



Royal Economic Society

NEWSLETTER

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ROYAL ECONOMIC SOCIETY

Conference bound

This issue of the *Newsletter* was put together on the eve of the Society's Annual Conference at the University of Warwick. This is the second year in succession that Warwick has hosted the Annual Conference. This speaks well for the efficiency of the local organisation and for the freindly atmosphere created by the university. For those of us responsible for reporting events, however, the big question will be whether Diane Coyle's plea last year for more social time has been observed and whether in consequence it will be easier to keep up with events. Notwithstanding a steady reduction in the *Newsletter's* production time, a full report of the Conference will have to wait until the July issue, when we shall also have the Secretary-General's Annual Report.

In this issue, Angus Deaton explains why US state governments face substantial budget deficits this year and why they are almost bound to seek solutions in spending cuts that will have a disproportionate impact on the poor.

In the second of our series where we ask a prominent practitioner to comment on recent economic research, Gerald Holtham reflects on Yafeh and Yosha's recent *Economic Journal* article on restraining management excess and wonders whether they have missed the point in a number of respects.

We also return to two issues which have much exercised members in the past: the comparative slowness of refereeing and publication in economics journals and how economics can be made more attractive as a field of study.

In the second of her contributions from an Indian perspective, Kanchan Chopra looks at the difficulties of combining economic liberalisation with decidedly conservative political institution. And with all of this we have our usual features of RES News, highlighting the Society's new website, forthcoming conferences, and news from the ESRC.

In this issue

- Letter from America 3
- Large shareholders and banks: Who monitors whom? 5
- Why is economics publishing so slow? 7
- Selling economics 9
- Compelling shades of pessimism - a perspective on India 12
- Obituaries 15
- Correspondence 17
- Research round-up 18
- ESRC News 19
- RES News 20
- Conference Diary 21

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Editor

Prof Peter Howells,
East London Business School,
University of East London,
Longbridge Road,
Dagenham, Essex. RM8 2AS

Fax: (44) (0)20 8249 3549
(44) (0)1722 501907

Email: p.g.a.howells@uel.ac.uk
sarumeds@aol.com

Information Secretary

Ms Eleanor Burke,
London Business School,
Sussex Place,
Regent's Park,
London NW1 4SA

Fax: (44) (0)20 7724 1598

Email: eburke@london.edu

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Next issue

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Contributions from readers

The *Newsletter* is first and foremost a vehicle for the dissemination of news and comment of interest to its readers. Contributions from readers are always warmly welcomed. We are particularly interested to receive **letters** for our correspondence page, **reports of conferences and meetings**, and news of **major research projects** as well as **comment on recent events**.

Readers might also consider the *Newsletter* a timely outlet for comments upon issues raised in the *Features* section of *The Economic Journal*. We can normally get them into print within three months of receipt.

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Letter from America- Red Ink and Redistribution

In this year's first Letter from America, Angus Deaton of Princeton University explains why many US state governments face substantial budget deficits this year and why they are almost bound to seek solutions in expenditure cuts that will have a disproportionate impact on the poor. Meanwhile the Federal Government cuts taxes on the wealthy.

THE DISMANTLING of the Bush administration's economic team is now complete, with the resignation of Glen Hubbard as Chairman of the Council of Economic Advisors, who will return to his position at Columbia University. Hubbard was the architect of the administration's current budget proposal, whose centerpiece is the abolition of taxes on dividends. Remarkably, this measure is being sold as the centerpiece of an economic stimulus package. Republicans are referring to it as the 'Jobs and Growth Tax Act' and minimizing its distributional effects by the identification of various worthy groups of beneficiaries, such as the elderly. Hubbard will be replaced by Greg Mankiw, of Harvard, a distinguished macroeconomist and well-known textbook author. The media have been enjoying the traditional sport of digging up published positions that might prove currently embarrassing. In earlier (but not current) editions of Mankiw's principles text, he refers to the tax cutting policies of the Reagan administration as 'fad economics', promoted by 'charlatans and cranks', charlatans and cranks who have in the last few days been denouncing Mankiw's nomination. The economic theories of the Reagan era are certainly making a comeback in Washington. Deficits are of no consequence, and indeed are welcomed by many on the right as the only effective discipline against spending. President Bush has been enunciating a doctrine that, if not the Laffer curve, appears indistinguishable from it. The new economics team, including Mankiw, all have previously opposed this sort of economics, but it is unlikely that we will hear them expounding these views for some time, or indeed that there will be any change of policy as result of their appointments.

The states' fiscal crisis

Meanwhile, at the end of February, the Governors of the 50 states assembled in Washington for their annual meeting where the main topic of their discussions was the most severe fiscal crisis for half a century. Deficits in the statehouses are different from the deficits in Washington. No matter what their politics, state politicians are in no position to sit back and enjoy their deficits, because the majority of states have constitutional provisions requiring their budgets to be balanced. Governors all over the US are scrambling to do so, by every sort of accounting gimmick that they can think of (though these are

mostly exhausted by now), in a few cases by raising taxes (although only at the last ditch; even left-leaning governors are likely to be voted out of office if they raise taxes), and in nearly all cases by cutting expenditures.

The states face both structural and short term difficulties. In the long term, there is a growing imbalance between states sources of revenue and their expenditure commitments. Most states are dependent on sales tax for a substantial fraction of their revenues; there is no general national sales tax in the US, and competition between the states keeps sales taxes relatively low, less than ten percent. But sales taxes do not cover services, which are a growing share of the economy, nor are sales over the internet effectively taxed, at least if an online merchant sells to a consumer in a state where the merchant has no physical presence. (If I buy a book from Barnes and Noble, I pay sales tax, because Barnes and Noble has shops in New Jersey. If I buy it from Amazon, no tax is levied by the retailer, and although I am supposed to pay the tax to the state when I file my state tax return, such taxes are rarely collected.)

The lost internet taxes are calculated to be around \$13 billion a year, not large in terms of total states' budgets, but a substantial share of the current projected deficit of \$55 billion. On the expenditure side, states (or smaller localities) are responsible for almost all of education expenditure, as well as for a substantial share of government spending on health. Much of the latter is through Medicaid, a federal program that covers healthcare expenditures for people with low incomes, and whose financing is the joint responsibility of the states and the centre. The rising costs of healthcare for an ageing population is one of the great fundamentals shaping American political economy.

The state of the economy and the behaviour of the stock market are major immediate reasons for state woes. Like many individuals, state governments seem to have believed that the stock market boom was permanent, and they increased expenditures and cut taxes in that belief. And, as with private firms, there was a good deal of creative accounting based on booming markets, and the backing for several contingent liabilities (such as state pensions, or state insurance funds) was switched into the market. As the gains undo themselves, the schemes

that generated money are contributing to the deficits. Several states have become heavily dependent on capital gains taxes, revenue from which is currently in extremely short supply. And there are less obvious problems: the state of New Jersey is under pressure to help meet the costs of rising malpractice insurance for doctors, who claim that the enormous rise in their premiums are a result of insurance companies recouping their stock market losses. (Others note that doctors kill and maim large numbers of people, that states rarely discipline bad doctors, or that it's really all the fault of the trial lawyers and their influence in the Democratic party.)

Health and education will suffer...

In the end, there will certainly be large cuts in state expenditures, particularly on health and education. The education cuts will further disadvantage state universities relative to private ones. Fees at state universities matter to state legislators and are kept low, so that tuition at a top state university costs about a fifth as much as tuition at a top-or not so top-private university. A resident of Wisconsin who attends the world class state university at Madison would pay \$4,426 for tuition, but \$27,830 if he or she came to Princeton, and \$19,240 at Rider University in nearby Trenton, New Jersey, a less well-known private university. Well-off property owners will bear some of the burden as local municipalities raise property taxes to offset decreased state support for schools.

...with very regressive results

But the cuts in Medicaid spending will affect the poorest. Medicaid is the only source of funding for long-term health care for the elderly — provided they have spent down their assets — as well as for prescription drugs for those on low incomes. And the federal government is offering to lend the states money for Medicaid — an almost irresistible offer in current circumstances — in exchange for moving to a system of block grants in which states will face the full marginal cost of such care. The funds from the tobacco settlement, which were earmarked for healthcare, are being converted to general revenue. In one of the more remarkable schemes, Governor Pataki of New York has proposed closing part of this year's \$11.5 billion shortfall, not from the tobacco money itself, which is only \$420 million a year, but from capitalizing the revenue into a \$4 billion dollar bond issue guaranteed by the inflow from the tobacco settlement, itself funded by taxes on cigarettes smoked by people with below average incomes.

In Washington, there will be deficits for many years to come, in part in response to a weaker economy, but mostly as the result of tax cuts whose beneficiaries are typically very well-off. In the states, most deficits will be closed in a way that protects those who are benefiting from the federal tax cuts. There is no such protection for the elderly, the poor, and the sick.

ESDS launch in London

In the January issue of the *Newsletter* we reported on the opening of the Economic and Social Data Service (ESDS). Funded jointly by the ESRC and JISC, the main aims of the new service are to promote wider and more informed use of data for research and teaching and to enhance the underlying data sources through the development of value added sources.

During the afternoon of 30 June 2003 the ESDS will be hosting its inaugural launch, at Regent's College in central London. Ian Diamond (Chief Executive, ESRC) and Len Cook (the National Statistician) and ESDS staff will be speaking about the range of opportunities offered by the service. Places are free but they are also limited, so those wishing to attend should register their interest by contacting archive@essex.ac.uk.

Further details about ESDS, including progress on the establishment of user forums, will be published in the coming months. Updates can be found at: www.data-archive.ac.uk

Television to broadcast research news

The best research is of limited value if it is not disseminated accurately and widely. With this in mind, a consortium of leading UK universities has created an international television news campaign to make available free news and feature packages on their latest research for use by television outlets world wide.

The first packages to be made available by *Research TV* will cover stories about peace keeping in the Middle East, the future shape of motor manufacturing in the developed world and the impact of the Columbia disaster on future research into space. *Research TV* is led by the University of Warwick, the other partners being the universities of Oxford, Kings College, London, Cardiff and Birmingham with additional backing from the ESRC Research Council and Regional Development Agency Advantage West Midlands. *Research TV* is being produced by TAP TV and will be available as a fortnightly 10 minute feed available to all subscribers of the Reuters WNS service from Tuesday 8th April. Each feed will feature a number of topical research stories. Broadcasters will be invited to seek further in-depth information on the Research UK website.

Editor's note: For further news on initiatives to bring research and the media closer together, see 'Getting Media Wise', p.8.

Large Shareholders and Banks: Who Monitors and How?

- Thoughts on Yafeh and Yosha

In the January issue of the Economic Journal, Yafeh and Yosha¹ claimed to find a relationship between concentration of ownership and a tighter monitoring of certain company expenditures. In the second of this series where we ask practitioners to give their views of relevant research, Gerald Holtham, Chief Investment Officer at Morley Fund Management, offers some comments based on his own experience.

DOES CONCENTRATED SHAREHOLDING force a company management to be more efficient than they would be faced with a host of small shareholders?

Academic research has traced a relation between concentration of ownership and Board turnover or the probability of poorly performing firms being restructured. Now, the study of Japanese firms by Yafeh and Yosha claims to find a relationship between concentration of ownership and a tighter monitoring of certain company expenditures.

I shall describe briefly the findings of the study and make some observations on those findings. I shall then attempt to relate the findings to experience in the UK of investment management with a policy of active engagement with companies in which there is an investment.

The findings

Yafeh and Yosha's analysis is based on the idea that certain sorts of expenditure may be productive but may be excessively favoured by managements for the benefits that managers themselves derive from them. Shareholders cannot easily tell if such expenditures are appropriate or not and for a small shareholder the costs of monitoring the expenditure are large in relation to his or her expected benefits, which are shared with other shareholders. Larger shareholders can internalise more of the benefits of monitoring, however, and, in any case, it is easier to co-ordinate action among a small number of large shareholders.

The hypothesis is that committed large shareholders either do, or are thought by managers to, monitor such expenditure and this acts as a *de facto* restraint. They test this by regression analysis of the expenditures against measures of shareholder concentration. The types of expenditure selected are research and development as a proportion of sales, advertising as a proportion of sales, entertainment expenditures and general administrative expenditures. They also hypothesise that the proportion of cash and liquid assets in the balance sheet might be restrained by shareholders since managers may wish to hold excessive amounts of cash to increase their freedom of action.

The finding was that three of these expenditures did tend to be restrained by concentrated shareholding, namely R and D, advertising and administration expenditures. That was true in the chemicals industry and the metal products industry. It was not true, however, in the electronics industry, a fact that Yafeh and Yosha ascribe to greater competition in that industry, which might be sufficient to restrain management without need of shareholder scrutiny. Yet no measure of competition or substantiation of the view that electronics are more competitive was given.

The analysis controlled for other factors such as size of company and found that leverage was also a significant factor in constraining expenditures. The authors however could not find any distinction between bank debt and other debt and so concluded that there was no evidence that monitoring by banks constrained expenditures in the way that shareholder concentration appeared to do.

Interpretation depends on context

My experience leads me to a different hypothesis about why the results for electronics differ from those for chemicals and metal products. Fund managers tend to classify companies into types and view them as different kinds of investment proposition. In a mature industry like chemicals or metal products, projections of rapid revenue growth will be treated with scepticism unless they reflect experience. Cost control will be an important element in the relative success of such companies. In a growth area, such as electronics has been, the main competitive battle is for revenue growth. Fund managers will be much less concerned about advertising expenditure, for example, if there is a plausible case that it might be fuelling growth. The focus of scrutiny will be different because the key drivers of success are seen to be different.

Within the chemicals sector, Yafeh and Yosha attempted to control for this effect by introducing Tobin's Q as a control variable since high growth companies will have a higher valuation ratio. Q was indeed a significant variable but did not disrupt the negative correlation between the expenditures and shareholder concentration. That regression, however, does not

rule out the possibility that in a different sector with generally higher valuations, expenditures will cease to be the focus of shareholder attention.

Incompetence rather than self-interest?

The authors' selection of expenditures that are likely to be restrained by large attentive shareholders also appears to be arbitrary. And they over-interpret the results to fit an academic paradigm. Shareholders, unlike academics, are not much exercised by nice principal-agent problems. That managers will not have exactly the same interests as shareholders is a fact of life. Of still more importance is that managers vary widely in competence. If management overspends on expensive advertising it is much more likely to be owing to simple misjudgement of the effectiveness of the expenditure than because the managers derive psychic benefits (denied to shareholders) from seeing their company's name on the television. Shareholders will be worried about overall cost control in a slow-growing business but they are most unlikely to focus on particular expenditures that generate externalities for managers (other than outstanding items like private jets).

Unlike academics, they will not suppose that everyone is successfully optimising something and that deviations from what they judge to be best are caused by mixed motives. Such things are possible, but incompetence and sub-optimal outcomes provide a more common explanation.

Bonuses give private benefits too

If one is really looking for managerial nest-feathering it is usually unnecessary to look much beyond the salaries and bonus lines. Those are indeed a prime area of focus for alert shareholders. But if you are worried whether the managerial team is up to the job, you had better look at all expenditure ratios together. Note, too, that 'up to the job' has a rather exacting meaning in this context. It means being better than most other managements in the sector. No one invests in a company just because it fails to go bankrupt. They invest because they expect it to outperform its sector or the market as a whole.

Yafeh and Yosha do not provide any support for the proposition that R and D or advertising provide more positive externalities for managers than any other expenditure so it is unclear why these expenditures should be selected for attention. Entertainment expenditure seems more obviously related to manager utility but the results show this category of expenditure was less significantly influenced by shareholder concentration than the others (probably because it was much smaller).

I conclude that the results support the hypothesis that concentrated shareholders are a force for overall expenditure restraint in slow-growing companies. I much doubt whether anything is added by the focus on specific expenditures.

Does this addition to the literature, though, add to the weight of evidence that having a few large shareholders is a good thing?

It certainly reinforces the case, I believe, for saying that only large shareholders *can* be a restraint on management. To the extent that managements require oversight if not restraint, there is a powerful case for large committed shareholders in a capitalist economy.

It does not follow, of course that the influence of large shareholders is always beneficent from a broader social viewpoint. If I have correctly interpreted Yafeh and Yosha's results, for example, the interest of large shareholders in restraining costs appears to be beneficial in that cost to sales ratios are consequently lower. But the results are a snapshot. To confirm that the influence was beneficial we would need panel data to see whether the firms so constrained grew more or less slowly than the others. In other words was the fear of managerial extravagance generally accurate or an inhibitor of growth?

My supposition is that on average the influence would have been beneficent. Most large shareholders, in my experience, have a healthy modesty about their ability to second-guess the management of a business. They may challenge odd-looking strategies or apparently high costs but they will

generally feel obliged to give a management its head. Only if and when results disappoint do they sell shares or move to sanction management. Influence may be exerted at any stage but control tends to be ex post. Only a very embattled or unconfident management would therefore be restrained by shareholder doubts from a course of action in which it really believed. The exception, of course, would be actions requiring access to significant new capital. When companies are tapping the market they do have to be more sensitive to investor opinion. The market's judgement even then, however, will generally depend at least as much on its overall confidence in the company's management team as on its own independent assessments of the action or investment proposed. Reputation will tend to trump cost-benefit analysis in situations of inevitable uncertainty.

Nonetheless, I do not claim that no company ever feels inappropriately restrained by its understanding of shareholder preferences. In this context it is necessary to remember the pressures on institutions which generally constitute the large shareholders. They are themselves agents and principal-agent problems can arise at their level too. They are accountable to the ultimate owners of the wealth, or their trustees, for the management of funds. This accountability is exacted at frequent intervals, generally every quarter. That can induce an element of short-termism when investment performance, relative or absolute, has been poor. A take-over which offers an immediate premium (and a rapid return) may be preferred to sticking with a management offering longer-term growth. Expenditures that detract from the bottom line and offer only the possibility of future growth may be discouraged. Yet these high implicit rates of time discount may reflect the competitive needs of the fund manager rather than the true time preferences of the wealth holder or society at large.

...continued on p.14

Why is economics publishing so slow?

The speed with which papers get published in economics journals (and the quality of the editorial process) are issues which have been aired in these pages several times of late¹ and we have promised to return to both. In two recent contributions to the Journal of Political Economy,² Glenn Ellison produces evidence that turnaround times are lengthening and tests some explanations.

Over the last three decades, there has been a dramatic slowdown in the publication process at top economics journals. Thirty years ago, papers in such journals were accepted, typically, within six to nine months of submission. Now the process can take two years or more. The slowdown is widespread, affecting both the general-interest and specialist ('field') journals. Why should this be?

According to Ellison, the most obvious change in the process is the extent to which papers which are eventually accepted for publication are subject to revisions along the way. In the early 1970s, when most papers got through the refereeing process in less than a year, the noncommittal 'revise and resubmit' was reserved for exceptional cases: it is now the most frequent response. Another feature of the process is an increase in the length of referees' comments and suggestions. Ellison points out that the paper in which he is presenting these findings was accepted by the *JPE* with a request for a small revision. Nonetheless, the editor's letter and referees' reports occupied 3,800 words. By contrast, the letters accepting (with revision) two papers in 1960 and 1972, provided the advice in 351 and 755 words respectively. The inevitable consequence is that the refereeing process itself is slower and that it takes authors longer to respond to all the comments.

Another part of the explanation is that papers are substantially longer than they used to be. They take longer to read and provide more material on which referees might feel pressure to comment. Today's papers in *Econometrica* and *REStud* are, on average, 75 per cent longer than they were in the 1970s. In *AER*, *JPE* and *QJE* they are about twice as long. Furthermore, some 60 per cent of papers in the top five US journals were co-authored in the 1990s, compared with only 30 per cent in the 1970s. Coordinating the response from two or more authors adds to the time required to reply to referees and editors.

Amongst the other potential explanations that Ellison examines are the 'democratization' of the publishing process; improvements in computer software and a decline in the information-dissemination role of journals. None of these yields much by way of additional explanation for the slowing of the publication process.

The relevance of democratization to speed of publication lies in the fact that a decline in papers from prestigious authors or top-rated departments, which may receive less rigorous scrutiny, would raise the average refereeing time as papers selected on

more meritocratic principles require more forensic refereeing. Firstly, time series data do not suggest that there has been much 'democratization' over the years. By constructing a Herfindahl index, Ellison shows that there is very little difference in the concentration of publications over the 1970s, 80s and 90s. Furthermore, cross-section data do not suggest that papers by 'high status' authors are accepted more rapidly. This is tested by including a variable representing the average number of papers published by an author in *Brookings Papers in Economic Activity* and the *AER's Papers and Proceedings* (since such papers are often invited rather than submitted).

Thirty years ago, there were no personal computers and revising papers usually meant having them retyped. Running regressions was also much slower and more difficult. The dramatic reduction in these constraints in recent years has certainly reduced the cost of drafting and revising (a serious point overlooked by all those commentators who twenty years ago predicted the coming of the paperless office!). A further technological development, which may be pushing in the same direction is the internet and the practice of publishing working papers on websites. Thirty years ago, most economists would not know about new research until it was published in the journals. This is no longer true and it is at least a plausible hypothesis that journals feel able to ask for more changes and less pressed to review and accept quickly.

Testing these hypotheses involved interviews with editors and a study of editors' reports. In none of these could Ellison find evidence of intention, which should have been there if the decisions were deliberate. Indeed, '...even most long-serving editors seemd unaware that there had been substantial changes in the length of the review process.'³ The *JPE* 1981 editors' report describes the lengthening of the process (by 5 months in the previous two years) as 'a most unsatisfactory trend'.

Although submit-accept times have lengthened for all journals, a striking feature in Ellison's data is that these lags vary considerably *between* fields. In the 1990s, for example, the shortest mean period was 14.4 months (urban economics) while the longest (econometrics) was 25.7. This difference led Ellison to another hypothesis that 'social norms' regarding what constitutes a good paper have changed. In the second paper Ellison shows that compared with papers thirty years ago, today's papers have longer introductions, more references, longer sections relating the work to the existing literature and so on. The second paper endeavours to explain these changes by developing a *q-r* theory of quality standards. The fundamental question behind these changes is whether or not they are welfare increasing. If preferences are given, then welfare increases as standards evolve towards those preferences. This opens the possibility that the substantial impact on the life of academic economists that changes in the publication process have had, may be a good thing. By contrast, the thought that it might all be misguided is pretty horrifying.

Notes:

1. *Newsletters*, April 2002, October 2002. The ELSSS project can also be seen as evidence of dissatisfaction with the publishing process. See *Newsletter*, April 2002 for an update.
2. Ellison, 'The Slowdown of the Economics Publishing Process' *Journal of Political Economy*, Oct. 2002, 110 (5), 947-993; 'Evolving Standards for Academic Publishing: a *q-r* Theory', *ibid*, 994-1027.
3. Ellison (2002a) p.982.

Graduate salaries: a 25 per cent premium

We last reported on the premium level of salaries earned by graduates, and economics graduates in particular, in April 1998. Professor Ian Walker, University of Warwick, has just reported on the evidence of more recent data.¹

According to research recently completed by Professor Ian Walker at the University of Warwick, an undergraduate degree adds an average of around 25 per cent to one's earnings compared to the earnings of those who choose to leave education at 18. But the research also shows that this boost in earnings varies considerably depending on degree subject. The 25 per cent premium equates to about £220,000 over a full working-life. But the results also show that there is considerable variation in this effect on earnings across individuals — not least because of degree subject. Unsurprisingly Law, Medicine and related subjects, and Economics/Business are the degree choices that are associated with the most financial gain, while Arts (and Education) degrees are associated with small effects on earnings. The research is based upon data from the Labour Force Survey.

Given the dramatic increase in graduate numbers over the last 30-40 years, and a national policy of continuing to expand higher education, an obvious question to ask of the data is whether the premium has declined in response to this large increase in supply. The data suggests that, while students in the post-Robbins expansion in the mid to late 60's did not see their graduate labour market premium diminish, the students of the 90's expansion do seem to be enjoying more modest early career returns.

The research also examines the merits of continued expansion by looking at the question of whether more education makes us more productive or whether it is simply that more productive people choose higher education. On the evidence here, the former seems to be the case and this provides some support for the policy of expansion, notwithstanding the declining private returns that may be involved.

Note:

1. I. Walker, 'Education, Earnings and Productivity: Recent UK Evidence', *Labour Market Trends*, 111 (3), March 2003.

Getting Media Wise

Most research funding bodies rightly lay great stress on the arrangements for the future dissemination of the results of any research which they support. The ESRC has gone a step further by setting up a series of media training courses intended to help researchers communicate their results to the widest audience.

Last year, the ESRC set up four new training courses to develop the media skills of its researchers. Trainers, who include Evan Davis, the BBC's economics editor and Royal Economic Society Council member, will coach researchers throughout their academic careers, from recent PhD graduates to directors of ESRC-funded research projects.

Drawing on the skills of newspaper and television reporters and in some cases using the facilities at the BBC's Training and Development Centre, the courses have proved a hit with researchers who are or can expect to be called upon, often at short notice, to produce the highly condensed, instant impact summaries which the broadcast media in particular require.

One of the courses is aimed at senior researchers who already have some experience of the media. Practical sessions are held in a radio station and in front of a TV camera.

Two of the courses are aimed at ESRC centres and programmes. Centre and programme directors attend a day's training in communication strategy. The emphasis is on how to identify, target and engage with different audiences and the training, while short, is intensive with up to four trainees and a similar number of trainers from the media.

Courses can also be designed for specific research programmes or groups. Researchers from the Centre for the Analysis of Social Exclusion were recent beneficiaries of instruction on how to handle the media, what are 'news values' and how to identify the most suitable media for dissemination of their research.

Training is available also for researchers at the beginning of their careers. PhD students can find out the basics of the media and user engagement in half-day training sessions that are held across the UK.

Further information can be obtained from:
anna.hinds@esrc.ac.uk

Selling economics

The state of economics education and its apparent difficulties in attracting and retaining students has been discussed in these pages before (October 1996, January 1997, July 2000). In this note, based on an article which appeared recently in International Review of Economics Education,¹ Paul Ormerod makes a number of suggestions. One in particular is that we should take advantage of advances in computer technology to enable students to use interacting agent-based models whenever possible.

ECONOMICS AS AN academic discipline has two valuable strengths. Firstly, it trains people to think analytically. Secondly, it provides a number of important insights into how the economic and social world actually operates. But despite these advantages, students at all levels have turned away from economics in large numbers. The aim of this letter is to offer both some reflections on the current situation, and some suggestions on the way ahead.

Incentives matter and can be interesting

The idea that agents respond to incentives — to prices — is an extraordinarily powerful one. It is as close to a universal law of behaviour in economics that we have. In practice, of course, quantifying these effects may be very difficult, not least because the strength of the response to a given set of incentives is emphatically not universal. It varies with the social and institutional setting and with the historical context.

But the idea that agents respond to incentives has many applications. For example, the Mayor of London — Ken Livingstone, a man of impeccable Left wing credentials — is using it to try to help solve London's traffic problems. A congestion charge has been levied on the movement of cars into Central London, in the hope that this will cause a sufficient number of drivers to abandon their cars and switch to public transport. We do not have to buy into the complete package of free market ideology to recognise that incentives matter.

Why, then, has the number of students choosing economics dropped sharply, and how might they be persuaded to move back? Economics can be extremely interesting, but agents in the market — students — are telling us that it is not. The set of incentives they face either discourages them from taking up economics in the first place, or leads them to abandon it as soon as possible.

Dogmatism

I think that an important reason for this is that the teaching of economics has become too dogmatic, and too much is claimed for the achievements of the discipline. Economics should be taught instead more as a way of thinking about the world which can be of help in understanding a wide range of business, economic and social issues. An engineer teaching students the mathematics of, say, bridge building, can afford to be dogmatic. An enormous number of bridges has been constructed on these principles and, most of the time, most of them stay up. Economics is far from being in this position, yet it is often pre-

sented as though it is. Textbooks have come to resemble those of engineering, as if many problems have been solved and students simply need to absorb a settled body of knowledge.

A prime culprit in this respect is the widespread use of the assumption in economics courses that agents are rational maximisers, able to gather and process efficiently large amounts of information. John Sutton of the LSE has recently reflected on this question: 'The student who comes to economics for the first time is apt to raise two rather obvious questions. The first relates to the economist's habit of assuming that agents can be treated as rational maximisers by the time that students have advanced a couple of years, this question is forgotten. Those students that remain troubled by [it] have quit the field; those who remain are socialised and no longer ask about such things.'²

Institutions and economic history

This emphasis in economics on a universal rule of agent behaviour has led to the severe curtailment of courses on institutions and economic history. I believe this to be seriously misguided. Consider, for example, what are perhaps the four most important episodes in the economic history of the twentieth century:

- how in World War Two the Allies, in particular the United States but also to some extent the Soviet Union, were able to increase war-related production massively and rapidly
- the contrast at the end of the two world wars in the transition back to a peace-time economy
- the Great Depression of the 1930s
- the economic crisis of the mid-1970s.

None of these topics can be analysed properly without reference to economic theory, and often pretty high level stuff at that. For example, the micro-economic rules of behaviour of firms and consumers, the role of the price mechanism, industrial structure and organisation, the macro-economic impact of monetary policy and wealth effects, the impact of expectations — all of these are involved. But, equally, none of these episodes can be understood properly without an appreciation both of the role of institutions and of the particular historical circumstances of the time.

Cognitive limits on agent behaviour

The most powerful and exciting aspect of economics at present is the research agenda which recognises explicitly that there are cognitive constraints on the behaviour of agents. In general,

agents face constraints on their abilities to gather information. Even more importantly, they face constraints on their abilities to process information.

The Nobel awards in the last three years have all reflected this in various ways. The econometrics of Heckman starts from the premise that agents are heterogeneous, and we need to know how to handle this if we are to evaluate the effects of policies more accurately. The concept of the representative agent whose individual behaviour can inform us of the behaviour of the system as a whole plays no part. The bounded rationality models of Akerlof and Stiglitz recognise explicitly that agents are unable to gather full information, even though in general they still maximise in models with bounded rationality. And experimental economics is showing time and time again that agents in general do not behave in line with the precepts of optimising theory.

The *Economic Journal* itself has carried an excellent set of papers over the past couple of years or so, which demonstrate that in practice agents tend to follow simple rules of thumb. For example, in the January 2002 issue is a fascinating analysis³ of 282 actual plays of the popular American TV game show *The Price is Right*. The authors derive analytically the unique subgame perfect Nash equilibrium. The rules are very simple and the potential winnings are high. Yet, unless the Nash strategy is obvious, agents in practice typically deviate from this optimal strategy.

A much more realistic and powerful body of theory can be built which recognises the cognitive limits on the abilities of agents to gather and process information. Agents in general do not optimise, but follow rules of thumb. And their ability to learn, especially in a changing landscape, is severely constrained, a point which is perhaps the most difficult of all for many economists to accept.

Yet even those who are both aware of and sympathetic to the modern agenda in economic theory may hesitate about how it can be taught. Much of the work is, after all, at the forefront of knowledge. Fortunately, we can draw on advances in technology, and in particular on personal computers.

Agent based models on personal computers

There are good reasons why standard economics developed using the assumptions that agents carry out maximising behaviour with fixed tastes and preferences and with access to full information. Once they are relaxed, even apparently simple models often become extremely difficult, and usually impossible, to investigate analytically. Certainly, applying the economist's favourite piece of maths, calculus, does not get us very far in this context.

All theories are approximations to reality. In certain limited circumstances, such as in choosing between rival brands of nappies in a supermarket, the conventional economic assumptions might not be too unrealistic. But it is impossible to read the great economists of the past, Marshall for example, for very long before realising that they knew only too well that in most circumstances these were very imperfect approximations. They were compelled to make them given the technology — essentially paper and pencil — available to them at the time. It is only much more recently that economists have begun to ele-

vate these assumptions into a dogma.

The power of personal computers frees us from the constraints of the analytical calculus. It is straightforward to programme sets of behavioural rules for agents in any particular model, and to use computing power to understand its properties rapidly and efficiently.

Let me give two examples. First, the Schelling model of segregation. The model is an intellectual *tour de force*, not least because Thomas Schelling succeeded in deriving his initial results by hand using the squares on a chessboard. The problem it addresses can be stated very simply. The United States (and the UK, as the 2001 riots in the mill towns brought home to people) sees rather dramatic residential segregation on racial lines. Does this mean that individuals are strongly prejudiced?

Schelling's model is devastatingly simple, yet incredibly effective. The model is populated by a given number of agents, each of which belongs to one of two distinct types. Initially, these are placed at random on squares on a large chessboard (technically, on a torus). A specified percentage of squares is left empty.

The model is then solved over a series of steps, or iterations. In each step, an agent is drawn at random and decides whether or not to move to a different square. After making a decision, it is returned to the sample. Another draw is then made, and another decision made, and the process is repeated for a specified number of iterations.

The decision rule is the same for all agents in the original version of the model, though it need not be. First, the neighbourhood of each agent is defined. In other words, which other agents are regarded as its neighbours? A simple definition is to take the eight squares that surround any given square. Second, agents are given preferences. For example, suppose an agent only moves if it finds itself in a minority in its neighbourhood. In other words, as long as 50 per cent of its neighbours are of the same type as itself, it is happy. So individual agents only have a mild preference to have similar neighbours. If the agent moves, it goes to the nearest empty square where its preferences are satisfied.

The results of the model are dramatic. Allowing on average only two moves per agent produces marked segregation across the chessboard. Mild preferences at the individual level lead to very distinct segregation at the system-wide level.

The Schelling model embodies many of the general properties of agent-based modelling. For example, it is firmly in the scientific tradition of economics that insights into complex problems can be obtained by setting up and analysing theoretical models which simplify, often drastically so, the reality they are intending to describe.

But it departs from the tradition in the way its agents behave. They use a simple behavioural rule of thumb, and do not attempt to perform complex calculations in an attempt to optimise. Indeed, it is not clear what exactly would constitute optimising behaviour in this model, when the welfare consequences of the decision of an individual agent depend upon the random sequence in which other agents are called in the future to make their own decisions.

The model also has emergent properties. In other words, the properties of the system as a whole emerge from the interactions between individual agents.

Further, the model is empirically grounded from the outset. It was developed to account for an observed phenomenon — the marked residential divisions on racial lines — and constructed rules of individual agent which lead to this property of the system as a whole.

More mundanely, the model is solved not analytically but by simulation. Finally, the model contains an important stochastic element — in this case the order in which agents are drawn to make decisions — so that no individual solution of the model will be the same as any other. The model therefore needs to be solved many times from its initial conditions in order to establish its properties. The mechanics involved will be familiar to devotees of real business cycle models, although, here, of course, our old friend the optimising, representative agent is involved.

The Schelling model illustrates many of the principles involved in agent-based modelling. My second example can therefore be described more briefly.

The aim of the second model is to account for the observed volatility of financial markets. Standard economics does not have much to say about volatility. Its focus on comparing static equilibria leads to a neglect of the dynamic process by which markets evolve over time. Economics says a lot about equilibrium, but little about the paths which might be followed towards it. Indeed, Kenneth Arrow, who placed a great deal of economics onto a modern mathematical basis at the level of very high theory, has described the volatility of financial markets as ‘an empirical refutation’ of general equilibrium theory.⁴

The model is due to Alan Kirman.⁵ Agents in the model are traders in the market. At any point in time, an agent can operate either as a fundamentalist, relying upon the fundamentals of a share or an exchange rate, or a chartist, using more or less sophisticated methods of extrapolating recent behaviour in an asset price. But in this model, preferences are not fixed. Agents can and do behave as a fundamentalist for a number of periods, and then switch to being a chartist, or vice versa.

Again, the model evolves in a series of steps, or iterations. In each step, an agent is drawn at random to decide which rule of behaviour to use. The agent will switch with a specified probability to the other mode of behaviour of its own accord. It also has a second, separate, probability of switching. This is in part a parameter of the model. But, crucially, the parameter is multiplied by the proportion of the total number of agents which are operating in the different mode of behaviour. In other words, the more agents are, say, chartists when the agent considering the decision is a fundamentalist, the more likely is the agent to switch behaviour.

No single solution of the model is the same as another and, as with the Schelling model, the properties of the model are established by carrying out large numbers of solutions. The model is able to generate both non-predictability and high volatility.

The Schelling and Kirman models are able to account for observed empirical phenomena at the level of the system as a whole using rule of thumb behaviour for the individual agents

which comprise the system. This does not necessarily mean that they are *the* explanations of segregation or asset market volatility. But they are consistent with the empirical evidence, and so carry a substantial amount of initial credibility. Their rules of behaviour are not derived from *a priori* reasoning, but are designed in realistic ways to be compatible with the evidence.

Both the Schelling and the Kirman models are easy to set up on a personal computer. They have a small number of parameters, and simple rules. Students can explore for themselves the properties of the models, investigating for example, the effect on outcomes as parameters are varied. They can use them to think about the effect of policies. In the Kirman model, for example, what happens if a Tobin tax is brought in and the number of trades falls? Does it suggest that volatility will be reduced or not?

So many of the really interesting developments in theory, which make economic behaviour much more realistic, can be harnessed in teaching, thanks to the massive developments in computer technology.

Summary

The material discussed here requires a summary rather than a conclusion, for these are a set of ideas rather than a comprehensive manifesto. Above all, I feel that economics must stop being taught as if it were a received and validated stock of knowledge on the same scale as, say, engineering or physics. This is far from saying that the development of knowledge is exhausted in these two disciplines — this is transparently not the case — but they each have a solid and very substantial set of demonstrable achievements.

Being an economist involves not so much the possession of a particular stock of knowledge, but of a state of mind. It involves accepting that progress towards understanding complex problems in the social sciences can be made by setting up and analysing theoretical models which simplify, often drastically so, the reality they are intending to describe. But it also involves a recognition that we must be aware constantly of the need to have empirical grounding for our models. Further, it involves realising that any particular pattern of behaviour which we observe cannot necessarily be applied automatically in other contexts. The specific ways in which agents behave can be influenced by the particular institutional setting and the historical context.

Finally, on a purely practical note, I think that the teaching of economics should:

- use topical issues, particularly those involving policy implications, to illustrate a range of ideas
- provide some empirical grounding for theoretical models in the courses
- make sure that all economics students know something about twentieth century economic history, and the importance of institutions
- take advantage of advances in computer technology to enable students to use interacting agent-based models whenever possible.

...continued on p.14

A perspective on India -

Compelling Shades of Pessimism

In another report on recent developments in India, Professor Kanchan Chopra, Institute of Economic Growth, University of Delhi, looks at the difficulties of combining economic liberalization with political institutions which show a reluctance to change.

UNTIL 1991, India was presented as one of the world's significant experiments for development within a democratic context, following a centrally determined development path. Government controls played a central role, both in the domestic arena and with respect to trade and interaction with the rest of the world. However, there was little change in the institutions governing economic activity after independence. Property rights in large areas of asset ownership remained intact, despite half-hearted efforts at land reform in the early stages, which were soon consigned to forgotten memory. The bureaucratic structure of control of the economy stayed; if anything it was strengthened after independence. Mega projects, in the agricultural, industrial and infrastructure sectors were seen as the engines of growth. On the political and international arena, we fancied ourselves to be one of the leaders of the nonaligned movement. This mix of political and economic factors gave the country a low annual growth rate of around 3 per cent, referred to as the 'Hindu' rate of growth by one of the leading economists of the day.

All that started changing in the late eighties, and in 1991 it was claimed that liberalization and an outward looking approach was the new formula. Driven by the imperatives of fiscal need and geo-political reality, change was inevitable and it came. A hesitant dismantling of controls was brought in: some attempts at encouraging competition were initiated.

The initial years saw progress. Even by the (admittedly flawed) criteria of growth rates, annual GDP growth between 1991-92 and 1995-96 increased to enter the range of 6 to 7 per cent. Since 1997, rates of growth have hovered around 6 per cent, while analysts state that for per capita growth and a frontal attack on magnitudes of poverty, something of the order of 8 to 9 per cent is required. It is therefore time to ask whether the speed of internal reform and of integrating with the global economy is in line with what is required to deliver the target. Also, let us remember that the target itself is a changing and dynamic one, given by the manner in which the rest of the world changes.

Internal compulsions driving policy

Liberalization has many facets. Opening up the economy to a more free trade regime is only one part of it. The other part is about the removal of internal restrictions on expansion of enterprise and legitimate economic activity. Or about the introduction of governmental expenditure and revenue policies that give appropriate signals regarding its intentions to direct resources towards entrepreneurial effort which enriches the economy. Such policy must have an important component of reducing unwarranted subsidies and unproductive governmental expenditure. And it is in these areas that the dictates of domestic and international political situations determining the pace of change.

Within the country, the recently presented budget indicates that the 'election cycle' seems to be a driving force for governmental policy. The closer the ruling government is to an election year, the more the urge to pamper and protect well-entrenched, articulate vote-banks.

Within the country, the recently presented budget indicates that the 'election cycle' seems to be a driving force for governmental policy. The closer the ruling government is to an election year, the more the urge to pamper and protect well-entrenched, articulate vote-banks. In a federal

polity of the kind that exists in India, state elections and central elections come in different years. Every two or three years, some part of the country is going to the polls. And so, for understanding the driving forces for policy, this cycle almost needs to be superimposed on the more well understood 'rain-fall cycle' (used to analyze performance of the agricultural and thence the entire economy). The closer the country is to elections, the more the concern with vote-banks and the lower the likelihood of any structural change that will affect adversely the urban middle class, farmers in rich parts of the country and others. As for the poor and disadvantaged, a few sops prior to election time or the right kind of group patronage across caste and class are all it takes to corner their votes. A good economic modeling of the cost of capturing votes of different socio-economic classes could be undertaken on the above lines!

Be that as it may, levers driving government policy towards structural change are determined by political compulsions of a cyclical nature. As the Finance Minister put it in a recent statement, 'Can my job be solely and purely defined by Economics?', implying of course that it cannot. What implications does that have for the nature of change that we can

expect? Are we witness to a genetically programmed constraint to growth in a large, democratic country? Is this a constraint that reflects the collective will to accept slow rates of change in the interest of the articulate political classes? Witness the lack of will to reduce fertilizer or power subsidies to farmers, the continuing profligacy in unproductive public expenditure and the fascination with mega projects that seems to pervade governmental thinking as elections approach.

A special kind of mega-project that has received a great deal of media attention could be focused on more extensively. This is the project to link together India's rivers, ostensibly in the interest of doing away with seasonal and regional water scarcity altogether. Several versions of this project have been rejected by earlier government commissions, the last among them opening (in its report in 1999) that '...the Himalayan component would require more detailed study using systems analysis techniques. Actual implementation is unlikely to be undertaken in the immediate coming decades.' Even so, the \$112 billion project, which with the usual cost and time over-runs may mean an investment of upwards of \$500 billion (an amount which is larger than the present annual GDP of the country) is now presented to the country as a response to an order from the Supreme Court.

And this is done without a second look at past evidence or a putting together of available knowledge. Before the implementation phase starts, citizens need to know that the project has been assessed openly and professionally. This is particularly important at a time when the old paradigm of water resource management is undergoing a fundamental change. Policy implementation cannot however expect to be conducted within the framework of logical or consistent processes. The only hope perhaps is that the storm of elections will pass over and the mega project will die its natural death

And the global context....

Meanwhile, increasing integration with the global economy is a reality to be reckoned with. In the light of changes in fiscal management and reduction of subsidies described above, the domestic debate takes place with full information on happenings at world forums and the positions taken by developed countries on their kinds of protectionist measures, be they for farmers in the European Union, or more recently for steel and other sectors in the US. The developed country positions continue to reinforce the view that 'short-term national interest' is the only final bottom line, whether it be in economic or political matters and the rhetoric towards a more open world economic order is seen as just that 'rhetoric'. Witness the response to issues regarding the protection of the global commons. The little progress seen at Kyoto is now lost in a mire of mutual recrimination with no sense of leadership emerging from the powerful in the progress towards a notion of 'responsible well-being' in the twenty-first century.

One can of course argue that this is ground reality and we in India need to put our act together, keeping it in mind. On rare occasions, we even manage to do so. To give an example, our entrepreneurs, with the assistance of information technology, are perhaps in a position to do so. Witness the sharp rise in outsourcing of business processes to India by US and other companies. Outsourcing is helping corporate America to cut costs, resulting in higher profit and finally more growth. In the short run, it also means the migration of white-collar jobs to India and other countries in Asia. This seems to be a textbook case of comparative advantage in trade, spurred on by the information technology revolution. An analysis by Nasscom has shown that the American banking and financial sector has saved around 8 billion dollars in the last four years due to this outsourcing. Meanwhile, India's software and service exports show a rise of 28 per cent, despite a world wide downturn.

Outsourcing ... means the migration of white-collar jobs to India and other countries in Asia. This seems to be a textbook case of comparative advantage in trade, spurred on by the information technology revolution.

However, the New Jersey senate in the US recently introduced a bill which sought to stop the import of government's business process outsourcing work from other countries. Four other states are also considering similar legislation, specifically designed to protect local jobs. While it is still to be seen whether the proposed bills stand the test of constitutional validity within the US and the yardsticks set by WTO, the portents are ominous. As for the WTO, the credibility of international institutions in the face of unilateral action by large powers is in question after the largest institution of them all, the UN suffered a political setback in the Iraq test case. What evidence is there to believe that trade and other economic institutions will fare any better when it comes to the crunch?

Professionals in the developing world, which is struggling to move towards a more secure economic future in a global environment, need to inform themselves on the reality behind the rhetoric of free trade and globalisation and advise their business and corporate interests accordingly. This is indeed a huge demand on the human capital resources of these countries. Will they ever manage to be in the forefront in this dynamic world situation with asymmetric initial conditions and differential rates of access to knowledge?

Meanwhile, the world as we knew it is changing fundamentally and unalterably. The new order is being built on the fact that strength — military and economic — and influence, will dominate policy completely. Is it the unilateralism of the rich and the powerful that will dominate international institutions, whether it be with respect to trade, climate change or indeed appropriate political regimes? A chilling thought, in particular for nations who seek to assert their democratic entity and at the same time struggle to bridge the multidimensional internal cleavages that divide them.

...continued from p.6

Restraining management excess

The shareholder is an important part of the governance system of capitalism. The function can really only be discharged by large institutional shareholders. In general, the system seems to work better than alternatives such as bank-based conglomerate structures but there is no need to claim perfection for it.

Note:

1. Y Yafeh and O Yosha, 'Large Shareholders and Banks: Who Monitors and How?', *Economic Journal*, vol. 113, 484, 128-46.

Economics for the future

One hundred years of economics at Cambridge

A conference to celebrate the centenary of the economics degree at Cambridge is to be held on 17-19 September 2003. The conference is organised by the *Cambridge Journal of Economics* and sponsored by Oxford University Press.

Abstracts of no more than 500 words should be sent to The Programme Committee, Economics for the Future Conference, *Cambridge Journal of Economics*, Faculty of Economics and Politics, Sidgwick Avenue, Cambridge, CB3 9DD. The Conference will encourage open dialogue amongst all those concerned about the future prospects for economics and papers presented at the Conference will be considered for publication in a special issue of the *Cambridge Journal of Economics*. Further information: www.econ.cam.ac.uk/cjeconf.

...continued from p. 11

Selling economics

Notes:

¹ This feature is based on an article in the new journal, the *International Review of Economics Education*

² J.Sutton, *Marshall's Tendencies: What Can Economists Know?*, Cambridge MA: MIT Press, 2000

³ R.Tenorio and T.N.Cason 'To spin or not to spin? Natural and laboratory experiments from *The Price is Right*', *The Economic Journal*, 112 (476), 170-95.

⁴ article in the *Guardian* 3 January 1994

⁵ 'The Behaviour of the Foreign Exchange Market', *Bank of England Quarterly Bulletin*, August 1995

The GES recruits for Europe

The Government Economic Service is looking for graduate recruits to its 'European Fast Stream' scheme. The scheme was recently introduced by the government to try to raise the level of recruitment into EU institutions from this country. EFS economists work in the GES but if they succeed in an EU competition they will leave the GES and join an EU institution. Candidates for the EFS scheme should have the normal qualifications for admission to the GES (a good upper second class honours degree or a master's degree in economics) and at least one A level (or equivalent) in another EU language as well.

Further details can be obtained from: www.ges.gov.uk

Editor's note: we hope shortly to publish an insider's account of the GES's interview and selection procedure.

The Bank of England/Times Interest Rate Challenge

The national final of the Bank of England/Times Interest Rate Challenge, held last month, was won by St Paul's School, Barnes (London). The Governor of the Bank of England, Sir Edward George, presented them with the Challenge Trophy and a cheque for £10,000 for the School.

219 teams from across the United Kingdom entered the regional heats. The six teams reaching the final had to imitate the MPC process, assessing the UK and global economies to determine the most appropriate interest rate to achieve the Government's 2.5% inflation target. The teams, each of four students, then presented their decision to a panel of judges. For the national final, held at the Bank's headquarters in Threadneedle Street, the panel comprised Charles Bean (the Bank's Chief Economist, and a member of the Monetary Policy Committee) as chairman, his deputy Nigel Jenkinson, Committee member Kate Barker, and Anatole Kaletsky, associate editor at *The Times*.

Charles Bean expressed himself especially impressed by the students' knowledge of the vast range of economic data that the Committee had to consider. The team from Eton College in Windsor was the runner-up, winning £5,000 for their college, while the Perse School from Cambridge came third. The competition was instituted three years ago in order to promote an understanding of and enthusiasm for economics amongst A-level students.

Further details of this and next year's challenge can be obtained from: www.bankofengland.co.uk

Michal Kalecki

Jan Toporowski, Reader in Economics at South Bank University, has been awarded a Leverhulme Fellowship to write an intellectual biography of Michal Kalecki. Dr. Toporowski would greatly appreciate access to any unpublished materials (letters, papers, drafts) relating to Kalecki which any member of the society may have, or be aware of. Jan Toporowski can be contacted at: toporj@sbu.ac.uk

Obituaries

Arthur Brown

Arthur Brown, CBE, FBA, Emeritus Professor at the University of Leeds, died on 28 February 2003, aged 88. He served on the Council of the Royal Economic Society continuously from 1950 to 1968, and was President of the Society 1976-78. He was one of the most accomplished applied economists of his generation. His joy and *forte* was not the now fashionable approach of running hundreds of regressions, but digging below the surface and searching for meaningful economic relationships by dissecting statistics and plotting graphs – and he did so to great effect in his various books and articles. He was the master of using simple economic theory and statistics for elucidating practical issues of public concern in an intelligible, but rigorous, way.

Brown was the only child of parents in domestic service, and educated at Bradford Grammar School before going up to Queens College, Oxford in 1933. His original intention was to study physics, but the economic turmoil of the time whetted his appetite for politics and economics, and in 1936 he graduated with the best first class honours degree in PPE in the previous ten years. His youthful brilliance was rewarded with a Fellowship of All Souls and a Lectureship at Hertford College. These were the heady days of the Keynesian revolution, and Brown remembered queuing to buy *The General Theory* on the day of publication. He chose for his PhD the topic of liquidity preference, with Jacob Marschak as his supervisor, and his 1939 paper in *Oxford Economic Papers*, ‘Interest, Prices, and the Demand Schedule for Idle Money’, was one of the first econometric studies of the Keynesian demand for money function.

Like many of his contemporaries, Brown spent the war years in government service, first in the Foreign Research and Press Office; then as Head of the Research Department of the Foreign Office, and finally in the Economic Section of the Cabinet Office (1945-47), directed by James Meade. His researches in this period led to two books in 1947: *Industrialisation and World Trade*, and *Applied Economics: Aspects of the World Economy in War and Peace*. In the same year he left London for the University of Leeds, where he became the youngest-ever incumbent (till then) of a Chair of Economics. He loved the city of Leeds and the county of Yorkshire so much that he never left, despite many tempting offers to go elsewhere.

Brown chaired the Department of Economics for eighteen years. He was a shy man, but with a formidable presence, who set rigorous standards for colleagues and students. He was not the most charismatic of lecturers, but demonstrated a deep intuition and a rare profundity which at least the brightest students appreciated. His lectures to first year students, in which he

introduced and elucidated economic theory by constant reference to the real world, were published in a highly successful text, *Introduction to the World Economy* (1959).

The work that really consolidated his professional reputation, however, was *The Great Inflation 1939-1951* published in 1955, where, among many other insights, he plotted the historical inverse relation between the rate of change of wages and prices and the percentage level of unemployment, both for the UK and the US, thereby anticipating the Phillips curve. It didn't bother him that the Phillips Curve was not called the ‘Brown Curve’, and he was a generous supporter (by buying one for the Department!) of the infamous Phillips-Newlyn hydraulic machine built to illustrate how injections and leakages in an economy affect the circular flow of income. A sequel to his 1955 book was published in 1985 entitled *World Inflation Since 1950: An International Comparative Study* (with J. Darby).

Apart from inflation, another major research interest was inter-regional economic relations both between countries as part of a customs or currency union, and between regions within a country. On the latter, he headed a major study of regional disparities and regional policy in the UK commissioned by the NIESR, culminating in the publication in 1972 of *The Framework of Regional Economics in the United Kingdom*, plus supporting monographs. The case for taking work to workers was eloquently expressed in the book's final sentence ‘that the economy was made for man not man for the economy’. That could be his epitaph, encapsulating his approach to economics as a social science.

Brown was not only a fine economist, but also a tireless public servant who gave his time generously for the public good, sitting on many Commissions and public bodies including: the East Africa Economic and Fiscal Commission (1960); the UN Consultative Group on the Economic and Social Consequences of Disarmament (1961-62); the Hunt Committee on Intermediate Areas (1967-69), and the University Grants Committee (1969-78). He was also President of Section F of the British Association for the Advancement of Science in 1958.

His wife, Joan, who he married in 1938, predeceased him in 2000, as did his eldest son in 1959. He is survived by two other sons: Henry, an architect; and William, Professor of Industrial Relations at Cambridge University and Master of Darwin College.

A P Thirlwall
University of Kent at Canterbury

Glyn Davies

Glyn Davies who was born near Abertillery in Monmouthshire on 22 May 1919, died in Pontypridd on 6 January 2003. His best-known work, *A History of Money from Ancient Times to the Present Day* was first published in 1994, nine years after his retirement, and the third edition came out just a few months before his death.

Considerable disruption to his education was caused as the search for employment by his father, a former miner who had started work underground at the age of 11, took the family all over South Wales. Nevertheless the hardships of that period stimulated an interest in economics and in 1938 he sat the Royal Society of Arts examination in that subject, gaining first place and medal.

World War II interrupted his university studies in Cardiff and he served in the Royal Dragoons, an armoured reconnaissance regiment, in North Africa, Sicily, the Italian mainland, and then in northwest Europe from Normandy to Denmark. In Italy his squadron adopted a pig who travelled with them in their armoured cars. Davies recounted the story of this amusing interlude in an article in the *Army Quarterly and Defence Journal* in July 1998, probably the only occasion on which a journal of that type has published an article about a pig!

While in Denmark after the German surrender he met Grethe, the girl who was to become his wife. Therefore, instead of completing his honours degree he chose a faster route to employment and settled for an ordinary degree and took a post-graduate diploma in education. He taught in primary, secondary modern, and grammar schools in Cardiff while studying for University of London honours and masters degrees in economics as an external student, and also taught students attending evening classes for Institute of Bankers' examinations. In 1959 he joined the Scottish College of Commerce in Glasgow which, a few years later, was to become part of the new University of Strathclyde.

In articles in the *Oxford Economic Papers* and the *Journal of Economic Studies*, in 1967 and 1968 respectively, he drew attention to the paradox that areas of high unemployment might actually suffer from a shortage of suitably qualified labour, nullifying government attempts to encourage firms to move away from areas of full employment. He encouraged inter-disciplinary research and chaired Strathclyde's Regional Studies Group which drew together economists, other social scientists, and engineers to study the problems of the Scottish economy.

In 1968 he was seconded to the Welsh Office as the first person to hold the post of Senior Economic Adviser to the Secretary of State for Wales, who at that time was George Thomas, the future Lord Tonybandy and Speaker of the House of Commons who became a firm friend and later wrote the foreword to *A History of Money*. There was a serious lack of statistics on the Welsh economy and one of the main tasks facing Davies in the Welsh Office was to remedy those deficiencies. He produced data on identifiable public expenditure in Wales for the Crowther Commission on the Constitution which was considering the arguments for devolution. (Later he was to chair the cross-party Campaign for a Welsh Assembly, prior to

the 1979 referendum). When the new *Index of Welsh Industrial Production* was published it showed that output in Wales was increasing more rapidly than in the rest of Britain, but not sufficiently fast to counter Wales's dismal economic legacy which was worse than suggested by the unemployment statistics alone, since the activity rates in Wales were low.

In 1970, at the end of his period of secondment, he became the first occupant of the Sir Julian S Hodge Chair of Banking and Finance at the University of Wales Institute of Science and Technology, UWIST (which later merged with University College Cardiff to become Cardiff University). There he wrote the first book about the new postal giro system, *National Giro: modern money transfer*. With Ian Thomas he analysed the effects of the influx of foreign companies in *Overseas investment in Wales*. Another book, *Building societies and their branches: a regional economic survey*, written with Martin J. Davies (no relation), combined his interests in financial institutions and regional development as did various articles including one with J Wynne Evans in the *Service Industries Journal* (1983) pointing out that by the 1980s in every single region of Britain there were more people employed in services than in all other categories put together.

He served as Chairman of the Wales Careers Advisory Council and Honorary Vice-President and Secretary of the Cardiff Business Club, and economic adviser to the Commercial Bank of Wales, of which he later became a director. Subsequently he became the economic adviser to another indigenous Welsh bank, the Julian Hodge Bank, and continued in that role after his retirement in 1985 in addition to working on his *History of Money*.

He and his wife Grethe enjoyed travelling and visiting members of their far flung family in Canada, Australia, Fiji, Peru, Trinidad and Denmark. Walking in the Brecon Beacons and supporting Wales at rugby internationals in Cardiff were other passions. He is survived by his wife and daughter and by three sons, one of whom, John, is a Professor of Economics at Acadia University, Nova Scotia.

Roy Davies
University of Exeter

National Statistics

Socio-economic classification

A Researcher's Guide to the Socio-economic Classification, is a guide to the new classification which replaces 'Social Class Based on Occupation and Socio-economic Groups'.

The book, edited by David Rose and David Pevalin, describes the conceptual basis of the NS-SEC, shows how it has been validated and demonstrates some applications to a range of research topics.

The book is published by Sage Publications and the ISBN is 0761973222.

Correspondence

Privatisation of public enterprises

Sir,

It is well taken, as highlighted in your interesting feature on the joint award of the 2002 Prize in Economic Science to Daniel Kahneman and Vernon Smith by the Royal Swedish Academy (*Newsletter*, 120, Jan. 2003), that the 'English' auction generally produces a higher price than the 'Dutch' auction in connection with privatisation of public monopolies. However, there is yet another dimension of divestment policies, namely, whether the process should start with profitable units or with those written-up in red ink.

There was a time when British economists like James Meade (a Nobel Laureate in 1977) advocated 'the principle to socialise just those industries in which...loss is incurred...' (symposium on 'Price and Output Policy of State Enterprise', *The Economic Journal*, Dec. 1944, pp. 322-3). In my 1961 DLitt thesis I argued, against Meade, that public enterprises should, as a rule, be commercially viable, profits being 'the propellers of socialist industrialisation' (*The Theory and Working of State Corporations with Special Reference to India*, London: Allen and Unwin, 1962). Vernon Smith's laboratory experiments were published about the same time (1962).

The current move toward privatisation of public enterprises, initiated by the Government of India in 1991, accelerated during 2002-03 with the proposed divestment of highly profitable public enterprises like Hindustan Petroleum Corporation Ltd (HPCL) and Bharat Petroleum Corporation Ltd (BPCL), mainly to meet swelling fiscal deficits. This myopic vision of selling grandmother's real jewellery means a reversion to Meade's closed-door analysis put forward six decades back. Consequently, in the course of time, the government may be left mostly with the burden of junk portfolios like the Heavy Engineering Corporation (Ranchi) which, promoted in 1958, has been on its sick bed for some four decades.

Om Prakash

*Former Vice-Chancellor and Fellow Emeritus
University of Rajasthan, Jaipur India*

The Department of Applied Economics of the

Universitat de les Illes Balears

jointly with

**The Institut de Analisis Economica (CSIC)
of Barcelona**

announce the

**II Mediterranean Summer School in
Theoretical and Applied Economics:
The Evaluation of Public Policy**

to be held in Palma de Mallorca, Spain, July 14-18, 2003

The course will be offered to a number of selected students interested in the design of public policies and the analysis of their effects on equity and economic efficiency. The course's goal is to provide an extensive revision of what has been done on the subject and to open new paths for future research.

Lectures will be given by top leading specialist in the field. Each theoretical session will be followed by a workshop in which students will present their ongoing research. All people accepted in the summer school are strongly encouraged to participate in the presentations and debates around these papers.

Invited speakers

Richard Blundell (University College of London and IFS):
'Evaluation Methods for Welfare-to-Work Programmes'

Francois Bourguignon (World Bank and DELTA Paris)
'Ex-ante Poverty Evaluation of Public Policies in
Developing Countries'

Martin Browning (University of Copenhagen):
'Heterogeneity, Sample Selection and Endogeneity
Problems in the Treatment of Micro data for the Analysis of
Public Policies'

More information at:

<http://www.uib.es/congres/econschool/summerschool.htm>

Research round-up

The Newsletter asks repeatedly for members to report interesting items of research - published or in progress. With a few notable exceptions, the invitations go unheeded. In frustration, we have gone to look for some. The items below refer to topical issues or to issues which have featured in the Newsletter in the recent past.

Pensions and long-term saving

In *Newsletter* no. 109, April 2000 we reported on a joint RES-CEPR symposium on pensions. Since then, pensions (and long-term savings) have risen rapidly up the league table of public concerns. The Centre for the Microeconomic Analysis of Public Policy, led by Richard Blundell and Costas Meghir and hosted by the Institute for Fiscal Studies has been working on these, and other, issues.

Work on pensions has looked at the tax treatment of private pension saving and found that, despite the abolition of dividend tax credits to pension funds in the July 1997 Budget, private pension saving remains relatively tax-favoured compared with savings held in an Individual Savings Account. Moreover, employer contributions to private pensions are particularly tax-favoured since there is no employer or employee National Insurance either when the contribution is made or when the income is withdrawn. There is no obvious economic rationale for the tax system to favour one type of pension contribution over another.

Another dimension to the pensions problem that has attracted much attention in the financial press of late, is the sheer complexity of choice. Further research at the Centre suggests that this may well be implicated in the alleged failure of individuals to save enough for old age. This complexity has also led to almost continuous reform (which often has the effect of adding yet more complexity). The argument either for a period of stability or, if there is to be further pension reform, for that reform to ensure that the current system is simplified is strong.

Another topical issue concerns annuities and their mandatory purchase. Centre research has shown that those individuals in the UK who have purchased an annuity, tend to have much higher levels of savings, are more educated and are more likely to own their own homes than those who have not purchased an annuity. This provides an indication of the amount of selection into the annuities market, with these individuals being considered as 'bad risks', i.e. having longer life expectancies than those suggested by the UK population tables. The research also shows that those who purchased an annuity voluntarily have, on average, even more years of education and even higher levels of savings than compulsory annuitants. Figures suggest that future generations of annuitants will continue to be, on average, wealthier than those without an annuity. Consequently, selection in the current market for annuities, may not be completely eliminated by the introduction of mandatory annuitisation requirements.

Further information from: www.ifs.org.uk/esrc/pensions.shtml

Happiness is an educated partner

The question of what makes people happy was raised in these pages in *Newsletters* no. 110 and 120, July 2000 and January 2003 respectively, and we know that marriage plays a part. Recent research at the Institute for Social and Economic Research (ISER) at the University of Essex suggests why this might be and it does not encourage a romantic view of the benefits of long-term partnership. Rather it may be because an astute choice of partner improves real income.

The research by Malcolm Brynin and Marco Francesconi examines the value of marriage and partnership on the basis that both men and women gain or lose materially depending on the type of partner they choose. And much of this now derives from the relative value of each person in the labour market. They find that:

Individuals become more productive in the workplace and therefore on average earn higher pay, the higher the 'human capital' of their partner. Such people receive better career advice and encouragement and might benefit from a well cared-for home.

In earlier days, women generally did not work, and so the flow of this benefit was entirely from her to him. Now that women are nearly as fully engaged in employment as men, a process of equalisation is likely.

A man who partners someone with both high education and high human capital more generally defined earns a higher wage than other men of the same educational level who are similar in other ways.

The same applies the other way round. Moreover, the balance of advantage is now more strongly in the woman's favour, even though she may continue to earn less on average than men doing the same type of job. Perhaps, given her more tenuous link to employment, it is especially important to her career to partner a man with similarly high human capital.

There is a positive relationship between someone's wages and the relative human capital of both partners at the time of the formation of the partnership. This suggests that partnership decisions might be partly based on perceptions of the future labour market value of a partner.

It is income that counts most in forming an individual's welfare, and in particular income over the lifecycle. The way that most people can evaluate the future income of a prospective partner is through their educational record and their motivation.

Further information from: www.essex.ac.uk/iesr

ESRC news

Funding boost

ESRC is to receive an additional £36 million over the next three years to fund social science research in the UK. This increase of 27 per cent to the research council's baseline will be used to fund a wide range of interdisciplinary research designed to strengthen the ESRC's capacity and reputation for excellence. Furthermore, the government has announced that the science budget is scheduled to grow by 10 per cent a year until 2005 and all the research councils should benefit from that growth.

Amongst other beneficiaries of the increased funds for the ESRC are four major research programmes. The first is an investigation into rural economy and land use, jointly with EPSRC and NERC. Two others are research into a sustainable energy economy and into the use of stem cell technology. One tranche of the additional funding will go to the National Co-ordinating Centre for Quantitative Methods, the final piece in the ESRC's strategy to promote quantitative research.

New projects

New research projects to be funded by the ESRC include an investigation into 'Student Lifestyle Choices'. This will look at why some students choose to stay at home and how this affects the quality of their experience as students. It will also address questions of adulthood and independence. The project will be based at the University of Liverpool.

Risk database

As part of its Outreach programme the ESRC Centre for Analysis of Risk and Regulation (CARR) has launched the first national and international database for risk and regulation. Containing up-to-date information on academic research, the Risk and Regulation Online Research Directory promises to become a gateway for academics, researchers, students and practitioners to develop intellectual synergies, pull together research and build successful partnerships.

CARR hopes to contribute to better co-ordination and communication among academics and professionals in this multi-disciplinary field and enable users to benefit from contemporary research findings. More information from: www.lse.ac.uk/depts/carr

How to write a good application

Applications for ESRC funding, as for other research grants, require the investment of much time and trouble. The system is competitive and many good applications are inevitably rejected. For some applicants, the chances of success will be improved by looking at 'How to write a good application', just published by the ESRC. A copy can be downloaded from: www.esrc.ac.uk/ESRCContent/researchfunding/

Social inequalities in Europe

Research just completed as part of the 'One Europe or Several' project, which involved universities in Europe as well as the UK, shows that while the prosperity of member states as a whole has improved, the gaps between successful and under-achieving regions in European countries are getting larger, as are inequalities in household income. There is also a measurable movement of manufacturing jobs from countries such as the UK and Italy to eastern Europe, especially in low wage sectors. In future much manufacturing, including technology and intensive skilled jobs may move to lower cost locations in east and central Europe. Everything else, including research and development, marketing and services will remain in the west, preserving high paid jobs, but reducing the demand for less skilled labour.

The ESRC's contribution to the project was to fund research at the University of Sussex led by Prof. Mick Dunford. The research findings have direct relevance to policymakers within regional authorities, national governments and the European Commission. At a time when Chancellor Gordon Brown has proposed radical moves to repatriate the £1.4bn the UK currently receives from Brussels to support the EU's poorest regions, the Sussex researchers have uncovered some colourful examples of Europe's international division of labour, particularly in the components sector. One manufacturer, for instance, had shipped steering wheels destined for Birmingham from Turin to Romania for trimming and covering in wood or leather to save on wages, reducing employment in Italy, and closing a Birmingham plant that previously supplied UK car assemblers.

Virtual colleges strengthened

A range of new measures aimed at increasing the impact of the ESRC's Virtual College System (VCS) are currently being implemented following a recent review of VCS activities. The VCS was established in 1997 with the aim of providing the ESRC with a clearer route through which the academic community could assist in the shaping of Council policies, practices and new research developments, and also contribute to the direct assessment of Research Grant applications. To achieve these objectives, three Virtual Colleges were set up to coincide with the disciplines of the Research Teams within ESRC. The 30-40 members of each Virtual College are drawn from the academic community and join the VCS following various nomination/selection processes.

Members of the VCS play a vital role in the assessment of small grant applications (which are reviewed by one College member and one Board member). They also play a major part in identifying and developing new areas of research for possible funding by the ESRC.

Both roles will be strengthened in future by a series of initiatives to increase interaction between VCS members. These range from the publication of a VCS newsletter to a series of Joint College Days whereby members will be able to meet and develop further ideas for potential research, which can then be taken to the Research Priorities Board. New research ideas for the ESRC can be forwarded via a college member. A list of names can be found at: www.esrc.ac.uk/esrccontent/aboutesrc/research_coll

RES news items

New President-elect and Council members

At the Annual General Meeting of the Society held on 7 April 2003 at the University of Warwick, Professor John Sutton, professor of economics at London School of Economics was confirmed as the President-elect of the Society. He will take office as President after the Annual General Meeting in 2004 for a period of three years.

The following were elected to hold office for five years from 2003-2008:

Francesca Cornelli, London Business School
Ed Crooks, *Financial Times*
Nobuhiro Kiyatoki, London School of Economics
Barry McCormick, Department of Health
Amanda Rowlatt, Office for National Statistics
Ian Walker, University of Warwick

Publications

The Society offers to its members a number of scholarly publications at special prices. These include: *The Collected Writings of John Maynard Keynes*; *Keynes Lectures, 1932-35*;

2004 ANNUAL CONFERENCE

The 2004 Annual Conference will be held at the

University of Wales Swansea

Monday 5th to Wednesday 7th April

Further details will follow in the July issue of the *Newsletter* together with the Secretary-General's Annual Report and the report on this year's Annual Conference.

Malthus' Principles of Political Economy and An Essay on the Principles of Population; Official Papers of Alfred Marshall and The Correspondence of Alfred Marshall, Economist.

A full list with the special prices may be obtained from Ms Eleanor Burke, Department of Economics, London Business School, Sussex Place, Regent's Park, London NW1 4SA. Fax: 44 (0) 171 724 1598. E-mail: eburke@london.edu or via the Society's home page on the internet (www.res.org.uk).

Enquiries about rights, permissions and initiatives relating to editions and other scholarly works should be addressed to The Publications Secretary, Professor Donald Winch, Arts E, University of Sussex, Falmer, Brighton, BN1 9QN.

New RES website

www.res.org.uk

We are very pleased to announce that the new Royal Economic Society website is now live with new functionalities and added features for both members and non-members.

The site is divided into eight major sections:

- Home
- Academic
- Society
- *Economic Journal*
- *Econometrics Journal*
- New members
- Media
- Membership

Through the *Membership* section, members can access the full text of all articles in *The Economic Journal* and *The Econometrics Journal* a membership directory through which they can contact other members as well as updating their own details interactive news pages where they can publish news or raise queries of potential interest to other members.

The website also provides details of forthcoming articles in all the Society's publications the recent activities of the Society's sub committees access to the datasets used in the papers published in the Society's journals details of submission procedures

... and much more

We ask members to visit the site and to please activate their membership directory entry. Feedback and comments are welcome.

Conference Diary

2003

april

25-27 April

Limerick, Ireland

Seventeenth annual conference of the **Irish Economic Association (IEA)**.

Further information from: Internet: www.iea.ie/conferences

may

14-16 May

Bologna, Italy

Second annual conference of the **European Economics and Finance Society (EEFS)** to be held at the University of Bologna on the topic European Integration: Real and Financial Aspects.

Further information from: Internet: www.dse.unibo.it/eefs

29-31 May

Sussex

International conference on **Global Regulation** to be held at the University of Sussex.

Further information from:

Internet: www.sussex.ac.uk/units/CGPE/regulation.html

30-31 May

Helsinki, Finland

International conference on **Inequality, Poverty and Human Well-Being** to be held at the United Nations University.

Further information from: E-mail: global@wider.unu.edu

Internet: www.wider.unu.edu

june

5-5 June

Birmingham

Twentieth symposium on **Banking and Monetary Economics** to be held at the University of Birmingham.

Further information from: Professor Andy Mullineux, Department of Accounting and Finance, The Birmingham Business School, University of Birmingham, Edgbaston, Birmingham, B15 2TT. E-mail: a.w.mullineux@bham.ac.uk

13-15 June

New York, USA

CALL FOR PAPERS

Seventeenth annual conference of the **European Society for Population Economics** to be held at New York University. Submissions (including abstract), should be sent by e-mail by 1 February 2003 to gsas.econ.espe2003@nyu.edu

Further information from: Internet: www.espe.org

26-28 June

Vienna, Austria

CALL FOR PAPERS

First international conference on **Economics and Management of Networks** to be held at the University of Vienna. The purpose of the conference is to provide an international discussion forum for the research in economics and management of franchising networks. Those wishing to present a paper should send a 1 page abstract and response form by 15 March 2003 to Josef Windsperger, University of Vienna, Center for Business Studies, Brünner Str. 72, A-1210 Vienna, Austria (or by Fax to 00431-4277-38174).

Further information from: Josef Windsperger at the address above. Internet: www.univie.ac.at/EMNET

july

4-5 July

Cambridge

Annual conference of the **Association of Christian Economists** to be held at Sidney Sussex College, Cambridge.

Further information from: Dr Michael Pollitt (mgp20@cam.ac.uk), Professor Andrew Henley (andrew.henley@aber.ac.uk) or Professor Jonathan Thomas (jpt@st-and.ac.uk).

10-12 July

London

International West-East conference on **Accounting and Finance in Transport: European and Asian Experiences and Public Policy Considerations** to be held at the University of Greenwich.

Further information from:
Internet: www.gre.ac.uk/schools/events/account%20and%20finance.html

august

20-24 August

Stockholm, Sweden

Eighteenth annual congress of the **European Economic Association**.

Further information from: Internet: www.eea-esem2003.org

20-24 August

Stockholm, Sweden

Annual meeting of the **Econometric Society**.

Further information from: Internet: www.eea-esem2003.org

27-30 August

Jyväskylä, Finland

Forty-third congress of the **European Regional Science Association (ERSA)** to be held at the University of Jyväskylä.

Further information from: www.jyu.fi/ersa2003

september

1-2 September

London

CALL FOR PAPERS

First annual meeting of **OxMetrics User Conference** to be held at Cass Business School. The conference aims to provide a forum for presentation and exchange of research results and practical experiences within the fields of computational and financial econometrics, empirical economics, time-series and cross-section statistics and applied mathematics. Abstracts (100-200 word) should be sent by e-mail by 30 April 2003 to Giovanni Urga (g.urga@city.ac.uk).

Further information from: Giovanni Urga at the above e-mail address.

Internet: www.staff.city.ac.uk/~giourga/oxmetrics.html

10-12 September

Cambridge

CALL FOR PAPERS

Thirty-fifth annual conference of the **Money, Macro and Finance Research Group** to be held at the University of Cambridge. Two copies of papers should be sent by 30 April 2003 to Programme Convenor, MMF 2003 Conference, Faculty of Economics and Politics, Austin Robinson Building, University of Cambridge, Cambridge CB3 9DD.

Further information from:
Internet: www.econ.cam.ac.uk/mmf

18-21 September

Erfurt, Germany

European meeting of the **Economic Science Association** to be held at the University of Erfurt.

Further information from:
Internet: www.uni-erfurt.de/elab/esa

19-21 September

Tennessee, USA

Sixty-third annual meeting of the **Economic History Association**. The topic will be: Transitions in Economic History.

Further information from: Internet: www.eh.net/EHA/meeting

6 September

Cambridge

Centenary conference for Alumni of the Cambridge Economics Tripos and their former teachers. Speakers to include Amartya Sen*, Andrew Turnbull, Bob Solow, Eddie George*, Geoff Harcourt and Martin Wolf (* provisional). Open to Tripos Alumni and their teachers.

Further information from: Brian Holley, E-mail: brian.holley@econ.cam.ac.uk ('Centenary conference' in subject field).

october

8-10 October

Strasbourg, France

Fifth European Transport Conference of the Association for European Transport.

Further information from: Sally Scarlett, Association for European Transport, c/o PTRC, 1 Vernon Mews, Vernon Street, London W14 0RL. Tel: 020 7348 1978 Fax: 020 7348 1989 E-mail: info@aetransport.co.uk Internet: www.aetransport.co.uk

16-19 October

Quebec, Canada

Fifty-sixth International Conference of the Atlantic Economic Society to be held in Quebec City, Canada.

Further information from: E-mail: iaes@iaes.org Internet: www.iaes.org

november

6-7 November

Nottingham

CALL FOR PAPERS

Fourth international conference on Money, Investment and Risk. Those wishing to present a paper should send abstracts by 21 July 2003 to Professor Leighton Vaughan Williams, Department of Economics and Politics, The Nottingham Trent University, Nottingham NG1 4BU.

Further information from: Leighton Vaughan Williams at the address above. Tel: 0115 848 5516 Fax: 0115 848 6829 E-mail: leighton.vaughan-williams@ntu.ac.uk Internet: www.ess.ntu.ac.uk/economics/conference.htm

7-12 November

Maastricht, Netherlands

Annual conference of the European Association for Evolutionary Political Economy to be held at the University of Maastricht. The theme is 'The Information Society: Understanding its Institutions'.

Further information from: E-mail: groenewegen@few.eur.nl Internet: www.eaepe,infonomics.nl

2004

january

3-5 January

California, USA

Annual meeting of the American Economic Association to be held in San Diego.

Further information from:
Internet: www.wanderbilt.edu/AEA

Membership of the Royal Economic Society

Membership is open to anyone with an active interest in economic matters.

The benefits of membership include:

- Copies of the *Economic Journal*, the journal of the society, eight times a year.

The *Economic Journal* is one of the oldest and most distinguished of the economic journals and a key source for professional economists in higher education, business, government service and the financial sector. It represents unbeatable value for those who want to keep abreast of current thinking in economics. Issues are divided into those containing 'Articles' — the best new refereed work in the discipline — and 'Features' including symposia and regular features on data, policy and technology.

- On-line access to *The Econometrics Journal*, a new electronic journal published by the Royal Economic Society and Blackwell Publishers. The journal seeks particularly to encourage reporting of new developments in the context of important applied problems and to promote a focus for debate about alternative approaches.

- Copies of the Society's *Newsletter*. This is published four times a year and offers an invaluable information service on conferences, visiting scholars, and other professional news as well as feature articles, letters and reports.

- The right to submit articles to the *Economic Journal* without payment of a submission fee.

- Discounts on registration fees for the Society's annual conference.

- Discounted prices for copies (for personal use only) of scholarly publications.

- The opportunity to take advantage of the grants, bursaries and scholarships offered to members of the Society.

Membership rates for 2003 are £45 (\$65)*

There is a reduced rate of £22.50 (\$36) for members who reside in developing countries (with per capita incomes below US\$500) and for retired members. A special offer of three years membership for the price of one at this reduced rate is available to full-time students who join the Society for the first time in 2003. Details and application form are available from:

**The Membership Secretary, Royal Economic Society,
University of York, Heslington, York, YO10 5DD.**

If you would like to join the Society, complete the adjacent application form and return it to the Membership Secretary at the address above.

* All customers in the EU should add 5 per cent VAT to these prices or provide a VAT registration number or evidence of entitlement to exemption. Canadian customers please add 7% GST or provide evidence of exemption.

Please enter my name as an applicant for membership of the Royal Economic Society. I enclose a cheque for
..... in payment of my subscription for 2003.

Name:
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Occupation..... Date.....