David Canning, Barry Moore and John Rhodes

Sponsor: SSRC

Aims of the Project

This 2-year project, which started in November 1982, comprises two separate but related studies. The first involves constructing a labour market balance sheet for the Northern Ireland economy and the UK economy. The Northern Ireland/UK differential changes in each component of the labour market can then be identified. The more important differential movements will be subject to statistical analysis. Special attention will be directed to the size and composition of migration flows.

A similar analysis is being carried out for the main components of public expenditure and tax revenues in the Province. The differential impact of UK taxes on the Northern Ireland economy as it diverges from the UK economy will be assessed, as will the relative provision of public services after taking account of variations in expenditure needs.

These two studies will provide the basis for an evaluation of economy policy in the province. This should discuss what constitutes an appropriate set of objectives for economy policy in Northern Ireland and the likely implication of different means of achieving these objectives. Possible policy options need developing into proposals for practical usable policy instruments. Throughout the two studies comparisons with the Republic of Ireland will also be drawn.

Progress of the Work

The first 10 months of the project have been devoted largely to gathering the substantial amount of data required for this project.

David Canning has spent much of this period in Belfast. Progress has been slowed by the delays in the publication of two very important sources of data - the 1981 Census of Population and the 1981 Census of Employment, neither of which is yet available for the Province. This is due in part to a higher than average non-response to the surveys. However, these delays have provided an opportunity to develop the conceptual parts of the study and to undertake analysis where data are available. For example, a more theoretical paper has been prepared on the implications of firms' behaviour under cost minimisation assumptions for local, regional and national labour markets.

Seminars, conferences, etc.

Barry Moore was a member of the SSRC Panel on Research on the Inner Cities and a paper on 'Unemployment in Inner Cities' was presented to the SSRC Conference on Unemployment in May 1982. Throughout the year John Rhodes was a member of the Regional Studies Association Panel, which was a group of academics set up to consider how regional policies could be modified to meet the conditions prevailing in the 1980s. The Panel's deliberations form the basis of a book which has now been prepared. A paper on the economic background to inner city problems was given to the Cranfield Conference on Policing and Social Policy in multi-ethnic areas in Europe. A paper was also presented to a Scottish office conference on prospects for the Scottish economy. A Report on Urban and Regional Policy Coordination was written for the OECD and will be published in due course.

All three members of the project are producing papers for a SSRC seminar on Northern Ireland to be held in Belfast in December 1983.

Publications

G. Gudgin, B.C. Moore and J. Rhodes: Employment problems in the cities and regions of the UK: prospects for the 1980s, the December 1982 issue of the Cambridge Economic Policy Review (Vol. 8, No. 2)

J. Rhodes, Regional Aid, Public Money, Vol. 3, No. 1, June 1983

B.C. Moore and J. Rhodes, Unemployment in Britain's Inner Cities, SSRC, 1982

ECONOMIC CONSEQUENCES OF THE SIZEWELL 'B' NUCLEAR POWER STATION

Project member: G. Gudgin

Associate members: S. Fothergill, N. Mason

Sponsor: National Union of Mineworkers

This project has examined the consequences for national income and employment of the CEGB proposal to build a nuclear power station at Sizewell in Suffolk. The research examined the CEGB estimates of costs of construction and operation, and developed a range of plausible alternative costings. The impact of projected expenditures were calculated both for direct and indirect suppliers to the CEGB, and for consumers and taxpayers as a whole. The main conclusions were that it is relatively easy to reverse the CEGB expectation that Sizewell 'B' will result in cheaper electricity, and that in a balance of payments constrained economy national income, and certainly employment, are likely to be significantly reduced.

It is planned to published the study as a DAE pamphlet, and members of the project will be called upon to give evidence at the Sizewell Public Inquiry in December 1983.

SSRC JOB GENERATION WORKSHOP (21-22 September 1982)

Convenors: G. Gudgin, R. Tarling

This workshop was funded by the Industry and Employment Committee of the SSRC to exchange views on the processes of job generation between those working in different relevant disciplines within the UK and abroad, and policy makers concerned with employment issues. A second aim was to provide guidance for policy on research in this area. A report on the workshop and its implications for future research was written for the SSRC.

INSTITUTIONAL INVESTMENT, MERGERS AND PUBLIC POLICY CONGLOMERATE ORGANISATION AND ECONOMIC EFFICIENCY

Project members: A. Singh, A. Hughes and M.S. Kumar

Associate member: A.D. Cosh

Sponsor: Office of Fair Trading

These two projects started in May 1982. They extend the authors' earlier work on the impact of mergers, and investigate a range of new issues. The aims and methods of research for the two projects, and the progress made in each, are examined in turn.

1. Institutional investment and mergers

Although there is broad agreement over the facts as well as the reasons for the increasing domination of industrial companies by institutional holdings, the implications of these facts arouse great controversy. The implications are, indeed, far reaching and

extend to several areas: from the general social theory of the nature of contemporary capitalist society, to narrow, but extremely important, issues in the economic theory of the firm, and to questions of public policy.

The purpose of the research being undertaken is to shed some light on the role of institutional investors in the merger process. The huge merger wave which has engulfed UK industry during the last two decades has been the subject of a large academic literature; the effects of these mergers on industrial performance and economic growth rightly continue to be matters of serious public policy concern. In summary, the results of the academic research so far suggest that at the microeconomic level, the effect of mergers on company profitability has most likely been neutral i.e. on average mergers have neither raised, nor lowered, profits of amalgamating firms. There is unambiguous evidence that in perhaps half the cases mergers reduced microeconomic efficiency. A central question which arises with respect to the role of institutional investors is whether or not the post-merger performance of companies where such investment is important, has been markedly different from that of other companies. To what extent, if at all, do institutional investors use their influence and professional knowledge to discourage mergers which they believe are unlikely to be successful.

The research project is investigating two main issues:

- (i) Why do not institutional investors more frequently use their influence to discourage take-overs and mergers in view of often disappointing post-merger performance?
- (ii) Where institutional investors are important share-holders in large companies, are they over-influenced by the short-term capital gains?

The issues are being studied in two complementary ways.

First, by means of ex post statistical data and observed outcomes, and second, by means of interviews. With regard to the first, very detailed research has been done, based on data on company characteristics and performance, and on data on company stockholdings, which were collected from share registers and other sources. An analysis has been undertaken into the extent of institutions' involvement in over 300 large companies, and its effect on companies' performance, in particular on the post merger performance. A detailed report has been submitted to the OFT. A. Hughes and M. Kumar also had a preliminary discussion with economists at the OFT. Further work on the instruments used by institutions to influence industrial companies is in progress. With regard to the second approach, preparation for direct interviews with important pensions funds and other institutional managers is under way. The ex post research has yielded important material for the design of interviews: it will also help later to place the interview material in perspective.

2. Conglomerate organisation and economic efficiency

This research has two main aims: firstly, to answer some basic questions about the internal organisation and economic performance of large diversified firms in the UK; secondly, to consider the implications of these results for the development and implementation of industrial and competition policy. Particular attention is paid to questions of investment appraisal and the allocation of capital funds within companies, and a distinction is drawn between investment in new capital equipment and the purchase of subsidiaries. As for the institutional investment project, the research will be carried out using questionnaires and interviews with management, as well as using published information on ownership, diversification, and other characteristics of firms, and their performance.

Significant amounts of data have been collected on institutional holdings in a sample of the three hundred largest companies. These data are being combined with the Department of Industry databanks to examine the relevant issues.

Papers

The research group has produced the following reports during the year:

1. Institutional Investment and economic performance: empirical evidence for the UK
2. Institutional investors in the UK: objectives, constraints and the structure of asset holdings

COMPANY FINANCE AND PERFORMANCE

Project members: A.W. Goudie, G. Meeks

Associate member: J.G. Meeks

Sponsor: Esme Fairbairn Charitable Trust

The project's aims are to extend and develop a data bank of listed companies' financial accounts; to use these accounts in modelling the financial decisions of individual companies; to incorporate these models in the Cambridge Growth Project's disaggregated model of the British economy; and to use the integrated models for forecasting and policy evaluation.

The following progress has been made this year:

(i) Data Processing

The current update of the databank is unprecedentedly difficult because the suppliers of our data, the Business Statistics Office, has changed its sample of companies, its accounting framework and its computer. All our programmes for assimilating the data have had to be re-written. These now seem to be working satisfactorily and we are currently subjecting a subset of new data to extensive testing with a view to completing a major update by Spring 1984.

Copies of the existing databank have been provided to several other users during the year.

Paper 1 (see below), which arose directly from our work on the databank, was published during the year.

(ii) Model building

The disaggregated model of the listed company sector has been continually developed. Papers 2 and 3 have been prepared, outlining the model, describing some of its properties, etc. Paper 4 demonstrates some of the benefits of our approach in the case of modelling tax liabilities.

(iii) Policy Evaluation

The model has continued to be used to analyse the prospects for the listed company sector under different macroeconomic assumptions. Papers 5, 6 and 7 have resulted from this work.

A further paper (8) was prepared on one of the project's earlier topics, assessing the performance of merging companies.

Papers published, prepared, etc. during the year

1. A.W. Goudie and G. Meeks, Diversification by merger, Economica, 1982
2. A.W. Goudie and G. Meeks, 'Individual agents in a macroeconomic model'
3. A.W. Goudie and G. Meeks, 'The company sector'
4. A.W. Goudie, Tax exhaustion: estimates from a disaggregated model of the company sector, Applied Economics, forthcoming
5. T.S. Barker, A.W. Goudie and G. Meeks, 'An industrialist's guide to the manifestos', Sunday Times, 5.6.1983
6. T.S. Barker, A.W. Goudie and G. Meeks, 'Alternative macroeconomic policies, paper present to CE/CGP Conference, July 1983
7. A.W. Goudie and G. Meeks, 'The implications for companies of alternative macroeconomic policies', paper present to CE/CGP Conference, July 1983
8. G. Meeks and J.G. Meeks, Profitability measures as indicators of post-merger performance: a reply, Journal of Industrial Economics, forthcoming

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

Project members: Prof. J.E. Meade and David Vines

Associates: Dr J.M. Maciejowski, Division of Control and
Management Systems

P. Westaway, PhD Student with
research-linked award, in Economics Faculty

N. Christodoulakis, PhD Student, Division
of Control and Management Systems

Sponsor: SSRC

The purpose of this project is to investigate the administrative
and economic feasibility of a two-pronged set of policies:-

- (1) monetary, budgetary, and foreign-exchange policies designed to ensure a steady but restrained rate of growth of the total money incomes generated by the production of goods and services in the UK; and
- (2) a combination of various reforms of different wage-fixing institutions and arrangements which, against the background of a steady rate of growth in the demand for the products of labour, would promote full employment

1. Work on Wage Fixing

A book by J.E. Meade entitled Stagflation Volume 1: Wage Fixing was published by Allen and Unwin in January 1982.

2. Work on Demand Management

Stagflation Volume 2: Demand Management was published by Allen and Unwin in September 1983, jointly authored by D. Vines, J. Maciejowski and J.E. Meade. The book opens with six theoretical chapters advocating 'New Keynesian' demand management and continues with an investigation of feedback control rules along New Keynesian lines for fiscal, monetary, and exchange rate policy using a quarterly dynamic model of the UK economy, based on the UK Treasury

model. The basic investigation of these rules is described in 'Decoupled Control of a Macroeconomic Model using Frequency Domain Methods' by J. Maciejowski and D. Vines, forthcoming (January 1984) in the Journal of Economic Dynamics and Control.

In the second part of the book, these rules are used to replay history over the 1970s and early 1980s in order to investigate what the performance of the UK economy might have been if these policies had been implemented. A short version of this work was reported to the AUTE in Oxford in April 1983 and is forthcoming (1984) in the Economic Journal, Conference Papers Supplement.

The book includes a large section on statistical and administrative problems facing 'New Keynesian' Demand Management. There is also an exposition of the quarterly dynamic model of the UK economy which we have used. And finally there is an account of the method by which the controls rules have been decided. In order to make the book self contained this last section includes a concise introduction for economists to modern 'engineering' methods of multivariate feedback control. One aspect of the work on control rules was reported to a control engineering conference in Hull, UK, in July 1982.

Two research students have been working with the Project for this past year. N. Christodoulakis, a PhD student in control engineering, has been applying our methods to the London Business School and National Institute Models and has produced a paper with D. Vines on the 'Dynamic Properties of the London Business School Model'. P. Westaway wrote an M Phil thesis on the application of alternative control methods to our problems, and has an SSRC Research Linked Studentship in Economics to work with the Project. He and Jan Maciejowski have written a paper entitled 'A Comparison of Frequency Domain and Optimal Control Methods for the design of a Macroeconomic Feedback Regulation Policy'. Both these papers were presented at the fourth IFAC/IFOR/SEDC conference on Modelling and Control of National Economics, Washington, DC, June 1983.

Programme of Further Work

There are a number of important possible developments of the investigation of New Keynesian principles for Demand Management described in Stagflation Volume 2. We are continuing to work on these:

(i) We are investigating the effect of taking the total earned incomes rather than the total money GDP as the income target to be controlled. We are also looking at whether the control problem is eased by taking the rate of growth of the income target rather than what its level should be on some predetermined growth path as the variable to be controlled (i.e. accepting and not trying to rectify any past slippage of the income variable from a predetermined target level). So far in our work we have assigned each financial variable to a single target (tax rate to the control of money GDP and exchange rate to the control of the balance of payments); but we are investigating how far the outcome could be improved by cross linking each financial control to all the financial variables.

Significant progress has been made on all these investigations.

(ii) Our control rules were formulated on the basis of a single given econometric model. We are examining how robust these rules are by applying our methods to the London Business School and National Institute models. This investigation is far advanced but it is not yet clear what answers it will yield.

(iii) The model of the United Kingdom economy used in our study could itself be developed to serve our purposes more completely. It needs to be expanded to integrate the effects of interest rate changes fully into a model of the financial system, in particular considering their effects upon the capital account of the balance of payments and upon private sector investment and (perhaps) savings. To this end James Meade has written a note on 'Modelling the Capital Market'.

Publications and working papers

J.E. Meade, A New Keynesian Approach to Full Employment, Lloyds Bank Review, October 1983

D. Vines and J.M. Maciejowski, The Design and Performance of New Keynesian Economic Policies, forthcoming in A.S. Courakis (ed.) Monetarism Traditions, Debates and Policies, Macmillan 1983

J.M. Maciejowski and D. Vines (1982) Decoupled Control of a Macroeconomic Model using Frequency Domain Methods, forthcoming in the Journal of Economic Dynamics and Control, Jan, 1984

D. Vines and J.M. Maciejowski, 'The UK Economy in 1972-1986 under a New Keynesian Stabilization Policy', paper presented to the AUTE, Oxford, April 1983, and forthcoming in Economic Journal Conference Papers Supplement, 1984

J.E. Meade, 'Future Work on New Keynesianism, A Note'

N. Christodoulakis and D. Vines, 'The Dynamic Properties of the London Business School Model', paper presented at the fourth IFAC/IFOR/SEDC Conference on Modelling and Control of National Economics, Washington, D.C., June 1983, to appear in conference Proceedings published by Pergamon Press

P. Westaway and J.M. Maciejowski, 'A Comparison of Frequency Domain and Optimal Control Methods for the Design of a Macroeconomic Feedback Regulation Policy'. Paper presented at the fourth IFAC/IFOR/SEDC Conference on Modelling and Control of National Economics, Washington, D.C., June 1983, to appear in Conference Proceedings published by Pergamon Press, and submitted to Automatica

J.E. Meade, 'Modelling the Capital Market', mimeo, September 1983

Seminars, Conferences, etc.

Lectures given by Professor Meade at Copenhagen (May 1983)

David Vines at Exeter (March 1983), Oxford (April 1983) and Rome (September 1983)

Jan Maciejowski, Nicos Christodoulakis and Peter Westaway at Washington (June 1983)

DESTOCKING DURING THE RECESSION

Project member: C. Pratten

Sponsor: Department of Industry

This study deals with the importance of changes in stocks for the 1979/82 recession. A report on the study was submitted to the Department of Industry, describing changes in stocks and the ratio of stocks to output. The effects of tax relief for stock building are also recorded. The heart of the report is a survey of the reasons for destocking given by a sample of large companies.

SUPERVISION OF OPERATING BUSINESSES BY HOLDING COMPANIES

Project member: C. Pratten

Sponsor: SSRC

A study of the methods used by holding companies to monitor and control their operating businesses was started.

ADJUSTMENT PROBLEMS AND POLICIES IN AN INTEGRATED WORLD ECONOMY

Project member: M. Panić

Sponsor: A Sainsbury Family Trust

The project has been designed to analyse adjustment problems and policies from two different, though highly inter-related standpoints: international and domestic. These have developed now into two separate studies both which will be published by the Macmillan Press Ltd.

The last twelve months have been spent writing the first book, which will be completed next year, and collecting material for the second book. The work carried out so far follows exactly the outline and programme described in the Twenty Second Annual Report.

The first book consists, in its present form, of five parts: (i) Introduction: the nature of present-day international integration and its policy implications, according to lessons from the more successful national economies; (ii) the causes and characteristics of external disequilibria, especially fundamental disequilibria; (iii) effects of the fundamental disequilibria on national commercial policies; (iv) the stresses imposed on the international system by the energy crisis; and (v) policy alternatives. As the first and the last parts are closely linked, I am working at the moment on an extensive re-drafting of the two.

At the same time, I have been collecting material for the second book which deals with domestic policy options open to an internationally integrated economy. This has involved visits abroad, in order to learn something about the actual application of macro-economic and other policies: Austria (a successful application of long-term incomes policies); Japan (a successful application of industrial policies); and the Netherlands (where a serious breakdown of domestic consensus has made it virtually impossible to continue with either incomes or industrial

policies). In each country I had long discussions with those actually involved, over the years, in the formulation and implementation of economic policies: senior government officials, central and other bankers, industrialists, trade union officials and senior academics. Additional visits are planned over the next few months to: France (including the OECD Secretariat), Belgium (the EEC Commission) and possibly Sweden.

Other Activities

Papers have been presented at seminars for academic economists and government officials on: limitations of macro-economic policies in an integrated world economy; the UK experience with industrial policy; international direct investment in conditions of structural disequilibrium; effects of the energy crisis on the world economy; and the international debt problem. M. Panić has also, at the invitation of the OECD, joined a group of international experts which will act in an advisory capacity while the Secretariat is preparing a special report at the request of member governments.

Papers (including the working papers to be revised for publication) and articles written during the last 12 months:

M. Panić and M.S. Kumar, 'International Interdependence and the Debt Problem' presented at the 7th World Congress of the International Economic Association, held in Madrid. To be published in the Congress proceedings

M. Panić, 'Can present Policies Revive our Industries?', The Guardian, 3 November, 1982

M. Panić, 'Let's talk to OPEC', The Times, 8 March 1983

M. Panić, 'Industrial Policy: Some lessons from the UK and Japanese Experience'

M. Panić, 'The Multinational Corporation and National Economic Policies'

M. Panić, 'International location and Mobility of Multinationals'

M. Panić, 'The Problem of Balance of Payments Adjustments'

M. Panić, 'Control of the Money Supply in an Open Economy'

RISK, INFORMATION AND QUANTITY SIGNALS IN ECONOMICS

Project members of the DAE research staff: Mr B. Lockwood

Mr J. Thomas

Teaching Officers who participate
in the Project:

Dr M.M. Bray

Professor F.H. Hahn

Dr S.M. Kanbur

Dr D.M.G. Newbery

Sponsor: SSRC

The aim of this project is to investigate both at a fairly general and abstract level and also 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 from those of the Walrasian one (on which, for instance, much government and monetarist policy is based). To get things right we have also aimed at an understanding of what really is required to make the traditional theory work ('no surplus', 'adding up' etc) in particular when the number of firms is taken as endogenous as is

product variety. Particular attention is being paid to the labour market, where the Walrasian interpretation is least satisfactory.

Some of the research

(i) Hahn: Publications

This year has been largely devoted to an attempt to (a) get Implicit Contract theory right at the partial level (the literature is poor) and (b) to integrate contracts into a theory of the economy. Two papers have resulted. In one it is shown that a contract equilibrium of the economy has features of a Nash equilibrium, that there may be many such equilibria, that some of them can be Pareto-ranked by employment and that there is a well defined notion of equilibrium involuntary unemployment. The other shows that when incentives and asymmetric information concerning worker's ability are modelled the 'Indifference Principle' of usual contract theory no longer holds. This is satisfactory since in the first paper the absence of the Indifference Principle turns on a possibly not very robust assumption concerning workers' utility function.

In the coming year Solow and I will co-operate on a book on Employment Theory.

- (1) Samuelson and General Equilibrium Theory, in The Economics of Samuelson, Dec. 1982
- (2) Leijonhufvud on Keynes, in Rational Expectations, ed. Roman, 1983
- (3) The Neo-Ricardians, Cambridge Journal of Economics, 1982
- (4) Some Keynesian Reflections on Monetarism, in Keynes and Economics, Macmillan, 1983
- (5) Implicit Contracts and Involuntary Unemployment, I.M.S.S.S., 1983 (forthcoming)

(6) Laffont and Fixed Prices, to appear in Proceedings of Helsinki Conference, ed. K.J. Arrow, in 1984.

(ii) Lockwood

He has worked on Bargaining Theory, Contracts, Perfect Equilibria and Non-linear Pricing. The work on perfect equilibria is particularly valuable since it studies situations with discounting. He also has studied contracts in general equilibrium but from the point of view of efficiency theory.

(iii) Thomas

He has spent most of his time on two areas of research. Firstly, he has been looking at inventory theory and some of its implications for macroeconomic behaviour: he is writing a paper investigating inventories in a Walrasian setting. Secondly, indexation of labour contracts. This has led to a paper which demonstrates that there may not be full indexation in a situation of asymmetric information.

(iv) Bray

She has continued her work on the question whether there are learning processes which lead to convergence to a Rational Expectations Equilibrium.

(iv) Kanbur

Over the last year he has continued his work on the applied theory of decision-making under uncertainty. Part of his work on Labour Supply under Uncertainty is coming out as a paper in Economica, and he is now working on 'Windfall Profits Taxation'. He has continued his work with J. Stiglitz on Mobility and Income Distribution, and he has also written a specially-commissioned review article for

Oxford Economic Papers on the book The Theory of Commodity Price Stabilisation: A Study in the Economics of Risk, by Newbery and Stiglitz.

(vi) Newbery: Journal and Books

Optimal Commodity Stockpiling Rules, with J.E. Stiglitz, Oxford Economic Papers, Nov. 1982

'The Manipulation of Futures Markets by a Dominant Producer', Nov. 1982, DRD Discussion Paper 39, World Bank, Washington, D.C. Forthcoming in a Conference volume by R. Anderson Industrial Organisation of Futures Markets

'The State of Leasing Theory: Conflicts Among Different Models of Decision Making Under Uncertainty', World Bank, March 1983, forthcoming in a conference volume.

Presumptive Patenting and the Persistence of Monopoly: A Reply, with R.G. Gilbert, Sept. 1983, forthcoming American Economic Review, 1984

Uncertain Innovation and the Persistence of Monopoly: A Comment, Aug 1983, forthcoming American Economic Review, 1984

Pareto Inferior Trade, with J.E. Stiglitz, Sept. 1983, forthcoming Review of Economic Studies

Commodity Price Stabilising When in Imperfect or Cartelized Markets, June 1983, forthcoming in Econometrica, 1984

Working Papers

Credible Oil Contracts, June 1983, World Bank

Marginal Road User Costs: Theoretical Derivation with an Application to Tunisia, DRD World Bank, Jan 1983

The Relationship between Efficient and Equitable Road User Charges, DRD World Bank, Feb 1983

Setting the Price of Oil in a Distorted Economy, DRD World Bank, Sept. 1983

Wage Rigidity, Implicit Contracts and Economic Efficiency: Are Market Wages Too Flexible? with J.E. Stiglitz, June 1983, DRD Discussion Papers, World Bank

Our weekly meetings (Quakers) continue to be a great success. Their format has been imitated at Harvard, MIT and at San Diego.

Principal Talks Given at Quakers' Seminars 1982-83

1. Panikos Demetriades
The Costs of Inflation
2. Marcel Peeters
Unsatisfactory Equilibrium
3. Ben Lockwood
Labour Market Equilibrium with Imperfect Information on Both Sides
4. Jonathan Thomas
Supply Responses in a Model with Inventories of Finished Goods
5. Ravi Kanbur
Effects of a Profits Tax on Oil Revenues
6. Ravi Kanbur
On Discounting Cash Flows When the Aggregate Price Level is Uncertain
7. Hamud Saburion
Rational Conjectures
8. Adam Brandenburger
Convergence to Rational Expectations Equilibrium in a Learning Model with a Monopolist
9. Louis Makowski
Perfect and Imperfect Competition in Economic Thought
10. Frank Hahn
A Model of Implicit Contracts
11. Ravi Kanbur
Income Distributions
12. Panikos Demetriades
Effects of Inflation In a Model of Investment
13. Traels Sorenson
On Labour Market Models
14. Marcel Peeters
Keynesian Features in an Overlapping-Generations Model
15. Louis Makowski
'Rational Conjectures' Aren't Rational
16. Ben Lockwood
Perfect Equilibria in Repeated Games with Discounting
17. Hamud Saburion
Rational Conjections, Dynamics and Game Theory
18. Kenneth Arrow
Behaviour Under Uncertainty and Its Implications for Policy
19. Jonathan Thomas
Indexing Labour Contracts
20. Ben Lockwood
Pricing Behaviour in a Search Model

The work of the project is written up in the series Economic Theory Discussion Papers. During the year the following titles were added:

62. Inflation, Unemployment and Rational Expectations: a New Keynesian Analysis
Marcel Peeters. April 1982
63. On Dividing Justly
Menahem Yaari and Maya Bar-Hillel. February 1983
64. A Remark on Competitive Equilibrium with Equal Incomes
Menahem Yaari. March 1983
65. Perfect Equilibria in Repeated Games with Discounting
Ben Lockwood, June 1983
66. 'Rational Conjectures' aren't Rational, 'Reasonable Conjectures' aren't Reasonable
Louis Makowski, May 1983
67. Easy Proofs of Unanimity and Optimality for Competitive Stock Markets
Louis Makowski. June 1983

Discussion Paper to be Published

Wage Rigidity, Implicit Contracts and Economic Efficiency: Are Market Wages Too Flexible? D.M.G. Newbery

Manipulation of Futures Markets by a Dominant Producer, D.M.G. Newbery

TESTING FOR UNIT ROOTS OF STOCHASTIC DIFFERENCE EQUATIONS

Project member: N.E. Savin

Research Assistant: A. Brandenburger

Research Associate: J. Nankervis, City of London Polytechnic

Sponsor: SSRC

The hypothesis that economic agents have rational expectations has played a key role in the development of recent macroeconomic models. Such models have produced policy implications which are different from those of the traditional Keynesian models. Hence it is of interest to test the rational expectations hypothesis. This hypothesis does not assume the model is stable. In practice, testing this hypothesis often involves testing whether certain economic variables follow a random walk, i.e. if certain stochastic difference equations have unit roots. By contrast the policy implications of the traditional Keynesian model are derived on the assumption that the model is stable. Testing the stability assumption also involves testing hypotheses about the root of stochastic difference equations. These tests about roots are relevant for assessing the current policy debates.

The research involves calculating by exact or Monte Carlo methods the power functions of tests about the roots and coefficients of a stochastic difference equation with independently and identically distributed errors when stationarity is not assumed. The main focus of the research is on tests about the value of the autoregressive parameter (the coefficient of the lagged endogenous variable) in a first order equation with and without exogenous variables. In the context of this equation the random walk hypothesis is that this parameter is unity.

We also propose to investigate higher difference equations and the robustness of our results to nonnormal errors.

The first phase of the project was to investigate the exact sampling distribution of the ordinary least squares estimator of the autoregressive parameter and the exact power of tests of the random walk and other hypotheses when the tests are based on the least squares estimator. The first step was to study the case of no constant term in the autoregressive model. The results are reported in 'Testing for Unit Roots: 1'. The Annals paper treats certain technical problems involved in the calculations. In 'Conflict Among Testing Procedures' the investigation was restricted to stable equations, but extended to three well known testing procedures. The second step was to introduce a constant term (drift parameter) into the model. The results for this case are reported in 'Testing for Unit Roots: 2' (see Twenty Second Annual Report).

The exact sampling distribution of the least squares estimator was calculated on the assumption of normal errors. In this case the estimator is a ratio of quadratic forms in normal variables. Its exact distribution can be obtained by numerically integrating the characteristic function. For a fixed start up regime, we developed a computer algorithm which exploits the special features of the matrix of the quadratic form. Our algorithm is an efficient method for calculating the exact distributions and the exact powers. The algorithm is available on request.

The conclusions of this phase are now briefly reviewed. In the fixed start up regime the exact distribution of the least squares estimator is strongly influenced by the ratio of the constant term over the standard deviation of the error. When this ratio is small the distribution is highly nonnormal even when the autoregressive parameter is as low as 0.8. The influence of this ratio complicates the construction of tests of hypotheses about the value of the autoregressive parameter, including tests of the random walk hypothesis. What we show is that for sample sizes typical in economic applications, for example, samples of 100, the powers of

tests of the random walk hypothesis are low at many stable alternatives of interest. Because of the presence of these low powers an acceptance of the random walk hypothesis should be treated with caution. Likewise tests of the hypothesis that the autoregressive parameter is 0.9 have low power at alternatives below the hypothesised value. Hence the same caveat applies to an acceptance of this hypothesis.

The case of a stationary process is modelled by using a random start up. In the random start up regime the distribution of the estimator does not depend on the value of the ratio mentioned above. Nevertheless, if the true value of the autoregressive parameter is near but below unity, the distribution of the estimator is highly nonnormal even for samples as large as 100. The standard normal approximation is often employed to test hypotheses about the value of the autoregressive parameter of a stationary process. We show that the use of the standard normal as an approximate distribution cannot be recommended either in a fixed or random start up regime.

The second phase was to examine the exact sampling distribution of the familiar τ statistic for testing the autoregressive parameter when the parameter value is in the neighbourhood of unity. The exact power of tests of the random walk and other hypotheses was studied. The results are reported in 'Testing the Autoregressive Parameter with the τ statistic'. The only feasible methodology was to use Monte Carlo simulations. In order to estimate the quantities of the sampling distributions with reasonable accuracy a large number of replications were required, as they were for satisfactory estimates of the powers. For the fixed start up regime the conclusions are essentially those established for the least squares estimator. The most important message of the project is simply this: in a fixed start up regime large samples are needed to draw reliable inferences about the autoregressive parameter when the true value is near but below unity.

In the random start up regime the distribution of the τ statistic had a shape which was close to that of Student's t . The problem was the location of the distribution; it was centered substantially to the left of zero. Once the distribution was corrected for mean and variance Student's t distribution proved to be an excellent approximation. This was true when the autoregressive parameter was near unity and the sample was small at 25. This suggests that an Edgeworth approximation can give good results if sufficient terms in the Edgeworth expansion are employed to correct the mean. This appraisal was the outcome of some very fruitful discussions at the SSRC Econometric Study Group at Warwick in July, 1983. We are now revising our paper to bring out these points. Hence, accurate approximations can be developed for the distribution of the τ statistic, even though this does not appear to be true for the least squares estimator.

The paper 'Conflict Among the Criteria' studies the accuracy of certain asymptotic approximations in the case of the classical linear regression model. This paper is not directly related to the project, but owing to substantial interest in this topic we made a detour. Serendipity led to this detour and to what we believe was a useful contribution.

As noted earlier the exact sampling distributions have been calculated on the assumption of normal errors. Nankervis and I are now investigating the robustness of the distributions to nonnormal errors and likewise with regard to the powers. Some progress was made on this topic before the end of the grant. We plan to have a working paper ready by next summer.

Publications and working papers

Evans, G.B.A. and N.E. Savin: Conflict Among Testing Procedures in a Linear Regression Model with Lagged Dependent Variables, in Advances in Quantitative Economics, ed. by W. Hildenbrand: Cambridge University Press, 1982

Evans, G.B.A. and N.E. Savin: Conflict Among the Criteria Revisited: The W, LR and LM Tests, Econometrica, 50 (1982), 737-748

Evans, G.B.A. and N.E. Savin: Testing for Unit Roots: 2, Technical Report No. 362, February 1982, The Economic Series, IMSSS, Fourth Floor, ENCINA Hall, Stanford University. Revised April 1983, forthcoming Econometrica

Nankervis, J.C. and N.E. Savin: Testing the Autoregressive Parameter with the τ Statistic, May 1983, submitted to Journal of Econometrics

Conferences

SSRC Econometric Study Group Conference, Warwick, July 1983: "Testing the Autoregressive Parameter with the τ Statistic".

European Meeting of Econometric Society, Pisa, 1983. Paper: 'Testing the Autoregressive Parameter with the τ Statistic'.

Seminars:

Seminars on 'Testing for Unit Roots: 2' have been given at Stanford, Berkeley, Chicago Business School, Northwestern, UCLA, UC San Diego, University of British Columbia and University of Washington.

Seminars on 'Testing the Autoregressive Parameter with the τ Statistic' have been given at Essex, LSE, Manchester, Oxford, University of British Columbia and University of Washington.

HOUSING MARKETS AND LABOUR MOBILITY

Project members: Dr G.A. Hughes and Dr McCormick

Sponsor: Department of the Environment

This project was established 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. The work of the project has been both theoretical and empirical, since

it is necessary to construct better analytical models of the relationship between housing and migration which can be estimated in order to test various hypotheses. The project was wound up at the end of March 1983, though research on the subject and on related issues continues. The final six months of the research was devoted to completing and extending research which had been initiated in previous years. Four new or revised papers were completed in this period:

A. In Hughes and McCormick (1982) our previous work on job search is extended. We show that the probability that a worker will change job conditional on having embarked on job search is significantly lower for those with occupational pensions than for those without occupational pensions. Thus, the adverse effects of occupational pensions on job mobility operate not only via the willingness of workers to look for another job, as we had previously shown, but also by reducing the chances that job search will be successful.

B. In Hughes and McCormick (1983a) we examine data on housing search in the 1974 GHS. This complements our earlier work on past house movement and migration. We show that there is no significant difference between owner-occupiers and council tenants in the willingness to migrate, so that the much lower rate of actual migration is the consequence of a very low probability of success in migration search for council tenants. This is specific for inter-regional migration, since the probabilities of successful search for local house movement for owner-occupiers and council tenants are very similar. Further, we investigate the impact of unemployment on housing search and show that households with unemployed heads tend to be more willing to move house than those with employed heads. This effect is limited to local house movement for unemployed manual workers, whereas unemployed non-manual are more willing to migrate than their employed equivalents.

C. In Hughes and McCormick (1983b) we examine the link between job mobility and house movement using bivariate probit and logit models. The crucial question is to attempt to identify whether there is some kind of hierarchy in decision-making - e.g. do households decide first whether to look for another house (or actually to move) and then, conditional on this, whether to look for another job (or to change job). Econometrically it is difficult and expensive to estimate models which can discriminate between alternative hypotheses of this kind and the results are somewhat mixed. However, the data strongly reject the hypothesis of hierarchical decision-making with housing decisions preceeding job decisions for both search and actual choices. The analysis tends to support the opposite hierarchical pattern in which job decisions preceed housing decisions, especially with respect to search behaviour.

D. Finally, in McCormick (1983) the issue of whether there is some kind of systematic link between household tenure and unemployment of the head of household is re-examined. The paper shows that council tenants are more likely to be unemployed than owner-occupiers, but more detailed analysis shows that the difference is really between owner-occupiers with mortgages and other tenures (including owner-occupiers without mortgages). The evidence is compatible with the hypothesis that the social security system increases the cost of unemployment for owner-occupiers with mortgages relative to that for other tenures and hence makes them more likely to accept alternative, if less well-paid, job opportunities.

Bibliography

- G.A. Hughes and B. McCormick (1982) - 'Variable Intensity of On-the-Job Search: A Test of the Theory'
- G.A. Hughes and B. McCormick (1983a) - 'Potential and Actual Migration in the U.K.'
- G.A. Hughes and B. McCormick (1983b) - 'House Movement and Labour Mobility'
- B. McCormick (1983) - 'Housing and Unemployment in the U.K.' (forthcoming in Oxford Economic Papers)

Conferences/Seminars

Papers based on the work of the project were given to the SSRC Public Economics Study Group, the AUTE meeting and at the University of Newcastle upon Tyne.

TAXING AND PRICING TRANSPORT FUELS IN DEVELOPING COUNTRIES

This research, which forms part of a larger project financed by the World Bank, is directed by Dr G.A. Hughes and Dr D. Newbery. The objective of the work is to formulate guidelines for imposing taxes on transport fuels - primarily petroleum products - in developing countries taking account of the impact of such taxes on the distribution of income across households and on non-transport intermediate demand for the fuels. The research involves theoretical work on the optimal tax structure for fuels in a

distorted economy and extensive empirical work on the impact of fuel taxes and of alternative indirect taxes in a number of developing countries. The main component of the empirical work is being done in Tunisia but studies of Indonesia, Jordan and Thailand are also in progress.

The research in Cambridge started in October 1982 and the principal task completed during 1982/83 was the development of a methodology for the assessment of the effects of fuel taxes on prices and the distribution of income using detailed input-output tables and data from a household budget survey. Computer programs to implement this methodology have been written and these were used to analyse the impact of fuel taxes on Thailand and Tunisia (Hughes 1983a, 1983b). For both countries the results suggest that the effect of fuel taxes on the general level of prices is likely to be rather small and less than the effect of plausible alternative taxes which raise an equivalent amount of revenue. A tax on gasoline tends to lessen vertical inequality in the distribution of real income, while taxes on all other petroleum products have little overall effect as a whole, though taxing kerosene may worsen inequality among rural households. Unfortunately, fuel taxes tend to be relatively inequitable in a horizontal sense - i.e. by affecting otherwise similar households in different ways - so that they may be politically unpopular.

Research on the impact of fuel taxes is continuing with the intention of examining the extent of substitution between individual fuels and between fuels and other inputs in both production and consumption.

Bibliography

- G.A. Hughes (1983a) - 'The Impact of Fuel Taxes in Thailand'
G.A. Hughes (1983b) - 'The Impact of Fuel Taxes in Tunisia'

Conferences/Seminars

Papers based on the work of the project were given at the World Bank, University College London, University of Southampton and the Energy Research Group, Cambridge.

INEQUALITY IN CHINA

Project member: Peter Nolan

Associate member: Dr. G. White (Institute of Development Studies,
Sussex University)

Sponsor: SSRC

This project began in Oxford (Institute of Commonwealth Studies) in mid 1979, moved to Cambridge in Oct. 1979 with Nolan (funding was given to Nolan only. White had alternative funding).

The object of the research is a multi-disciplinary analysis of 'Growth and Inequality in China from 1949 to present day'.

During the academic year 1982/83, Nolan has continued to research on problems connected with agricultural change in the People's Republic of China. This research mainly involves the use of Chinese materials purchased from the People's Republic. In addition this summer Nolan made a six-week field trip to Sichuan province in central China. The purpose was to examine the nature and impact of the massive institutional reforms ("de-collectivisation") in China's villages in the past two years.

Publications

P. Nolan Growth Processes and Distributional Change in a South Chinese Province: the case of Guangdong, London: Contemporary China Institute, 1983

P. Nolan 'De-collectivisation of Agriculture in China, 1979-82: A Long-term Perspective, Economic and Political Weekly, 6.8.83 and 13.8.83 (a shorter version will appear in the Cambridge Journal of Economics vol. 7, no. 4)

P. Nolan Collectivisation in China: Some Comparisons with the USSR, originally published in 1976, reprinted in S. Jones, P.C. Joshi, and M. Murmis (eds) Rural Poverty and Agrarian Reform, Dakar, Allied Publishers, 1982

P. Nolan and G. White Economic Distribution and Rural Development in China: the Legacy of the Maoist Era, originally published in 1979, reprinted in F. Stewart (ed) Work, Income and Inequality, London, Macmillan, 1983

B SOCIOLOGY

REPRODUCTION OF SOCIAL INEQUALITY

Project Members: Dr R.M. Blackburn
Dr K. Prandy
Mr A. Stewart

Associate: Dr L. Miller-Bernal, Wells College,
New York

Sponsor: SSRC

This project, which commenced in May 1978, was designed to continue and extend the work of the group, and earlier projects (described in previous Annual Reports) were incorporated.

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.

The research involves a number of themes relating to social stratification, including white-collar unionism, the labour market, careers, and perceptions, understandings and evaluations of social inequality. Current work is focussed on the last of these themes.

Dr Blackburn gave a paper on 'The Reproduction of Social Inequality' at Loughborough University.

Publications:

K. Prandy, A. Stewart and R.M. Blackburn, White-Collar Work, (Cambridge Studies in Sociology), Macmillan, 1982

K. Prandy, A. Stewart and R.M. Blackburn, White-Collar Unionism, (Cambridge Studies in Sociology), Macmillan, 1983

R.M. Blackburn and M. Mann, L'illusione della Scelta, Rosenberg and Sellier, 1983 (Italian edition of The Working Class in the Labour Market)

J.M. Holmwood and S. Stewart, The Role of Contradiction in Modern Theories of Social Stratification, Sociology, May 1983

An extract from A. Stewart, K. Prandy and R.M. Blackburn, Social Stratification and Occupations was selected for inclusion in D.T.H. Weir (ed.), Sociology of Modern Britain, Fontana

UNDERSTANDING AND EVALUATION OF INCOME DIFFERENTIALS IN THE CONTEXT OF SOCIAL STRATIFICATION

Project members: Dr R.M. Blackburn
Dr K. Prandy
A. Stewart

Associates: Mr J. Holmwood, University of Edinburgh
Mr D. Donald, Glasgow College of Technology
Mr A. Hutton, Glasgow College of Technology
Dr L. Miller-Bernal, Wells College, Aurora, N.Y.

Visitors: Dr J. Higley, Australian National University
Professor R.N. Adams, University of Texas Austin

Sponsor: SSRC

This project, which commenced in November 1982, examines the bases of understanding and evaluation of income differences. A central concern is with judgements of jobs and how these determine expectations of earnings. Broadly, our aim is to investigate the social element in 'market forces' and set them in a wider social context. Gender is one aspect considered in detail, but others are more closely related to general stratification processes. As well as earnings from employment, we deal with investment income and payment from the State.

The data are from interviews with men and women. They cover samples from a broad range of occupational levels, in manufacturing, services and the public sector, and two very different localities (Cambridge and Glasgow). Differences in responses are related to these factors, extensive information on background characteristics, and data on social interaction patterns.

Papers

A. Stewart presented a paper at the London School of Economics and Political Science on 'Implicit Theories of Social Stratification'.

THE IMPORTANCE OF SOCIAL STRATIFICATION

Project members: Dr K. Prandy
Dr R.M. Blackburn

Sponsor: SSRC

This project began on 1 August 1983. Its main aim is to undertake a reassessment of the significance of social stratification, and to

test whether there is greater coherence and consistency in this area than has typically been found previously. We propose to develop a more refined measure of social stratification in relation to occupations, to produce a significantly more adequate scale than any now available, and to apply it to a range of theoretically important issues using secondary analysis.

The project has begun well, with a complete index of occupations having been set up on the computer. Consideration is already being given to the production of a manual based on this.

Dr Prandy and Mr Stewart gave a paper 'Reproduction of Occupational Inequality' at an SSRC symposium on Work Histories of the University of Surrey in September 1983.

OTHER ACTIVITIES OF THE SOCIOLOGY GROUP

The group has maintained its association with colleagues in other institutions. In particular Mr J. Holmwood of the University of Edinburgh, Mr D. Donald and Mr A. Hutton of the Policy Analysis Research Unit at Glasgow College of Technology and Dr L. Miller-Bernal of Wells College have collaborated in our work. Dr R.N. Adams and Dr J. Higley were visitors to the Department.

As in previous years the group was host to the SSRC Social Stratification Seminar.

Dr R.M. Blackburn acted as external examiner for the London School of Economics, and continued to act as the local sociology representative for the SSRC Survey Archive.

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

The group continued to organise its own seminar series. Speakers from outside the Department were C. Fraser, D. Lovatt and C. Marsh.

II PUBLICATIONS

ECONOMIC POLICY REVIEW

Every year since 1975 the Cambridge Economic Policy Group has published an analysis of Britain's economic situation and medium term prospects. Since 1979 this has been published by the Gower Publishing Co.

During the academic year 1982-83 the CEPG produced one review, Employment problems in the cities and regions of the UK: Prospects for the 1980s, by Graham Gudgin, Barry Moore and John Rhodes (December 1982, Vol. 8 no. 2).

This issue examined the prospects for the different regions within the UK, using an integrated model to show how the processes of structural change and migration interact with national and international developments to determine job opportunities and the level of unemployment in each part of the country.

DAE OCCASIONAL PAPERS

This series, published for the Department by the Cambridge University Press, is designed for the rapid publication of research results.

One new title appeared in the Series this year, No. 54, Labour Market Structure, Industrial Organisation and Low Pay by Christine Craig, Jill Rubery, Roger Tarling and Frank Wilkinson. A second title No. 55, Political Aspects of the Economy, by V.K. Borooah and F. van der Ploeg, was prepared for the press.

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 now published by Macmillan.

During the year the following were published

K. Prandy, A. Stewart and R.M. Blackburn, White-Collar Work (December 1982)

K. Prandy, A. Stewart and R.M. Blackburn, White-Collar Unionism (August 1983)

The following was accepted for publication:

P. Whalley, Social Production of Technical Work.

An Italian edition of R.M. Blackburn and M. Mann, The Working Class in the Labour Market was published by Rosenberg and Sellier under the title L'illusione della scelta.

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 interested libraries and academic institutions. The following titles were added in the series during the year:

- No. 54 Depletion policy and the de-industrialisation of the UK economy
Terry Barker
- No. 55 Mergers, concentration and competition in advanced capitalist economies: an international perspective
Alan Hughes and Ajit Singh
- No. 56 The Cambridge Multisectoral Dynamic Model: an instrument for National Economic Policy Analysis
Terry Barker, Vani Borooah, Rick van der Ploeg and Alan Winters
- No. 57 Identification of activity effects trends and cycles in import demand
Terry Barker
- No. 58 Cambridge and Chicago on the balance of payments
John McCallum and David Vines

- No. 59 Third world industrialisation and the structure of the world economy
Ajit Singh
- No. 60 Economic development and revolutionary upheavals in Iran
Hashem Pesaran
- No. 61 Keynesian model building and the rational expectations critique
Tony Lawson
- No. 62 How to run a company and run down an economy: the effects of closing down steel-making in Corby
Bob Rowthorn and Terry Ward
- No. 63 Identification of rational expectations models
Hashem Pesaran
- No. 64 The system of dependent capitalism in pre- and post-war revolutionary Iran
M.H. Pesaran
- No. 65 Comparison of local power of alternative tests of non-nested regression models
M.H. Pesaran
- No. 66 Pitfalls of testing non-nested hypotheses by the Lagrange Multiplier Method
M.H. Pesaran
- No. 67 Reliability and the adjustment of sequences of large economic accounting matrices
F. van der Ploeg
- No. 68 Women in the recession
J. Rubery and R.J. Tarling
- No. 69 The industrial implications of an optimal reflationary mix for the British economy
F. van der Ploeg
- No. 70 Monetarism in an open economy
M. Panic
The concept of international economic order: comments on Dr Tumlr's paper
M. Panic
- No. 71 On the comprehensive method of testing non-nested regression models
M.H. Pesaran
- No. 72 A critique of the proposed tests of the natural rate-rational expectations hypothesis
M.H. Pesaran

- No. 73 The changing criteria of economic success: performance and popularity in British Politics
V. Borooah and F. van der Ploeg

III OTHER ACTIVITIES

DAE LIBRARY

During the period October 1982 to September 1983 the Department received 153 periodicals: 16 of these were in exchange for the Department's Reprint Series and 51 were gifts, the remainder being purchased. The library has acquired 118 books, 849 pamphlets and 216 government publications.

COMPUTING UNIT

Although the University Computing Service was transferred to an IBM 3081 machine in August 1982, this change has not yet implied a corresponding burden on the Department computing staff. This burden will come with the change to an MVS-based operating system in 1983-84.

The Department computing staff have meanwhile been developing programs for the graphics terminal and flat-bed plotter which are

attached to the IBM 3081 and which have replaced the old Hewlett-Packard local plotting facilities. This work was carried out by Roger Smith and Diana Day; Roger Smith and Bobbie Coe continued to provide advice and help for Department staff generally.

UNIVERSITY RELATIONSHIPS

Members of the Department's research staff served on University Committees during the year, including the Department's Committee of Management, the Faculty 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 lectures for undergraduate Tripos courses in various fields, including industrial growth, competition and structural changes; economic policy issues; world economic growth; the theory of international economics; applied macroeconomics; and industrial management. They gave courses for the M.Phil in Economics, and supervised students preparing for that degree. They also supervised and examined students for the degree of Ph.D. in this and other universities.

Most members also undertook undergraduate teaching for Colleges. Nine were Directors of Studies in Economics and two in Social and Political Sciences.

IV FINANCE

During the financial year (1 August 1982 to 31 July 1983) the Department's annual expenditure was £637,728 compared with £578,237 in 1981/82. 88.4% of the expenditure was on stipends, salaries and wages.

The University Grant rose from £217,318 in 1981/82 to £225,135 in 1982/83, an increase of £7,817. Expenditure went up by £59,491.

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	284,590
The World Bank	11,000
	<hr/>
	295,590

V STAFF

RESEARCH STAFF

DIRECTOR Professor 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

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

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M.S. Kumar, PhD (Cantab), Trinity College

B. Lockwood, BA (Sussex)

F. van der Ploeg, BSc (Sussex), King's College (resigned
30.9.83)

A.J. Snell, BSc (Econ) (Hull)

J.P. Thomas, BA (Cantab), DPhil (Oxon), St. John's College

M.R. Weale, MA (Cantab), Fellow of Clare College

PUBLICATIONS SECRETARY

Mrs A. Newton, MA (Cantab)

RESEARCH ASSOCIATES

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Professor F.H. Hahn, Faculty of Economics and Politics,
Fellow of Churchill College

Professor O. Hart, London School of Economics

Mr A. Hughes, Faculty of Economics and Politics, Fellow of
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Dr G. Hughes, Faculty of Economics and Politics, Fellow of
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Professor the Lord Kaldor, Fellow of King's College

Mr T. Lawson, Faculty of Economics and Politics

Professor J. Meade, Fellow of Christ's College

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Mr P. Petit, CEPREMAP, Paris

Dr T. Ryan, Trinity College, Dublin

Dr N.E. Savin, Faculty of Economics and Politics, Fellow of
Trinity College

Dr A. Singh, Faculty of Economics and Politics, Fellow of
Queens' College

VISITING SCHOLARS, OCTOBER 1982 - SEPTEMBER 1983

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Professor S. Biasco, University of Modena, Italy

Mrs V.K. Borooah, University of Southampton

Mrs E. Desai, Institute of Applied Manpower Studies, Dehli,
India

Professor A. Giannola, University of Naples, Italy

Dr J. Higley, Australian National University

Mr A. Hutton, Glasgow College of Technology

Mr G. Karl, Bremen University, Germany

Mr J.P. McAuley, State Bank of New South Wales, Australia

Mr A.T. Mackey, City of London Polytechnic

Dr B. Maley, University of New South Wales, Australia

Mr A. Meixide, University of Santiago, Spain

Dr L. Miller-Bernal, Wells College, Aurora, New York, USA

Professor L. Osberg, Dalhousie University, Halifax, Nova
Scotia

Professor B.P. Philpott, Victoria University of Wellington,
New Zealand

Mr G. Quiros, University of Valencia, Spain

Dr B. Suchecki, University of Lodz, Poland

Dr V. Tokman, PREALC, Chile

Dr A. Tomaszewicz, University of Lodz, Poland

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