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DEPARTMENT OF APPLIED ECONOMICS

TWENTYSIXTH REPORT

ACTIVITIES IN THE PERIOD

OCTOBER 1985 to SEPTEMBER 1986



University of Cambridge

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DEPARTMENT OF APPLIED ECONOMICS

Sidgwick Avenue, Cambridge CB3 9DE

Director: W.A.H. Godley

T W E N T Y S I X T H R E P O R T

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

O C T O B E R 1985 t o S E P T E M B E R 1986

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Mrs M. Barnett

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Secretary

Mrs K.M. Wilson

TWENTYSIXTH REPORT OF THE
DEPARTMENT OF APPLIED ECONOMICS
(covering the year October 1985 to September 1986)

I RESEARCH ACTIVITIES

This section outlines the work done in 1985-86 on the research projects being conducted in the Department.

A ECONOMICS

GROWTH AND FLUCTUATIONS IN THE BRITISH ECONOMY:
PROJECTIONS FOR PLANNING

Project members

Professor Sir Richard Stone	Professor of Finance and Accounting University of Cambridge
Dr T.S. Barker	Senior Research Officer
Dr V.K. Borooah	Senior Research Officer
Dr J.P. Dunne	Research Officer (joined October 1985)
Dr M.S. Kumar	Research Officer
Dr M. Landesmann	Research Officer
Dr K. Lee	Junior Research Officer (joined October 1985)
Dr M.H. Pesaran	Reader, Faculty of Economics and Politics (Principal Investigator)
Dr A.W.A Peterson	Lecturer, Faculty of Economics and Politics, University of Cambridge (Principal Investigator)

Mr R.G. Pierse	Research Officer
Mr A. Snell	Junior Research Officer (resigned September 1986)
<u>Associate members</u>	
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 (1985) 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 M. Weale	Department of Applied Economics, University of Cambridge
Professor L.A. Winters	Department of Economics, University College of North Wales

Visitors to the Project:

Mrs G. Gunluk-Senesen	Department of Economics, University of Nottingham
Dr K. Peter	Central Planning Office, Budapest, Hungary
Dr L. Tomaszewicz	Institute of Econometrics and Statistics, University of Lodz, Poland
Dr P.-R. Agenor	Department of Economic and Business Studies, University of Liverpool
Dr P.J. Crossman	Department of Economics, James Cook University, Queensland, Australia

Funding

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

The objectives and organisation of the research

The aim of this project, which is under the direction of 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:

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
Kevin Lee	industrial employment equations; labour supply
Hashem Pesaran	aggregation/disaggregation
William Peterson	energy submodel
Richard Pierse	income, spending and portfolio allocation of the personal sector; econometric methods; solving the model over the past
Andrew Snell	the exchange rate

Progress of the research

The work on the present version of the model was consolidated for publication in the book The Cambridge Multisectoral Dynamic Model, (edited by Terry Barker and William Peterson and to be published early in 1987 by Cambridge University Press. Work began on the next version, with estimates being made of all the main macro-equations in the model as well as of the Rotterdam system of equations for consumers' expenditures. A major effort went into the development and application of tests for aggregation bias and papers on the topic have been presented at several conferences. Research has also been done in the areas of consumers' expenditure, the structure of the labour market, wage determination and the exchange rate. Finally, the model has been successfully transferred to the ESRC Macroeconomic Bureau in Warwick and onto a 'supermicro' - the Acorn Cambridge Workstation.

Relationship with the ESRC Macroeconomic Modelling Bureau

The 1985 version of MDM6, together with the forecasts produced by Cambridge Econometrics (1985/2 and 1985/3), were sent to the ESRC Macroeconomic Modelling Bureau at the University of Warwick 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 provided data and estimates of the average earnings equation in the DGP model which were compared to estimates from the other models.

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, Terry (1985a) Forecasting the economic recession UK 1979-82: a comparison of model-based ex ante forecasts. Journal of Forecasting, Vol. 4, pp. 133-151

Barker, Terry (1985b) Endogenising input-output coefficients by means of industrial submodels, pp. 183-192 in A. Smyshlyaev (ed.) Input-Output Modelling, IIASA, Laxenburg, Austria

Barker, Terry (forthcoming a) 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

Barker, Terry (forthcoming b) Modelling economic structure and change in the British economy. Vierteljahreshefte Deutsches Institute fur Wirtschaftsforschung

Barker, Terry and Paul Dunne (eds) (forthcoming) The British Economy after Oil: Manufacturing or Services? Croom Helm Ltd, London

Barker, Terry and William Peterson (eds) (forthcoming) The Cambridge Multisectoral Dynamic Model of the British Economy, Cambridge University Press, Cambridge

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 (1986) Aggregate consumption and the distribution of income. The Economic Journal, Vol. 96, pp. 449-466.

Borooah, V.K. and D.R. Sharpe (1985) Household income, consumption and savings in the United Kingdom. Scottish Journal of Political Economy, Vol. 32, pp. 234-256

Borooah, V.K. and F. van der Ploeg (1986) Oligopoly power in British industry. Applied Economics, Vol. 18, pp. 583-598

Borooah, V.K. (forthcoming) Politics and economics, in J. Eatwell, M. Milgate and P. Newman (ed) The New Palgrave: A Dictionary of Economic Theory and Doctrine

- Dunne, J.P. (forthcoming a) The Employment Consequences of Military Expenditure: A Comparative Assessment. World Employment Programme Research, Working Paper, International Labour Office, Geneva, 1986
- Dunne, J.P. (forthcoming b) Using Input Output Models to Assess the Employment Effects of Military Expenditure: a Comparative Assessment. Paper presented at International Institute for Applied Systems Analysis, Input-Output Meeting, Warsaw, December, 1985. Papers and Proceedings, 1986
- Dunne, J.P. with P. Elias (forthcoming c) Jobs After TOPS: An Analysis of Survey Data from the Training Opportunities Scheme. Institute for Employment Research, Research Report, 1986
- Kumar, M.S. (1985) Socio-economic goals in energy pricing policy, in Siddayao, C. (ed.) Criteria for Energy Pricing Policy, Graham and Trotman
- Kumar, M.S. and M. Munasinghe (forthcoming) Pricing Energy for Equity and Efficiency. To be published by the ILO
- Kumar, M.S. and K. Lee (1986) Modelling and aggregating labour demand functions. Paper presented at the Conference on 'Manufacturing and Services', Robinson College, Cambridge, June. Published in the Proceedings
- Kumar, M.S., M.H. Pesaran and R.G. Pierse (1986) On the problem of aggregation in econometrics. Discussion Paper Number 67, Banca D'Italia
- Kumar, M.S. (1986) Financial Institutions, Conglomerate Organization and Economic Performance, with A. Hughes, A. Singh and A. Cosh. Forthcoming as OFT Occasional Paper
- Landesmann, Michael and R. Pierse (1986a) Industrial policies in the U.K., 1973-1981, in a volume ed. by A. del Monte on Industrial Policies in Europe, Naples.
- Landesmann, Michael (1986b) Conceptions of technology and the production process, in a volume ed. by M. Baranzini and R. Scazzieri, Foundations of Economic Analysis, Blackwell
- Landesmann, M. (1986c a) U.K. Policy and the international economy, in P. Nolan and S.H. Paine (eds), Rethinking Socialist Economics, Polity Press
- Landesmann, Michael (forthcoming a) Industrial structures and international competition in the European Communities. DAE Occasional Paper
- Landesmann, M. (forthcoming b) Views on economic crisis, international economic relations and trade policy in inter-war Germany, Osaka City University Economic Review

- Landesmann, M. and A. Snell (forthcoming) Implications of a Modernisation Strategy for the UK Economy, in W. Krelle (ed.), Economic Growth and Structural Change, Analysis and Forecast
- Pesaran M.H. and R. Smith (1985) Keynes on Econometrics, in T. Lawson and M.H. Pesaran (eds) Keynes' Economics: Methodological Issues, Croom Helm, 1985, pp. 134-150
- Pesaran M.H. and R. Smith (1985) Evaluation of macroeconomic models. Economic Modelling, 2, pp. 125-134
- Pesaran, M.H., R.P. Smith and S. Yeo (1985) Testing for structural stability and predictive failure: a review. Manchester School, September, pp. 289-295
- Pesaran, M.H. (1985) Formation of inflation expectations in British manufacturing industries. Economic Journal, 95, pp. 948-975
- Pesaran, M.H. and R. Tarling (1986) Changes in the UK male labour force in the post-war period, in A. Dogramaci (ed) Measurement Issues and Behaviour of Productivity Variables, Kluwer-Nijhoff, Boston, pp. 41-97
- Pesaran, M.H. and T. Lawson (eds) (1985) Keynes' Economics: Methodological Issues, Croom Helm, 1985
- Pesaran, M.H. and M. McAleer (forthcoming) Statistical inference in non-nested econometric models. Applied Mathematics and Computation
- Pesaran, M.H. (1986) Structural Keynesianism: an alternative to monetarism, in P. Nolan and S.H. Paine (eds) Rethinking Socialist Economics, Polity Press
- Pesaran, M.H. (forthcoming a) Global and partial non-nested hypotheses and asymptotic local power, Econometric Theory
- Pesaran, M.H. (forthcoming b) Econometrics, The New Palgrave: a dictionary of economic theory and doctrine, Macmillan
- Pesaran, M.H. (forthcoming c) Non-nested hypotheses, The New Palgrave: a dictionary of economic theory and doctrine, Macmillan
- Pesaran, M.H. (forthcoming d) The Limits to Rational Expectations, Basil Blackwell, Oxford
- Pesaran M.H. and B. Pesaran (forthcoming) An Interactive Time-series Econometric Package for Data Processing, Estimation, Hypothesis Testing and Forecasting, Oxford University Press
- Peterson, A.W.A. (forthcoming) Keynesian policies for voluntary unemployment, in Cahiers de Recherche Economique de Louvain

Peterson, William and Terry Barker. 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

Pierse, R.G. (with M. Lubrano and J-F Richard) (1986) Stability of a UK money demand equation: a Bayesian approach to testing exogeneity, Review of Economic Studies, October 1986

Pierse, R.G. (with M. Landesmann) (1986) Gli effetti delle politiche industriali in Gran Bretagna dal 1973 al 1981, Chapter 4 in A. Del Monte and S. Vinci (eds) La Politica Industriale in Europa e Negli Stati Uniti, Liguori Editore, Napoli

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

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

Ryan, P, M.S. Kumar and L. Osberg (1986) The Sterling exchange rate and the structure of prices and wages in the UK, 1970-1981, Cambridge Growth Project Discussion Paper No. 2

Conference Papers

The following papers have been presented at conferences during the year

European Production Study Group Conference on Unemployment in Europe, Maastricht, April 1986

William Peterson Keynesian policies for voluntary unemployment

ILO Conference on Energy, Bangkok, Thailand, 26th-28th March 1986

M.S. Kumar and Pricing energy for equity and efficiency
M. Munasinghe

European Public Choice Society, 1986 Meeting, Noordwijkerhout, Holland

V.K. Borooah The growth of government expenditure in the United Kingdom

Cambridge Growth Project/Cambridge Econometrics Conference on Manufacturing or Service: UK Industry and the Economy, Robinson College, Cambridge June 1986

V.K. Borooah The structure of MDM

A.W.A. Peterson Modelling the supply side of industry

V.K. Borooah Expenditure and price elasticities and consumers' expenditure

T.S. Barker International trade in oil, services and manufactures and the British economy

J.P. Dunne Modelling the Public Sector

R. Pierse Disaggregation and modelling

M.S. Kumar and K. Lee Modelling and aggregating labour demand functions

Eighth International Conference on Input-Output Techniques, Sapporo, Japan, July 28th-August 2nd 1986

Terry Barker Development in the Cambridge Multisectoral Dynamic Model (MDM) of the British Economy
and

Industrial Planning using an input-output model of a market economy: the effects of the 1985-86 fall on oil prices on the British economy

William Peterson Supply functions in an input-output framework

and
A computer modelling language for input-output analysis

European Meeting of the Econometric Society, Budapest, September 1986

R.G. Pierse On the problem of aggregation in econometrics

Meetings of the IIASA Project on Economic Growth and Structural Change, Lodz, Poland, December 1985 and Sofia, Bulgaria, June 1986

M. Landesmann and Implications of a modernisation strategy
A. Snell for the UK economy

Lectures and Seminars

- | | |
|--|---|
| Andrew Snell and
Michael Landesmann | 'Model simulations with alternative scenarios
of world trade, world prices and
productivity growth'
(given to the Cambridge Growth Project,
November 1985) |
| Mohan Kumar and
Paul Ryan | 'Industrial wage structure, international
trade and union activity'
(given to the Cambridge Growth Project,
November 1985) |
| William Peterson

and | 'The EEC HERMES model of the UK economy'
(given to the Cambridge Growth Project,
November 1985)

'Designing a modelling language for
input-output models'
(given to the Cambridge Growth Project,
February 1986) |
| Kevin Lee | 'An empirical investigation of the frequency
of industrial wage change in the UK'
(given to the Seminar for Labour Economics,
LSE, February 1986). |
| Vani Booroah | 'The growth of Government in the UK'
(given to the Cambridge Growth Project,
March 1986) |
| Richard Pierse | 'On the problem of aggregation in
econometrics'
(given to the Macro-modelling Study Group,
LSE, 9th May 1986) |
| Richard Pierse and
Andrew Snell | 'Some implications of temporal aggregation for
econometrics'
(given to the Cambridge Growth Project,
May 1986) |
| Terry Barker and
Paul Dunne | 'The effects of the fall in oil prices on the
UK economy: simulations with MDM6'
(given to the Cambridge Growth Project, May
1986) |
| Vani Booroah and
Kevin Lee | 'The demand for female employment'
(given to the Cambridge Growth Project, May
1986) |
| Richard Pierse and
Andrew Snell | 'Temporal aggregation in economic modelling'
(given to the Cambridge Growth Project,
June 1986) |

Growth Project Papers (GPP)

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|-----|---|
| 572 | Statistical inference in non-nested econometric models - M.H. Pesaran and M. McAleer |
| 573 | Structural Keynesianism as an alternative to monetarism - M.H. Pesaran |
| 574 | Two-step, instrumental variable and maximum likelihood estimation of multivariate rational expectations models - M.H. Pesaran |
| 575 | Short-run macroeconomic adjustment in a small open economy: an econometric analysis - P.-R. Agenor |
| 576 | Using input-output models to assess the employment effects of military expenditure: a comparative assessment - J.P. Dunne |
| 577 | Longer term prospects for the UK economy: the possible effects of oil price and exchange rate changes - G. Duffy and J.P. Dunne |
| 578 | Keynesian policies for voluntary unemployment - A.W.S. Peterson |
| 579 | On the problem of aggregation in econometrics - M.H. Pesaran, R.G. Pierse and M.S. Kumar |
| 580 | The effect of changes in Britain's industrial structure on relative pay and employment - V.K. Booroah and K. Lee |
| 581 | Permanent income, rational expectations and government consumption: a multi-country study- V.K. Booroah |
| 582 | Implications of a modernisation strategy for the United Kingdom - M. Landesmann and A. Snell |

Growth Program Manuals

- | | |
|---|---|
| 5 | MDM6 Users Manual (October 1985) - Terry Barker |
|---|---|

ASSESSING ECONOMIC POLICY IN THE UK AND EUROPE

Project Members:

M. Anyadike-Danes	J-C Moreno-Brid
N. Christodoulakis	T.S. Ward
K.J. Coutts	
Professor W. Godley	

Associates

T.F. Cripps
R. Rowthorn

Sponsor: ESRC

This report covers the third 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.

Macroeconomic Theory and Policy

During the past year the work undertaken on this project has fallen into three categories; policy analysis and medium-term forecasting to the British and World economy, the continuation of work on macroeconomic theory, and particular empirical studies

(a) Policy analysis and forecasting

A study of the strategic problems facing the UK economy was undertaken last spring by K. Coutts, W. Godley, R. Rowthorn, and T.S. Ward. This was widely circulated in the form of a paper called The British Economy: Recent History and Medium Term Prospects.

This work formed the basis for a half an hour lecture on Channel 4 by W. Godley which was subsequently published in New Society.

Work on the world economy, conducted by T.S. Ward with T.F. Cripps acting as consultant, has been divided into two main parts, both of which have been carried out in collaboration with other members of the European Federation for Economic Research (FERE), which is based in Paris and includes economists from CEPREMAP and BIPE in Paris, ISMERI in Rome and the Universities of Parma and Turin, SEVI in Brussels, the University of Antwerp, research institutes in Madrid and Santiago, the Panteios School of Political Science in Athens, ESRI in Dublin, the University of Bremen and the DAE. One part consists of a study of the position of Europe in the world economy, while the other consists of an analysis of labour market developments in European countries during the period since 1973.

So far as the first part is concerned, the results of the study were presented at a conference in Brussels in January 1986, attended by officials from a number of directorates of the European Commission (including the Directorate-Generals for Economic and Financial Affairs and Employment and Social Affairs, members of the European Parliament including representatives from most European countries and the Chairman of the Economic Committee) and economists from Europe. Work on this part has concentrated on preparing an analysis of Europe's changing trade and financial relations with the rest of the world, using the model of the global economic system developed over the past few years. This demonstrates both that the policies adopted by European governments bear a major part of the responsibility for the recession in Europe over the past decade and that without European recovery there is little chance of the global economy as a whole sustaining the rates of growth achieved before 1973.

It argues that the failure of governments in Europe to pursue expansionary policies is attributable not only to a desire to maintain control over potential domestic sources of inflation, particularly

wages, but also to a fear of falling foul of international financial markets, of provoking capital outflows and a collapse in the exchange rate which could lead to a financial crisis as well as increased domestic inflation. Until European governments succeed in establishing a joint mechanism for managing exchange rate movements between their currencies which (unlike the present EMS) does not operate by subordinating ultimate economic objectives to the maintenance of exchange rate stability, growth in all parts of Europe is likely to remain slow. It is the fragmentation of monetary management which explains the failure of governments in Europe to respond to the US expansion in 1983 and 1984 in a way which might have transformed it into a global recovery.

Since the conference in January 1986, an attempt has been made to incorporate the large and sudden fall in the price of oil into the model and to examine its implications. The conclusion which emerges is that this fall might at best bring about a temporary upturn in world economic activity, but in essence it represents merely a redistribution of income from oil-producing to oil-consuming countries: it will not produce higher long-term growth unless the consuming countries which benefit adopt policies which are sufficiently expansionary to offset the restrictive policies forced upon the producing countries which lose. A further conclusion is that, even without recovery in world economic growth, prices of oil are unlikely to remain at their present low level for very long given the implications for OPEC oil production. Prospective developments under alternative assumptions about policy and other key economic factors have been explored with the aid of the model to assess the implications for European growth and to identify what would need to happen for recovery to be achieved.

The results of the other part of the work, on labour market developments, were published in book form in French in April 1986 this year under the title La Flexibilité du Travail en Europe (Editions la Découverte). This book has been translated into English during the course of the year and will be published by Oxford University

Press in 1987. This book should perform a valuable service in providing an insight into the French 'regulation' approach to the analysis of economic development for English readers, as well as representing an interesting account of changes in wage bargaining, working practices and social welfare in seven European countries during the economic crisis of recent years.

A Conference of the FERE was held in Selwyn College, Cambridge, June 1986 on Cities in Europe and the Economic Crisis.

(b) Macroeconomic Theory

Steady progress has been made, although most of this work still takes the form of overlapping working papers. A paper IS-LM and stock flow models with inflation was presented to the AUTE Conference in April 1986 by K. Coutts and W. Godley and has been submitted to the Economic Journal. A related piece by N. Christodoulakis and A. Boitani 'A note on IS-LM and stock adjustment processes' has been submitted to the Manchester School.

A great deal of work has been done, largely by Anyadike-Danes, attempting to relate the theory adumbrated by Godley and Cripp's book Macroeconomics to the standard paradigm as evolved, in particular, by Tobin. Considerable insights have been gained into the meaning of the models proposed inter alia by Modigliani, Barro and Grossman, Malinvaud and Tobin by the use of numerical simulations.

(c) Empirical studies

W. Godley and N. Christodoulakis have evolved a simulation model designed to analyse alternative trade policy options (devaluation, tariffs or other forms of protection) taking account of alternative degrees of wage indexation and retaliation.

K. Coutts, W. Godley and J. C. Moreno-Brid have completed an elaborate up-date of earlier work on normal cost pricing, entitled 'Industrial pricing in the UK under conditions of stagflation'. The results of this study are of particular interest because they show how domestic wholesale prices of manufactures have continued to track normal costs throughout the last 20 years of violent fluctuation both in demand and costs; no evidence was found that demand affects the relationship between prices and normal costs even during this turbulent period. This study of pricing also contains some interesting new features; for instance, it offers and tests a theory which makes behavioural sense of the observed tendency of prices to lag behind costs. It has also proved possible to rearrange the material to produce an analysis of the behaviour of profits.

An empirical analysis of both the French and US economies has been continued using a highly aggregative stock flow model. The work, particularly on the US economy, has been undertaken by Michael Anyadike-Danes and is now at a very advanced stage.

Summary of main papers

<u>The British Economic: Recent History and Medium Term Prospects</u>	K. Coutts, W. Godley R. Rowthorn, T. Ward
Channel 4 'Opinions' Lecture	W. Godley
IS-LM stock flow models with inflation	K. Coutts, W. Godley
A dynamic model for the analysis of trade policy options	N. Christodoulakis W. Godley
A Note on IS-LM and stock adjustment processes	A. Boitani N. Christodoulakis
Industrial pricing in the UK under conditions of stagflation	K. Coutts, J.C. Moreno-Brid, W. Godley
Real wages and employment: a question mark	W. Godley

A MACROECONOMIC MODEL OF THE DOMINICAN ECONOMY

Project Members: K. Coutts and T.S. Ward
Visitors: F. Pellerano) Economic Section of the
H. Guiliani) 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 so that the Central Bank can analyse the impact of external shocks on the domestic economy and evaluate the implications of alternative economic policies.

The project began in September 1985 with a visit to Cambridge for one month by F. Pellerano and H. Guiliani of the Central Bank. A second visit took place in November. The first stage of the project involved constructing a set of data banks and analysing a large number of time-series data for its reliability and internal consistency. Some of this work was done in Cambridge, but the most of it was done by Pellerano and Guiliani in Santo Domingo.

Coutts spent one month in April 1986 at the Central Bank developing a proto-type model and working on some of the major data problems arising in adapting Dominican economic statistics for modelling purposes. Ward spent two weeks at the Bank working on the public sector accounts to derive the first set of consistent estimates of the consolidated public sector. Coutts, Pellerano and Guiliani produced new estimates of external trade values in domestic currency which made it possible for improved estimates of the expenditure composition of GDP to be calculated.

A conference on macroeconomic modelling in developing countries, organised by the Central Bank, was held at the end of April 1986 in the Dominican Republic. The participants gave papers outlining their experience in implementing various types of economic models in

Mexico, Venezuela, the Andean Pact nations and the South East Asian economies. Speakers also introduced papers on the methodology of macroeconomic modelling and on assessing IMF structural adjustment programmes in several developing economies. Staff members of the Central Bank, economists from government departments and the universities attended the sessions.

A third visit was made by Pellerano and Guiliani in June 1986 for one month to develop the specification and testing of the model's principal behavioural equations. Work was done on the external sector and the public sector. Coutts, Guiliani and Pellerano contributed a paper for the International Institute for Labour Studies on stabilisation policies in the Dominican Republic and IMF standby loans.

Conference attended:

"Macroeconomic models for developing countries", conference organized by the Central Bank of the Dominican Republic, April 1986, Puerta Plata, Dominican Republic.

Paper published:

"Stabilization programmes and structural adjustment policies in the Dominican Republic", by K.J. Coutts, H. Guiliani Cury and F. Pellerano. Paper prepared for Labour and Society, journal of the International Institute for Labour Studies, ILO, October 1986.

RECONCILIATION OF TRANSACTIONS AND BALANCES IN THE UK NATIONAL ACCOUNTS

Project Members: M. Anyadike-Danes
A. Homenidou-Stronge

Sponsor: DAE

National accounts statistics emerged in their modern form in the wake of the Keynesian revolution and their emphasis until very recently on flows, to the virtual exclusion of stocks, strongly reflects these origins. While it is true that estimates for stocks of fixed capital and inventories have been available for some time, information on stocks of financial assets have begun to appear only in the last few years. However, this newer balance sheet data has not to date been reconciled with the transactions-based national accounts in a consistent way, a defect which it is the aim of this project to remedy. The resulting fully integrated dataset for the years 1966 to date, apart from being of interest in itself, will then provide an important input into macroeconomic modelling of expenditure and portfolio allocation.

The first stage of the project has involved assembling the basic stock and flow data. Much of the relevant material has been obtained from the computerised CSO databank via the ESRC's Centre for Economic Computing using the JANET network. But the balance sheet data obtained in this way has had to be supplemented using unpublished figures supplied directly by the CSO for the years 1966-1974. It is envisaged that this initial stage will soon be complete and that the process of reconciling the sectoral balance sheets and transaction flows by asset category can then commence.

Considerable interest has already been shown in the progress of this research, particularly by the CSO, who have invited one of the project members to participate in an inter-Departmental Working Party which has been set up to discuss related developments in official statistics. The CSO have also promised their full cooperation in providing further unpublished data and, where appropriate, information on its construction.

LABOUR STUDIES GROUP

Members: Jill Rubery, Roger Tarling,
Frank Wilkinson

Associate Members: David Canning, Christine Craig, Michael Kitson

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.

The Eighth conference of the International Working Party on Labour Market Segmentation was held this year at Newnham College, Cambridge, organised by Jill Rubery and Frank Wilkinson. The conference was sponsored by the Cambridge Journal of Economics, the International Institute for Labour Studies at Geneva, and the Department of Applied Economics. The theme for the conference was 'The New Regulatory Framework'. Sixty participants attended the conference, from 14 countries. A selection of papers from the conference will be published as a book edited by J. Rubery and F. Wilkinson.

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 is described in greater detail in the 25th Annual Report.

During the academic year 1985/86, four papers have been prepared, drawing on the material collected from case-studies of firms for this project. Frank Wilkinson prepared three papers: 'The Flexible Firm and Structured Labour Markets', published in Work and Society; a paper for the International Working Party on Labour Market Segmentation Conference on 'Consumer Demand, Retail Organisation and the Structuring of Production'; and a briefing paper for the BBC on 'Markets, Industrial Development and Labour Organisation'. Jill Rubery, Roger Tarling and Frank Wilkinson prepared and presented a paper on 'Flexibility, Marketing and the Organisation of Production' at the International Symposium on Labour Market Flexibility organised by the International Institute of Labour Studies, Geneva. This paper is to be published by the Institute.

3. Industrial Organisation and Competitiveness: an International Comparison of the Footwear Industry

Project members: Jill Rubery, Frank Wilkinson
Sponsor: Centre d'Etudes de l'Emploi

This project is concerned with a comparison of industrial organisation and competitiveness in the Italian, French and British shoe industries, undertaken in collaboration with a team from the Centre d'Etudes de l'Emploi, Paris and a team from the University of Modena, Italy. Several meetings of the research teams have been held, the fieldwork largely completed and the interim reports on the project submitted. The main factors of interest which are emerging from the results are the importance of the differences in the system of retail organisation in determining industrial organisation and competitiveness and the much greater importance of investment in new technology designed to improve responsiveness of the production system to market demand, then investment in more modern processing equipment. The fieldwork will be completed and the individual country reports written in the first half of this academic year. When the individual country reports have been translated into French and English, work will begin on a joint comparative analysis.

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.

The first study is an intensive survey of the employees of a sample of firms to be included in the core survey as detailed case studies. The intention is to link directly the employment policies and practices of the firms to the attitudes, skills and job orientations of their employees. These parallel studies will also provide the way of linking the changing economic, technical and institutional environment to the labour market experiences of individuals and how this is subsequently modified.

The second related study surveys a sample of households and investigates welfare organisation and provision and the role in this played by occupation-linked and other private schemes, state financed social security and that provided within the family and community. The focus on welfare provision is intended to bring together the study of current changes in employment opportunities and changes in family and social organisation, and thus provide a basis for the comprehensive analysis of changes in social and economic life which underlies this initiative.

An important feature of the first 12 months of the research has been the largely unanticipated commitment of time and energy to the development of the core surveys. Even before October 1985 Jill Rubery was heavily committed to the preparation of the work attitude/work history core survey and Cathy Marsh was a member of the tendering sub-committee. From the beginning of October Jill Rubery continued to be a full participant in the work attitude/work history sub-committee with particular responsibility for employees and for the self-employment schedule; Cathy Marsh has advised on sampling strategies and doorstep procedures, helped set-up SPSS-X control deck for analysing the pilot data and has advised on the

employment section of the work attitude/work history survey; Brendon Burchell has had a watching brief on unemployment in the household survey and provided an initiative-wide analysis of the pilot data service; Ray Jobling is the co-ordinator of the welfare working group for the household survey; Colin Fraser is a full participant in the household survey sub-committee; and Frank Wilkinson is a full participant in the employer telephone survey sub-committee. Whilst this participation in setting up the core surveys has been much more time consuming than was planned for, it has had important benefits both as a learning process but also as a way of bringing together members of different teams with similar research interests.

At the local level the background work on Northampton and the establishing of contacts with employers' and trade union organisations, local politicians and local government officials has gone ahead.

Contacts have also been made with individual employers and the preparation of the employers and employees survey for the first related study is well in hand. It is planned to conduct the main survey work for this related study from November to Easter with the necessary prior piloting. The 'Welfare' related study is also being organised and Ray Jobling has established contact with key officers in the health and welfare services in Northampton and is also preparing a section for the employers survey designed for the purpose of assessing their contribution both to welfare (broadly defined to include social attitudes) and to the community.

The core survey of work attitude and work history (subcontracted to Public Attitudes Surveys Limited) was successfully piloted and the main wave interviewing began in July and is now virtually complete. The core survey of employers (by telephone and undertaken by the Policy Studies Institute) has been piloted and is scheduled to begin in October 1987. The household survey (of a subsample of the individuals covered by the work attitude and work history survey) has now reached the piloting stage.

Working Papers presented to Core-Survey sub-committees or to Initiative meetings

Jill Rubery	Labour Market segmentation theory and the initiative (May 1985)
	Perceptions of labour market segments (July 1985)
Dr C. Fraser	The Cambridge team's interest in the household and community survey (April 1986)
F. Wilkinson	Real wages, changing patterns of consumption and retail trade: the implications for production (April 1986)
B. Burchell and C. Marsh	How tired are you of attitude surveys? Tired, very tired or completely exhausted? (February 1986)

Seminars

Frank Wilkinson	'Deregulation, segmented labour markets and unemployment', Unemployment seminar, Faculty of Economics, Cambridge University, October 1985
	'Flexibility, Marketing and the Organisation of Production', International Symposium on Labour Market Flexibility, International Institute for Labour Studies, Geneva, September 1986
Jill Rubery	Discussant at conference in Avignon organised by the EEC Commission on the Labour Force Sample Survey, in January 1986
	'Women and the recession' seminar at University of Durham, February 1986
	'Women and low pay', lectures at Cranfield Institute of Technology, March 1986
	'Women and recession: a comparative analysis' International Working Party on Labour Market Segmentation Conference, July 1986
Brendon Burchell	(with J. Devereux) The influence of family unemployment on the values of school children, British Psychological Society, December 1985
	The influence of fathers' unemployment on the values of school children, Unemployment seminar, Faculty of Economics, Cambridge, Spring 1986

Publications

- Burchell, B.J. Information-search and the testing of hypotheses about other people, Questioning Exchange, in press, 1986
- Burchell, B.J., Devereux, J. The Influence of Family Unemployment on the Values of School Children, abstract, British Psychological Society Bulletin 1986
- Craig, C., Garnsey, E. and Rubery, J. Labour market segmentation and women's employment: a case-study from the United Kingdom, International Labour Review, 1985
- Garnsey, E., Rubery, J. and Wilkinson, F. Labour market structure and work-force divisions, in R. Deem and G. Salaman (eds), Work, Culture and Society, Open University Press, 1985
- Rubery, J. Trade unions in the 1980s: the case of the UK, in R. Edwards et al. (eds), Unions in Crisis and Beyond, Croom Helm, 1986
- Rubery, J. and Wilkinson, F. Inflation and income distribution, in P. Nolan and S. Paine (eds) Rethinking Socialist Economics': a New Agenda for Britain, Polity Press, 1986
- Wilkinson, F. The flexible firm and structured labour markets, Work and Society, 1985
- Wilkinson, F. Deregulation, segmented labour markets and unemployment, in P. Pederson (ed.), volume of papers from Bornholm Conference on Unemployment Research, de Gruyter, Berlin, forthcoming

5. The Service Sector

Project members: R.J. Tarling, M. Kitson, F. Wilkinson
Associate member C. Craig
Sponsor: Department of Employment

Aims of the research

The persistent growth of employment in services in all advanced industrial countries, even during the recent recession, strongly suggests that the main area for job creation lies in the service sector. This growth can be explained by increased consumer demand for more leisure activities - travel, sports facilities etc. - and services associated with house and consumer durable ownership linked

to increasing real income; a growth in community and social services arising from increased wealth, changing lifestyles and demographic factors; and more demand for financial and business services.

The growth of services has been accompanied by a decline in manufacturing in employment terms. This seems particularly so in Britain where the fall in manufacturing employment has led many commentators to conclude that Britain's comparative advantage now may lie in such sectors as financial and business services and tourism.

However closer examination suggests that the simple view that services provides an alternative employment base to manufacturing may be overstated. Many services specifically cater for industry and growth in these sectors can be linked to such factors as the reorganisation of production, with firms 'putting out' service functions to specialist providers, an increase in the number of small firms more dependent on outside suppliers, the development of new techniques requiring new forms of expertise, and growing competition requiring more advice on business efficiency, marketing and design. In this respect the difference between manufacturing and services is definitional and the growth in service employment is complementary to, rather than a substitute for, an expanding manufacturing sector. An important part of this project, which started in September 1985, is to distinguish between different types of services and how their growth (or decline) interrelate and interact with non-service sectors.

A second important task is to study the structure of service industries and how this has changed through time. Many service sectors have witnessed the growth of large firms as the opportunities for economies of scale and specialisation have presented themselves, as demand for services have increased and as ownership has been consolidated. At the other end of the scale, the increase in demand for consumer services (such as the repair and maintenance of houses), for consumer durables, and for the care of the young and aged; the 'putting out' by firms of technical, maintenance and other

services, and the growth of specialisation, associated with computerisation and other new methods; and the growth of private social and community services (a development given impetus by changes in government policy), have all created ample opportunities for self-employment and the establishment of small firms.

The combination of the analysis of aggregate data and carefully detailed case studies will be used to chart the developments in services and their implications for employment opportunities, labour market organisation, and for education and training requirements.

The organisation of the project is in two stages. In stage 1, we talked to a range of bodies and individuals to gain an understanding of the main factors operating in each sector, from employer and employee groups, policy makers and providers of complementary and competing services. This set of discussions has been supplemented by desk study work which was designed to identify the major characteristics of change in the sectors. Taken together, the two parts of stage 1 enabled us to select samples of firms which capture the variety of factors influencing each sector and the processes of change taking place. Stage 2 adopts a case study approach to nine sectors in the service sector, covering 24 interviews in each sector. The firms interviewed in each sector were chosen to take into account the different organisational levels of decision making and the constraints on decisions at different levels, and were given some spatial dimension to allow for local effects on the nature of service, competition between service providers and local labour markets.

Progress of the research

Interviews have been completed in four areas. There have however been significant problems in gaining access to firms. However the analysis and writing up has already begun. We anticipate completion of the analysis of the questionnaires during November 1986 and expect to be able to write up this analysis stage by stage during December 1986 and January 1987.

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

Project member: J. Rhodes

Sponsor: ESRC

Changes in regional and urban policy in recent years mean that previously developed methods for evaluating the impact of policy are no longer appropriate. Regional policy has been weakened and is now applied to small urban and rural areas rather than large standard regions. Urban policy has been strengthened and is applied to parts of the larger cities. To complicate the issue manufacturing industry in rural areas has been declining less rapidly than in urban areas but this differential relative change is itself not constant through time. The main purpose of this work is to develop a new method for evaluating the impact of urban and regional policies when applied to small areas.

This 2-year project which will terminate in March 1987 seeks to explain relative movements in manufacturing employment in small geographical areas by reference to a small group of policy and non-policy factors which are:-

- (i) urban policy
- (ii) regional policy
- (iii) local authority planning policy
- (iv) local industrial structure
- (v) urban/rural shift

The importance of these factors is being assessed with the help of time series and cross section regression analyses.

A very large and new data base has been assembled for this analysis at the local authority county and district level. The central requirement is for small area employment data which are consistent through time but also disaggregated by industry. The well-known difficulties in achieving consistency through time are associated mainly

with changes in the standard industrial classification. An additional problem is the delay in receiving the resulting of the 1984 Census of Employment which is now promised for the end of 1986.

A large analysis has been completed to measure the restrictiveness of local authority planning policies over five recent years. This is based on unpublished Department of the Environment development control data and measures the refusal rate of planning applications in each local authority area. The average refusal rate for manufacturing industry is less than 5% in remoter rural countries such as Cornwall and Cumbria, but exceeds 15% in the more highly restrictive countries such as Berkshire, Buckinghamshire, Dorset, Essex and Hertfordshire.

Variables have also been constructed to measure the relative strength of urban policy and regional policy in each local authority area. Systematic differences in employment change between urban areas and rural areas are being tested for, using various indicators of density of built up area in each district.

Publications

- J. Rhodes and B.C. Moore, The Effects of Government Regional Economic Policy, HMSO, 1986
- J. Rhodes, The Use of Census of Production Data in Regional Economic Analysis, Journal of Regional Studies, August 1986
- J. Rhodes (with B.C. Moore), Economic and Social Change in Urban Britain and the Inner Cities, in V. Hausner (ed.), Critical Issues in Urban Economic Development, ESRC Programme on the Inner City in Context, OUP, 1986

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

Project member: I.G. Begg
Associate member: 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 was on constructing a database of employment by industry in each city. The source of these data was 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 added to the database.

In addition, a database of social indicators for each of the cities has been put together. This includes indicators of demographic composition of the population, of housing mix and of various characteristics of cities that serve to classify the cities in terms of social advantage or disadvantage.

An analysis of the economic structure of each city was carried out using a classification of industries designed to bring out the effects of structural change. This revealed the importance of producer services industries as a determinant of employment growth, and also showed that cities with a preponderance of 'old' manufacturing industries - coal, steel and textiles, for example - had fared particularly badly. A paper based on this analysis has been included in a volume edited by V.A. Hausner to be published in December 1986 as part of the ESRC 'Inner City in Context' research initiative.

A final report has been submitted to ESRC, and a book bringing together all the results of the project is in preparation. In addition, a paper on the location of growing industries in Britain's cities has been written in collaboration with Professor G.C. Cameron.

Publications

Begg, I.G. and Moore, B.C.: 'The Changing Economic Role of Britain's Cities' in Hausner, V.A. (ed.), Critical Issues in Urban Economic Development, Vol. II, OUP (1986)

Begg, I.G., Cameron, G.C. and Moore, B.C.: 'The Location of Modern Industry and Employment Change in Britain' (mimeo 1986)

Conference papers

B.C. Moore: 'Structural Change in the British Economy and Employment in Britain's Cities' paper presented to the Property Research Club Conference, at Wolfson College, Cambridge, April 1986

I.G. Begg: 'The Changing Economic Role of Britain's Cities' paper presented to the ESRC/Regional Studies Association Conference on 'Changing Cities' at University of Manchester, May 1986

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. This formed the basis of two chapters of the report on 'Europe in the World Economy' submitted to the French Commissariat au Plan.

COMPANY FINANCE AND PERFORMANCE

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

Associate member: Dr L. Slater

Sponsors: Esmee Fairbairn Charitable Trust, ESRC and
Leverhulme Trust

The Cambridge/DTI Databank

Further updating has been carried out during the year of this databank of UK companies' financial accounts. In some cases the series of accounts now extends from 1948 to 1983, and further accounts will be added in the near future. A book reporting aggregates from the databank was completed and published during the year (Goudie and Meeks, Company Finance and Performance, DAE, £59).

COMPANY FAILURE AND RESCUE POLICY

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

Sponsor: Leverhulme Trust

This project involves constructing a macro-micro model of company failure and using it in policy analysis. The model has been completed and extensive simulations and retrospective analysis carried out. Writing up this work, pursuing the records of individual companies and reviewing government policy towards failing companies have

occupied this year and will not be complete until 1988. A paper describing our approach was published during the year (G. Meeks, Disaggregating the company sector, Proceedings of Bank of England/Statistics Users Council Conference, 1986); and a paper 'Economic Darwinism' (G. Meeks), describing some of the results which have emerged so far, was presented at a Darwin College seminar.

STAGFLATION: OPEN ECONOMY MANAGEMENT

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

Sponsors: ESRC and Centre for Economic Policy Research

The purpose of this project is to investigate the possibility of regulating a small open economy, such as that of the United Kingdom, by means of control rules designed to (i) keep the growth in money GDP on a target path, (ii) maintain a desired ratio of national wealth to national income, and (iii) ensure that adequate foreign exchange reserves are held.

The project falls into two parts. The first involved modifying version 7 of the National Institute model, so as to provide an instrument primarily intended for policy analysis rather than forecasting. The modifications included the incorporation of appropriate stock variables in the consumption and investment functions and the introduction of a portfolio model of exchange rate determination. These modifications were completed during the year and are described by Christodoulakis and Weale (forthcoming) and Weale (1986b).

The second part involves the design of control rules for use with various exchange rate regimes with both rational and adaptive expectations. A preliminary study was completed during the year (Christodoulakis, Vines and Weale (1986b)). Preliminary results suggest that 'cost-push' rules relying on the effect of the exchange rate on prices are an essential part of economic management if wages are very sensitive to prices. However this cost-push aspect (which is not internationally compatible) can be avoided if wage reform ensures that wages become less sensitive to prices than is at present thought to be the case. The results of this research will be presented in a book to be prepared during the coming year.

During the year work on labour market reform by James Meade was completed (Meade, 1986a, b).

Christodoulakis continued to work on frequency domain control techniques. He presented a paper (Christodoulakis and Levine, 1986) comparing frequency domain and optimal control methods to the Conference of the Society of Economic Design and Control.

A research student, Andrew Mackay, has been working on statistical problems of money GDP targets, in collaboration with the Central Statistical Office. Martin Weale also did some work in this area (Weale, 1986c).

James Meade attended the Bank of England Academic Panel, where he presented Meade (1986a) and Martin Weale attended the Panel for a meeting about the effects of interest rates on the economy. David Vines became a member of the Treasury Academic Panel.

Publications

Christodoulakis, N., D.A. Vines and M.R. Weale (1986).
Developments in New Keynesian Formation, Journal of Economic Dynamics and Control, Vol. 10, pp. 185-189

Christodoulakis, N. and M.R. Weale. (forthcoming). The Stock Exchange in a Macroeconometric Model. Economic Modelling

Grady, J. and M.R. Weale (1986). British Banking: 1960-1985
Macmillan

Meade, J.E. (1986a). Alternative Systems of Business Organisation
and Workers' Remuneration, Allen and Unwin

Meade, J.E. (1986b). 'Different Forms of Share Economy', Public
Policy Centre

Vines, D.A. (1985). Comment on Frenkel and Razin, in W.H. Buiter
and R.C. Marston (eds), International Economic Policy
Co-ordination, CUP Cambridge

Weale, M.R. (1985). Testing Linear Hypotheses on National Account
Data, Review of Economics and Statistics, Vol. 67. pp. 685-689

Weale, M.R. (1986). The Structure of Personal Sector Short-Term
Asset Holdings, Manchester School. Vol. 54. pp. 141-161

Working Papers

Christodoulakis, N. and P. Levine. (1986). 'Linear Rational
Expectations Models: A Frequency Domain vs Optimal Control
Approach to Policy Design'. Presented at the 5th
IFAC/IFORS/SEDC Conference. Budapest. June 1986

Christodoulakis, N., J.E. Meade, D.A. Vines and M.R. Weale.
(1986). 'Stagflation End of Award Report'. Department of
Applied Economics. Mimeo.

Christodoulakis, N., D.A. Vines and M.R. Weale. (1986). 'Policy
Design and Operation with a Managed Exchange Rate under
Different Expectational Regimes'.

Weale, M.R. (1986a). 'Rational and Adaptive Consumption Behaviour'

Weale, M.R. (1986b). 'The Reconciliation of Values, Volumes and
Prices in the National Accounts'

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 project are to examine and quantify the
economic influences of the two special training and employment
subsidies upon firms, and also to trace those influences which are
transmitted to other parts of the economy. Comparative analyses will
be made with an estimated alternative position without the subsidies.

Preliminary estimates have been made from data and opinion gathered
from firms of the extent to which subsidised job places have been
substituted for places which would have been created in the absence of
these two schemes.

The contribution of the two schemes towards improving the training
undertaken by firms and the longer-run influences upon employment
and output are central aspects of the research. Data on these
matters are being assembled from firms, whose collaboration in this
and in other aspects of the study has been good.

In addition to providing information about the effectiveness of
government subsidies for training, the study will produce interesting
results on the types and extent of labour in short supply and on the
effects of lowering wages on employment.

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.

The first of the two books, National Management of the International Economy, was finished in 1985. However, the collapse of oil prices in 1985/86 has made it necessary to revise Part IV of the book, which deals with the economic and financial consequences of the energy crisis.

The central question which the book tries to answer is this: what conditions have to be satisfied in order to achieve and sustain economic progress and stability in a highly integrated and constantly changing world economy? To answer the question, it has been necessary to deal with a wide range of issues - combining economic theory, empirical research and history. The issues covered include: changes in the character and organisation of international production, trade, investment and finance; the origin of short-term and long-term ('fundamental') disequilibria; the long-term evolution of national commercial policies and the international economy; the long-term effects (economic and financial) of the energy crisis; and policy changes which are required to cope with constant changes in the world economic environment, and unequal national capacities to respond to them.

Work on this book has involved collecting a large amount of interesting background material, and drafting a number of background papers and a short book on The Postwar International Financial System: Its Origins and Evolution.

This short book differs from the existing literature in this area in the sense that it is not a straightforward, historical account of the Bretton Woods System. It starts with a simple model of the organisation and functioning of a national financial system. The framework developed in this way is then used to analyse the main feature, strengths and weaknesses of the Gold Standard, the Bretton Woods System and the so-called 'non-system' which has existed since the early 1970s.

Books and papers

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

M. Panić: 'The Postwar International Financial System: Its Origins and Evolution'

M. Panić and C. Schioppa: Europe's Long-Term Capital Flows since 1970, Journal of Common Market Studies, forthcoming

Other Activities

In addition to giving a number of talks to economists and non-economists (mainly senior executives of international corporations and banks) using the material contained in the two books described above, Dr Panić was also invited by organisers of a Symposium on International Factor Mobility, held under the auspices of the European Economic Association, to give a paper on Europe's long-term capital flows. The result was the paper (written in collaboration with C. Schioppa) quoted above.

THE IMPACT OF IMPORT RESTRICTIONS IN THE INTER-WAR PERIOD

Project members: The late Professor Lord Kaldor
Michael Kitson
Associate member: John Rhodes
Sponsor: ESRC

Aims and Methods

The project aims to test the hypothesis that the discouragement of imports through duties or licensing systems in the 1930s was effective in reducing the propensity to import and in increasing the propensity to consume home produced manufactures, and that the effective demand for the products of UK industry and its rate of growth was significantly increased as a consequence. The empirical analysis is designed to disentangle, so far as possible, the relative contribution to industrial recovery of import duties and other possible causal facts such as the level of and changes in real wages, the house building boom and the stimulus provided by increased competitiveness of British industry as a result of the sharp fall in the effective exchange rate of sterling. The methodology seeks to disentangle the impact of different factors affecting economic change, by making comparisons of different economic sectors or industries which could be expected to respond differently to the various stimuli and to make comparisons through different time periods when the causal factors operated at different strengths.

The approach involves analysis of economic change in the 1920s and 1930s at two levels. Firstly, the analysis compared individual UK industries to establish how far the degree of protection introduced in 1932 affected the ratios of imports and exports to domestic production and how changes in these ratios differed as between the pre-protection and post protection periods and between newly protected and previously protected industries. Secondly, the macro-economic effects of protection and other causal factors on exports, imports and production were analysed. Much of the research has been devoted to obtaining and reconciling data from scattered sources in order to make such comparisons.

Summary of Results

The project has been concerned with empirical evidence and economic analysis designed to enable the possible causes of the acceleration in UK economic growth in the 1930s to be satisfactorily disentangled. Four main factors, suggested as possible causes in the previous literature, were examined. The four factors were the boom in housebuilding, the levelling out in the growth in real wages during the 1930s, the devaluation of September 1931, and the general imposition of protection by tariffs in 1931/2. Most previous work has favoured one or more of the first three explanations as being most important in generating a high rate of economic growth in the 1930s. This project, however, has reached the firm conclusion that protection played a dominant role in generating faster industrial and economic growth after 1932.

On the first factor there is evidence of a boom in housebuilding in the 1930s, but this accounted for less than 10% of the acceleration in the growth of GDP in the period 1932 to 1937. Almost 60% of the acceleration in GDP growth in the 1930s was accounted for by the increase in manufacturing output and it is causal factors relating to manufacturing industry which were responsible for leading the economy as a whole to a much higher growth rate. The housebuilding boom fed on this growth in output and the consequential growth in employment and personal incomes, as well as on the rapid spread of the building society movement.

No evidence was found to provide convincing support for the second causal factor examined, namely the levelling out of real wages in the 1930s after a period of rising real wages in the 1920s. The argument is that the rise in real wages in the 1920s meant that wages were higher than the marginal real product of labour at the ruling level of employment, thus forcing employers to pay off workers and contract output. It is then argued that after 1932 this process went into reverse: prices ceased to fall and therefore real wages ceased to rise, although they did not fall. However, the empirical evidence indicates that real wages continued to rise in the 1930s, perhaps

peaking in 1935 or 1936. On both theoretical and empirical grounds the whole argument is extremely suspect.

The devaluation of 1931 has featured prominently in previous work as a major cause of recovery in the period 1932 to 1937. On the export side the evidence suggests that it halted the long term decline in the UK share of world manufactured exports for a relatively short period of three or four years, but that it did not lead to any substantial and sustained rise in that share. Such evidence suggests that Britain's manufacturing exports had become seriously uncompetitive by 1930 (hence the fall in the export share) and that the effective devaluation of 1931 was necessary to restore competitiveness and growth to a 'normal' or 'average' position. If this is so, the devaluation could not be held responsible for doubling the growth rate after 1932 but merely for ensuring that competitiveness and growth were restored to their long-run position.

Similarly import propensities for manufactured goods had been rising up to 1931 and we would expect a devaluation to halt such a rise for a period of three or four years as equilibrium conditions were restored.

But precisely in 1932 there was a sharp fall in the import propensity of UK manufactures, of a magnitude of about one-third, and this was sustained continuously from 1932 through to 1938. This fall in import propensities was not matched by any sustained parallel increase in the export share. There must be a strong presumption, therefore, that this large absolute fall in import propensity was caused largely by the general extension of tariffs in 1931/2, on top of the benefits of a 'corrective' devaluation.

The fall in import propensity which occurred in 1932 was of the order of $4\frac{1}{2}$ percentage points, and, using the Harrod foreign trade multiplier, it is shown that this would have been sufficient to generate growth rates in UK manufacturing of about 8% per annum and GDP growth rates well in excess of 4% per annum between 1932 and 1937.

STRUCTURAL CHANGE AND INTERNATIONAL COMPETITION IN OECD ECONOMIES, 1973-1986

Project members: M.A. Landesmann
T.S. Barker
J.R. Wells

Associate members: R. Rowthorn (Cambridge University)
G. Erber (German Institute of Economic Research,
West Berlin)
S. Nakamura (Waseda University, Japan)

Sponsor: ESRC

This project, which began in July 1986, will analyse the patterns of industrial structural change which occurred in the principal OECD economies (West Germany, France, UK, Italy, USA, Japan) since 1973 and evaluate the implications of these changes for the longer-term industrial specialisation and competitive position of the different national economies.

The first phase of the project attempts to analyse the nature and strength of 'structural breaks' which occurred in the output, productivity and employment performance of the different manufacturing industries since 1973. These changes are compared across the different OECD economies in order to evaluate the strength and direction of the respective 'restructuring processes'. The changes on the 'supply side' of the different industrial activities are then introduced in an econometric model which attempts to evaluate the importance of these changes for the longer-term competitive performance of national industries in domestic and world markets. This model is built around a market share determination system which introduces longer-run supply side variables (earlier estimates of such a system are in M. Landesmann, (1987, forthcoming).

From July 1987 onwards it is hoped to include in the project's research some comparative analysis of the composition and employment

absorption capacity of the service sector in the different OECD economies.

Work on these questions is undertaken by means of standardised industrial and trade statistics supplied by the Statistical Office of the European Communities (Eurostat) which now also include data for the US and Japan.

In addition to work with this data-base there will also be collaboration with colleagues in other OECD countries (notably West Germany, Japan, France and Italy) who are undertaking detailed structural change analysis on their respective national economies using an agreed methodology.

Relevant Publications

- M. Landesmann (1986): UK policy and the international economy in P. Nolan and S. Paine (eds), Rethinking Socialist Economics; Polity Press, Cambridge
- M. Landesmann (1987) Industrial Structures and International Competition in the European Communities DAE Occasional Paper, Cambridge University Press, Cambridge, forthcoming
- M. Landesmann (forthcoming a) Dynamics of Competition between OECD economies; in W. Krelle (ed.), Economic Growth and Structural Change, Analysis and Forecast, Springer Verlag, Berlin
- M. Landesmann (forthcoming b) Supply versus demand determinants of disproportional growth in open economies, in: M. Ciaschini (ed.), Input-Output Analysis: Current Developments Chapman and Hall, London
- J. Wells (1986) Economic recovery and industrial expansion in the UK, in: P. Nolan and S. Paine (eds) Rethinking Socialist Economics, Polity Press, Cambridge
- R.E. Rowthorn and J. Wells (1987 a) De-industrialisation and Foreign Trade, Cambridge University Press, Cambridge, forthcoming
- J. Wells (1987 b) Latin America at the Crossroads, Croom Helm, London, forthcoming

Conferences attended and lectures given

Michael Landesmann:

(i) International Institute for Applied Systems Analysis (IIASA) (Laxenburg, Austria); Conference on Structural Change and Economic Growth, November 1986; papers presented:

1. Implications of a Modernisation Strategy for the U.K. economy (with A. Snell)
2. The Dynamics of Competition between OECD economies

(ii) History of Economic Thought Conference at Keele University, August 1986; paper presented:

Views on economic crisis, international economic relations and trade policy in interwar Germany

(iii) 10 Lectures given at Osaka City University (Japan) plus one lecture at Tokyo University, September/October 1986

RISK, INFORMATION AND QUANTITY SIGNALS IN ECONOMICS

Project members on DAE research staff: C. Doyle

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)
Visitor to the Project: 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. Work is progressing well on the provision of a rigorous theoretical foundation for non-Walrasian economics.

Economic Theory Discussion Papers:

The following discussion papers have been produced in the academic year 1985/86.

82. Wage Flexibility: A Preliminary View
by F.H. Hahn and R. Solow. December 1985
83. Price Matching Strategies and Oligopoly
by C. Doyle. December 1985
84. Learning-by-Doing, Market Structure and Industrial and Trade Policies
by P. Dasgupta and J. Stiglitz. December 1985
85. Liquidity with Random Market Closure
by D.K. Levine. December 1985
86. Speculation and Hedging: and, When do Futures Markets Destabilise Spot Markets?
by D.M. Newbery. January 1986
87. Disadvantageous Oil Tariffs and Dynamic Consistency
by E. Maskin and D. Newbery. February 1986
88. Policies to Achieve a Better Distribution of Income: Or is a Dollar a Dollar?
by D. Kelsey. March 1986
89. Common Knowledge with Probability 1
by A. Brandenburger and E. Dekel. September 1985
90. On Aggregation of (s, S) Inventory Policies
by S. Modica. April 1986
91. The Consumption Function when Capital and Labour Markets are Imperfect
by D. Kelsey. March 1986
92. Inequality, Malnutrition and Unemployment: A Critique of the Competitive Market Mechanism
by P. Dasgupta and D. Ray. October 1985
93. Choice Under Partial Uncertainty
by D. Kelsey. April 1986
94. On Involuntary Unemployment
by F.H. Hahn. May 1986
95. Correctly Anticipated Bank Runs
by Luca Anderlini. June 1986
96. On Autarkic Communities and Finite No Surplus Economies
by Luca Anderlini. June 1986

97. General Equilibrium Models with Infinite Numbers of Consumers and Goods
by Timothy J. Kehoe. April 1986
98. Gross Substitutability and The Weak Axiom of Revealed Preference
by Timothy J. Kehoe. May 1986
99. Monetary Policy in an Economy with Real Shocks
by David Canning. July 1986

Publication Connected with Project

Dasgupta

The Existence of Equilibrium in Discontinuous Economic Games: Theory (with Eric Maskin), Review of Economic Studies, 1986, Vol 53, pp 1-26

The Existence of Equilibrium in Discontinuous Economic Games: Application (with Eric Maskin), Review of Economic Studies, 1986, Vol 53, pp 27-41

Game Theory: A Survey (with K. Binmore) in K. Binmore and P. Dasgupta (eds), Economic Organizations as Games, Basil Blackwell (Oxford), 1986

Information Disclosure and the Economics of Science and Technology, in G. Fejwiel (ed.), Arrow and the Ascent of Modern Economic Theory, Macmillan (London) and New York University Press, forthcoming April 1987

Bargaining, (with K. Binmore) in K. Binmore and P. Dasgupta (eds) The Economics of Bargaining Cooperative Relations, Basil Blackwell (Oxford), January 1987, forthcoming

Trust as a Commodity, in D. Gambetta (ed.). Trust and Agency: Making and Breaking Cooperative Relations, Basil Blackwell (Oxford), forthcoming 1987

The Simple Economics of Research Portfolios; or Are There Too Many Multiples (with Eric Maskin), forthcoming, Economic Journal

Doyle

Intertemporal Price Discrimination, Uncertainty and Introductory Offers, Economic Journal Supplement, December 1985

Taxation of Foreign Multi-Nationals; A Sequential Approach to Tax Holidays, (with Svan Wijnbergen), Journal of Political Economy, forthcoming

Hahn

Exercise in Non-Walrasian Economics, in Heller, Starret and Star (eds), Festschrift for K. Arrow, CUP

Is Wage Flexibility a Good Thing (with R. Solow), in W. Beckerman (ed.), Wage Rigidity and Unemployment, Duckworth

Newbery

The Ramsey Model, contribution to The New Palgrave, MacMillan, forthcoming

Speculation and Hedging, contribution to The New Palgrave, MacMillan, forthcoming

Other Activities

Hahn was elected President of the Royal Economic Society, Honorary Member of the American Economic Association and awarded the DSc (Hon) by the University of London.

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 imposing taxes on transport fuels - primarily petroleum products - in developing countries taking account of the impact of such taxes on the distribution of income across households and on non-transport use of fuels as intermediate inputs.

Although the theoretical work on estimating the road damage cost of a vehicle was completed last year, the underlying road damage model on which the calculations were based had unsatisfactory features -- specifically, it appeared greatly to underestimate the returns to road strengthening and was thus in serious conflict with other experimental

evidence. As a result, the road damage model was re-estimated and substantially modified both in form and parameter values. The revised equation became available in late June 1986, at which point the computer programs had to be rewritten and revalidated. Fortunately, the new equation is analytically simpler, and if the relationship for vehicle operating costs is linearised (at negligible inaccuracy over the relevant range) it is now possible to perform the integrations analytically, and the calculations (if not numerous) by pocket calculator. This greatly improves the accessibility of the method. New programs were written taking advantage of the simpler form. It was also possible to write the new equation as a special case of the original equation, and so the new programs could be validated against the old (and vice versa). The results showed that the road damage cost estimated using the new equations was within 10 per-cent of that estimated with the old equations, and so the results appear to be moderately robust to alternative equation specification.

The two main tasks achieved during the remainder of the year were first, to re-do the congestion cost estimates in the light of further work commissioned by the World Bank, and second, to determine the effect of allowing for substitution in production and consumption in the model of the Tunisian economy developed to examine the impact of tax changes. The congestion cost estimates were somewhat reduced using the new methodology, though not dramatically, and they remain the least accurately measured component of total road use costs. The effect of allowing for substitution was dramatic. Initially, fuel taxes appeared to be almost ideal for charging for road use costs (given the impossibility of charging vehicles directly for their congestion costs). However diesel taxes appear to impose unacceptably large deadweight losses outside the transport sector, and this greatly reduces their attractiveness as a means of charging for road use. Taxes on freight services would also be well-suited were it not the problems they pose for moves to deregulate the freight haulage business.

The report will be presented at the World Bank in December 1986.

Other Activities

During the summer Newbery was a Visiting Scholar at the IMF Fiscal Affairs Department preparing a paper on Road User Charges and Road Transport Taxation for presentation to the Fund in December 1986. Given the close links between the topic of this paper and that of the research project, the visit provided the opportunity to advance and summarise the earlier Bank-supported research.

Papers produced at IMF by D. Newbery, July/August 1986

1. Efficient Pricing of US Interstate Highways
2. Road Damage Costs in Conditions of Road Crisis
3. On Cost Recovery from Optimally Designed Roads
4. The Choice of Overlay Thickness
5. Congestion Costs on Interurban Paved Roads in Developing Countries
6. The Time Path of Efficient Road User Charges
7. Estimating Urban Congestion Costs

WAGE DETERMINATION IN IMPERFECT LABOUR MARKETS

Project member: David Canning

Sponsor: ESRC Postdoctoral Fellowship Scheme

The aim of the research is, firstly, to examine wage and employment determination at the micro-economic level, both theoretically and empirically. Wage bargaining is modelled as a non-cooperative game. Secondly, a theoretical model is constructed showing how a simple economy would operate given the hypotheses that the labour market behaves.

Work on the fundamental ideas behind wage bargaining has produced two conclusions. First, a necessary condition for strikes is that both

sides have some private information, and, second, arbitration, even by an uninformed third party, will tend to make both sides better off (in expected terms) even though it does not always stop strikes from occurring. A discussion of this type of results is found in [1]. Another line of enquiry has been to examine the concept of 'wage leadership'. The idea is that the outcome of negotiations in one firm will signal general conditions to others and affect their bargaining process. It is shown that industries or firms where the workers are strong, in the sense that the firm is usually profitable and can afford to pay large wage increases, or the firm finds a strike very expensive, will be wage leaders. Strikes or large pay rises in these firms send signals to other workers. Firms in which workers settle for low amounts without a strike are not wage leaders, and the outcome conveys no information because the workers have not 'tested' the firm.

On the empirical side a study has been made of wage and employment determination in the clothing industry between 1950 and 1979. This is a simultaneous equation model of wage determination, labour demand and labour supply. The results are set out in [2]. The results suggest that it was foreign competition, rather than increasing wages, which caused employment to decline in the industry.

A macroeconomic model with a simple form of wage setting is presented in [3]. It is shown that monetary policy can stabilise the economy against employment shocks, despite rational expectations.

Publications and Papers

- [1] 'Bargaining Theory', mimeo, October 1986.
- [2] Wage Floors in the Clothing Industry 1950-79: a Reappraisal, in A Report on the Department of Employment's Study 'Wage Floors in the Clothing Industry 1950-81', by David Canning and Roger Tarling, Twentieth Century Press Ltd, 1985.
- [3] Monetary Policy in an Economy with Real Shocks, Cambridge University Economic Theory Discussion Paper No. 99, July 1986.
- [4] Increasing Returns in Industry and the Role of Agriculture in Growth, mimeo, September 1986.

- [5] 'Economic Growth in Northern Ireland: Problems and Prospects' mimeo, June 1986, with John Rhodes and Barry Moore, forthcoming in book of Essays on Northern Ireland, P. Teague (ed).

Seminars

Paper [2] was presented at a Faculty seminar at Queens College, Cambridge. An early version of [3] was presented at the ESRC conference 'Developments in Disequilibrium Macroeconomics' in Manchester, April 1986.

WIDER PROJECT ON WORLD MACROECONOMICS

Project Members: A. Hughes

A. Singh

Sponsor: World Institute of Development Economic Research

The World Institute of Development Economic Research at Helsinki, which is part of the UN University, has embarked on a large research programme on world macroeconomic policies. It is a collaborative research effort involving economists from several countries, under the overall direction of Professor S.H. Marglin of Harvard University. Mr. Hughes and Dr. Singh are undertaking the following studies:

- (a) Historical Analysis of Postwar capitalism in the Advanced Capitalist Countries, with Special Emphasis on Britain and France (in collaboration with Alain Lipeitz of CEPREMAP, Paris and Andrew Glyn of the University of Oxford).

This study is concerned with analysing the foundations of the period of world-wide prosperity from 1950-73. It uses the comparative experience of advanced industrial countries to address the question of the relative importance of external and internal considerations in determining the rate of growth and the level of employment. It describes and analyses the common features that make it useful to

think of a postwar 'mode of regulation' common to the developed market economies. It seeks to examine the differences between countries, such as the UK, France, W. Germany and Japan, that made them function differently, as well as the changes that took place within and between the Boom (1945-73), the Inter-Shock Period (1973-79), and the Global Recession (1979-present). Special attention is given to investigating whether the institutional structures put in place after World War II were self-contradictory in positing, for instance, both wage- and profit-led growth -- that is, in requiring high wages for the maintenance of aggregate demand, high profits as a stimulus to capital accumulation, and both high wages and high profits to stimulate the growth of productivity. This study also seeks to answer the question whether international considerations, for instance, the emergence of competition from the newly industrialising countries, the integration of EEC markets, the changes in the international monetary system and the development of a world capital market merely complicated matters; or were fundamental in precluding a resolution of internal contradictions that would have been tractable in a different, more agreeable, international environment.

- (b) Comparative Analysis of Asian and Latin American Responses to the World Economic Crisis

This study is concerned with analysing the reasons why Asian countries with very different structures -- for instance, China, India, and South Korea -- managed to weather the current world recession better than Latin American countries -- for instance Brazil, Chile, and Mexico. It seeks to investigate to what extent, if any, the differential performance of countries in the two continents can be linked to systematic differences in economic structure or to the particular policies followed by them.

Progress of the Research

1. The following papers, representing the results of the research carried out so far on the two projects, were presented at an international symposium held at the World Institute of Development Economic Research at Helsinki in August 1986.

A. Glyn, A. Hughes, A. Lipitz and A. Singh, The Rise and Fall of the Golden Age: An historical analysis of post-war capitalism in the developed market economies

A. Hughes and A. Singh, The World Economic Slow-down and the Asian and Latin American Economies: A Comparative Analysis of Economic Structure, Policy and Performance

At the next stage of the research project, during 1986-87, the first paper will be written up as a book which will be published under the auspices of WIDER. The second paper is being revised and will be included in a volume of papers on the developing countries.

2. Dr. Singh was asked to be a Guest Editor of a special issue of Labour and Society, the journal of the International Labour Institute, on the world economic crisis and structural adjustments in developing countries.

3. Published Papers

A. Singh, The World Economic Crisis, Stabilisation and Structural Adjustment: An Overview, Labour and Society, Vol 11, No 3, September, 1981

A. Singh, The great continental divide: Asian and Latin American Countries in the world economic crisis, Labour and Society, Vol 11, No 3, September, 1986

A. Singh, Exogenous shock and de-industrialisation in Africa: prospects and strategic for sustained industrial development, forthcoming in Trade and Development Review

B SOCIOLOGY

REPRODUCTION OF SOCIAL INEQUALITY

Project Members: Dr R.M. Blackburn

Dr K. Prandy

Associates: Professor A. Stewart, University of Edinburgh
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

Papers

Blackburn, R.M., 'A sociological view of the economics of unemployment', LSE

Blackburn, R.M., 'The social bases of unemployment', Cambridge

THE IMPORTANCE OF SOCIAL STRATIFICATION

Project members: Dr K. Prandy
Dr R.M. Blackburn
Visitors: R. Volpato and G. Lowe
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 project has had two basic aims, the first of which was an improvement of the Cambridge scale of occupations. Only one other comparable continuous measure is available for British occupations, that developed by Hope and Goldthorpe as part of the Nuffield Social Mobility Study. That, like the original Cambridge scale, was based on the 1970 OPCS classification which has now been superceded. The rationale of the Cambridge scale makes it possible to study ways in which it could be improved. Conversion to the 1980 OPCS scheme is also easier because much of our own data has been coded to a finer scheme than that provided by OPCS.

Improvement of the Cambridge scale is potentially possible because it is based on patterns of social interaction - friendship and, in subsequent development, marriage. An iterative procedure was used, in which all those grouped into an occupation were given the mean score of all those with whom they interacted. After the estimates based on the original Cambridge score, at each stage the mean was used as a new estimate. In terms of an internal criterion, the correlation between respondents' and friends' occupations' scores, there was a noteworthy improvement. By including wives, as well as some female respondents and friends, we were able to give separate scores for female-incumbent occupations. This is the first time as far as we know what occupations performed by women have been explicitly incorporated into any such measure, or anything similar.

The second aim of the project was to use the improved measure in the secondary analysis of a number of existing datasets with the hope of showing how stronger correlations could be obtained. We have concentrated on the two major areas of social mobility and voting behaviour, using the data from the main Nuffield study and its sub-sample follow-up and from the 1979 and 1983 British General Election studies. Our analyses show that in almost all respects a continuous measure of occupation is preferable to one using a division into a limited number of social classes. No evidence on the internal homogeneity, or boundaries between such 'classes' is forthcoming. The revised Cambridge scale is shown to be preferable in nearly every instance to its rival the Hope-Goldthorpe scale. This is true not only for friendship and marriage relations, but also for relations between generations and others involving incumbents of occupations. It is also true for education (income is more doubtful) and for political variables (party identification in six out of seven cases and reported vote in eleven out of thirteen).

The consistency of these findings confirms that the Cambridge scale offers an improvement over anything else available. The consequences of this have been developed in more extensive analyses which form the bases for publications in preparation. One significant implication is that the inadequacies of previous measurement have led to underestimation of the importance of social stratification.

Publications

K. Prandy, Similarities of life-style and occupations of women, in R. Crompton and M. Mann, (eds), Gender and Stratification, Polity Press, 1986

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, which is now completed, was 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 were investigated among a sample of men and women of diverse stratification position and ethnicity.

The research has established the value of an essentially cognitive approach to social identity. This is not to deny the existence of value elements but to see them as firmly located in a cognitive context. Thus, for example, nationalism may be seen as an evaluative aspect of national identity, but is dependent on an understanding of nationality which involves social, political and economic aspects. It is the salience of experience related to these cognitive components which gives a meaning to nationality that makes evaluation relevant. Similarly, ethnicity must be understood in its geographical and social context before evaluation is relevant. The non-whites of the sample are a significant grouping because they are here in London. They are identified as 'different', with consequent disadvantage, which would not necessarily happen if they were born and living elsewhere.

The central concern of the research is with social identity in relation to economic processes. Three labour force participation issues - occupational differentiation by gender, occupational differentiation by ethnicity and the distribution of payment for different occupational tasks - were used to investigate possible cognitive typologies. Well formed typologies emerged, with a basic differentiation between

naturalistic and social forms of understanding. There is also a meritocratic form of cognition which divides into more naturalistic (merit in the individual) and social (need to get qualifications) types and is largely intermediate between the other types.

The typologies for the three issues are quite well related to each other, i.e. those classified as naturalistic on gender issues tend to be so on ethnicity and income as well, and so on. Thus, while the mode of cognition does vary according to issue, as expected, there is also a significant element of stability where mode of cognition tends to be a basic part of identity.

In keeping with the general approach we find experience is related to identity at more than the obvious level. Thus females and non-whites tend to have more social forms of cognition. Initially it was hypothesised that their more constrained experience would lead to a stronger tendency to see arrangements as 'given' and thus 'natural'. However, this was linked to a concern with the conventional view where evaluation would be central. In fact it is social arrangements which are here perceived as 'given'. The naturalistic cognition, by relegating social processes to the background, is essentially individualistic: explanation of deprivation lies in the individual. The understanding of the disadvantaged tends not to be in terms of their responsibility where their experience is one of powerlessness. It is not a question of blaming oneself or the system but of more fundamental cognition.

Income level is not related to cognitive mode. It has frequently been pointed out that evaluations of income are usually in relation to a narrow range of expectations. Such expectations depend on cognition of market position and capacity. However the actual mode of cognition of the distributive processes is derived from the broader context of experience.

Paper

R.M. Blackburn, 'Social Structure and Social Identity'

ESRC Data Archive. He also became the DAE Data Protection Officer.

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

The Sociology group contributed to the joint DAE, Faculty and Social and Political Sciences Seminar Series. Close links with Social and Political Sciences (SPS) were maintained with DAE sociologists contributing to teaching, examining and administration.

11 PUBLICATIONS

DAE OCCASIONAL PAPERS

No new titles appeared in the Series this year. However, several books are in various stages of preparation (the titles are provisional).

Industrial Structure and International Competition (M. Landesmann)

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

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

DAE PUBLICATIONS

Company Finance and Performance: aggregated financial accounts for individual British industries, by A. Goudie and G. Meeks, was published by the Department in February 1986 (price £59)

The British Economy: recent history and medium-term prospects (A Cambridge Bulletin on the Thatcher experiment) by K. Coutts, W. Godley, R. Rowthorn and T.S. Ward was published in March 1986 (price £2.80, distribution Central Books)

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. 97 On The Stability of the Inter-Industry Structure of Earnings in the UK: 1954-1978
Tony Lawson

No. 98 Different Approaches to Economic Modelling
Tony Lawson

No. 99 The Interrupted Industrial Revolution of the Third World: Prospects and Policies for Resumption
Ajit Singh

- No. 100 A New Keynesian Bretton Woods
James Meade
- No. 101 A 'Rational Modelling Procedure' (And the Estimating of
Input-Output Coefficients)
Tony Lawson
- No. 102 High Interest Rates in Backward Agricultural Communities:
An Examination of the 'Default Hypothesis'
Vani Borooah
- No. 103 The International Harmonisation of National Income Accounts
Richard Stone
- No. 104 Full Employment, New Technologies and the Distribution of
Income
James Meade
- No. 105 Macroeconomic Policy in An Oil-Exporting Economy with
Foreign Exchange Controls
M.H. Pesaran
- No. 106 British Government Popularity and Economic Performance: a
comment
V.K. Borooah and F. van der Ploeg
- No. 107 Economic Conditions, Class and Voter Behaviour: a study
based on the British General Election of 1966
Vani Borooah and Rick van der Ploeg
- No. 108 Starts and Completions of Private Dwellings: Four models
of Distributed Lag Behaviour
V.K. Borooah

III OTHER ACTIVITIES

DAE LIBRARY

During the period October 1985 to September 1986 the Department received 153 periodicals: 14 of these were in exchange for the Department's Reprint Series and 44 were gifts, the remainder being purchased. The library has acquired 115 books, 711 pamphlets and 187 government publications.

COMPUTING

The past year has seen a major enhancement of the computing facilities in the Department. All offices were rewired to allow access to the University's 'data network', and the number of connections to the University Computing Service was increased from 8 to 20.

In addition, £20,000 was spent on obtaining a range of equipment usable both as personal computers and as terminals for the mainframe. To complement these, a laser printer was purchased to enable computer-generated material to be printed in camera-ready form.

Software developments have included the transfer of forecasting models to personal computers, and the acquisition and use of several personal computer software packages. Together with the new equipment, this has meant a substantial improvement in the ability of members of the Department to exploit up-to-date econometric and data-handling techniques.

TEACHING FOR THE UNIVERSITY

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

- The post-war international monetary system
- Applied macro-economics
- Current problems of the world economy
- Industrial management
- Theory and measurement in social stratification
- Theories of production and technical change
- The state, the family and the labour market
- International organisation, multinational enterprise and international trade
- Social organisation of the labour market
- Statistical methods and applications

They gave Seminars for Research Students in the following areas:

Topics in applied economics
Labour economics
International economic integration
Studies in management and the structure, performance and prospects of 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. Nine 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, its
Appointments Sub-Committee and other sub-committees
The Faculty Board of Economics and Politics, and its
sub-committees dealing with Appointments; Lecture List
and Future Needs; Admissions

IV FINANCE

During the financial year (1 August 1985 to 31 July 1986) the Department's annual expenditure was £722,044 compared with £748,608 in 1984/85. 85.8% of the expenditure was on stipends, salaries and wages.

The University Grant rose from £251,001 in 1984/85 to £270,872 in 1985/86.

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	42,940
Department of Employment	37,309
Centre for Economic Policy Research	10,000
Centre d'Etudes de l'Emploi	6,000
Bank of Dominican Republic	26,804
Total	<u>£123,053</u>

V STAFF

RESEARCH STAFF

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

ASSISTANT B.M. Deakin, MA (Cantab), MA (Oxon),
DIRECTOR Fellow of Magdalene College

SENIOR RESEARCH OFFICERS

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

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

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

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

M.K. Anyadike-Danes, (BA) London

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

N.M. Christodoulakis, PhD (Cantab)

J.P. Dunne, BSc (Bristol), PhD (Edinburgh)

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

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

M.A. Landesmann, MA (Vienna), MA (Cantab), D Phil (Oxon),
Fellow of Girton College

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

JUNIOR RESEARCH OFFICERS

B. Burchell, BSc (Birmingham)

C. Doyle, BSc (Cardiff), MA (Warwick)

M. Kitson, BA (Cantab)

K. Lee, BA (Sheffield), MSc (Bristol)

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

POST-DOCTORAL FELLOWS

D.J.H. Canning, BA (Belfast), PhD (Cantab), Fellow of
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

Mr T.F. Cripps

Professor P. Dasgupta, Faculty of Economics and Politics

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

Dr G. Gudgin, Northern Ireland Economic Research Centre, Belfast

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

Professor G. Hughes, University of Edinburgh

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, Faculty of Economics and Politics, Fellow of Clare College

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, Fellow of Queens' College

Dr J.G. Meeks, Fellow of Robinson College

Dr B.C. Moore, Department of Land Economy, Fellow of Downing 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

Dr A.W.A. Peterson, Faculty of Economics and Politics, Fellow of Christ's 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 A. Stewart, University of Edinburgh

Professor Sir Richard Stone, Fellow of King's College

Professor D.A. Vines, University of Glasgow

VISITING SCHOLARS, OCTOBER 1985 - SEPTEMBER 1986

Dr P.R. Agenor, University of Liverpool

Dr P. Auerbach, Kingston Polytechnic

Mrs V.K. Borooah, University of Southampton

Dr M. Charette, University of Windsor, Ontario, Canada

Mr S. Crawford, Bates College, Lewiston, USA

Professor A. Duarte, University of Alicante, Spain

Dr P. Crossman, James Cooke University, Townsville, Australia

Professor O. Forssell, University of Oulu, Finland

Ms T. Garrido, University of California at Berkeley, USA

Mr H. Guiliani-Curry, Central Bank of the Dominican Republic

Professor J.M. Gutierrez-Diez, University of Valencia, Spain

Professor D. Jackson, University of Wollongong, Australia

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

Mr V. Masat, Res. Inst. of Socio-Economic Information and Automation in Management, Prague, Czechoslovakia

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

Dr N. Norman, University of Melbourne, Australia

Mr F. Pellerano, Central Bank of the Dominican Republic

Dr A. Romagnoli, University of Ferrara, Italy

Ms. R. Sales, Middlesex Polytechnic

Dr L. Tomaszewicz, University of Lodz, Poland

Mr R.S. Volpato, University of Tasmania

Dr A. Wojtyna, Academy of Economics, Krakaw, Poland

ASSISTANT STAFF, OCTOBER 1985 - SEPTEMBER 1986

Mrs I. Bailey	Miss A. Mason
Mrs M.J. Barnett	Miss S. Metcalfe
Mr E.D. Bougourd	Mrs A.L. Mills
Ms M.V. Clark	Mrs S. Moore
Mrs R. Coe	Mrs O.E. Peppercorn
Miss D.M. Day	Miss S.D. Seal
Mrs S.L. Douglas	Mrs E.P. Smith
Ms T.C. Gurner	Mr J.M. Turner
Miss C.A. Hudson	Mrs B.P. Watson
	Mrs K.M. Wilson