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O C T O B E R 1984 t o S E P T E M B E R 1985

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COMMITTEE OF MAN University of Cambridge

DEPARTMENT OF APPLIED ECONOMICS



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M.R. WEALE

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A. MASON (Assistant Staff Observer)

TWENTYFIFTH REPORT

ACTIVITIES IN THE PERIOD

OCTOBER 1984 to SEPTEMBER 1985

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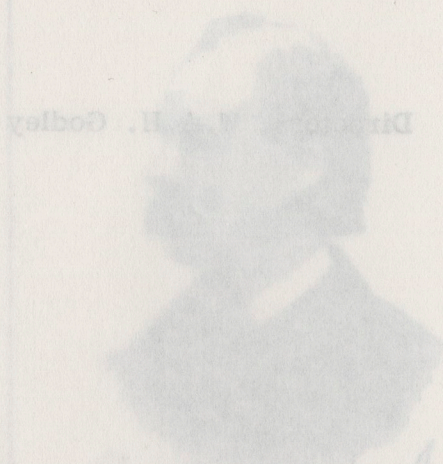
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TWENTYFIFTH REPORT

ACTIVITIES IN THE PERIOD

OCTOBER 1984 TO SEPTEMBER 1985

COMMITTEE OF MANAGEMENT, JANUARY 1985

Page

SWAMI AMRIT TERRY (T.S. BARKER)

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'Wage Flows in the Clothing Industry, 1950-81'

Social change and economic life: the
Northampton labour market

Economic policy in Northern Ireland

Urban/rural shift and the evaluation of urban
and regional policies in Britain

The economic role of cities in the context of
change in UK economic structure

To acquire, organise and write software for
an international trade database

Company finance and performance

Company failure and rescue policy

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

COMMITTEE OF MANAGEMENT, JANUARY 1985

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Dr Assistant staff	Research Officer 69
Dr M. Landesmann	Research Officer
Dr A.W.A. Peterson	Senior Research Officer (resigned July 1985 but continuing as a Principal Investigator)
Mr R.G. Merse	Research Officer
Mr A. Saad	Junior Research Officer
Professor Sir Richard Stone	Professor of Finance and Accounting University of Cambridge
Mr M.R. Weale	Research Officer (resigned January 1985 to join DAE Stagflation project)

TWENTYFIFTH REPORT OF THE
DEPARTMENT OF APPLIED ECONOMICS
(covering the year October 1984 to September 1985)

I RESEARCH ACTIVITIES

This section outlines the work done in 1984-85 on the research projects being conducted in the Department.

A ECONOMICS

GROWTH AND FLUCTUATIONS IN THE BRITISH ECONOMY:
PROJECTIONS FOR PLANNING

Project members

Swami Amrit Terry (Dr T.S. Barker)	Senior Research Officer
Dr V.K. Borooah	Senior Research Officer
Dr M. Kumar	Research Officer
Dr M. Landesmann	Research Officer
Dr A.W.A Peterson	Senior Research Officer (resigned July 1985 but continuing as a Principal Investigator)
Mr R.G. Pierse	Research Officer
Mr A. Snell	Junior Research Officer
Professor Sir Richard Stone	Professor of Finance and Accounting University of Cambridge
Mr M.R. Weale	Research Officer (resigned January 1985 to join DAE Stagflation project)

Associate members

Mr J.A. Beath	Department of Economics, University of Bristol
Mr A. Goudie	Department of Applied Economics, University of Cambridge
Ms Linda Hesselman	Cambridge Econometrics Ltd
Mr T. Lawson	Faculty of Economics and Politics, University of Cambridge
Dr G. Meeks	Faculty of Economics and Politics, University of Cambridge
Dr H. Pesaran	Faculty of Economics and Politics, University of Cambridge
Mr D. Sharpe	Wolfson College, Cambridge
Dr L.A. Winters	Department of Economics, University of Bristol

Visitors to the Project:

Mr Brendon V. Millane
Department of Minerals and Energy
Melbourne, Australia

Funding

The project is funded partly by the ESRC and partly by Cambridge Econometrics (1985) Ltd (a company set up to provide a commercial service using the project's model).

The objectives and organisation of the research

The aim of this project, which is under the direction of Swami Amrit Terry (Dr T.S. Barker), is to study quantitatively, in as great detail as practicable, the present structure and future prospects of the British economy and the possibilities of influencing these prospects by means of economic policy. To do this, the project has developed a multisectoral dynamic model of the economy (MDM).

The research activity of the project is organised around this model. 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:

Swami Amrit Terry (T.S. Barker)	co-ordination of research; exports, imports and their prices; complete model simulations
Vani Borooah	consumers' expenditures
Manmoham Kumar	industrial average earnings and price equations
Michael Landesmann	stockbuilding and production
Tony Lawson	expectational variables in the model
William Peterson	industrial investment and employment functions; energy submodel; complete model simulations
Richard Pierse	income, spending and portfolio allocation of the personal sector; econometric methods; solving the model over the past
Andrew Snell	the exchange rate
Martin Weale	the financial model; industrial pricing

Progress of the research

The main developments in the model during the year have been the inclusion of new stockbuilding equations included company liquidity effects, and revised investment and industrial price equations. The forecasting version of the model, as provided in September 1985 to the ESRC Macroeconomic Bureau, University of Warwick, now includes equations for both the rate of average earnings and the exchange rate.

Relationship with the ESRC Macroeconomic Modelling Bureau

The 1984 version of MDM6, together with the forecasts produced by Cambridge Econometrics (1984/4), was supplied to the ESRC Macroeconomic Modelling Bureau at the University of Warwick in December 1984 and the 1985 version, together with forecasts 1985/2

and 1985/3, was sent in September 1985. The model-solving package IDIOM and the regression package MREG which solve the model and handle the data are both in standard FORTRAN 77 so earlier problems of compatibility with the Warwick mainframe are virtually eliminated. Members of the project attended the ESRC Consortium meeting in Warwick in July and a brief outline of the CGP model was presented.

Other activities

The project has run a full programme of seminars and workshops during term-time in Cambridge and in addition members of the project have presented papers at seminars and conferences elsewhere.

Publications

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

Barker, T. (1985). The experience of monetarism in the United Kingdom 1979-81, in Wirtschaftspolitik und Wirtschaftliche Entwicklung, a volume in honour of Walter-Hesselbach, (eds) J. Langkau and C. Kohler, Friedrich-Ebert-Foundation, Neue Gesellschaft, Bonn, Federal Republic of Germany (in German)

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

Barker, T. (forthcoming b). The Cambridge Multisectoral Dynamic Model and alternative strategies for full employment in the UK. To be published in a volume edited by M. Hopkins, International Labor Office, Geneva

Swami Amrit Terry (T.S. Barker) (forthcoming c). Endogenising input-output coefficients by means of industrial submodels. To be published in A. Smyshlyaev (ed.) Proceedings of the Fifth IIASA Task Force Meeting on Input Output Modelling, IIASA, Laxenburg, Austria

Amrit Terry (T.S. Barker) (forthcoming d). Modelling economic structure and change in the British economy. Vierteljahreshefte Deutsches Institut für Wirtschaftsforschung

Barker, T., van der Ploeg, F. and Weale, M. (1984). A balanced system of national accounts for the United Kingdom. Review of Income and Wealth, Series 30, No. 4, pp. 461-486

Barker, T., A.W.A. Peterson and L.A. Winters (1984). IDIOM an international dynamic input-output model, in UNIDO (ed.) Proceedings of the Seventh International Conference on Input-Output Techniques, United Nations, New York

Borooah, V.K. (forthcoming). The interaction between economic policy and political performance, in R.C.O. Matthews (ed.) Economics and Democracy, Macmillan

Borooah, V.K. (1985). Consumers' expenditure estimates using the Rotterdam model. Applied Economics, Vol. 17, No. 4, pp. 675-687

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 D.R. Sharpe (forthcoming a). Aggregate consumption and the distribution of income. The Economic Journal, June 1986

Borooah, V.K. and D.R. Sharpe (forthcoming b). Household income, consumption and savings in the United Kingdom. Scottish Journal of Political Economy, November 1985

Borooah, V.K. and F. van der Ploeg (forthcoming). Oligopoly power in British industry. Applied Economics.

Kumar, M. (1984). Comparative analysis of UK domestic and international firms. Journal of Economic Studies, December.

Kumar, M. (1985). Growth, Acquisition and Investment, Cambridge University Press, January

Kumar, M. (1985). International trade and industrial concentration. Oxford Economic Papers, March

Kumar, M. (1985). Growth, acquisition activity and firm size. Journal of Industrial Economics, March

Landesmann, Michael and R. Pierse (forthcoming a). Industrial policies in the U.K., 1973-1981, in a volume ed. by A. del Monte on Industrial Policies in Europe, Naples

- Landesmann, Michael (forthcoming b). Conceptions of technology and technological change in production analysis, in a volume ed. by M. Baranzini and R. Scassieri, Foundations of Economic Analysis, Blackwell, November 1985
- Landesmann, M. (forthcoming c). U.K. policy and the international economy, in P. Nolan and S.H. Paine (eds.), Rethinking Socialist Economies, Polity Press
- Lawson, Tony (1985). Lawson and Pesaran (eds). Keynes, Prediction and Econometrics in Keynes' Economics: Methodological Issues, Croom Helm
- Lawson, Tony (forthcoming a). Uncertainty and economic analysis. Economic Journal
- Lawson, Tony (forthcoming b). The context of prediction (and the paradox of confirmation), British Journal for the Philosophy of Science
- 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
- Ploeg, F. van der (1984). Generalized least squares methods for balancing large systems and tables of national accounts. Review of Public Data Use, forthcoming
- Ploeg, F. van der (forthcoming). Optimal control methods for the formulation of economic policy. Systems Science, Poland
- Stone, Richard (forthcoming a). The accounts of society. Nobel Memorial Prize Lecture, 1984. To be published in Les Prix Nobel 1984. Almquist and Wicksell International, Stockholm, 1985
- Stone, Richard (forthcoming b). Richard Stone (an autobiographical sketch). To be published in Les Prix Nobel 1984. Almquist and Wicksell International, Stockholm, 1985
- Stone, Richard (forthcoming c). Preface to Materials for a Balance of the Soviet Economy, 1928-30. (Trans. and eds R.W. Davies and S.G. Wheatcroft), Cambridge University Press, 1985
- Stone, Richard (forthcoming d). James Alan Calvert Brown: an appreciation. To be published
- Weale, Martin (1984). Linear economic models, in F. van der Ploeg (ed.), Mathematical Methods in Economics, Wiley

Weale, Martin (forthcoming a). The structure of personal sector short-term asset holdings. Manchester School

Weale, Martin (forthcoming b). Testing linear hypotheses in an accounting framework. Review of Economics and Statistics, November 1985

Weale, M.R. (with the late John Grady) (forthcoming c). British Banking: 1960 to 1985. To be published by Macmillan

Conference Papers

The following papers have been presented at conferences during the year

IIASA Task Force Meeting on Input-Output Modeling, Laxenburg, Austria, October 1984

Amrit Terry (T.S. Barker)	Endogenising input-output coefficients by means of industrial submodels
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XIth Conference on Problems of Building and Estimation of Large Econometric Models, Lodz, Poland, October 1984

Amrit Terry (T.S. Barker)	Analysing economic policies with a large-scale multisectoral dynamic model: the Cambridge model of the UK economy
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Inter-University Software Conference on Econometric Software, LSE, January 1985

William Peterson with G.A. Hughes	Sophisticated econometrics for naive users
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Cambridge Journal of Economics Conference on: Socialist Policies for the U.K., Jesus College, Cambridge, June 1985

M.A. Landesmann	U.K. policies and the international economy: an internationalist perspective
-----------------	--

Cambridge Growth Project/Cambridge Econometrics Conference on Industry and the Economy, Selwyn College, Cambridge, June 1985

Amrit Terry (T.S. Barker)	Dynamic multipliers for MDM
------------------------------	-----------------------------

Vani Borooah and Don Sharpe	Aggregate consumption and the distribution of income in the United Kingdom: an econometric analysis
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- Manmohan Kumar The determinants of average earnings in the UK
- Michael Landesmann European industrial specialisation
- William Peterson Industrial investment, profitability and the cost of capital
- William Peterson and David Turner Prospects for job creation: an exploration using MDM
- Richard Pierse A condensed form of MDM6
- Andrew Snell Developments in the exchange rate model
- ESRC Macroeconomic Consortium Conference, University of Warwick, July 1985
- Amrit Terry The CGP model of the British economy
(T.S. Barker)
- Fifth World Congress of the Econometric Society: Massachusetts Institute of Technology, Cambridge, Mass., August 1985
- M.A. Landesmann Relative industrial performance, market shares determination and disproportional growth in interdependent economies
- 12th Annual Conference of EARIE, Queens' College, Cambridge, September 1985
- Manmohan Kumar Mergers, concentration and mobility
(with A. Hughes) amongst the largest non-financial corporations

Seminars

The following seminars have been given during the year

- Amrit Terry and Linda Hesselman 'An assessment of CE's industrial forecasts 1979-82'
(given to the Cambridge Growth Project, March 1985)
- Vani Borooah 'Aggregate consumption and the distribution of income'
(given to the Cambridge Growth Project, January 1984)
- Manmohan Kumar 'Interindustry structure of earnings re-examined'
(given to the Cambridge Growth Project, March 1985)

- Michael Landesmann 'European industrial structures and trade performance'
(given to the Cambridge Growth Project, February 1985)
- William Peterson 'Investment and industrial profitability'
(given to the Cambridge Growth Project, February 1985)
- Martin Weale 'Intersectoral comparisons of risk aversion'
(given to the Cambridge Growth Project, February 1985)
- 'How important are expectations? The life assurance and pension funds'
(given to the Cambridge Growth Project, November 1984 and ESRC Money Study Group, February 1985)

Growth Project Papers (GPP)

- 559 Implementing the Pesaran-Evans consumption function - Richard Pierse
- 560 Econometric tests for MDM - Richard Pierse
- 561 Policy analysis after the rational expectations revolution - Andrew Snell
- 562 A test of the rational expectations hypothesis in the context of a simple financial model - Andrew Snell
- 563 How important are expectations? The life assurance and pension funds - Martin Weale
- 564 Theoretical models of disproportional growth and international interdependence - Michael Landesmann
- 565 Relative competitive performance and market shares determination - Michael Landesmann
- 566 Inter-industry relationships and processes of international integration - Michael Landesmann
- 567 Disaggregated industrial forecasting performance UK 1979-82: Cambridge Econometrics, National Institute and naive forecasts compared - Amrit Terry and Linda Hesselman
- 568 Average earnings in the UK and the real wage resistance hypothesis - Manmohan Kumar
- 569 A Wald test of the restrictions implied by the rational expectations hypothesis - Andrew Snell

570 The context of prediction (and the paradox of confirmation) - Tony Lawson

571 Uncertainty and economic analysis - Tony Lawson

Sam Unit Papers (SUP)

120 UK import duties 1959-83 for MDM7 - Amrit Terry

Rocket Program Papers (RPP)

82 Consumers' expenditure data: new and old Blue Book classifications - Vani Borooah

Growth Program Manuals (GPM)

5 MDM6 Users Manual (October 1984) - Amrit Terry

ASSESSING ECONOMIC POLICY IN THE UK AND EUROPE

Project Members

K.J. Coutts

G.H. Gudgin

T.F. Cripps

T.S. Ward

Professor W. Godley

Sponsor: ESRC

This report covers the second year of a four-year programme which developed out of earlier research on the Effects of Economic Policy undertaken at the DAE and which is being sponsored by the ESRC Macroeconomic Modelling and Forecasting Consortium. The project aims to integrate the treatment of national issues within a coherent framework of analysis of the world economy and Europe as a whole. The general aim is being pursued at a number of levels simultaneously.

(a) Macroeconomic theory

K. Coutts, W. Godley and G. Gudgin have been working throughout the year on a new book, to be published by Basil Blackwell, on macroeconomic theory and modelling.

This work is motivated by the belief that the powerful insights of James Tobin into the role of money and finance in the macroeconomic process have not influenced sufficiently the paradigm within which macroeconomics is currently taught and the strategy habitually adopted by modellers of real economic systems.

The work starts from the observation that the logical constraints on the behaviour of economic systems as deployed in the IS-LM paradigm are confined to identities between flow variables, the stock of money and financial assets having at best an obscure accounting relationship to other variables. Our premise is that the accounting system should be based on national and sectoral balance sheets, with all sectoral flows being closed off by changes in the stock variables as recorded in these balance sheets. The full articulation of the accounting system, which implies the tracking of all stock variables through time, has a profound effect on the way economic systems behave.

The statistical and conceptual framework which is emerging from this work differs in certain respects from that which has habitually been used for econometric modelling. In particular it requires that estimates of stock variables should be consistent with the flow accounts (which is far from the case at present). It also implies a revised definition of real sectoral disposable income such that it is broadly consistent with Hicks' famous definition. The inflation accounting of whole economic system has to be carried out to achieve a consistent translation of nominal into real stocks and flows.

(b) Policy models

1. Assessing economic policy in the UK

K. Coutts and T.S. Ward presented a paper to the ESRC Macroeconomic Modelling Bureau Summer Conference held at Warwick in July 1985. The purpose of the paper was to compare policy simulations using the ESRC-supported econometric models of the UK economy. These models are presently available to academic users through the Bureau's USER service, which allows users to run versions of the models held on the Warwick University computer. The work involved two months intensive use of the Bureau's service, accessed via the JANET network, with results downloaded to a microcomputer for tabulation and plotting.

A subsidiary purpose of the exercise was to test the usefulness of the Bureau's service in giving academics access to the macroeconomic models, and of model proprietors in making the details of their models sufficiently coherent for non-proprietors to run them. Policy simulations were run on a version of H.M. Treasury, the London Business School, the National Institute and the City University Business School models.

2. The world economy

The international aspects of work on this project (mainly carried out by T.S. Ward) have continued to centre upon the European economies and have continued to be carried out in collaboration with economists from other European countries under the auspices of the European Federation for Economic Research (FERE), the administration of which has since January this year been conducted from Cambridge. The particular focus of research has been on the place of the European economy as a whole in the global economic system. The study is nearing completion and the main findings will be presented at an international conference in Brussels in January 1986, organised by the FERE, to which senior officials of the European Commission, members of the European Parliament and journalists will be invited, as well as academic economists with a particular interest in this area.

The study has four main parts. The first is to analyse the trade relations between Europe and the rest of the world in the context of global trade patterns. The issues examined here are the extent to which it is possible and desirable to treat Europe as an economic entity, the extent to which trade is complementary and the competitive position of Europe vis à vis the US and Japan. The second part is concerned with developments in the international financial system and how these have affected European countries, with particular focus on the implications of the growing scale of capital flows between currencies and of the breakdown of the management of exchange rates and of international credit creation in the early 1970s. The third part deals with government policy, examining the nature and strength of constraints on the pursuit of economic policy at the national level and the response of national governments to what appears to be a significant narrowing in their room for manoeuvre. It concludes by assessing the prospects for political cooperation or even unification, within Europe. The fourth part presents the results of simulating the FERE model of the world economy on various assumptions about future developments and the economic policy of the major national governments. This is intended to produce a quantitative underpinning of the analysis of the earlier sections and of the policy conclusions reached there.

Publications and Papers

K.J. Coutts and W. Godley

'IS-LM and Stock adjustment models'. Presented at the AUTE Conference in April 1985

'Notes on macroeconomic theory', DAE mimeo

'The teaching of macroeconomics using the IS-LM paradigm: a critique based on Artis' new textbook', DAE mimeo

T.S. Ward

'Oil and the Economic Crisis', paper delivered to the International Conference, Arab Petro-Dollars: what happens to them? London 15-16 July 1985

'European trade and Europe in the World Economy', working paper for FERE study on Europe in the World Economy

'Steps towards European Political Integration', working paper for
FERE study on Europe in the World Economy

'The Government's 1984 Autumn Statement', in First Report from the
Treasury and Civil Service Committee, Session 1984-85

'The 1985 Public Expenditure White Paper', in Sixth Report from the
Treasury and Civil Service Committee, Session 1984-85

'Comments on the 1985 Budget', in Eighth Report from the Treasury
and Civil Service Committee, Session 1984-85

K.J. Coutts and T.S. Ward

'Experiments in Policy Simulation using the Warwick Bureau Service',
DAE mimeo

In addition to these papers, project members have been invited to
speak on theory or policy in Bremen, Luxembourg, Florence, Paris
and a number of British universities.

THE DOMINICAN ECONOMY

Project Members: K. Coutts and T.S. Ward

Visitors: F. Pellerano) Economic Section of the
H. Guilianì) Central Bank of the Dominican
Republic

Sponsor: The Central Bank of the Dominican Republic

The aim of the project is to construct a macroeconomic model for the
use of the Bank's economic staff to analyse the implications of
alternative government policies and the impact of external shocks on
the domestic economy. The model will run on a microcomputer and be
developed simultaneously in Cambridge and Santo Domingo, with a
communications link via a data network.

LABOUR STUDIES GROUP

Members: Jill Rubery, Roger Tarling,
Frank Wilkinson

Associate Members: David Canning, Christine Craig

1. International Working Party on Labour Market Segmentation

The Labour Studies Group continued its active involvement with the
International Working Party throughout the year. This body is
composed of researchers from 14 countries (11 West European with
Hungary, the USA and Canada) and meets annually in different
European countries. It provides a forum for reporting and comparing
research findings and fostering international - and particularly
inter-European - research collaboration. A comparative project on the
footwear industry in collaboration with the 'Centre des études de
l'emploi' in Paris and the Economics Department in Modena University
will be undertaken the Labour Studies Group in 1986.

2. Employment consequences of changes in the manufacturing production process

Project members: Jill Rubery, Roger Tarling, Frank Wilkinson

Sponsor: ESRC

This project was designed to investigate how employment was affected
by the introduction of new methods of production and new products.
It was quickly realised that changes in the size and organisation of
the labour force were rarely seen by the firm as a primary objective
but were a by-product of other strategies. However, as such they
were of central importance in the successful implementation of
changes. It therefore became important to locate the reorganisation
of production and the labour force firmly within the broad context of
the firms' changing internal organisation and decision-making
processes and of changes in technology and in product and labour
market conditions.

Perhaps the most important finding was the very great difficulty there is in generalising about how firms have responded, or about the relationship between change and relative success. At one extreme, very successful firms had quite rigidly maintained existing systems of marketing, production and organisation whilst, at the other, dramatic changes have not guaranteed success. However, the vast majority of the firms we interviewed have undergone substantial change since the late 1970s and the most important aspect of this is the increased capacity to respond flexibly to product market demands.

The response of firms to changing conditions is, as might be expected, closely related to the nature of product markets, available technology, and the pace of technical change. But it is important to recognise the role of internal organisation and reorganisation. Important factors here include a widespread decentralisation of responsibility for production and marketing; the changing role of design and its closer integration with production; and the increasing tendency to 'put-out' stages of production, business and other services. An important aspect of the change in research, development and design is its increasing concentration on day-to-day problems of production and marketing. Almost all firms we talked to pay continuous attention to opportunities to improve marketability, simplify production and cut costs directly by 'designing out' labour and work in progress. For this purpose many firms have established joint teams consisting of managerial and other specialists in production, marketing, finance, research and development, and design. These developments are often at the expense of more detached, longer-term research and development.

Almost all the firms surveyed had substantially reduced their labour force, particularly in direct production employment. But this has generally been achieved within the existing framework of industrial relations rather than by a widespread change in the level of trades unionism or changes in collective bargaining procedures. Nor is there much evidence of major changes in the skill structure of the

labour force except for the increased flexibility and interchangeability of labour. Where new skills are needed the tendency has been for existing labour to be retrained - but where these tasks are allocated, for example to skilled production workers or to technical or white collar staff, depends on the system of industrial relations as well as on the technical and production requirements of the specific firm. We found little evidence of the widespread adoption of computer aided design and computer aided manufacture. But where these systems had been adopted the tendency was to integrate them with existing methods so that change has been significant rather than revolutionary. The results of the research have been analysed and the final report submitted to the ESRC. We are now reworking the material in preparation for writing a book.

3. A report on the Department of Employment's study 'Wage Flows in the Clothing Industry 1950-81'

Project members: David Canning, Roger Tarling

Sponsor: National Union of Tailors and Garment Workers

The report, which contains an overview of the findings under joint authorship and a technical reappraisal by David Canning, was submitted to the Union at the end of July, 1985. It has been printed as a booklet by the Union and should be released in October 1985.

The main finding was that data and specification problems in the DE study had led to an over-emphasis on the importance of minimum wages in reducing employment, with too little attention being given to competitive pressures within the sector, particularly those originating from overseas.

4. Social Change and Economic Life: The Northampton Labour Market

Project members: F. Wilkinson
R. Tarling
J. Rubery
R. Jobling (Faculty of Economics and Politics)
C. Fraser (Social and Political Sciences)
C. Marsh (Social and Political Sciences)

Associate members: R. Blackburn, K. Prandy

Sponsor: ESRC

In March 1985 a Cambridge team was selected to participate in the ESRC's interdisciplinary Social Change and Economic Life initiative. This involves the study of six local labour market areas in England and Scotland, each one under the responsibility of a separate team. The Cambridge team will be studying Northampton. The initiative will be coordinated at the national level of Dr Duncan Gallie of Nuffield College, Oxford.

The aim of the initiative is to study social change and economic life from an interdisciplinary perspective and through a range of different methods. Thus the initiative will study the local labour market from the perspective of employers, individuals and households; it will involve work by economists, sociologists, social psychologists and statisticians and it will have both an historical and a contemporary dimension. There will be common parts to the work in the six areas, but also considerable scope for each team to develop its own particular interests and perspectives. In particular there will be three main 'core' surveys: the first involving 1000 individuals in each locality, the second, 300 employers in each locality, and the third 300 households in each locality. Each of these surveys will have a substantial common element, but each will also allow for team-specific questions to be included. The Cambridge team's

responsibility is to contribute to the construction of these questionnaires and to the analysis of the data, but the actual surveys will be carried out by other agencies. In addition to these surveys the common part of the programme requires the team to carry out an interview survey of 30 firms and intensive case-studies of 12 firms. Each team will also be carrying out two or more related studies.

Publications

- Joan Robinson and F. Wilkinson (1985). Ideology and logic, in F. Vicarelli, Attualita di Keynes, Giuseppe Laterza and Figli, Rome - English translation by Macmillan, 1985
- C. Craig, J. Rubery, R. Tarling and F. Wilkinson (1985). 'Economic, Social and Political factors in the operation of the Labour Market', in R. Finnegan, D. Gallie and B. Roberts (eds) New Directions in Economic Life, MUP
- C. Craig, E. Garnsey and J. Rubery (1985). Payment structures in smaller firms: women's employment in segmented labour markets Department of Employment Research Paper No. 45
- E. Garnsey, J. Rubery and F. Wilkinson (1985). Labour market structure and workforce divisions, Unit 8 of the Open University Course Work and Society, to be reprinted in a book Work and Society based on selected units from the course
- J. Humphries and J. Rubery (1984). The reconstitution of the supply side of the labour market: the relative autonomy of social reproduction. Cambridge Journal of Economics, vol. 8, no. 4, December
- E. Lorenz and F. Wilkinson (1985). Shipbuilding and Britain's Economic Decline: 1890 to 1965, in B. Elbaum and W. Lazonick The Decline of the British Economy, Oxford University Press
- F. Wilkinson (1984). Worker organisation, State Expenditure and Capitalist Crisis. In the inaugural issue of the Journal of the Association d'Economie Politique, Etudes d'economie politique
- R. Tarling and F. Wilkinson (1986). The level and flexibility of costs in R. Tarling (ed): Flexibility or Rigidity: the Struggle for Control in the Labour Market. Academic Press (forthcoming)

R. Tarling and F. Wilkinson (1985). Mark-up pricing, inflation and distributional shares: a note, Cambridge Journal of Economics, vol. 9, no. 2, June

C. Craig and F. Wilkinson (1985). Pay and Employment in Four Retail Trades, Department of Employment Research Paper Series, No. 51

Conferences and Seminars

Department of Employment, November 1984, C. Craig and F. Wilkinson

Bath University, November 1984, Jill Rubery

Graduate Seminar, Oxford, November 1984, R. Tarling

University of Munster, Guest Lecture, November 1984, F. Wilkinson

University of Bielefeld, Guest Lecture, November 1984, F. Wilkinson

Cambridge Journal of Economics Conference, June 1985, Jill Rubery and Frank Wilkinson

International Working Party on Labour Market Segmentation

Conference, Santiago del Compostala, Spain, July 1985, Jill Rubery, Frank Wilkinson

Seminar at Aarhus University on Segmented Labour Market Theory, September 1985, Frank Wilkinson

International Conference on Unemployment Research (Danish Social Science Research Council) Rønne, Denmark, September 1985, Frank Wilkinson

ECONOMIC POLICY IN NORTHERN IRELAND

Project members: D. Canning, B.C. Moore, and J. Rhodes

Sponsor: ESRC

Aims of the Project

The aims of this 2-year project, which started in November 1982, were to study the Northern Ireland labour market and the role of the public sector in the Province, and the dynamic relationships between the two, in order to compare and contrast the impact of alternative economic development strategies. The study of the labour market which is the first part of the project aims to answer the question of why Northern Ireland has experienced persistent and substantial labour market imbalance relative to the position in Great Britain. The method used is firstly to construct labour market balance sheets for the Province and for Northern Ireland covering a long period of time and including the main components of labour demand and supply. The second stage is to disaggregate and quantify the main components of demand and supply and study changes in relation to their counterparts in Great Britain.

The second part of the project aims to analyse public service provision in the Province in the context of the system and principles adopted by Central Government for allocating public expenditure throughout the UK. The objective is to assess how far public expenditure in the Province can be justified in terms of its special expenditure needs and thus to see how far the fiscal transfer from Great Britain is in accord with normal equalisation principles, falls short of them or exceeds them.

Finally the study aims to draw from the main analysis some implications for policy and specifically to identify and explore the relative merits of four policy options for promoting a faster rate of economic development in Northern Ireland.

Summary of Results

The rate of economic growth in Northern Ireland is too slow to employ all the labour resources becoming available each year. The Province has proportionately the largest annual job shortfall of all the UK regions.

Between 1971 and 1983 about 74,000 jobs were lost in the manufacturing sector, a loss of 44%. About two-thirds of this decline (51,000) jobs can be accounted for in terms of the national decline in manufacturing industry. The special industry mix in the Province accounted for a loss of only 2000 jobs (having been much more important in the 1960s at -22,000 jobs and 1950s at -34,000 jobs). The remaining loss of 21,000 jobs is made up of a loss of 40,000 jobs from the reduction in competitiveness in Northern Ireland relative to Great Britain caused by the political troubles and the upward movement in wages, and a net gain of 19,000 from regional policy.

Since about 1978 the net contribution of regional policy has been in decline as factories attracted by a policy current ten or twenty years earlier close down or contract more rapidly than new jobs can be created by today's policy.

New policy jobs have been attracted in some industries and not in others. The Exchequer cost per job created thus varies widely across industries.

The political troubles have directly created about 24,000 jobs in the Province, mainly in occupations connected with security. These jobs would disappear if the troubles suddenly ended but the loss of up to 40,000 manufacturing jobs caused by the troubles would not be regained if the troubles ended. Even if the troubles were suddenly to end the outlook for economic growth and employment in the Province, assuming conventional UK national and regional policies, remains bleak.

The Exchequer cost of creating one new job for ten years in health or education is less than the Exchequer cost of creating a manufacturing job in recent years, using conventional regional policies.

The level of taxation officially attributed to Northern Ireland is a good indicator of the taxes actually paid.

Because of the earnings convergence, tax revenue collected in Northern Ireland has increased as a proportion of non-oil taxes paid in Britain.

Public expenditure in the Province increased rapidly in the 1960s and 1970s relative to Great Britain, but has not increased further, in relative terms, since 1979. By the early 1980s public expenditure per capita was about 25% above the level in Great Britain.

A detailed study of each public service revealed that this high level of expenditure was justified in terms of Northern Ireland's special 'needs'. 'Expenditure needs' are defined to include the containment of the political troubles.

Although the Province now receives fair treatment under public expenditure programmes in terms of overall spending (in sharp contrast with the position in the 1950s) in accordance with its high special needs, many of the programmes are adjuncts to British policies which are not always appropriate to the unique situation found in Northern Ireland.

The fiscal transfer from Great Britain to Northern Ireland now amounts on average to about £1000 per Northern Ireland resident and £4500 per household. This should be regarded as a quite normal transfer from richer regions to poorer regions with high expenditure needs and one which takes place in many advanced countries through the system of public finance.

Four strategic policy options for the future were examined in the light of these research findings and other considerations. The four options were:- (i) continuing with present policies; (ii) cutting real wages; (iii) allowing manufacturing industry to decline and expanding the public sector beyond the point justified by relative needs; (iv) a set of proposals for reforming policy aimed at achieving recovery and growth in Northern Ireland's manufacturing industries.

Publications and Papers

Moore, B., Rhodes, J. and Tyler, P. 1985. The Effects of Government Regional Economic Policy, HMSO

Canning, D. 1985. 'Regional Labour Markets', paper presented to ESRC Conference in Glasgow, June 1985

Other Activities

D. Canning and B. Moore took major parts in an Ulster television programme on the Northern Ireland economy. This included a debate with the Rt Hon Rhodes-Boyson, the minister responsible for Northern Ireland economic development.

URBAN/RURAL SHIFT AND THE EVALUATION OF URBAN AND REGIONAL POLICIES IN BRITAIN

Project member: J. Rhodes

Sponsor: ESRC

This 2-year project which began in May 1985 has three objectives. First, it aims to understand more about the process by which manufacturing firms have been declining faster in large urban areas than in smaller towns and rural areas - a process which has come to be known as the 'urban/rural shift'. We need to know more about its causes, its timing and how far it has been influenced by urban policies, regional policies and by local authority planning policies.

The second objective is to estimate for the first time the impact of urban policy on employment in the conurbations. Until 1977 urban policies sought to encourage the movement of manufacturing industry out of the large cities into New Towns and overspill areas. After 1977 urban policies were sharply reversed in an attempt to regenerate the larger cities, and particularly their inner areas, through such policy instruments as enterprise zones, urban development grants, partnership schemes and Docklands Development Corporations.

The third objective is to devise a new methodology for evaluating the impact of regional policies. The method we first devised in 1973 is still in use but it suffers from important defects because the nature of regional policy has changed radically since 1981, notably in the application of policy to small sub-regions rather than to large standard regions. This change in the thrust of regional policies means that its effects can only be estimated using a method which simultaneously measures the impact of urban policies and 'models' the process of urban/rural shift in relatively small geographical areas.

THE ECONOMIC ROLE OF CITIES IN THE CONTEXT OF CHANGES IN UK ECONOMIC STRUCTURE

Project members: I.G. Begg, B.C. Moore

Sponsor: ESRC

The object of this research is to examine the effects of structural change in the UK economy on economic activity in the cities of Great Britain. One hundred cities, comprising all urban areas down to a population size of approximately 80,000, are distinguished.

In the first stage of the research, the main emphasis has been on constructing a database of employment by industry in each city. The source of these data is records of employment by employment exchange area obtained from the Department of Employment on

magnetic tapes. Software to access and manipulate this data has been written, enabling flexible definitions of industry groups and cities to be specified. Data for 1959, obtained in photostat form, have been coded and are currently being added to the database.

The first output of the research is a paper setting out a typology of UK cities according to economic characteristics. This is to be published in Spring 1986 as a chapter in the second volume of a series edited by V. Hausner, reporting the results of the 'Inner City in Context' research initiative of the ESRC.

The full results of the project will be published as the final volume in the series.

Two other papers, to be published in the first volume of the series, were produced as a result of an earlier project on inner cities.

These are:
Begg, I.G. and Eversley, D.C.E. 'Deprivation in the Inner City: Social Indicators from the 1981 Census'

Begg, I.G., Moore, B.C. and Rhodes, J. 'Economic and social changes in urban Britain and the inner cities'

TO ACQUIRE, ORGANISE AND WRITE SOFTWARE FOR AN INTERNATIONAL TRADE DATABASE

Project member: I.G. Begg

Sponsor: ESRC

The aim of this project is to construct a comprehensive trade database, covering a twenty-year time span and providing consistent data on bilateral trade between each of 100 country/regions. Twelve commodity groups are distinguished.

Data have been acquired from the United Nations Statistical Office for 1967 and 1970-83. These proved to contain some inconsistencies which

have been discussed with the UNSO. As a result, some additional material will be sent, and used to improve the database. Extracts from the data have been used by a working group of FERE as source material for a study of Europe in the World Economy, to be presented at a conference in Brussels in January 1986.

Publications and Papers

Begg, I.G. 'European trade, and Europe in the World Economy', (DAE mimeo)

COMPANY FINANCE AND PERFORMANCE

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

Associate member: Dr L. Slater

Sponsors: Esmée Fairbairn Charitable Trust, ESRC and
Leverhulme Trust

The project has three parts. First, it is developing a computerised databank of standardised financial accounts for UK companies. Second, it is using these accounts in conjunction with the Cambridge Growth Project's disaggregated macroeconomic model of the UK economy to model company behaviour. And third, it is using the resulting models for forecasting and policy evaluation.

Data

A major update was completed of the Cambridge DTI Databank of Companies' Financial Accounts. This now spans the years 1948-83 and contains up to 200 variables for up to 2500 companies in each year. Copies of the databank have been supplied during the year or are currently being supplied to six Universities and Polytechnics in Britain, to three overseas, and to the European Commission. An extensive new manual has been written ((1) below); a paper discussing the general use of such statistics has been prepared (2); and a book based on the databank is in draft (3).

Models

The main modelling, of the top 100 companies and of a sample of falling companies, has been completed. Four papers describing the modelling framework and its applications have been published or prepared during the year ((4), (5), (6) and (7)).

Policy evaluation

The main statistical exercises we had planned concerning the link between government policy and company failure were completed during the year (some initial results were presented at a seminar (8)): the main work of the next year will be devoted to writing up these results. A paper on the remaining topic within our project proposal, rescue policy, was also prepared during the year (9).

Publications and Papers

- (1) The Cambridge/DTI data bank: a manual for users, A.W. Goudie, G. Meeks, J.M. Wheeler and J. Whittington, DAE mimeo
- (2) 'Disaggregating the company sector', G. Meeks, paper to be presented at the 1985 Statistics Users Conference and to be published by the Bank of England, 1986
- (3) Company finance and performance: aggregated financial accounts for individual British industries, 1948-82, A.W. Goudie and G. Meeks, DAE, 1986
- (4) 'Individual agents in a macroeconomic model: UK companies in Cambridge MDM'. A.W. Goudie and G. Meeks, Journal of Policy Modelling, 1984
- (5) 'The company sector'. A.W. Goudie and G. Meeks, forthcoming in Barker and Peterson (eds), The Cambridge Multisectoral Model, CUP
- (6) 'Disaggregated modelling of the company sector', A.W. Goudie and G. Meeks, discussion paper presented to the ESRC Macroeconomic Modelling seminar at LSE, November 1984
- (7) 'Multiple discriminant analysis of company failure', A.W. Goudie, working paper
- (8) 'Company failure', A.W. Goudie, G. Meeks and J.G. Meeks, discussion paper presented to the Cambridge Growth Project seminar, December 1984

- (9) 'Rescue policy', A.W. Goudie, G. Meeks and J.G. Meeks, paper presented to the Public Policy Centre, 1985

- (10) 'Utility in economics', J.G. Meeks in Turner and Martin (eds) Surveying Subjective Phenomena., USA National Research Council, Russell Sage Foundation, 1985

COMPANY FAILURE AND RESCUE POLICY

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

Sponsor: Leverhulme Trust

Estimating a multiple discriminant model of company failure for larger listed companies

A substantial part of the modelling work has now been completed and written up in paper (1) (see below). One of the initial aims - to stratify the sample by industry - is likely not to be as worthwhile as we had hoped because few industries within the 'larger listed' sample record sufficiently large numbers of failures for adequate modelling. However, the industry dimension and the influence of size are being explored for a recent sample of companies analysed by the Department of Trade and Industry which includes many small and unlisted firms.

Developing a disaggregated macroeconomic model of companies' finances

Development work has continued through the year. A paper (2) (see below) reporting some features of the model was published during the year; and a further paper (3) reporting work supported by the Trust has been accepted for publication. One aspect of the planned research which has accounted for a good deal of work, the modelling of financial influences on the investment decision, has produced rather negative results as far as the analysis of failure is concerned and will not have the role we had planned for it in the overall model of failure. However, the negative results may be written up and published for their intrinsic interest.

Integrating the model of potential failure with the disaggregated macroeconomic model of companies finances

This work has been completed and the substantial benefits arising from incorporating the macroeconomic model in predicting failure have been documented in paper (1) and in two discussion papers ((4) and (5)) presented during the year.

Simulating the effect on the failure rate of changes in macro-economic variables

The first simulation exercises were completed during the year and reported in papers (4) and (5). Because the early results have proved so interesting we plan to extend this part of the analysis somewhat beyond the original proposal by conducting a detailed study of the effects on the failure rates of the rapid appreciation of the pound in the late seventies.

Analysing rescue policy using the framework developed in the earlier sections

This work is still at an early stage; but a paper (6) outlining the main issues has been drafted during the year.

Project Papers

- (1) 'Multiple discriminant analysis of company failure', A.W. Goudie, working paper
- (2) 'Individual agents in a macroeconomic model: UK companies in Cambridge's MDM', A.W. Goudie and G. Meeks, Journal of Policy Modeling, 1984
- (3) 'The company sector', A.W. Goudie and G. Meeks, forthcoming in Barker and Peterson (eds), The Cambridge Multisectoral Dynamic Model, CUP
- (4) 'A macroeconomic approach to company failure', A.W. Goudie, G. Meeks and J.G. Meeks, discussion paper presented to staff seminars at the Universities of Aberdeen, Cambridge, Dundee and St. Andrews
- (5) 'Disaggregated modelling of the company sector', A.W. Goudie and G. Meeks, discussion paper presented to the Economic and Social Research Council Macroeconomic Modelling Seminar at London School of Economics

- (6) 'Rescue policy', A.W. Goudie, G. Meeks and J.G. Meeks, discussion paper prepared for a meeting of the Social Sciences Research Trust at the London School of Economics

Other Papers by Project Members

'Tax exhaustion: estimates from a disaggregated model of corporate tax liabilities', A.W. Goudie, Applied Economics, 1984

'The dividend decision in the presence of tax exhaustion', A.W. Goudie, Scottish Journal of Political Economy, 1984

'Utility in Economics', J.G. Meeks, in USA National Academy of Sciences, Surveys of Subjective Phenomena, vol. II, 1984

'Profitability measures as indicators of post-merger efficiency: a reply', G. Meeks and J.G. Meeks, Journal of Industrial Economics, 1984

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

Project members: N. Christodoulakis
Prof. J.E. Meade
D. Vines (resigned September 1985)
M. Weale

Sponsor: ESRC

The aim of this Project is to investigate the feasibility of economic policies allowing full employment and non-inflationary growth in national income. This requires both the study of wage fixing policies and the study of issues in the design of fiscal and monetary policies for demand management.

Wage-fixing

A book on this work entitled Stagflation Volume 1: Wage Fixing was published by Allen and Unwin in 1982. James Meade has continued to lecture and write on this subject, and has completed a book on wage fixing in capitalist, profit-sharing and labour-managed economies.

Demand Management

Stagflation Volume 2: Demand Management was published in 1983. In it policies were described which used fiscal policy to keep money national income on its target path, exchange rate control through official intervention to manage the balance of payments current account, and monetary policy to keep the real rate of interest constant.

A major shortcoming of that exercise was a refusal properly to consider the effects of monetary policy. The reason for this was the absence of any information about the effects of relative expected yields on the international flow of funds. Work has continued to be directed towards remedying this deficiency.

Recent Work on Wage-fixing

James Meade has completed a book manuscript entitled Imperfect Competition and the Choice of Industrial Structure to be published by George Allen and Unwin. This book contains an analysis and development of certain ideas first put forward by Professor Martin Weitzman in the Economic Journal. Its purpose is to examine how, within the framework of a steady demand management policy, the choice between different forms of business organisation may influence the relationship between employment and rates of pay. This relationship is studied for the two types of economic organisation described by Professor Weitzman, namely

- (i) the capitalist wage economy, and
- (ii) the capitalist share economy, and also for two further types of organisation not considered by Professor Weitzman, viz.
- (iii) non-discriminating labour cooperatives, and
- (iv) discriminating labour-capital partnerships.

Recent Work on Policy Analysis

The aim of the research has been to model policy formation in various expectational regimes including that of rational expectations. In order to do this it has proved necessary to model three capital markets, the foreign exchanges and the stock exchange and gilt-edged markets.

Capital markets The portfolio allocation model of international capital markets, described by Meade, Vines and Weale (1984) has been estimated. A satisfactory estimate for the response of portfolio allocation by the domestic private sector to rationally expected excess yields has been obtained. However, the estimated response is shown to be sensitive to the definition of wealth. For example, the results obtained if one includes all land owned by the private sector under wealth are more satisfactory than those arising if land is excluded. This probably explains why less success has been achieved in investigating portfolio allocation by the rest of the world: the wealth term used here is inevitably a proxy.

The stock exchange (valuation ratio of private capital) and gilt markets have been modelled on the assumption that down to a risk on premium, stocks and shares are perfect substitutes for Treasury bills. The investment equations of the National Institute model have been replaced by one which is sensitive to the valuation ratio. The consumption function (see also below) has at present been replaced by one in which consumption takes place out of income and wealth. Thus both investment and consumption are sensitive to capital market movements. A description of some of the associated dynamic properties is offered by Christodoulakis and Weale (1985).

Expectations. We have developed and implemented methods for designing linear feedback control rules under rational expectations. These methods include a refinement of the method which we have up until now used for the linearisation of non-linear models and implementation of the well-known Blanchard-Kahn method on the

resulting linear model. We then utilize the linear rational-expectations solution to 'guide' the solution of the full non-linear model. So far we have investigated the behaviour of two jumping variables: the stock market valuation ratio and the long-term rate of interest. We plan to have forward-looking consumption function in which the level of consumption itself will be a jumping variable. The policies we are currently analysing emphasise exchange rate stabilisation. Thus this variable is not at present modelled as jumping, although expectations about its behaviour can be assumed rational.

Attention so far has focussed on analysis under rational expectations. But we intend also to investigate policy information under other expectational regimes. We do not expect major difficulties in developing the model above for use with, for example, adaptive or neutral expectations.

The Consumption Function. Any analysis of monetary and fiscal stabilisation should allow for anticipatory behaviour on the part of consumers. Under some circumstances consumers might neutralise at least part of the fiscal control rules implicit in our policy proposals. For example, in the presence of a tax increase they might minimize any reduction in consumption in the knowledge that the control policy would subsequently call for a reversal of the tax increase. Martin Weale has been developing a version of the recent consumption function by Blanchard which would allow us to test this smoothing hypothesis, and would allow us to run our policy exercises on the assumption that consumers possessed fully rational expectations of all future changes in taxation.

The Policy Design. Work is now in hand to apply the developments outlined above to the design of actual policy proposals. The policy objective is to steer the money national income and the investment-to-output ratio towards chosen targets paths. The regime under which policy operates contains also:

- (i) a procedure by which the balance of payments is regulated by alternatively implementing interest rate adjustments, intervention, and a 'free floating' exchange rate, and
- (ii) different variants of the wage equation displaying the degree, if any, to which wage fixing has been reformed away from the 'standard' type of full indexation.

Preliminary results have been obtained. These show the consequences for policy design under alternative assumptions, e.g.

- an ability to borrow very large sums from abroad
- an ability successfully to reform wage fixing
- a deliberate manipulation of the exchange rate to fine-tune control of money (in the manner of the present government).

The outcomes are being compared with what would happen if none of these above three avenues for action were available.

Publications and Papers

Christodoulakis, N. (1984). Designing a Full Controller for an Uncertain Multivariate System, in S.G. Tzafestas (ed.) Multivariate Control: New Concepts and Tools, Reidel, Holland, pp. 179-196

Christodoulakis, N. (1984). Designing a Decoupling controller for a multi-represented discrete-time multi-variable plant, Int. Journal of Control, Vol. 40, pp. 1117-1137

Christodoulakis, N. and D. Vines (1984). The dynamic properties of the LBS model, in T. Basar (ed.) Modelling Control of National Economies, Pergamon Press, Oxford

Christodoulakis, N. (1985). Explicit optimal paths for regulating a stabilised system, Proceedings of 4th Int. Conference on Control Theory, Academic Press

Meade, J.E. (1984). Wage-Fixing Revisited, Institute of Economic Affairs, Occasional Paper, London

Meade, J.E. (forthcoming). Alternative Systems of Business Organisation and of Workers' Remuneration to be published by George Allen and Unwin, London

Vines, D.A. (forthcoming) North-South Interaction and Commodity Control, Journal of Development Economics, (with S.M. Ravi Kanbur)

Weale, M.R. (1984) A Balanced System of National Accounts for the United Kingdom, Review of Income and Wealth, Series 30, No. 4. pp. 461-486 (with T.S. Barker and F. van der Ploeg)

Weale, M.R. (forthcoming) Two Populations and their Economies, London Paper in Regional Science (with J.R. Stone)

Papers

Christodoulakis, N. (1984) 'Discrete Time Robust Controller - Design for Large-Scale Macroeconomics', PhD thesis, University of Cambridge

Christodoulakis, N. (1985) 'Linear Rational Expectations Models: A Frequency-domain versus Optimal Control Approach to Policy Design', Department of Applied Economics mimeo (with P. Levine)

Christodoulakis, N. and M.R. Weale (1985) 'The Stock Exchange in a Macroeconomic Model', presented to a seminar at Churchill College

Christodoulakis, N., Vines, D.A. and M.R. Weale (1985) 'The Design of New Keynesian Policies under Rational Expectations', paper presented to the sixth annual conference of the Society of Economics, Dynamics and Control, London, June 1985

Meade, J.E., D.A. Vines and M.R. Weale (1984) 'Financial Policy and the Exchange Rate: A Model for the Investigation of New Keynesian Policies', presented to Centre for Economic Policy research, May 1984

Weale, M.R. (1985a) 'How Important are Expectations. The Life Assurance and Pension Funds', presented to ESRC Money Study Group, February 1985 and 5th World Conference, Econometric Society, Boston, August 1985

Weale, M.R. (1985b) 'Changing Regimes of Monetary Control', presented to 2nd International Conference in Banking and Monetary Economics, Antibes, June 1985

Weale, M.R. (1985c) 'Wealth and the Consumption Function', Department of Applied Economics, mimeo

Westaway, P. (1985) 'An Investigation of New Keynesian Policies using Control Methods', PhD thesis, University of Cambridge

Westaway, P. and D.A. Vines (1985) Stagflation and new Keynesian Demand Management, mimeo, University of Cambridge, Department of Applied Economics, January 1985

STUDY OF THE WIDER ECONOMIC EFFECTS OF THE YOUTH TRAINING SCHEME (YTS) AND THE YOUNG WORKERS SCHEME (YWS)

Project members: B.M. Deakin and C.F. Pratten

Sponsor: Department of Employment

The objectives of the research are to study and quantify the economic effects of the YTS and YWS. The YTS is a one-year (in April 1986 to be a two-year) subsidy to provide training and work experience for school leavers. YWS is a £15 per week subsidy to young workers (on condition that the total wage does not exceed £50 per week); it is a sequel to the existing YTS. The research examines the uses made by firms of these two schemes and the various 'transmission' processes by which the subsidies influence (1) transactions between participating firms and their suppliers; (2) costs, prices, output and employment; and (3) profits and investment. The extent to which subsidised employment is substituted for employment which would in the absence of the schemes have taken place is estimated, and evidence is sought of any influence of the schemes upon non-participating firms in the same industry. The more general influence of an increase in the number of young workers with skills and work experience, and the effects of the schemes upon average and relative wages, are also studied. The methods of research include interviews with firms and also the addition of questions to a current interview survey of 'young people in the labour market' which is being conducted by other University teams sponsored by the Manpower Services Commission. The Cambridge Growth Model, which has previously been employed to examine the effects upon the economy of a hypothetical marginal wage subsidy (the results are given in The Economic Journal for December 1983) will be used to explore the longer-term multiplier and other wider economic influences of these two subsidy schemes upon the whole economy.

SUPERVISION OF OPERATING BUSINESSES BY HOLDING COMPANIES

Project member: C. Pratten

Sponsor: ESRC

The report on this study of the methods companies use to monitor and control their operating businesses was completed. The report was published by Gower Press in December 1985, under the title The Management of Operating Businesses by Large Companies.

Other Activities

A textbook entitled Applied Macroeconomics was published by Oxford University Press in May 1985 and Destocking in the Recession was published by Gower Press in February 1985.

An article on the role of giant and large companies in the economy will appear in Lloyds Bank Review, January, 1986. An article on growth rates was published in the Guardian on 16th October, 1985.

ADJUSTMENT PROBLEMS AND POLICIES IN AN INTEGRATED WORLD ECONOMY

Project member: M. Panić

Sponsor: A Sainsbury Family Trust

This project - divided into two parts to be published by Macmillan as two separate books - analyses the causes and the consequences as well as the institutional and policy implications (international and domestic) of global economic integration.

Last year was devoted chiefly to preparing the first of the two books, National Management of the International Economy, for publication.

Westaway, P. and D.A. Vines (1985) Stagflation and new Keynesian Demand Management, mimeo, University of Cambridge, Department of Applied Economics, January 1985

The central question which the book tries to answer is this: what are the conditions that have to be satisfied in order to achieve a stable international economic order in a highly integrated and continuously changing world economy? The book is divided into five parts: (i) the process of international integration; (ii) the nature and causes of external disequilibria (with a special emphasis on 'fundamental disequilibria'); (iii) the effect of changes in countries' international competitiveness over the last century and a half on the character of their commercial policies; (iv) special problems created for the international economic system by the energy crisis; and (v) the organisation and policies required to achieve a stable international economic order in the 1980s.

Over the past year additional material for the second book, Domestic Policy Options in an Open Economy, has also been gathered.

Publications and Papers

M. Panić: National Management of the International Economy, Macmillan, forthcoming

M. Panić: 'Economic Insularity as a Policy Option in the 1980s', mimeo

M. Panić: 'Transnational Enterprise - A viable, Long-Term Form of Industrial Organisation?' mimeo

Other Activities

Apart from giving a number of talks on British and international economic problems, Dr Panić participated in some of the activities reported in the Twenty Fourth Annual Report. In addition, at the invitation of the European Institute of Public Administration (established by EEC governments) he joined in 1984 their Panels of International Experts on Comparative Government Policies.

Publications

The Decline of British Shipbuilding, with F. Wilkinson in B. Elbaum and W. Lazonick (eds) The Decline of The British Economy, Oxford University Press, 1985

THE IMPACT OF IMPORT RESTRICTIONS IN THE INTER-WAR PERIOD

Project members: Professor Lord Kaldor

Michael Kitson

Associate member: John Rhodes

Sponsor: ESRC

This project has aimed to evaluate the impact of import restrictions on the British economy in the inter-war period.

The project consists of three areas of analysis which are nearing completion. First, an evaluation of British economic performance, indicating the dominant role of manufacturing in the recovery of the 1930s. Second, an analysis of trade flows, indicating the relative importance of protection and devaluation in inducing the large fall in manufacturing import propensity. Third, an inter-industry comparison which shows that newly-protected industries had higher growth rates of output, employment and productivity than the non-newly-protected industries.

Some empirical problems have been encountered as a result of the insufficiency or inferior quality of relevant data. Most of the problems have been overcome with the benefit of advice from academics who have specialised in the period (particularly Dr A. Maizels).

The preliminary result of the research formed the basis of two lectures delivered by Kaldor and Kitson to Part II of the Cambridge Economics Tripos. It is intended that the final results will be published as a monograph, although some parts of the research may also be more adequately disseminated through learned journals.

INDUSTRIAL STRUCTURE AND ECONOMIC PERFORMANCE: BRITAIN AND FRANCE IN THE 1970s

Project member: Dr E.H. Lorenz

Sponsor: ESRC Postdoctoral Fellowship Scheme

The basic aims and methodology of the project are outlined in the 24th Annual Report.

In the Autumn of 1984 a scheduled set of interviews was completed with engineering firms in the East and West Midlands. These interviews were primarily concerned with the impact of investment in numerically controlled machine tools on company organisation. A few firms were investigated in great detail to explore differences in the perspective of personnel with different functional roles in the firms.

During Spring 1985, Dr Lorenz visited the Laboratoire d'Economie et de Sociologie du Travail (LEST), Aix-en-Provence, France. This period was used for background developments in the French debate on new technology and industrial relations, and the role of small firms in the economy.

The visit to LEST was followed by a twelve-week period of fieldwork in Lyons where Dr Lorenz was attached to the Groupe Lyonnais de Sociologie Industrielle (GLYSI) at the Universite de Lyon II. This period was largely devoted to conducting interviews with local engineering firms, exploring such issues as the impact of new technology and the reasons for the increased use of subcontracting by French firms. The subcontracting relationship promises to be a fruitful focus for future research as it is extensively used by the more successful French firms and is comparatively neglected by most British firms.

Publications

The Decline of British Shipbuilding, with F. Wilkinson in B. Elbaum and W. Lazonick (eds) The Decline of The British Economy, Oxford University Press, 1985

Labour Supply and the Employment Strategies of British and French Shipbuilders, 1890 to 1970, Le Mouvement Social, forthcoming 1986

Other activities

April 1985: Seminar given at the Department of Economics, University of Modena, Italy on government intervention and industrial structure in the British shipbuilding industry.

RISK, INFORMATION AND QUANTITY SIGNALS IN ECONOMICS

Project members on DAE research staff: Dr T.S. Worral

Teaching Officers who participate in the Project: Dr M.M. Bray
Professor P. Dasgupta
Professor F.H. Hahn
Dr T. Kehoe
Dr D.M.G. Newbery

Associate member: Dr D. Canning (DAE)

Visitors to the Project: Professor D. Levine (U.C. California)
Professor R.M. Solow (MIT)
Sponsor: ESRC

The project's purpose is to investigate both at a fairly general and abstract level and in particular contexts the consequences of 'missing markets', asymmetric information, market dependent information, quantity signals and constraints. The theory which is emerging has strikingly different implications than does the Walrasian one (on which, for instance, much Government and Monetarist policy is based). We have in this last year been increasingly interested in the macro-economic implications of our work. In particular, we have done more on the theory of the labour market, implications of perfect

competition for macro-theory and monetary theory. In all of this work the original intention of treating information and quantity signals explicitly has played an important role.

Publications, papers and other activities

Individual members' publications and papers are listed separately. We also plan to publish a volume of essays on our work, designed for the non-technical reader. This will be edited by D. Canning.

Publications:

Bray, M.M. 'Rational Expectations, Information and Assets Markets: An Introduction', commissioned by Peter Sinclair (ed), Oxford Economic Papers, June 1985 (Economic Theory Discussion Paper No 80)

Activities

'Price Setting Duopoly' (currently being revised), invited paper written and presented at meeting of The Association of University Teachers of Economics in Oxford, March 1985

Board Member of Review of Economic Studies

Publications:

Dasgupta, P. The Existence of Equilibrium in Discontinuous Economic Games; 1: Theory, (with Eric Maskin), Review of Economic Studies, January 1986

Dasgupta, P. The Existence of Equilibrium in Discontinuous Economic Games, 2: Applications, (with Eric Maskin), Review of Economic Studies, January 1986

Dasgupta, P. The Theory of Technological Competition, in J.E. Stiglitz and F. Matherson (eds), New Developments in the Theory of Market Structures, Macmillan Press (London) and MIT Press (Cambridge, Mass.), 1985

Dasgupta, P. Game Theory: An Introduction, (with K. Binmore) in K. Binmore and P. Dasgupta (eds), Social Organisations as Games, Basil Blackwell, Oxford, forthcoming 1986

Dasgupta, P. Information disclosure and the Economics of Science and Technology, (with Paul David), in G. Feiwel (ed), Essays in Honour of Kenneth Arrow, forthcoming, 1986

Dasgupta, P. Learning-by-Doing, Market Structure and Industrial and Trade Policies, (with J.E. Stiglitz), mimeo. 1985

Publications

Hahn, F.H. In Praise of Economic Theory, Jevons Memorial Lecture, published by University College London

Hahn, F.H. Equilibrium and Macro-economics, Blackwell

Hahn, F.H. Money Stability and Growth, Blackwell

Hahn, F.H. Equilibrio Economico, Disoccupazione e Moneta, La Terza, Rome

Hahn, F.H. Fix Price Models, a comment, in Frontiers of Economics (ed K.J. Arrow and S. Houkaphja), Blackwell

Hahn, F.H. Wages and Employment, Oxford Economic Papers, 1985 Economic Theory Discussion Paper No. 75

Hahn, F.H. 'An Exercise in Non-Walrasian Analysis', Economic Theory Discussion Paper no. 81 to appear in Heller and Starr (eds), Arrow and Economics (forthcoming)

Activities

Jevons Lecture University College, London, Joung Lecture (Bristol) and lectures at Harvard, MIT, Stanford and Siena

Publications

Newbery, D.M.G. Setting the Price of Oil in a distorted Economy (with A.K. Dixit), Economic Journal, 1985, Supplement, pp. 71-82

Newbery, D.M.G. 'The Effect of Protection on Manufactured Exports from Developing Countries' (with G.A. Hughes), March 1984, paper presented at Sewanee Symposium, forthcoming in a volume ed. by L. Klein and Z.A. Silberston

Newbery, D.M.G. 'Equity, Efficiency and the Pricing of Petroleum Products in Asia', April 1984, paper presented at the Energy Pricing Policy Workshop, Bangkok, 8-11 May, 1984. Revised version (August 1984) to be published in Criteria for Energy Pricing Policy (ed C. Siddayao), Graham and Trotman, London

Newbery, D.M.G. 'UK Energy Pricing Policy', paper presented to the Policy Studies Institute, December 11, 1984, published in Energy Self-Sufficiency for the UK? (ed. Belgrave and Cornell), Gower, 1985

Newbery, D.M.G. The Theory of Taxation for Developing Countries (with N.H. Stern), OUP for World Bank, forthcoming 1986

Newbery, D.M.G. Discussion of 'Certainly Equivalent Producers in the Macro-economic Planning of an Oil Economy - the case of Norway', by O. Bjerkholt, to be published in National Resources and the Macroeconomy (ed Meary, P. and van Wijnbergen, S.), for Centre for Economic Policy Research (Conference of June 1985)

Papers, original and revisions

Newbery, D.M.G. 'Wage Rigidity, Implicit Contracts and Economic Efficiency: Are Market Wages too Flexible?' (with J.E. Stiglitz)

Newbery, D.M.G. 'The Fundamental Theorem of Road User Charges', Centre for Economic Policy Research Discussion Paper No. 59, April 1985

Newbery, D.M.G. 'Risk and Trade Policy' (with J.E. Stiglitz), Economic Theory Discussion Paper No. 77, Feb 1983, currently being revised

Newbery, D.M.G. 'Pricing and Taxing Transport Fuels in Developing Countries' (with G.A. Hughes) (Report and first draft of monograph, August 1985)

Activities

Committee Member, ESRC Economic Affairs Committee

Editor, Economic Journal

Editor, Cambridge Energy Series, CUP

Visiting Professor of International Affairs, Woodrow Wilson School, Princeton University, Jan-June 1985

Economic Theory Discussion Papers:

The following discussion papers have been produced in the academic year 1984/85.

80. Rational Expectations, Information and Asset Markets: an Introduction
by Margaret Bray. November 1984

81. An Exercise in Non-Walrasian Analysis
by F.H. Hahn. November 1984

THE STUDENT'S T APPROXIMATION IN AR(1) MODELS

Project member: N.E. Savin

Associate member: S.C. Nankervis

Sponsor: ESRC

The aim of the research is to investigate the accuracy of Student's t approximation to the distribution of the t statistics for testing the regression coefficients in an AR(1) model. The accuracy of the approximation is of interest since the approximation is widely used in practice to conduct tests of hypotheses. Two specifications of the model are considered. The first is where the marginal distribution of the initial value of the dependent variable is such that the process is stationary and the second is where the initial value is treated as a known constant. The latter specification is appropriate when the process is nonstationary.

For the first specification the research has established that the distribution of the t statistic has the right shape, but the wrong mean and standard deviation. The results show that Student's t provides an accurate approximation once the statistic is adjusted to have the same mean and standard deviation as Student's t . When exogenous variables are present the mean and standard deviation depend on the nuisance parameters including the parameters of the process generating the exogenous variables. For the second specification the research has shown that the distribution of the t statistic depends in a complicated way on the nuisance parameters. The analysis examines some conditions under which the Student's t approximation is satisfactory.

The results of the research has been delivered at various seminars and conferences. These include the Econometric Society European Meeting, Madrid, 1984; Fifth World Congress of the Econometric Society, Boston, 1985; Finite Sample Conference, London, Ontario, 1985.

Newbery, D.M.G. The Theory of Taxation for Developing Countries (with N.H. Stern), OUP for World Bank, forthcoming 1988

The following two papers have been submitted to journals for publication:

Nankervis, J.C. and N.E. Savin. The Student's t Approximation in a Stationary First Order Autoregressive Model, accepted by Econometrica subject to revision

Nankervis, J.C. and N.E. Savin. Finite Sample Distributions for First Order Stable and Nonstable Stochastic Difference Equations with an Exogenous Variable, submitted to Econometric Theory

TAXING AND PRICING TRANSPORT FUELS IN DEVELOPING COUNTRIES

Project members: Dr G.A. Hughes, Dr D.M.G. Newbery

Sponsor: The World Bank

The objective of this research, which forms part of a larger project, is to formulate guidelines for the design of a set of road user charges in developing countries. This will in turn require the design of a set of taxes on transport and on transport fuels and must take into account the impact of such taxes on the distribution of income across households and on the non-transport use of fuels.

Both the tax impact analysis and road user charges components of the study were delayed by unforeseen difficulties in obtaining essential data on road conditions and traffic volumes in Tunisia, the country chosen for the primary application of the analytical techniques developed in the study. There were additional problems in obtaining, reading and analysing the most recent Input-Output Table for Tunisia. These delays set back the final stage of work on the project by almost a year, since the appropriate empirical material did not become available until the summer of 1985. Since then substantial progress has been made and a draft of most of the monograph which will report the research was completed during July and August. The project will be completed during 1985-86.

Newbery's main task completed during the past year was the reformulation of the theoretical models to calculate the marginal social cost of an extra vehicle transit on various kinds of roads, using the final versions of Road Damage Models developed at the World Bank, which became available in the early part of the year. These were calibrated for Tunisia and a set of road use costs for each type of vehicle and each category of damage and road type computed, and aggregated to give the road use cost by type of vehicle. Since the road user charges are intended to cover all social costs an attempt was made to estimate the contribution of congestion costs to total road user costs.

Transport is both a final consumption good - e.g. private cars, taxis and passenger transport - and an intermediate good, so that it is not entirely straightforward to determine the appropriate manner of recovering road use costs and to establish whether it is desirable to tax transport according to conventional optimal tax criteria. The issues are complicated by the fact that road freight transport relies almost exclusively on diesel oil as a fuel, which is also an important intermediate input into other industries, while private cars tend to use gasoline but can be switched to diesel oil. A model to investigate the desirability of taxes on intermediate inputs has been developed and this will in due course be combined with the model which investigates the impact of fuel taxes on households. Preliminary estimates suggest that the Tunisian system of transport charging has greater logic than might have appeared at first sight, though the system of licence fees could be improved.

One problem which consistently arises in attempting to model the impact of various taxes concerns the importance of substitution effects associated with the tax-induced changes in relative prices. To investigate these further Hughes has extended his model of the effect of fuel taxes in Thailand to encompass all primary sources of energy, using data for 1981-82, and to incorporate substitution between energy and other factors as well as between fuels. The results of these models are specific to the particular circumstances of the countries

and sectors examined but they provide a basis for investigating the robustness of conclusions drawn from the simpler models which do not allow for substitution effects.

Publications

G.A. Hughes, The Incidence of Fuel Taxes: A Comparative Study of Three Countries, to appear in D. Newbery and N.H. Stern (eds), The Theory of Taxation for Developing Countries

G.A. Hughes, 'Fuel Prices, Taxes and the Distribution of Income in Thailand', mimeo, University of Cambridge

G.A. Hughes, 'Substitution Effects and the Impact of Fuel Taxes in Thailand', mimeo, University of Cambridge

G.A. Hughes, and D.M. Newbery, Pricing and Taxing Transport Fuels in Developing Countries, mimeo, University of Cambridge, August 1985 - first draft of monograph reporting the results of the research

D.M. Newbery, The Design of Road User Charges and Transport Taxation in Tunisia, Part I of projected monograph

D.M. Newbery, The Theory of Road Use Costs and Transport Taxation, Part III of projected monograph

D.M. Newbery, 'The Fundamental Theorem of Road User Charges', Centre for Economic Policy Research Discussion Paper No. 59, April 1985

D.M. Newbery, On the Desirability of Input Taxes, Economic Letters, forthcoming

Seminars, etc

Papers based on the work of the project were given at seminars/workshops at Cambridge, Dundee, LSE, Warwick and Bangkok.

MONEY AND WELFARE ECONOMICS

Project member: D. Kelsey
Sponsor: ESRC Postdoctoral Fellowship held at
Churchill College

Adam Smith and subsequent writers have shown that in a competitive economy the pursuit of self-interest can lead to an outcome which society would view as efficient. Typically such theories are only concerned with those economies in which money does not play an essential role. This project aims to discover whether similar results can be established for an economy in which money has a more significant function.

Papers

1. 'The Economics of Chaos', mimeo

This paper provides a survey of dynamic systems and examines critically how it can be applied to economies.

2. 'The Consumption Function when Labour and Capital Markets are Imperfect', DAE mimeo

This paper examines the consumption function. In this, dynamic programming is used to analyse consumption behaviour in a sequence economy. Evidence suggests that the consumption function has a greater dependence on current income than standard theory would predict. The paper argues that this can be explained by the assumption that unemployment is a Markov process (that is, those employed this month have a greater chance of being employed next month than those currently unemployed). This seems a very reasonable assumption. The aim is to extend this work to provide a theory of consumer behaviour within a model of a sequence economy.

Seminars

January 1985. Seminar given at the Department of Decision Theory, University of Manchester. Title 'The Ostrogorski Paradox'.

August 1985. Seminar given at the World Econometric Society Congress in Boston. Title 'Acyclic Choice and Group Veto'.

WAGE DETERMINATION IN IMPERFECT LABOUR MARKETS

Project member: David Canning
Sponsor: ESRC Postdoctoral Fellowship Scheme

The aim of the research is to develop models of wage and employment determination in both the unionised and non-unionised sectors of the labour market, and to test the hypothesis that these theories are consistent with the experience of the UK economy. Non-cooperative game theory is used to model wage bargaining, while segmented labour market theory is applied to the non-unionised sector. I am particularly interested in developing a model of wage transmission between firms which is direct, either due to comparability arguments in wage bargaining or to the potential mobility of skilled labour, and not dependent on, or responsive to, each firm's local labour market conditions.

Progress on the theoretical side of the research has been made on three fronts. First, I have done some work on the appropriateness of mixed strategy equilibria in repeated games with many players—one of the fundamental problems of game theory. Second, a theory of structural unemployment based on game theoretic arguments has been developed, and it is shown that collusion by the employers not to compete for labour may allow each to employ more workers than in a noncooperative framework. Third, I have constructed a general equilibrium model of an economy with overlapping generations in which unions set the wage for each period and in which random (but correlated) shocks occur. It is shown that monetary policy, rather than wage adjustment, minimises employment fluctuations.

On the empirical side I have done some work with Roger Tarling on the causes on employment decline in a particular industry, clothing, between 1950 and 1979. Unlike previous studies we found that increases in the minimum wage rates set by wages councils had played a relatively small part, and that foreign competition, by taking British markets and forcing down domestic producers' prices, was mainly responsible.

Publications and papers

Wage Floors in the Clothing Industry 1950-1979, National Union of Tailors and Garment Workers

A paper entitled: 'Nash Equilibria in Repeated Non-Cooperative games with Many Players' was given at a Churchill Seminar in December 1984

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

Teaching Officers directing the project: A. Hughes, A. Singh

Associate members: A.D. Cosh, M.S. Kumar

Sponsor: Office of Fair Trading

These two projects, which are nearing completion, are fully described in the 24th Annual Report. The results are being written up in the form of a book, Institutional Investment, Take-overs and Corporate Performance, which it is hoped will be published in one of the DAE Series.

B SOCIOLOGY

REPRODUCTION OF SOCIAL INEQUALITY

Project Members: Dr R.M. Blackburn

Dr K. Prandy

Mr A. Stewart (resigned September 1985)

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

New York

Sponsor: ESRC

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.

Publications

Blackburn, R.M., 'Ideologies of Work', in D. Rose (ed.), Social Stratification and Economic Decline, Hutchinson, forthcoming

Blackburn, R.M., The White-Collar Revolution, University of Tilburg, 1985

Blackburn, R.M., 'The economics of unemployment: a sociological view', ESRC Stratification Seminar, Cambridge 1985

Stewart, A., Blackburn, R.M., and Prandy, K., Gender and Earnings: The Failure of Market Explanations, in B. Roberts, R. Finnegan and D. Gallie, New Approaches to Economic Life, Manchester University Press, 1985

THE IMPORTANCE OF SOCIAL STRATIFICATION

Project members: Dr K. Prandy

Dr R.M. Blackburn

Sponsor: ESRC

The project examines the argument that there is greater coherence in stratification arrangements than has previously been shown to exist. It re-analyses existing data sets to test our contention that relationships are stronger than previously found and evaluate the results, rather than seek to uncover new relationships. The main areas being considered are inter-generational transmission of advantage, marriage, friendship, income, education, home and car ownership and, to a lesser extent, attitudes and beliefs. An essential step has been the production of a more adequate measure of stratification which will be made available for general use. This is continuous, but one aim of the project is to explore its relationship to possible groupings into discrete classes. The project is intended both to benefit those concerned with empirical research, and also to have significant theoretical implications.

The first part of the work involved in this project is the improvement of the Cambridge scale of occupational life-styles. One problem is that certain of the sub-groups of the 1970 OPCS coding scheme (or even whole groups) are not very well represented in our main data set on patterns of interaction. It was therefore decided to add to the latter information on respondents and their friends and spouses from other of our data sets. The most recent of these has good detail, but is relatively small, while two earlier ones give further coverage of the non-skilled and non-manual occupations respectively. In the case of the second of these a certain amount of re-coding was done, while the first called for conversion from an earlier scheme.

This additional work has helped in several cases, as far as numbers are concerned, and in particular has enabled us to deal more adequately with occupations performed by women. Some work on this

was referred to in the previous report, and this has been extended. Unfortunately this aspect of our work still suffers from the paucity of numbers in comparison with males, but useful results are nonetheless being derived. For example, at a practical level we have been able to respond to a request for comments on a draft paper prepared by OPCS in relation to possible revisions of their occupational classification scheme in order to deal more effectively with female occupations. On the basis of our work we have been able to provide evidence on the desirability of, for example, sub-dividing the present categories covering clerks, typists and secretaries, and nurses.

Apart from further development of the scale, we have continued our work on patterns of social relationships with which it is closely bound up. The connection is most obvious in the case of marriage, where we have worked on the data from the 1979 and 1983 British Election Studies and from the follow-up to the Oxford Occupational Mobility Study. The same datasets as well as our own are also being used to provide information on the patterning of occupational positions between generations, mainly fathers to sons, but also including some cases of fathers to daughters (for female respondents), and fathers-in-law to sons-in-law. In the analysis of these data we are trying to develop a model of stratification encompassing both inter-generational transmission of position and choice of marriage partner. The results are in line with what we expected. That is, although we are not producing new and different results from existing datasets, we are using them to show clearer patterns. However we believe that this new degree of clarity will itself be of considerable interest.

Although the social relationships aspect of stratification is the major concern of the project, we have also extended the examination of the utility of the scale into other areas. Given the datasets that we are using, voting is an obvious one, but we cannot claim that our work throws a bright new light on what most recent studies have shown to be a rather murky area, the relation of voting behaviour to

stratification. We have been more successful with income, but we have yet to carry out analyses on other aspects of social experience.

Publications and Papers

K. Prandy, Similarities of life-style and occupations of women, in R. Crompton and M. Mann (eds), Gender and Stratification, Polity Press, forthcoming. This paper was also presented at a meeting of the Seminar group on 'Women and the Census' at the City University, London, June 1985

K. Prandy, 'Measurement and its relation to theory', lecture given at BSA Summer School, University of Exeter, September 1984

K. Prandy, 'Occupational classification and the construction of a scale of similarity of life-style', paper presented at a discussion of user requirements with regard to a revision of the International Standard Classification of Occupations, International Labour Office, Geneva, April 1985

SOCIAL IDENTITY AND THE UNDERSTANDING OF ECONOMIC CHANGE IN GEOGRAPHICAL CONTEXT

Project members: Dr R.M. Blackburn

Dr K. Prandy

D. Lovatt

Sponsor: ESRC

This research project is concerned with the ways in which economic processes, especially processes of change, are perceived and understood. The relationships between social experience and the ways in which people perceive and interpret economic processes are being investigated among a sample of men and women of diverse stratification position and ethnicity.

A sample of 280 respondents has been interviewed. The sample was designed to cover the full range of occupational experience, and was stratified by gender and ethnicity. The operation of stratification processes meant that, as expected, occupational experience differed

by stratum, non-white women in professional and managerial work being particularly rare. To overcome the problem of non-English speaking Asian respondents, the project was successful in recruiting a multi-lingual Indian interviewer, and some of the interviews were conducted in one of five languages which she spoke - Bengali, Punjabi, Hindi, Gujarati, and Urdu.

In research, social identity is conceptualised as a complex process of perceptions, cognitions, and evaluations in relation to issues and their salience in the structure of personal experience. Each respondent has been asked a range of attitudinal questions designed to measure these aspects of social identity in relation to four issues:

- (1) Occupational differentiation between men and women
- (2) Occupational differentiation between white and non-white employees
- (3) The distribution of wage income between occupational tasks
- (4) The causes of unemployment

It is a basic argument of the research that social identity varies with respect to the structure of social experience. The first three of the issues noted above are designed to measure identity in relation to issues which bear directly on the three aspects of social differentiation. In contrast, it is suggested that the experience of living in a society characterised by large-scale unemployment is a general issue which is likely to impinge, in one way or another, on the identity of all members of our sample.

An important, if secondary, aspect of the data collected during the survey was the recording of detailed work histories. This data is used to help to assess the ways in which social inequalities are reproduced under conditions of rapid economic change.

Publications and Papers

Blackburn, R.M. 'Social Identity and Social Structure', Netherlands Institute for Advanced Study, 1985

Lovatt, D. and B. Ham (1984). Class formation, wage formation and community protest in a metropolitan control centre, International Journal of Urban and Regional Research, 8(3)

Lovatt, D. and B. Ham (1984). The distributional implications of de-industrialisation, British Journal of Sociology, 35(4)

SOCIAL CHANGE AND ECONOMIC LIFE

Members of the Sociology group are taking part in this interdisciplinary project. For details see above, pp 18-19.

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 and Dr L. Miller-Bernal of Wells College have collaborated in our work. Dr Malcolm Walters and Dr Graham Lowe were visitors to the Department.

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

Dr Blackburn spent the year as a Fellow at the Netherlands Institute for Advanced Study (NIAS) in Wassenaar.

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

The group continued to organise its own seminar series.

II PUBLICATIONS

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. Growth, Acquisition and Investment, by Manmohan S. Kumar, was published in January 1985.

Company Finance and Performance: aggregated financial accounts for individual British Industries, by A. Goudie and G. Meeks, is being published by the Department early in 1986.

Several books are being prepared for the series (the titles are provisional):

Industrial Structure and International Competition (M. Landesmann)

The Impact of UK Fiscal Policy on the Northern Ireland Labour Market (B. Moore, J. Rhodes and D. Canning)

Institutional Investment, Take-overs and Corporate Performance (A. Cosh, A. Hughes, M.S. Kumar and A. Singh)

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. 88 Government Policies, European Recession and Problems of Recovery
Francis Cripps and Terry Ward
- No. 89 Medium-Term Planning with a Multisectoral Dynamic Model of the UK Economy
F. Van der Ploeg
- No. 90 Control of Medium-term Dynamic Econometric Models: An Application to the Cambridge Growth Project Model
Rick van der Ploeg
- No. 91 A Note on the Maximum Likelihood Estimation of Regression Models with First Order Moving Average Errors with Roots on the Unit Circle
M.H. Pesaran
- No. 92 Inflation, Capital Gains and UK Personal Savings: 1953-1981
M.H. Pesaran and R.A. Evans
- No. 93 Software Support for Multisectoral Dynamic Models of National Economies
William Peterson, Terry Barker and Rick van der Ploeg
- No. 94 Tests of Non-Nested Regression Models: Small Sample Adjustments and Monte Carlo Evidence
L.G. Godfrey and M.H. Pesaran
- No. 95 The J-Test as a Hausman Specification Test
Jerry Hausman and Hashem Pesaran
- No. 96 Expectations Formations and Macroeconomic Modelling
M.H. Pesaran

III OTHER ACTIVITIES

DAE LIBRARY

During the period October 1984 to September 1985 the Department received 154 periodicals: 14 of these were in exchange for the Department's Reprint Series and 50 were gifts, the remainder being purchased. The library has acquired 110 books, 982 pamphlets and 207 government publications.

COMPUTING

The Department continued to rely on the University Computing Service for most of its computing needs, although some programs have now been successfully implemented on IBM personal computers.

Iain Begg has succeeded William Peterson as Department representative to the Computing Service.

TEACHING FOR THE UNIVERSITY

During the year members of the Research Staff gave lectures for undergraduate examination courses in the following areas:

- Applied macro-economics
- Comparative industrial relations
- Current problems of the world economy
- Industrial management
- Industrial relations and the economics of the labour market
- International economics
- International economic integration

International organisation, multinational enterprise and international trade

Statistical methods and applications

The post-war international monetary system

The state, the family and the labour market

Theories of production and technical changes

They gave Seminars for Research Students in the following areas:

Labour economics

International economic integration

Philosophical issues in economics

Principles of applied economics

Studies of management and structure, performance and prospects for UK industries

They also supervised and examined post-graduate students for the degree of M.Phil, and for the degree of Ph.D in this and other Universities.

TEACHING FOR COLLEGES

Nearly all members of the Research Staff undertook undergraduate supervision teaching for the Colleges. Twelve members were Directors of Studies in Economics and two in Social and Political Sciences.

SERVICE ON UNIVERSITY COMMITTEES

Members of the Department's research staff served on the following University Committees during the year:

The Committee of Management of the Department, and its

Appointments Sub-Committee

The Faculty Board of Economics and Politics, and its

sub-committees dealing with Appointments; Lecture List and Future Needs; Admissions

EARIE CONFERENCE

The Twelfth Annual Conference of the European Association for Research in Industrial Economics was sponsored jointly by the Department and Acorn Computers. The Conference, which was organised by the DAE, took place 11-13 September, 1985. About 225 economists from Europe, North America and Australia participated. The Conference took place at a time when far-reaching changes are taking place both in the industrial map of the world economy and, for distinct but not entirely unrelated reasons, in the subject of industrial economics itself. These events have helped to place industrial economics at the heart of current concerns of the economics profession in general and of economic policy makers in particular. The DAE has many of its research staff working in this area.

A little over fifty papers were selected for presentation at the conference. The keynote address (sponsored by the Master and Fellows of St. John's College) was given by Professor Harold Demsetz of the University of California, Los Angeles, on 'The New Industrial Organisation'. Apart from those Cambridge economists who gave papers, several members of the Department and teaching officers of the Faculty of Economics took an active part in the conference as chairman of sessions and as commentators on papers. The Chairman

of the Programme Committee was Dr A. Singh. The local organising committee comprised, in addition, Dr B. Lyons, Dr A.W. Peterson, Dr A.D. Cosh and Mr I. Begg. Mrs K.M. Wilson acted as Secretary to the Conference.

IV FINANCE

During the financial year (1 August 1984 to 31 July 1985) the Department's annual expenditure was £748,608 compared with £677,076 in 1983/84. 89.0% of the expenditure was on stipends, salaries and wages.

The University Grant rose from £237,889 in 1983/84 to £251,001 in 1984/85, an increase of £13,122. Expenditure went up by £71,532.

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

	£
Economic and Social Research Council	450,286
Department of Employment	26,218
	<u>476,504</u>

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

SENIOR RESEARCH OFFICERS

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

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

V.K. Borooah, MA (Bombay), MA (Southampton), MA (Cantab),
PhD (Southampton), Fellow of Queens' College

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

T.F. Cripps, BA (Cantab), Fellow of Darwin College

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

B.C. Moore, MA (Cantab), MSc (Econ) (London), Fellow of
Downing College

M. Panić, MA (Cantab), MA (Econ) (Sheffield), PhD (Cantab)
(under Special Regulations), Fellow of Selwyn College

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

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

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

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

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

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

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

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

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

RESEARCH OFFICERS

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

N.M. Christodoulakis, PhD (Cantab)

A.W. Goudie, MA (Cantab), Fellow of Robinson College

M.S. Kumar, PhD (Cantab), Fellow of Sidney Sussex College

M.A. Landesmann, MA (Vienna), Fellow of Girton College

R.G. Lewney, BA (Cantab), MA (Amherst)

D. Lovatt, BA (Sussex), M Phil (London)

R.G. Pierse, BA (Oxon)

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

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

T.S. Worral, BA (Econ) (Liverpool), MA (Econ) Essex, PhD (Econ) (Liverpool)

JUNIOR RESEARCH OFFICERS

M. Kitson, BA (Cantab)

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

POST-DOCTORAL FELLOWS

D.J.H. Canning, BA (Belfast), PhD (Cantab), Pembroke College

E.H. Lorenz, MA (Berkeley), PhD (Cantab)

PUBLICATIONS SECRETARY

Mrs A. Newton, MA (Cantab)

RESEARCH ASSOCIATES

Dr A.D. Cosh, Department of Engineering, Fellow of Queens' College

Mrs C. Craig

Professor P. Dasgupta, Faculty of Economics and Politics

Dr C. Fraser, Social and Political Sciences, Fellow Churchill College

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

Mr A. Hughes, Faculty of Economics and Politics, Fellow of Sidney Sussex College

Dr G. Hughes, Faculty of Economics and Politics, Fellow of Churchill College

Mr R. Jobling, Faculty of Economics and Politics, Fellow of St. John's College

Professor the Lord Kaldor, Fellow of King's College

Dr T.J. Kehoe, Massachusetts Institute of Technology

Mr T. Lawson, Faculty of Economics and Politics

Mrs C. Marsh, Social and Political Sciences, Fellow of Newnham College

Professor J. Meade, Fellow of Christ's College

Dr B. McCormick, University of Southampton

Dr G. Meeks, Faculty of Economics and Politics, Queens' College

Dr J.G. Meeks, Fellow of Robinson College

Dr D. Newbery, Faculty of Economics and Politics, Fellow of Churchill College

Dr P. Nolan, Faculty of Economics and Politics, Fellow of Jesus College

Dr M.H. Pesaran, Faculty of Economics and Politics, Fellow of Trinity College

Mr P. Petit, CEPREMAP, Paris

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

Professor Sir Richard Stone, Fellow of King's College

VISITING SCHOLARS, OCTOBER 1984 - SEPTEMBER 1985

Dr P. Auerbach, Kingston Polytechnic

Professor N.M. Bedford, University of Illinois at Urban-Champaign, USA

Dr L. Benelbas, Ministry of Economics and Finance, Madrid, Spain

Mrs V.K. Borooah, University of Southampton

Professor A. Del Monte, University of Naples, Italy

Mr H. Guiliiani-Cury, Central Bank of the Dominican Republic

Professor G.S. Lowe, University of Alberta, Canada

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

Mr F. Pellerano, Central Bank of the Dominican Republic

Dr H. Reynolds, University of Texas at Dallas, USA

Dr D. Schiliro, University of Messina, Sicily

Dr G. Serafetinidis, Panteios School of Political Science, Athens, Greece

Mr R.S. Volpato, University of Tasmania

Dr M.J. Waters, University of Tasmania

Mr E. Wolleb, University of Palermo, Sicily

ASSISTANT STAFF, OCTOBER 1984 - SEPTEMBER 1985

Mrs I. Bailey

Mrs M.J. Barnett

Mr E.D. Bougourd

Ms M.V. Clark

Mrs R. Coe

Miss D.M. Day

Mrs S.L. Douglas

Ms T.C. Gurner

Miss C.A. Hudson

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Miss S. Metcalfe

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Mrs O.E. Peppercorn

Miss S.D. Seal

Mrs E.L. Scott

Mrs B.P. Watson

Mrs K.M. Wilson