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EXECUTIVE SUMMARY

This report covers the first year of the Centre’s new 5-year ESRC programme on Labour Markets (LM), Education and Skills (including the Centre for the Economics of Education), Technology and Growth (T&G), and Globalisation (G).

Research

Our Labour Markets Programme, now the largest in the centre, reports on:

- our joint programme with NBER on Seeking a Premier League Economy, an assessment of whether changes in the UK economy over the past 20 years have resulted in a model economy for others to copy – this culminates in a joint CEP/NBER publication in March 2002;

- the concluding work, culminating in a conference, of the Leverhulme Labour Market Consequences of Structural and Technological Change Programme under Prof. Nickell; this will culminate in a special journal issue of the Oxford Bulletin of Economics and Statistics;

- an update of the programme’s publication “The State of Working Britain”, published November 2001, which updates and extends the originally highly successful publication (MUP 2000) and contains new work on how low skilled workers and disadvantaged groups have fared during the economic recovery;

- new work on the impact of intergenerational influences and childhood experiences on inequalities; the impact of labour market institutions and the housing market on labour market performance and unemployment in the UK; comparative work on OECD countries; work on determinants of performance inside the firm. Our work has never been solely empirical, however, and Manning’s new book on Monopsony provides an important new way of thinking about labour markets, challenging conventional wisdom that a laissez faire approach to labour markets results in a perfectly competitive market.

Related to our work on labour markets is that in the Education and Skills Programme which has been funded largely through the DfES Centre for the Economics of Education now in its second year and involving partnership with the Institute for Fiscal Studies and the Institute of Education. This side of our work is rapidly expanding and the programme has been successful in raising considerable funding for policy evaluation projects. We report here on a broad range of issues including returns to education, changes over time in the relative demand for skilled workers, links between educational attainment and family background, the performance of the further education system, the labour market for teachers and school effectiveness and quality.

Our Technology and Growth Programme shifts the focus to the macroeconomy and takes a theoretical approach to the role of the rate of job creation in the determination of employment across the OECD, and considers the impact of regulation on the rate of new-business startups. Work has also been carried out on the determinants of “jobless” growth,
comparing US and EU economies and arriving at the surprising conclusion that the EU has had faster productivity growth associated with employment decline relative to the US.

Work on the knowledge economy has assessed the payoffs from undertaking R&D expenditure to generate new knowledge, and the impact of different ways of disseminating new knowledge. Freeman’s work on the Internet Economy, using for the first time internet databases from e.auction and e.recruitment companies, addresses the impact of new technologies – specifically the Internet – on how labour and product markets work.

Our GLOBALISATION PROGRAMME reports on work on international trade and investment, location of economy activity, and international finance. Work has been undertaken on the drivers of globalization (in particular the role of new technologies) and on its impact. This looks both at the long historical record of globalization and economic performance, and at the impact of globalization on current income differentials and on poverty.

Locational issues have been investigated at the sub-national as well as the international level, with work on cities, regional inequalities, and the clustering of industrial activity in the UK.

Major new projects on International Financial Stability have been launched to examine the international macro-economy. These draw together experts in international banking and finance as well as macro-economists. The research will initially focus on the causes and consequences of financial crises, and the lessons to be drawn for institutional reform.

Top Findings of the Year

1. Blanden, Goodman, Gregg and Machin [LM 287] find that the extent of inter-generational mobility across the earnings distribution in Britain has fallen. Comparing the 1970 birth cohort with the 1958 cohort, parental earnings have become a more, not less important determinant of the earnings of the next generation.

2. Gregg, Dickens and Wadsworth [LM16, 50, 155, 258] use new data to address the old question of the extent to which unemployment is a few people experiencing repeat spells, or falls more generally across a wider range of people. They find that the bulk of unemployment falls on a small number of individuals who experience repeated periods of unemployment. Policies are needed not just to help the unemployed back into work but to keep them in employment once they have jobs.

3. Machin, Manning, et al [LM 58, 214, 215, 229] study the impact of the minimum wage. It has led to a loss of jobs in a few sectors (such as residential care homes) but there is no evidence that it has affected aggregate employment. It has also had a perceptible impact on earnings amongst the lowest 5% of the earnings distribution, but has not had spillover effects beyond this group.

4. Gibbons and Machin [LM112] study the willingness of parents to pay for better primary school performance, finding that house prices rise by between 3 and 9% for each 10 percentage point improvement in the performance score of local primary

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1 Square brackets refer to numbered publications in Annex B organised by programme. LM = Labour Markets/Education & Skills, T&G = Technology & Growth, G = Globalisation programme
schools. The effect varies across regions, and is most pronounced in London and the South-East.

5. Dougherty [LM111, 269] uses US data to explore the relative importance of numeracy and literacy in determining earnings of young adults. Both are valuable, but numeracy more so. While the value of literacy is static, that of numeracy is increasing at around 6% per annum through the sample period.

6. Pissarides [T&G] shows that with the shift from manufacturing to service employment, an increasing fraction of job creation takes place in new businesses. Business regulation in Europe, compared to the US, has hampered the formation of new businesses, as reflected in the fact that new employment accounts for 40% of US GDP growth but only 7% of European GDP growth over the last 20 years.

7. Freeman [LM 84] studies internet based labour recruitment agencies. Although these have been amongst the most successful of the dot.coms, the idea that the internet will bring about a more perfect market – for example by speeding up the process of finding jobs or reducing dispersion of pay offers – is not validated by their experience.

8. Winters, McCulloch and Cirera [G4] study the effect of trade liberalization on poverty. They outline circumstances under which trade liberalization can hurt the poor in the short run and identify policy responses. They find that in the long run trade liberalization ultimately helps poverty alleviation by stimulating growth.

9. Redding and Venables [G64, 68, 79] study the effect of location and remoteness on the cross-country distribution of income. They find substantial evidence of ‘wage gradients’ both within and between regions of the world, and show that up to two-thirds of the cross-country variation in wages can be accounted for by a measure of remoteness from centres of economic activity.

10. Norman and Venables [G106] analyse the theory of policy competition between countries seeking to attract a cluster of activity. They show that such competition does not result in a ‘race to the bottom’; on the contrary, it results in there being fewer and larger clusters of activity, thus bringing an efficiency gain that is enjoyed by consumers of the product.

11. Meade and Sheets [G116] investigate the role of regional influences on monetary policy decision making in the United States, and find that voting behaviour in the Federal Reserve is strongly influenced by economic conditions in members’ home districts. The likelihood of similar nationally biased voting in the ECB suggest the need for careful design of voting rules to ensure appropriate balance between national and zone-wide interests.

Output and Impact: publications (Annex B)

- Our output of publications during the year continues to be enormous, with 98 book chapters and refereed journal articles, 6 books and 85 discussion papers and reports and an all time record 149 conference papers presented in the UK and abroad.
• Our work is read, too. Stats from our newly redesigned website indicate that our discussion papers were downloaded 165,000 times during the year and we had one or more visits to the site from around 10,500 people a month. Stats on downloads of our papers in social science electronic archives are also encouraging, with 3 staff making the 10 top most downloaded papers in their area in RePEC and SSRN and with papers of six CEP staff downloaded over 250 times each. We continued to reach non-academic audience through our magazine, CentrePiece, which contains accessible but serious articles highlighting research going on in the centre. We are now piloting distribution in the US.

• The quality of our work was also recognised, with Venables awarded the Nikkei Economics Book Prize 2000, and the Bhagwati prize for the best article in the Journal of International Economics 1999-2000; Redding a Phillip Leverhulme Prize Fellowship for work on international trade and economic growth and Merxe Tudela and Elisabetta Falcetti receiving the Young Economists Award of the European Economic Association. Steve Nickell was made the President of the Royal Economic Society and Danny Quah received the ESRC’s ‘Heroes of Dissemination’ Award.

Output and Impact: Events

• We continued to run a large number of events, with six seminar series a week, and 12 conferences covering Skills-biased Technological Change, Home Ownership and Unemployment, Unions and the Internet, the Internet Economy, the National Minimum Wage, Performance Pay, Adolescent Development and Social Policy, and International Trade.

• We reached large outside audiences at Business Forum events, at a series of 10 public lectures and through our redesigned website http://cep.lse.ac.uk

Output and Impact: Policy Involvement (page 37)

We want our ideas to be read, but we also want them to have impact on the real world:

• Eleven of our staff are providing policy advice to the government on areas researched in depth by the Centre over the past 10 years. Those include policies on the Minimum Wage, the New Deal, Working Family Tax Credits, the New Apprenticeship, national literacy and numeracy strategies, e-unionism, trade liberalisation and regional issues.

• Two members of our staff (Nickell and Bean) are currently members of the Monetary Policy Committee. Nickell continues to supervise projects in the Centre.

• Vignoles has been seconded for a year to the DfES.

Funding and Fundraising (page 34)
• We attracted the largest amount of outside project funding ever, financing £1.06m of work with non-ESRC money raised in 2000 and previously, in addition to £884k of work financed by ESRC. This is the first time that our outside funding has exceeded the ESRC contribution and this has helped us to maintain our overall pre-2000 level of activity.

**Staffing & Training (Annex A & F)**

• During the year we have appointed 1 senior research fellow, 5 research officers and 6 research assistants. Junior staff (12) have departed (Annex F) to take up posts in IFI’s (Bank of England, IMF, World Bank, EBRD), the United Nations, universities (Kellogg, Pompeu Fabra, Virginia) and financial markets institutions (Credit Suisse First Boston, Allianz). Six members of the Centre obtained their PhD during the year (Annex F.)

**Other Resources**

• The year saw the move back to campus for the CEP from its temporary accommodation in the Patents Office to the LSE’s Foster-designed Research Lab. We are now located in outstanding accommodation and facilities alongside other major ESRC Research Centres (Financial Markets Group, Centre for Analysis of Social Exclusion). We have already started to work to reap benefits from this co-location with data sharing, joint projects, joint IT, some joint events and information exchange and dissemination.

**Layout of Report**

In what follows we first discuss programme by programme (Labour Markets, Education and Skills, Technology and Growth, Globalisation) a selection of the research carried out during the year with numbered references to publications set out in corresponding programme order in Annex B. We then turn to our plans for the following year. We go on to discuss the impact of our work through events, media and policy contacts (p. 37), our finances (p.34) and information strategy (p.40).
RESEARCH COMPLETED

LABOUR MARKETS
(Programme Director: Alan Manning)

This programme covers research into labour markets, labour market policies and institutions, and their impact on inequality and unemployment. It also includes research on labour practises inside firms, and work carried out under the Education and Skills programme insofar as these relate to labour markets (demand and supply of skills, childhood experience and later performance in the labour market). Before turning to our work from 2000, however, we report on three initiatives started in previous years that this year reached completion.

December 2000 saw the final conference on ‘Seeking a Premier League Economy’, a two-year project carried out jointly by CEP in association with the National Bureau of Economic Research, (and culminating in a joint book to be published in early 2002). This project evaluates 20 years of institutional change in the UK economy and asks whether the performance of the UK economy has dramatically improved. While there are parts of the economy where change is very visible and substantial (e.g. the importance of trade unions) there are many parts where surprisingly little has changed and where the impacts of one programme have been offset by those from another. For example, Britain's place in the international productivity league table is virtually unchanged [LM246] and labour is not noticeably more mobile than before [LM287]. Overall, however, the conference concluded that the reforms had helped the UK to become one of the most market-friendly economies in the world and had arrested its relative economic decline, although at the cost of a substantial rise in inequality.

A new edition of the successful ‘The State of Working Britain’ [LM244] was also published in November 2001. The book presents a view of the labour market based on flows rather than stocks and makes the latest research and facts about the British labour market available to interested non-specialists. This edition contains articles on the minimum wage, ethnic minorities, lone parents and the impact of the Working Families Tax Credit, trade unions, the impact of the internet, regional differences in male inactivity and how low-skilled workers have fared in the economic recovery. Much of this update was concerned with whether the improved labour market conditions of the 1990s had been shared by all. Certain disadvantaged groups have done well (e.g. lone parents, and British-born ethnic Indian and Chinese) but other groups have not fared so well (e.g. those in depressed regions, older less-skilled men and those of Pakistani and Bangladeshi origin).

The end of a five-year Leverhulme-funded programme run by Nickell on “The Labour Market Consequences of Structural and Technological Change” was marked by a conference run in September. The overall conclusions of this project are that technological and structural change has been driven by advances in science, technology and the organisation of production in the industrial sector along with increasing international specialisation. In the UK, this has led to a dramatic increase in employment in the service sector, a rise in demand for skilled workers, a fall in demand for unskilled workers, a rise in demand for female intensive skills and a collapse in trade unionism in the private sector. In their turn, these
changes have generated a significant rise in the returns to qualifications and a marked improvement in the relative labour market position of women. More broadly, we have seen a general rise in pay dispersion, particularly facing new entrants to the labour market. Furthermore, there has been a gradual rise in short-term pay flexibility which has probably been associated with increasing perceptions of insecurity. A further consequence has been the dramatic increase in inactivity among unskilled men to the extent that by the late 1990s over 30% of such men between 25 and 64 were not working, despite the booming labour market. Furthermore, the situation is markedly worse in Inner London and the Northern regions of Britain. All this has, in its turn, generated an increased polarisation of work across households with severe consequences for child poverty. This is generating difficult policy problems which have not, as yet, been fully resolved. The work of the project will appear in a special edition of the Oxford Bulletin of Economic & Statistics in the Spring of 2002.

**Labour Markets and Labour Market Policies (Alan Manning)**

As aggregate labour market conditions in the UK have markedly improved compared to the situation 10 or 20 years ago, the focus of our research has moved away from concern with the overall level of unemployment to concerns about pockets of disadvantage still to be found in the labour market. The gains from improved labour market performance have not been shared by all and the labour market research of the Centre tries to understand the reasons for these inequalities, to evaluate policies designed to remedy them, and to identify policies that can help to improve performance.

**Labour Market Inequalities**

Why do large pockets of disadvantage persist and why do certain groups not seem to share in the general increase in prosperity? There has been an enormous amount of academic research on wage inequality in the past 20 years but inequality is a wider issue touching on questions of social exclusion and the Centre is actively involved in researching aspects of inequality that have previously been under-studied.

It is well-known that inequality in incomes is transmitted through generations: the children of high-earners are more likely to earn high wages as well. But, there is much less work on whether this inter-generational inequality has changed over time. Is Britain becoming a more ‘equal opportunity’ society or are the old privileges being reinforced by rising income inequality? Blanden, Goodman, Gregg and Machin [LM287] have looked at correlations between labour market earnings and parents’ earnings over time to assess whether the extent of intergenerational mobility has altered. They find that mobility appears to have fallen in a cross-cohort comparison of people who grew up in the 1960s and 1970s (1958 birth cohort) as compared to a cohort who grew up in the 1970s and 1980s (1970 birth cohort). This is because the sensitivity of labour market earnings to parental income rises in regression models that are specified the same way for both cohorts, thereby showing less intergenerational mobility for the more recent cohort. These results are particularly relevant and interesting given that wage and family income inequality rose sharply between the times that the two cohorts grew up. The results are linked to the observation that, despite the expansion of the education system and the increase in numbers obtaining degrees from the younger cohort, it appears to be children from richer families who disproportionately benefited from the expansion.
Chevalier and Lanot [LM102 and 261] observe that children from poorer backgrounds are generally observed to have lower educational outcomes than other youth. However, the mechanism through which household income affects the child’s outcomes remains unclear. Either poorer families are financially constrained or some characteristics of the family make the children less likely to participate in post-compulsory education. They investigate which matters using a methodology that separates financial and familial effects. As in previous studies, there is clear evidence that pupils from poorer families are less likely to invest in education. However, a financial transfer would not lead to a significant increase in schooling investment, which supports the view that the family characteristic effects dominate the financial constraint effects.

One of the most popular proposed remedies for rising wage inequality is to increase the level of educational attainment. Work by Pischke in conjunction with Acemoglu of MIT [LM30] investigates the extent to which market incentives in the form of higher returns to education work to bring forth an increase in supply. Concentrating on wage inequality and the payoffs to skills in the UK and the US that have occurred since the 1970’s early results suggest that the market is not very effective in doing this.

Previously reported Centre research has demonstrated how childhood experiences have a powerful influence on adult outcomes and how any inequality in these experiences will be reflected in later inequalities by which time it may be too late to do anything about them. Work in this area has continued. Freeman and Feinstein organized a very successful follow-up to their earlier ‘Brain Development and Childhood Intervention’ conference with a further conference focusing on the impacts of social changes – such as young people changing schools – on biological markers of their behavioural status. Evidence of the timing of myelination of the brain and hormonal changes with adolescence provides guidance to potential impacts of policy interventions on youths at different ages. The next step in this area is to use before/after biological markers to help get an early assessment of the impact of policy interventions on young people, particularly those at risk for socially deleterious behaviour such as crime. Given that social scientists and government officials do not in general take account of biological knowledge in thinking about the causes or cures of social problems, we view this conference as part of a long run strategy to bring the biology in and to make the Centre a place in which natural and social scientists can interact regularly. This year we will hold a conference on the economic and biological aspects of happiness.

Blanden, Gregg and Machin are investigating the impact of family income in childhood on outcomes in later life. They are particularly concerned with trying to disentangle the effect of income from that of correlated measures of family background such as parental education, social class family structure and innate ability. [LM 211]. Initial findings suggest that much of the affect of income is indirect and occurs via these other aspects of family background. This implies that there are limits to the extent to which intergenerational transmission of inequality can be reduced by reductions in income inequality.

In Britain and many other European countries, lack of work is a major cause of poverty. However, the burden of unemployment does not fall equally across all members of society as is evidenced by the high numbers of long-term unemployed. But, this tells only part of the story about the unequal burdens of unemployment. It may be the case that a small fraction of
the population suffer a large number of repeat spells of unemployment. Research in this area has been hindered in the past by the lack of suitable longitudinal data but this is now available (the NES/JUVOS data set) and Gregg [LM50], Dickens [LM155, 80] and Wadsworth conclude that, even as the incidence of long-term unemployment declines with the fall in the aggregate unemployment rate, the bulk of unemployment continues to fall on a small number of individuals [LM82]. Policies are needed not just to help the unemployed back into work but to keep them in employment once they have jobs: future CEP research will focus on how this might be achieved.

Work has also been done on spatial inequalities in labour markets. A half-day conference organized by Ortalo-Magne considered the ‘Oswald’ hypothesis that high levels of home ownership make labour markets sclerotic. Andrew Oswald presented the evidence in favour of his view, to be attacked by Alan Manning on the grounds that his empirical relationships were not robust and he had not established that home ownership caused unemployment when there were plausible explanations that had the causation running in the opposite direction. The link between regional inequalities and labour mobility was investigated by Gregg, Machin and Manning. They concluded that the UK labour market for graduates is well-integrated and that any problem of labour mobility is among the less-educated. They argued that speculative moves for work by unemployed workers were virtually non-existent because they are in a ‘Catch 22’ situation in which it is very difficult to obtain accommodation without a prior job but less-skilled jobs are advertised only locally so it is hard to get a job if one does not live in an area. While much work on spatial inequalities in the UK has focused on the ‘North-South’ divide there are larger disparities within regions. However, in spite of the fact that inequality in the UK rose in many dimensions in the 1980s, Gregg, Machin and Manning found that inequality in unemployment rates across British wards was remarkably similar in 1981 and 1991 suggesting that the gap between the best and the worst neighbourhoods was not rising. Whether the same is true of the 1990s will have to wait for the release of the 2001 Census data: this will be an area of continuing CEP research.

In other projects, Hansen and Machin [LM224] have investigated the impact of wage inequality on crime, finding that variations in the minimum wage in the US are an important factor in explaining variations in crime. One of the most striking features of the last 20 years in the UK (and many other countries) has been the declining gender gap. Waldfogel has continued her research on this important area, looking at how family leave policies affect labour market outcomes for women.

**Institutions and Labour Market Performance in Britain and Europe**

Turning from inter-generational and spatial explanations of inequality, Nickell, Nunziata, Ochel and Quintini [LM90, 129, 179] investigate how well the widely accepted view that labour market institutions are an important cause of unemployment stands up to the inclusion of data from the 1990s in which unemployment rates fell in many OECD countries though by widely varying amounts. They analyse shifts in the Beveridge Curve, real wages and unemployment over time and explain these shifts by institutional changes and macroeconomic shocks. The results indicate that changing labour market institutions provide a reasonably satisfying explanation of changes in unemployment in the OECD countries and their impact on unemployment is broadly consistent with their impact on real wages.
While the UK has seen a dramatic fall in unemployment, other EU countries have not been so fortunate. The CEP is fortunate to have researchers from many countries and is expanding its analysis of the labour market problems facing other countries. In particular, Güell [LM115, 163], Manacorda [LM256] and Petrongolo [LM282] have been researching various distinctive aspects of southern European labour markets. A general theme is that these labour markets have distinctive features so that methods for analysing unemployment based on UK or US labour markets need modification before they can be applied to these countries. For example, many more young people live with their parents in Southern Europe than is the case in the UK, limiting their opportunities for taking jobs far from the parental home. Manacorda investigates why so many young Italian men live at home concluding that this is primarily because Italian parents like this arrangement together with various features of the Italian welfare system [LM167]. In this case policies to reduce the wages of young people to ‘price them into jobs’ may simply reinforce their dependence on parents and actually reduce their employment opportunities.

The conventional analysis of the links between institutions and labour market performance assumes that the outcome of a ‘free’ market in which government takes a laissez-faire approach to labour markets is well-approximated by the model of perfect competition. The book by Manning completed in the past year [LM119, 120, 168, 169, 191, 243] challenges this conventional wisdom, arguing instead that employers have considerable market power over their workers so that ‘monopsony’ rather than ‘perfect competition’ is a better way to think about how labour markets work. The advantage of this perspective is developed by looking at many of the core issues in labour economics, including the evolution of earnings over the life-cycle, gender pay gaps, unemployment, vacancies and training. One of the main conclusions is that the ‘free’ market equilibrium has no desirable normative properties and all labour market policies need to be evaluated on their merits.

Our work on labour market institutions includes a 5-year Leverhulme funded programme on the future of unions. Only a third of employees now have their pay and conditions set by collective bargaining, and 3 million of these 8 million employees are not union members. Is this decline terminal or are there reasons to think there might be a resurgence in British unionism? Metcalf [LM64, 88 and 125] analyses what appeal unions might have for employees: unions provide a ‘sword of justice’. They lower the accident rate, promote family friendly policies and narrow the wage structure between men and women and whites and blacks. He concludes it is unlikely that such impacts will translate into new recognitions even with the new statutory recognition procedure. Diamond and Freeman [LM196] have used the British Workplace Representation and Participation Survey (BWRPS) to examine how British workers see their workplace and employer, the problems they have at work, the services they want from workplace organizations, and their assessment of the ability of unions to deliver those services. The principal finding is that British workers have a generally positive attitude toward trade unions and see the need for collective action on various workplace problems but are uncertain that unions can deliver on their needs and generally see works councils with some union role as their preferred form of workplace representation and participation.

Nevertheless, unions are experimenting with the Internet to boost membership by increasing their value and appeal to members. A conference, run by Freeman and Diamond and held jointly with the TUC and the Harvard Trade Union Program, brought together academics and “techie” union activists from around the world. It showed that unions are using the Internet in many exciting ways – from customizing services to members at low cost to conducting
industrial disputes to creating new union forms for the new economy. The ideas promulgated at this conference have reverberated in the UK and US union movements, raising the possibility to many that some form of e-union, combining Internet services with human interface, will become the new union form in the 21st century. The principal paper reporting this research will appear in the British Journal of Industrial Relations. A US version exploring the possible dimensions of a new form of unionism – open source unionism – will appear in Working USA.

Other research by Diamond and Freeman suggests the importance of peer groups in determining the impact of unionism. They examine how attitudes toward unionism change when workers shift from organized to non-organized workplaces and conversely, finding that workers who shift into union workplaces become more favourable while those who shift from union to nonunion workplaces become less favourable to unions. The implication is that the desire to unionize will fall over time, if nonunion employers deliver reasonable workplace conditions, and that declines in unionism will be cumulative.

**The Evaluation of Labour Market Policies**

The programme has been active in research on a number of areas of labour market policy.

The CEP has continued its research into the impact of the UK national minimum wage from April 1999. Swaffield organized a highly successful one-day conference in September 2001 to bring together the work of researchers in the Centre and elsewhere on the impact of the minimum wage. Work by Machin, Manning and Rahman [LM229] suggested that the NMW has caused job losses in the traditionally low-paying sectors such as residential care homes sector where a high proportion of workers are affected by the minimum (in this case 40%). On the other hand, work by Stewart and Swaffield [LM205] suggests there was no effect on aggregate employment. Work by Dickens and Manning [LM214 and 215] into the impact on the wage distribution suggested that there has been an effect but it reaches no higher than the 5th percentile because of the low level at which the NMW has been set and the lack of any noticeable spill-over effects. Overall, this suggests that, while the NMW may have cost jobs in a few highly-affected sectors, the net effect has been small but beneficial to those workers the policy set out to help.

Over the past 20 years public-sector pay has declined dramatically relative to the private sector. Nickell and Quintini have investigated the impact of this decline on the quality of the public sector workforce [LM236 and 279]. They found that men entering non-manual public sector occupations (excluding the police and related groups) in the early 1990s had a significantly lower test score position (around 9 percentage points on average) than those entering in the late 1970s. However, women exhibited no such declines. This puts public policy in a tricky position: raising public-sector pay is the only way of improving the quality of those working in the public-sector in the long-run but has the short-run effect of rewarding those who are no of such high quality.

**Inside Firms**

Firms differ widely in their human resource management strategies, and this strand of our research evaluates the effectiveness of different strategies.
West has continued his research into the impact of human resource management practices and performance. Several findings are of particular note. First, he has found a strong relationship between patient mortality and HR practices in hospitals, implying patient care is not simply affected by medical practices. Secondly, he has investigated various aspects of top management effectiveness, showing that positive, hopeful, warm, happy, and humorous CEOs can expect better bottom lines and that diversity in top management teams can stimulate innovation. Fernie [LM270] continued her investigation of HRM practices in the service sector, concentrating on performance in call centres. Previous survey work based on WERS revealed that there is clearly a link between certain positive HRM practices and job performance but to shed light on why HRM has this positive link, case studies were carried out in three call centres. Whilst finding that HRM practices were key, only a token involvement of staff was necessary. What was crucial in eliciting organisational commitment and appropriate customer service behaviour was the close alignment of HRM practices with concern for the bottom line, business strategy, and charismatic leadership. The pluralist partnership approach whilst promoting greater job satisfaction and superior performance to unionised or authoritarian workplaces, was less effective than this “unitary” view of partnership.

Marsden has continued his work on the impact of performance-related pay for teachers. Preliminary conclusions are that while some of the early opposition to the principle of linking pay to performance, and to pupil progress appears to have abated slightly, it has not proved divisive as some anticipated and it appears to assist communication between management and staff over school and work objectives. However, the new performance management system does not appear to have had a major effect on teachers’ motivation to perform well and one effect has been to enhance the role of middle management within schools.
EDUCATION AND SKILLS  
(Programme Director: Stephen Machin)

Previous work on skills focussed on the demand and supply of skills, and our designation as a Centre for the Economics of Education by the DfES has now involved us in work on the production of those skills. This includes work on the determinants of school effectiveness; on links between educational attainment and family background; on the performance of the further education system; and on the labour market for teachers.

School Effectiveness

Researchers have produced a comprehensive and up to date critical literature review on the relationship between student achievement and school resources, placing the current UK situation into appropriate context drawn from the much larger body of work from the US. [LM134, 206, 276 and 293]. This research highlights the methodological shortcomings of a lot of work in this area and has had direct input into the development of new survey instruments for collecting data on school children. There is also evidence that basic school resources – pupil teacher ratios and local authority spending – do increase school performance, once one controls for the effects of targeted-resource policies and parental selection on schools.

The question of school quality and organisation and how it impinges upon student achievement has been looked at in several ways.

Gibbons and Machin [LM112] study the willingness of parents to pay for better primary school performance. The research attempts to measure the house price premium attracted by observably better schools, using property price data from the Government Land Registry and primary school performance tables from the Department of Education and Skills. The main results show that households pay between 3.1% and 8.8% on property prices for each 10 percentage point improvement in the performance score of local primary schools. This sensitivity of property prices to local school quality implies that there is back-door selection into better performing schools on the basis of family income.

Gibbons (2001) has looked at the effect of neighbourhoods and school resources on primary school performance in England [LM190, 290 and 291]. He finds that neighbourhood status affects primary school performance in fairly predictable ways, with schools in higher education neighbourhoods, with older populations and larger owner-occupied properties getting better results. Perhaps more interestingly, there is evidence that performance of a school is related to the performance of local schools, even after taking account of catchment area similarities. This suggests a role for interactions or competition between schools, or peer-group type interactions between children from different schools in the same neighbourhoods.

Most of the literature on school quality has focused largely on the impact of variables such as teacher pay and qualification, and on class size. Pischke [LM238] investigates a very different dimension of a school’s organisation, whether students attending school for more days during the school year makes any difference in terms of learning outcomes and later
labour market success. In a comparative study of those German schools which as a result of reforms in the 1960’s had opted for an 8-month academic year with those which retained the 12-month year, results indicate that the short school years had no impact on the later earnings of those who were affected by them. This indicates that there seems to be enough slack in the German school system that even a substantial reduction in class room time does not seem to compromise the value of the ultimate human capital of the students. Even though the accelerated pace for the affected students leads to increased grade repetition, the earnings results indicate that there are no long-term effects even for the most poorly performing students. This indicates that a shorter term length might be a policy that could save resources in a country like Germany, which starts out with a relatively long school year.

Turning to the problem of teacher supply, Dolton, Chevalier and McIntosh [LM300] have investigated some of the factors that influence the decision to become a teacher, to determine whether policy can be used to eradicate the current UK teacher shortage. Examining the market for teachers in the UK from 1960 to the mid 1990s using graduate cohort data from 5 separate cohorts they show that relative wages are an important determinant of teachers’ supply decisions, with a 10% rise in teachers’ relative wages increasing the probability of an individual graduate teaching by 5.4%. Other results suggest that graduates in subjects such as engineering, science and social science, as well as those living in the South-east are, other things equal, less likely to choose teaching as a profession. Quality issues may also be important, with those individuals who obtain the best degree results (a first class or 2:1 degree) being the least likely to teach. Finally, analysis of responses to job satisfaction questions show that all teachers are less satisfied with their pay and hours of work compared to similar graduates in non-teaching jobs. Mid-career teachers are also less satisfied with their promotion prospects and opportunities to use their initiative. These results suggest that non-pecuniary aspects of teaching may also be affecting the supply of graduates to the profession.

**Returns to Education**

A sizable portion of CEP research on Skills and Education has continued to look at the wage returns to education. An up to date survey of the literature has been produced by Chevalier and Walker [LM19] and several dimensions have been considered:

The low standing of the UK in international comparisons of skill levels, whether by formal qualification level or by comparable tests of numeracy and literacy is a cause for concern, affecting as it does the long-run growth potential of the economy. McIntosh and Vignoles [LM63, 192 and 193] show the importance of basic literacy and numeracy skills in affecting labour market earnings. There is a clear, sizable wage penalty for people who do not achieve these basic educational levels. Basic numeracy and literacy skills lead to significant pay-offs in the labour market. Not taking into account other factors that influence earnings, individuals with Level 1 numeracy skills (the level of skills thought necessary to function in the modern labour market) earn around 15-19% more than those with skills below this level. Level 1 literacy skills are similarly associated with around a 15% wage differential, compared to literacy skills below this level. Even after allowing for an independent effect from the worker’s education/qualification level, sizeable wage differentials still exist. The evidence also suggests that better literacy and numeracy are associated with higher employment rates.

Additional work [LM104, 194, 199] further probes this issue using National Child Development Study data to ask whether it is these measures of basic skills, or ‘softer’ skill
attributes (such as personal social skills), that matter for earnings. They find that much more predictive power is derived from the basic skills measures as determinants of future earnings in the labour market.

In related work Dougherty [LM111 and 269] uses data on a sample of five thousand young adults in the United States to explore the relative importance of numeracy and literacy. He finds that numeracy is far more important than literacy. Both enhance earnings indirectly through educational attainment, but numeracy has an additional effect in its own right and it appears to be subject to increasing returns. Further, while the value of literacy seems to be static, that of numeracy is increasing at a rate of 6% per year. He argues this is in response to the growing importance of digital technology. Dolton and Vignoles [LM268] look explicitly at the breadth of the A-level curriculum and ask whether taking a broader set of A-levels impinges on economic success. The findings reinforce earlier findings (Vignoles, 2001 [LM27]) that the key wage returns accrue to mathematics A level and that the broader curriculum (like taking General Studies in addition) is far less important.

We have also looked at rates of return to vocational as opposed to formal academic qualifications, finding that academic qualifications provide a higher return than vocational qualifications at a similar level. [LM61, 105, 106, 124, 193, 263, 278, 288, 295]. However, once one calculates ‘true’ rates of return, taking into account the cost and time period involved in acquiring the qualifications, this differential is substantially reduced. This reflects the shorter duration of courses leading to vocational qualifications and values the opportunity cost of time spent out of the labour market.

Steedman’s work on Britain’s low skills problem and training remedies have now become standard reference for other’s research. This year she has been exploring the apprenticeship route for delivering post-compulsory education. [LM132, 180, 204, 295, 303] reviews the main characteristics of the provision, organization and financing of apprenticeship in a number of leading European countries and compares these to current practice in Britain as exemplified by Modern Apprenticeship. The paper concludes that apprenticeship in Britain, judged as a programme, falls short of the standards of that provided elsewhere in Europe on every important measure of good practice. With finance from the Esmee Fairbairn Foundation, Steedman now directs a major programme on “Skills for All” which will help remedy this situation by examining evidence to identify the policies which are most effective in promoting skill development in Britain and overseas and provide insight into how effectively new policies to raise skill levels are being implemented.

The Demand for Skills

How do wage differentials by education groups evolve through time and how are they related to changing relative demand and supply patterns by skill group? Machin, [LM301] report results from data between 1975 and 2000 to show that wage differentials attached to degrees fell in the 1970s, but have risen since (albeit faster in the 1980s than in the 1990s). Together with the expanding number of degree holders, these results suggest there to have been strong relative demand shifts for skilled labour since 1980. Further analysis shows that relative demand shifts are strongest for women, and for science and social science/business graduates. Investigating the causes of the rise in demand for skilled labour, findings point to an association with new technologies and with computer usage. Machin [LM47, 227, 301] surveys this literature and reports UK and US evidence showing the 1980s to be the decade
when wage inequality rose fastest, and that there are some important common cross-country
trends in the relative demand for skilled workers. Evidence shows that skills shortages are
arising as the education system is not providing enough, or skilled enough, graduates in some
areas. Work done on the quality of entrants to computer science courses in higher education
[LM32] very much emphasises such problems in the computer science area in particular.

Work on the skill-biased technical change hypothesis - that the principal driving factor
behind the increased relative demand for skills and rising relative wage gaps has been the
introduction of new technology that is biased in favour of skilled workers - has also continued.
Berman and Machin [LM36] uncover patterns of skill upgrading in the developing world.
These shifts are positively correlated with the shifts seen in the developed world and with
technology indicators from the developed world. They take this as evidence of skill-biased
technology transfer taking place and affecting labour market structure in similar ways in
different countries.

**Education and Family Background**

Focus on possible interactions between neighbours and area-based effects is given in research
by Gibbons [LM290] whose work is the first to estimate the impact of a British child’s
neighbourhood on her adult educational attainment, and to look at how this squares up with
the extent of intergenerational mobility. As an upper estimate, it finds that children from the
top 10% of wards – ranked by the proportion of adults with A-levels or higher level
qualifications in 1971 – were around seven and a half percentage points more likely to end up
with these qualifications by age 33 than children from the bottom, even once one takes into
account the quality of secondary school attended. Around one third of this effect could be
attributed to observable family background and correlation between the characteristics of
neighbouring parents. Overall, the fact that children from more advantaged families are
brought up in better neighbourhoods increases the persistence of inequalities from one
generation to the next. But the impact is quite small - neighbourhood effects only add around
10% to the correlation between children's attainments and that of their parents.
Current research in this programme focuses on two main areas. One is the macroeconomic implications of the functioning of the labour market, addressing questions of labour market flexibility, employment and unemployment. The other is the analysis of new technologies, looking both at the development of new technologies, and at their implications for aspects of economic life.

**Macroeconomics and Labour Market Flexibility (C. Pissarides)**

The focus of our work on aggregate labour markets was threefold. First, we studied further the role of labour market policy and flows in the labour market. Secondly we looked at the role of entrepreneurship in job creation where, although we made some progress in the acquisition of new data, we are still in the process of completing the OECD-wide empirical study. The final focus of our work was an empirical study of the links between, on the one hand, investment, R&D and productivity growth and on the other hand employment, in the countries of the European Union, the United States and Japan. This project was partly financed by the European Union.

**Labour Market Flexibility 1: Policy and Flows**

Our theoretical work on job and worker reallocation with the full range of policy instruments has been successfully completed in joint work with Dale Mortensen of Northwestern University [T&G23]. The work builds on the theoretical foundations laid down in the book by Pissarides and the two Handbook surveys by Mortensen and Pissarides. The more recent policy work explores the effects of taxes and subsidies on job creation, job destruction, employment, and wages. Qualitative analytical results show that wage and employment subsidies increase both wages and employment, especially of low skill workers. A hiring subsidy reduces unemployment duration but increases incidence with an ambiguous effect on overall employment. A firing tax has the reverse effect but the same indeterminacy. The ambiguity arises because firms adjust in each case both hiring and firing, in the case of a hiring subsidy in the upward direction to take advantage of the subsidy and in the case of a firing tax in the downward direction to reduce their tax liability. We calibrate the model to find a first-best policy: no tax on wages and employment and hiring subsidies that offset the distortions on the job destruction margin caused by unemployment compensation and employment protection policy. For this to work, however, financing has to be done with lump-sum consumption taxes, which is not practical. Further computational experiments determine the direction in which marginal improvements can be made both in terms of efficiency and in terms of improving the employment and wages of low skill workers. For example, a surtax of 4% on the wages of high-skill workers with the revenue used to finance an employment (or low-wage) subsidy for low-skill workers can have a big impact on low-skill unemployment, reducing it by up to 6 percentage points in a model calibrated to European parameters. The policy has virtually no impact on high-skill unemployment but reduces wage inequality, with low wages increasing by up to 6% and high-wages falling by 3%.
Our ongoing empirical research in the role of frictions in the workings of the labour market continued with a more detailed review of the key concept of the “matching function” [T&G15]. The matching function is a device that economists are increasingly using in the representation of frictions in labour markets. It gives the rate of job creation in the aggregate economy, or in large sectors of the economy, in terms of the inputs into recruitment and job seeking activities by firms and workers. In earlier work we showed that the matching function can occupy the same place in macroeconomics as other aggregate functions, such as the aggregate production function, and our recent review of the evidence for its existence has confirmed this view. It is now widely accepted that a Cobb-Douglas specification of the rate of job creation, with no economies of scale and depending only on a small number of variables, is a good representation of the job creation process in a labour market characterised by frictions. The small number of variables include foremost the number of vacancies opened by firms and the number of workers declaring themselves as eligible to take up a new job, but also variables such as the generosity of the unemployment insurance system and the location of firms and workers.

Recent work by Burgess at the level of Travel to Work Areas [LM97] has provided further support for the existence of a well-behaved local matching function. Making use of a monthly panel of outflows, unemployment and vacancy stocks data from the registers at Jobcentres in the UK, he found evidence of significant spill-over effects that are generally in line with the predictions of theory. For example, conditional on local labour market conditions, high unemployment levels in neighbouring areas raise the number of local filled vacancies but lower the local outflow from unemployment.

**Labour Market Flexibility 2: Entrepreneurship**

Our research on the role of entrepreneurship in the determination of employment across the OECD has focused on developing better theoretical foundations, in preparation for the empirical implementation of our ideas [T&G24]. We were able to show that once career choice is introduced in our conventional way of modelling the labour market, any obstacles introduced by excessive regulation in the setting up of new business restricts job creation and leads to lower employment outcomes. Of course, for this argument to have force, the economy has to depend on new firms for job creation. Evidence collected by others shows that with the shift from manufacturing to service employment an increasing fraction of new job creation is by new businesses. In a preliminary examination of the data we claim that the service sector in many of the European countries has not absorbed the labour released by manufacturing and agriculture at the speed at which it absorbed it in the United States because of excessive regulation in the setting up of new businesses in Europe [T&G12 and 33]. Our future work in this area will test more carefully the role of business start-up costs in the determination of employment and also consider the role of bankruptcy costs in the entry and exit of firms.

Pissarides [T&G32] has also continued his work on the logical foundations of employment protection legislation, which started with his Adam Smith lecture to the first world congress of labour economists [T&G16]. The underlying argument is that the evaluation of employment protection measures in the literature has generally used inappropriate modelling techniques. The negative results found cannot be relied upon, because the models used to evaluate policy are usually ones that imply that the optimum situation is a world without
policy. It would be very surprising if this were the case, given the prevalence of employment protection measures in so many countries. In his theoretical models, Pissarides was able to show that there is an important welfare-improving role for two measures normally associated with employment protection: severance compensation to dismissed employees and a delay in dismissal, accompanied by notice before dismissal. Both these features give insurance value to the employment contract, the first because it gives the worker a chance to maintain a high consumption standard in the first few months of unemployment and the second because it gives valuable information to the worker that the job is ending. But if it is optimal to include these “rigidities” in employment contracts, any legislation that simply replicates these measures will not have negative effects on employment. This clearly opens up a new scope for the testing of the effect of employment protection measures on labour market outcomes.

**Jobless Growth**

The second strand of our research in 2000-01 addressed the question of “jobless growth,” the feature that has characterised Europe's economies over the last 20 years [T&G38]. In “growth accounting” calculations, we found some striking differences between the countries of the European Union on the one hand and either the United States or Japan on the other. The fraction of growth since 1960 due to capital accumulation was about the same in the United States and the countries of the European Union, amounting to about one third of total growth. But employment growth in the United States accounted for as much as 40% of GDP growth or more, leaving the rest, about 20% of growth, to total factor productivity (TFP) growth. In Europe employment growth contributed a mere 7% to growth, and if measured by hours of work, its contribution to growth was negative, leaving about 70% of growth to TFP growth. In Japan capital accumulation contributed about 50% to growth, and employment about 14% if measured by persons or 4% if measured by hours worked.

The contrast between Europe and the United States is telling: GDP grew on average at about the same rate in each case, but growth in the United States was due much more to employment growth than to TFP growth. Although much of the employment growth in the United States was due to a higher rate of population growth, and in the European Union much of the TFP growth was due to technological catching up, this is not the whole story. Employment to population ratios increased in the United States but decreased in Europe. The conclusion that emerges is that relative to the United States, the European Union has had faster productivity growth associated with employment decline.

Extensive estimation procedures led to the conclusion that the higher rates of TFP growth and lower rates of capital growth that have been experienced in the European Union during the sample period have worked against employment generation. Our estimates suggested that a country with higher rate of growth of TFP has lower employment, unless it also has a higher rate of growth of its capital stock. Large rates of growth of TFP in the European Union have been saving labour, pushing up wages and acting as a disincentive to investment. Although they have been beneficial for output growth and living standards, they hampered employment growth. Investment has also been low recently in the European Union, especially when compared with Japan, and the combination of high TFP growth and low investment must be the factor behind the “jobless growth” that has characterized the European Union since 1960. The policy implication for Europe is that the only avenue for increased job creation is more saving and more investment.
The Knowledge Economy (R. Freeman)

Research has addressed both the production of new knowledge and the implications of new technologies for society. We discuss them in turn.

Incentives for R&D

With active support for R&D again on the UK policy agenda as the Chancellor announced his intention to extend the R&D tax credit for small and medium sized enterprises to larger firms, the programme is undertaking research to evaluate the impact such a policy is likely to have on UK productivity and growth.

One of the main justifications for government subsidies to R&D is the belief that social rates of return are in excess of private rates of return. Firms’ decisions to undertake R&D are based on their private return to R&D, generally thought to be lower than the return to society as a whole. Policy towards R&D is examined by Redding with Griffith and Van Reenen [T&G22]. The research uses econometric estimates to evaluate the effect of the proposed tax credit on R&D levels and the implications of increased R&D for productivity and value-added, allowing R&D to have a dual impact through the rate of innovation and dissemination. We compare the increase in value-added with the likely exchequer costs of the program under a number of alternative assumptions. In the long-run, the increase in value-added far outweighs the costs of the tax credit. On these grounds, the policy seems a sensible one for longer term growth. In the short-run, the effect is much smaller, with the increase in value-added only exceeding cost if R&D grows at or below the rate of inflation. This is due partly to the design of the credit (it is not very generous), the slow adjustment of R&D to changes in its price, and the slow impact of R&D on long-run productivity levels.

Quah [T&G 17, 35] is concerned with the extent to which centres of R&D are prone to spatial clustering. In theoretical work he shows how the presence of spillovers between R&D activities can lead to the intensity of R&D activity to exhibit a ‘wave-like’ spatial structure of R&D as firms seek to benefit from these spillovers. In empirical work on European data he identifies clusters of R&D activity, and shows how these seamlessly transcend national borders.

Applications of new technology

The year saw the start of work on a major project to investigate the economics of the internet. To kickstart the project and to investigate the -generally unsubstantiated - claims made about its impact on product and labour markets, the project devoted considerable effort to collecting new internet data from various dot.com firms in the areas of internet auctions and internet recruitment. This partnership with firms who have provided us freely with their data is a hallmark of the Centre’s research.

To help set the research agenda the programme ran two conferences (the second already reported under the Labour Markets Programme). The first brought together researchers from the LSE, Harvard, and other universities together with practitioners to examine the economic and social implications of the Internet. The research reports made it clear that the notion that the Internet is creating a perfect market due to provision of information and availability of
artificial agent shopping ‘bots’ that search for the best price for an item on the Web is, at least at the present time false. Rather than creating a perfect market, the internet is creating new markets that supplement existing markets, but which seems to replicate their imperfections. This is most striking in the two areas on which our research has focused: internet auctions and internet recruitment sites.

Auction sites allow producers to sell surplus goods at low distribution cost and allow individuals to sell items to people around the world. Our study has found that while individuals use proxy bids, specifying the maximum value that they place on an item, they often raise their proxy bids during an auction rather than lose their bid. The implication is that they were uncertain about the item, which opens the door for the specific way markets operate to influence outcomes, even on Internet sites. We find that the greater the number of bidders the higher the bid amount; the presence of a reserve price affects the chance that someone will raise their proxy bid, and that auctions generate considerable surplus, defined as the difference between the max value people are willing to pay for an item and the reserve price, with the division of the surplus dependent on the number of bidders and features of the auction. [LM84]

As for Internet recruitment firms [LM84], they are among the most successful dot.coms, in large part because they traffic in information – information about jobs and about people. Our study has highlighted the cost advantages that these firms have and the huge growth in their popularity as the first place for workers and firms to make matches in the job market. Here too, however, the notion that the more perfect and timely information on the Web will greatly alter existing market outcomes, for instance by reducing dispersion of pay or speeding up the process of finding jobs, has not been validated by experience.

Freeman and Diamond are also working on trade unionism and the Internet [LM265], studying the ability of unions to provide internet based services to workers as part of the effort to rejuvenate unions in modern Britain. They examine the aspects of the Internet – low cost of information, communication, and interaction – that offers unions opportunities to improve services and attract members and thus prosper in the 21st Century. Analysing current use of the Internet by unions in the UK and US, they develop five hypotheses about the impact of the Internet on unions: 1) the customized service hypothesis that unions will individualize services; 2) the cyber-organizing hypothesis that the Web will make it easier to organize and produce virtual minority unions in workplaces where unions are not recognized; 3) the cyber-democracy hypothesis that the Web will enhance union democracy; 4) the cyber-dispute hypothesis that the Web will become an important place for industrial disputes; and 5) the new internationalism hypothesis that the Web will strengthen the international labour community. We find that innovative unions have developed some policies that will take advantage of the opportunities the Web offers unionism, but that no union has yet put together the full package that constitutes the “e-union” of the future. This work has contributed to the TUC’s Promoting Trade Unionism Task Group and current TUC plans to develop a greater union web presence. [LM265] The paper ‘Will Unionism Prosper in Cyberspace?’ has been accepted for publication by the British Journal of Industrial Relations.

Quah [T&G26] and Crafts [T&G36] have written on the implications of new technologies for productivity growth. Crafts argues that ICT as a general purpose technology is already historically remarkable in that its impact on productivity exceeds that of electricity and far exceeds that of steam over a comparable number of years.
Implications for developing countries have been studied by Quah and by Venables. Quah [T&G5] models the effect of new technologies in reducing the effective distance between economic agents. He shows how the effects of this interact with labour skills and with consumption patterns to shape the pattern of development. Venables analyses the new opportunities for developing countries created by ICT (see Globalization section below).
The programme has continued to develop and extend its work addressing many of the issues raised by globalisation. Work on trade and investment studies the effects of globalization on the location of economic activity, and the effects of globalization on income distribution both between and within countries. A major new programme of work has commenced on international financial stability, focusing on the causes and consequences of financial crises, both international and domestic.

**Trade and Investment (A. J. Venables)**

**Globalization and the International Economy**

Work on the effects of globalisation has studied both the international location of activity and the impact of these changes on income distribution within economies. Effects of trade on the cross-country distribution of income are studied in ongoing work by Redding and Venables [G64, 72 and 80] who show how properly constructed measures of proximity to markets and sources of supply imply steep wage gradients from central to peripheral regions. Methodologies for estimating these effects and empirical results are developed in Overman, Redding and Venables [G63].

Venables [G53] studies the effects of new technologies, investigating the claim that they might lead to the ‘death of distance’. He argues that ‘weightless’ activities will probably account for only a few percent of world GDP, and most activities will remain subject to substantial shipping costs on imported inputs and on export of finished products. New technologies will facilitate management of remote operations and supply chains, and the importance of this is already seen in the growth of foreign direct investment and production networks. However, for many activities information is complex and hard to codify, so face-to-face communication will remain important. For some activities new technologies will actually increase the cost of distance, as being close to customers becomes more important (for example, just-in-time processes and products where demand changes fast). The analysis suggests that new technologies will allow some activities to relocate -- those that are weightless, or that are simple enough for relevant information to be easily codified and digitized. Other activities may well become more entrenched in established locations that have the advantage of dense networks of related activities. This is perhaps similar to the effects of the transport revolutions of the nineteenth century that fostered concentration of manufacturing activities in a few countries in order to benefit from increasing returns and clustering. Furthermore, those activities that do relocate to lower wage countries are themselves likely to cluster, suggesting that a relatively small group of countries will be beneficiaries. New technologies will therefore change economic geography by allowing some countries to benefit from the relocation of some activities, but many other countries will be left outside this process.

A longer historical perspective on these issues was explored in Crafts and Venables [T&G30]. They document the changing centres of manufacturing production in the world economy, from the nineteenth century rise of Europe at the expense of Asia, through the rise
of the US and now the resurgence of Asia. They argue that these shifting patterns of spatial concentration and deconcentration of production are hard to explain in standard economic terms, but fit well with a ‘new economic geography’ view of the location of activity.

Determinants of countries’ comparative advantage are being studied by Redding and Vera-Martin [G65 and 81], Proudman and Redding [G10 and 32], and Nickell, Redding, and Swaffield [LM296]. The research points to the continuing importance of factor endowments as a determinant of production structure and trade. Ongoing projects in this area are researching the determinants of developing country export growth and industrial structure, and the changing patterns of intra-industry trade in the world economy.

Effects of globalisation on the distribution of income within countries has been the subject of a major report produced by Winters, McCulloch and Cirera [G4]. The report draws on economic analysis and practical experience to construct a framework to analyse the complex links between trade liberalization and poverty and shows policy-makers how to use the framework to identify the critical features in their economies so they can ensure that the poor benefit from liberalization. It finds that trade liberalization ultimately helps poverty alleviation by stimulating growth, but that appropriate complementary policies in areas such as transport, infrastructure, education, and financial services are essential to ensure that the poor benefit from this growth. Trade liberalization also affects poverty more directly, via the prices of goods, wages and employment, and government revenue. In some cases, the poor can suffer. Appropriate domestic policies can reduce the number of such cases and help to alleviate the pain where suffering does occur. The principal benefits of trade reform come from unilateral trade liberalization, but the poor would also benefit considerably from substantially improved access to markets in the developed world.

**Trade and Geography**

Analytical work on trade and geography has taken two new directions. One is to study the ways in which labour market forces create a force for clustering of economic activity. The poaching of skilled workers has double-edged effects, as firms seek to locate where they can poach workers, yet not have their workers poached away. Combes and Duranton [G75] show that while it is efficient for firms to cluster together, they often have strategic incentives to separate out. Clustering is more likely the less intense is the competitive rivalry between firms. When workers themselves bear the costs of training, Matouschek and Robert-Nicoud [G97] show how clustering can increase the incentives to train, as workers are less subject to ‘hold-up’ by employers.

The other new direction is to explore the policy implications of clustering. Norman and Venables [G106] show how policy competition between countries to attract clusters does not lead to a mutually damaging ‘race to the bottom’. On the contrary, it has the effect of leading to fewer and larger clusters of activity as any surplus that countries derive from having a cluster is bid away and, ultimately, transferred to world consumers. Robert-Nicoud and Matouschek [G84, 97] study the effects of infrastructure investments at the intra-regional level as compared to inter-regional investments. They argue that backward regions are likely to be better served by intra-regional improvements, since they bring supply side improvements without making the region more vulnerable to ‘imports’ from more advanced regions. They argue that the distinction may account for the failure of some regional policies (e.g. the Italian Mezzogiorno).
Regionalism and the World Trading System

Winters has continued his work on regional economic integration [G17, 38 and 41], investigating its effects on trade flows and on the chances of maintaining liberal multilateral trade agreements. Particular attention has been paid to EU trade policy in general and towards the poor African, Caribbean and Pacific states. On the first, regional arrangements are found to have had less effect on trade flows over the 1990s than is often imagined, but that there is strong evidence of trade diversion resulting from European integration. On trade agreements, [G41] suggests that deepening an existing regional arrangement needs to be accompanied by tariff reductions on third countries if these are to be kept inside multilateral arrangements. Sometimes these reductions must be more than would be required just to keep their levels of exports constant. Albertin studies the incentives for a regional bloc to expand and the trade-off between the depth of integration and bloc size, arguing that deeper integration reduces optimal bloc size.

Wang and Winters [G37] consider what would be necessary to launch a genuine 'Development Round' of trade talks in the post-Seattle WTO. They include strong trade liberalisation - including in the movement of labour - mild changes in WTO procedures, a simple agenda excluding contentious areas like the environment and competition policy, and technical assistance.

Internal Geography and the Regions:

Research on the spatial economy has been developed at the sub-national as well as the international level. An important application of this is statistical analysis of the importance of clustering in UK manufacturing. Duranton and Overman [G94] study the data for finely disaggregated UK manufacturing sectors using plant level data to address the question of whether or not there is a statistically significant amount of clustering in UK manufacturing. Building on previous research in spatial statistics, they propose a novel way to measure localisation and answer key questions about the extent of localisation, the spatial scale(s) at which it takes place. Their new measure meets a number of key requirements: it is comparable across industries; able to control for the general tendency of manufacturing to agglomerate; able to distinguish industrial from geographic concentration; avoid aggregation and border problems; provide a measure of the statistical significance of observed effects. The measure is applied to a unique and exhaustive UK manufacturing data set. Four main conclusions emerge: (i) only 51% of industries exhibit a statistically significant level of ‘excess-localisation’ (i.e. they are significantly more clustered than would be predicted by a random process of location); (ii) excess-localisation takes place mostly between 0 and 50 kilometres; (iii) the degree of excess-localisation is very skewed across industries; (iv) they reveal broader patterns as industries that belong to the same industrial branches tend to have similar localisation patterns. They also find that larger establishments are the main drivers of localisation.

One aspect of globalisation is increased outsourcing and geographical ‘fragmentation’ of production. Duranton and Puga [G56] analyse this in the context of the changing functional specialisation of US cities. They show that while the sectoral specialisation of cities has declined, the functional specialisation has increased. In particular, firms are increasingly locating their head-quarters separately from their other establishments, and increasingly in large urban centres. Overman and Puga are using GIS data to analyse urban sprawl in the
US, to address the questions of how differences in fiscal and planning policies shape land use.

**International Financial Stability (E. Meade)**

The new International Financial Stability programme was launched in 2000 in response to the mid 90’s financial crises in emerging market countries and the ensuing shocks to the world financial system. Work in the programme seeks answers to questions to do with the causes and propagation of financial crises; the design of institutions to reduce their likelihood and mitigate their effects; and the role of macro-economic management and exchange rate policies in securing international financial stability.

The work programme is broad, ranging from microeconomic issues such as risk in financial markets, and the structure of financial market regulation, to macroeconomic issues such as exchange rate management, monetary policy, and institutional structure or “architecture.” These questions are examined at a conceptual, theoretical level and also at a more practical, policy-relevant level.

**Monetary policy and the banking system:**

Goodhart authored several pieces on monetary policy and central banking. [G1] examines the communications strategies of several major central banks and the resultant effects on the transparency of monetary policy. He also investigates the role played by asset prices in the measurement of inflation [G24]. Traditionally, central bankers have taken only movements in goods price inflation into account when formulating policy. However, large movements in asset prices that affect the behaviour of the macroeconomy have caused some to question this traditional formulation.

Other work assesses the Basel II proposed revision to the capital requirements of internationally active banks [G7]. The authors find that the new Basel proposal fails to address many of the key deficiencies of the global financial regulatory system and even creates the potential for new sources of instability. In a separate piece Goodhart examines the role played by operational risk in the Basel II proposals. In [G9] he looks at the need to regulate those who are responsible for regulation of financial services.

Meade and Sheets [G116] investigate the role of regional influences on monetary policy decision making in the United States. Using data on Fed Reserve voting, including information on dissents for tightening and easing, they estimate an empirical model of decision-making as a function of national and regional macroeconomic data and binary variables. Their empirical work provides compelling support for the regional hypothesis: the votes of Fed policymakers show a strong, robust link to the difference between regional and national unemployment rates. The authors use these results to draw some implications for the structure and voting behaviour of the European Central Bank.
Risk in financial markets

Shin examines whether the existence of large market players, such as hedge funds, increases the vulnerability of a country to speculative attacks [G14]. According to one view, large traders exercise a disproportionate influence on the likelihood and severity of a financial crisis by inciting and orchestrating attacks against weakened currency pegs. The paper looks at the possible mechanisms (if any) that may be at play – larger financial resources or better information – through which a large trader may exercise such influence on the market outcome. In addition, the paper looks at whether public disclosure of the trading position of the large player can make a difference to the market outcome.

Shin looks at the implications for asset returns when public information is provided by parties that have a material interest in the reaction of the market. The paper examines the interaction between an interested party (such as the manager of a firm) and sophisticated market traders. The manager has more information about the true value of the firm, and is mandated to make reports to the market in which any claim is supported by the necessary accompanying evidence. The market's response is to discount any disclosure appropriately given the degree of asymmetry of information, and the actual disclosure received. The paper derives a simple pricing rule for equilibrium prices that can be used to investigate some of the empirical predictions concerning the time series properties of asset returns.

Shin looks at the coordination problem faced by the creditors of a distressed borrower. Even if fundamentals are sound, fear of premature foreclosure by others may lead to pre-emptive action, undermining the project. How does such uncertainty affect the price of debt? The main difficulty in incorporating coordination failure in a pricing theory for debt is that coordination problems lead to multiple equilibria, in the manner of Diamond and Dybvig’s model of bank runs. This paper tackles this issue by developing a theory of solvent but illiquid borrowers that explains the incidence of cases where a solvent borrower is forced into failure by coordination failure. By explaining the incidence of coordination failure as a function of the underlying fundamentals and other relevant parameters, it is possible to supply the missing link between the asset value of the borrower and the value of the asset which is just low enough to trigger default. Once the incidence of coordination failure can be calculated, it is then a matter of evaluating the ex ante value of coordination failure and incorporating this risk into the price of debt.

Danielsson, Shin, and Zigrand examine the implications of widely-used systems for risk management that rely on assessing asset returns by reference to historical realized returns. Such systems fail to take into account the system-wide effects on market participants of the adoption of these techniques. The paper investigates the consequences of the widespread adoption of market-sensitive risk management systems that treat financial market uncertainty as exogenous, and do not take into account the feedback from traders’actions to the market outcomes. The authors compare the dynamics of asset prices with and without a risk management system in place.
FORWARD LOOK 2001-2002

LABOUR MARKETS
(Programme Director: Alan Manning)

Our work on different dimensions of labour market inequality will continue:

Blanden, Gregg and Machin are continuing their work on the impact of childhood deprivation on adult outcomes and how this has changed over time by comparison of different birth cohorts.

Inequalities in the distribution of work is an active research area within the Centre. Gregg and Wadsworth are continuing their work on workless households by extending their cross-country comparisons. Dickens will be starting analysis of the Department for Work and Pension’s Lifetime Longitudinal Labour Market Database assuming problems of access can be resolved. This will allow a much better assessment of inequality in the distribution of work over whole lifetimes than has been previously available and will also provide valuable insight into transitions in and out of dependence on welfare benefits.

A number of pieces of research into spatial aspects of labour markets are under way. Gibbons is investigating how pockets of high unemployment can co-exist alongside areas with high levels of job vacancies by comparing the areas in which the unemployed live with the areas in which there are job vacancies. Manning is working on the question of how ‘thick’ are labour markets by looking at how wages vary with commuting distance and the relationship between the distribution of homes and workplaces. Petrongolo is investigating how the stock-flow approach to matching provides a better understanding of the unemployment-vacancy relationship than the more standard stock-stock approach.

Manning and Goos are investigating whether the number of good and/or bad jobs has increased over the past 25 years. In this analysis a job is defined as a particular occupation in a particular industry and jobs are ranked according to their wages. Preliminary results suggest that employment growth has been concentrated among those jobs that paid both the highest and lowest wages in 1975 with the jobs in the middle of the wage distribution disappearing. This process of increased bifurcation in the distribution of jobs can be expected to have increased wage inequality and an assessment of the importance of the impact will be made.

Labour Market Policies

Although UK unemployment rates have fallen and are currently the lowest among the G7 economies, this appearance of economic success is partially misleading because there has been a very substantial rise in male inactivity rates over the past 25 years, mainly as a result of a rise in the numbers on sickness and disability benefits.
Expenditure on these benefits is now larger than on unemployment-related benefits. Nickell and Wadsworth will be researching the reasons for rising inactivity among men and thinking about what policies could be used to reduce the numbers.

Our policy evaluation work will continue, with Dolton continuing his work on the evaluation of the New Deal and Dickens and Manning continuing their work on the impact of the National Minimum Wage, focusing on the impact on the wage distribution. In particular, their work will concentrate on estimating the size of spill-overs associated with the NMW and an assessment of whether the rise in the adult rate to £4.10 in October 2001 has a larger or smaller impact than the initial rate of £3.60.

Gibbons and Manning are working on the impact of reforms designed to cap housing benefit on rents in the private-rental sector. Housing benefit often pays 100% of rents to those who are eligible, resulting in a very expensive system. Steps have been taken in recent years to cap the amount that can be paid. A crucial issue is the incidence of this subsidy: is it primarily a subsidy to landlords or tenants? This will be investigated by looking at how rents respond to caps on housing benefit.

There is considerable concern at the moment about the use of child labour in the production of goods bought by consumers in the industrialised countries. Should legislation be introduced to restrict the use of child labour or would such legislation simply reduce earnings among poor families making them worse off? Manacorda will be researching into the determinants of child labour and the effects of legislation designed to prevent it.

Freeman will be continuing his research into how the internet affects labour markets, and on its use by unions. He will be running a conference on the internet and international labour cooperation, and one on the use of the internet by NGO's.

The Leverhulme Unions project on the future of unions in Britain will be continuing and West will continue his research into effective human resource policies in firms.
EDUCATION AND SKILLS  
(Programme Director: Stephen Machin)

A summary of intended plans for future research in the Skills and Education programme (grouped by convenient categories) is as follows:

i) Schools

Several researchers wish to continue and develop existing studies in this area. These include: the impact of school quality and education outcomes (Chevalier, Dolton and McIntosh); teacher retention (Chevalier, Dolton and McIntosh); school competition (Gibbons and Machin); the impact of term length on educational outcomes (Pischke); transitions between primary and secondary school (Feinstein); performance related pay for teachers (Chevalier, Dolton, McIntosh and Marsden).

We are also involved in a consortium on the evaluation of the government’s Excellence in Cities programme. No research has yet been produced here as we are in the stages of survey design, data collection and so on. Researchers involved are: Conlon, McNally (Machin is on the management committee). We are also to be involved in other (related) evaluations (Excellence Challenge; Pupil Learning Credits).

ii) Post-school education

Projects here include: staying on after the compulsory school leaving age, analysis at regional and individual level (Vignoles and Galindo-Rueda); lifelong learning (Conlon, Vignoles); Skills for All (Steedman); reasons behind the existence of overeducation (Green, McIntosh); returns to apprenticeship in German speaking countries.

iii) Education and family background

Some of the CEP work here crosses over with ‘life chances’ in the Labour Markets programme, but the ones listed here focus upon education issues: parental education and teenagers’ choices (Chevalier); does inequality encourage education? (Acemoglu and Pischke); education and family income (Blanden, Gregg and Machin). Manning and Pischke are investigating the relationship between selective schooling and outcomes using the NCDS data. Do selective education policies benefit those at all points in the ability spectrum (because education can be tailored to specific needs) or do they benefit the most able at the expense of the least?
In the near future, we expect the bulk of our work to be on the role of entrepreneurship and small business firms in job creation. Our work on the logical foundations of employment protection legislation should come to an end before the end of the year. A new initiative that we are now working on is the interaction between family and education. The work will be abstract and stylised in its initial stages but we are hoping that in the more distant future it will lead to more empirical research.

Quah will work on growth and distribution using empirical analysis to test the principal features of the tension between on the one hand a massive increase in world economic growth over the past 100 years compared to the five previous millennia with on the other broad swathes of the world remaining miserably poor. How has this tension in growth and distribution emerged? His hypothesis is that economic growth swamps all else. While there is a long-standing perception that the US throughout the last twenty years or Thatcherite Britain (or China or India or many other parts of the developing world) have sacrificed equality for higher growth, such concerns over increasing inequality may be overblown because of the dramatic improvements in living standards for everyone, when economic growth occurs.

Freeman’s Knowledge Economy work will continue with work on the auction and recruitment dotcoms. A new departure will be intellectual property. For most of the last century, policymakers and scientists thought creativity and innovation had to be protected through legal monopolies granted in the form of intellectual property rights (IPRs). Recently, however, both emerging technologies and economic research have begun to challenge this view. In the coming year Quah, using analytical modelling will study appropriate policy on IPRs for promoting innovation and creativity, considering firstly distribution schemes that, specifically, dispense with monopolies but more generally approach social efficiency. Freeman will study the developing initiatives in the bio-sciences and economics (and possibly other fields) to use the Internet to help disseminate scientific knowledge. His project will document and monitor on-going changes, developing links to the various groups of scientists, publishers, lawyers, and provide a clearinghouse of information on the various efforts to use the Internet technology to enhance or replace traditional modes of scientific publication. Second, the economics of the various alternatives, benefits and costs will be studied, as well as the extent to which citations of Internet-based research pieces have begun to replace citations of journal articles or books, both in the social sciences and life sciences. A conference designed to stimulate thinking and interchange between major participants in this area, scientists, publishers, lawyers and economists is planned for the Summer of 2002.
GLOBALIZATION  
(Programme Director: Anthony J. Venables)

Work on foreign direct investment will continue in two directions. One is to look further into firms’ decisions to outsource part of their activities, and at the consequences of outsourcing. The other is to pull together work from the network programme ‘Foreign direct investment and the multinational corporation’ into a book.

Trade and development will move up our agenda with the commencement of a network of research on ‘Trade, industry and development’. It will extend our work on the impacts of globalization on comparative advantage and on income differentials. We will study trade linkages between countries, and investigate the determinants of the export success of different developing countries.

Ongoing work on regionalism will address some of the issues raised by the discussions underway for a Free Trade Area of the Americas.

Spatial analysis at the sub-national level will continue. This will include studying the determinants of plant location and of city growth. We are also starting projects on the determinants of factor price differences and productivity differences across UK spatial units.

On the theory side, there will be continuing work on the foundations of agglomeration and on policy making in the presence of clusters of economic activity. New work will commence on the role of networks in international trade and on trade and economic growth.

Our work on international financial stability will focus on the origins and responses to global financial crises. We will look first at monetary and exchange rate policies, in particular at the problems associated with setting exchange rate targets, on optimal monetary policy and the appropriate role for the exchange rate. As a way of focusing the work we will be running a conference bringing together academics working on dollarisation and euroisation, policy officials from Europe and America and financial market participants to address the costs and benefits of official currency substitution. Secondly we shall be researching the roles of regulatory policies and risk management and their implications for banking system stability. Finally we will research the optimal structures to develop international debt contracts between borrowing countries and global financial markets to avoid or at least mitigate financial crises.
DISSEMINATION, IMPACT AND PUBLIC AFFAIRS UNIT

The Centre attaches great importance to making the outcomes of its work available to as wide a variety of audiences as possible. It ensures through its events organisation and carefully targeted publication and press policy that it reaches decision makers in business, the City, Whitehall, NGO’s as well as its academic audience. With CentrePiece, a unique magazine popularising the Centre’s work, we extend beyond these audiences to all MP’s, the general reading public, schools and non-economists. To further this non-academic dissemination of its work, the Centre has hired as a consultant Hugh Stephenson, the Professor of Journalism at City University and formerly the Editor of The Times Business News and the New Statesman.

We report on our dissemination efforts below and in the annex on publications (Annex B) and Events.

1. Standard Academic Activities

Our main aim must be to influence the way people think about the world and this requires first that our work is recognised by academic peers through the quality refereed academic journals and conference paper submission. We succeeded here, by publishing 93 journal papers and book chapters; presenting no fewer than 146 conference papers in the UK and, mostly, abroad; writing 85 discussion papers, reports and non-journal articles. It appears that people read us: for example our discussion paper series is being downloaded from our website at the rate of 13,700 a month and judging by the considerable number of downloads of papers of junior as well as senior staff our research receives considerable attention from web-based resource centres such as RePEC and SSRN - six staff’s papers were downloaded over 250 times each. Venables, Faguet and Puga appeared in the Top 10 papers downloaded in their research areas.

For our academic events we ran 12 conferences and 6 seminar series per week (123 seminars in total).

2. Policy Advice

The Centre’s work continues to have more influence on high level government policy at home and abroad than any other comparable institution in the country through the appointment, secondment, committee participation and advice of its members:

- Layard has been advising the DfES on the New Deal Policy;
- Anna Vignoles has been seconded as an economic advisor to the Schools division of DfES and her work has had impact on National Literacy and Numeracy strategies;
- Steedman has had a key impact on the setting up of the government’s Modern Apprenticeship Advisory Committee and its report;
• Metcalf is a member of the Low Pay Commission;
• Freeman and Diamond have advised the TUC on the creation of e-unionism;
• Dickens has been appointed to an advisory group to the Cabinet Office to oversee a demonstration project on employment retention and advancement;
• Gregg is on the Chancellor’s Council of Economic Advisors – his work has been instrumental in the introduction of the working families tax credit, the new integrated child credit and employment tax credit as well as the job centre plus strategy;
• Venables advises a Lords Committee on Globalisation issues and the Treasury on regional issues;
• Bean is Chief Economist at the Bank of England and Nickell is on the Monetary Policy Committee as well as President of the Royal Economic Society and the European Economics Association of Labour Economists.

The Centre’s influence is also extended by staff who move on into influential posts outside. Since 2000 8 staff have joined the IMF, World Bank, EBRD and Bank of England, and 5 have taken up academic posts (Pompeu Fabra, Kent, Kellogg School of Management, Munich, Virginia). Two others have taken senior positions at Allianz (Munich) and Credit Suisse First Boston (London).

3. Media and Wider Audience Coverage

The Centre has been involved in a major refocusing of its effort to reach a wider audience. The point of departure has been the realisation that, given the reduced resources and changes working practices of those parts of the media interested in serious subjects, conventional press conferences and press releases have become a less effective way of stimulating coverage of the results of economic research and thus communicating them more widely.

This refocusing has had two main aspects. The first has been to build up an e-mail list of the addresses of named journalists on key publications and in broadcasting organisations known to be interested in the subjects that the Centre deals with and to use it to send them information by e-mail. (For the time being, at least, the existing machinery for distributing hard copy information and releases to the media is also being maintained.) The preliminary results of this electronically targeted approach are encouraging. For example, in May Richard Layard’s CEP Occasional Paper on “Welfare-to-Work and the New Deal” resulted in a signed article in The Times; in June Samuel Brittan devoted his weekly column to an article in the current issue of CentrePiece; the opening of the LSE’s new ESRC-funded research lab in July was described in an article in the Economist as “the largest concentration of social sciences and economics expertise outside the US”; and the publication of a new CEP book, The State of Working Britain: Update 2001, resulted in full articles in the Economist, the Observer and the Guardian. In total 106 articles appeared in the press making reference to our work. We intend, by targeted distribution of monthly summaries of our best work to improve upon this.

The second aspect has been to give more emphasis to direct dissemination. During the summer additional resources were devoted to a redesign of the Centre’s website http://cep.lse.ac.uk/ to make it a user friendly resource for academics, students,
journalists and members of the public, who might be interested in access to our material. The redesigned site was launched in November, with signposts to summaries of recent research and easy downloading facilities. The CEP website is now fully linked to the websites of the other centres that make up the LSE’s Research Lab. The Centre’s magazine, *CentrePiece*, is being actively used to provide accessible versions of the CEP’s research output for a wider audience. In addition to the free distribution to opinion formers, the magazine is being promoted on subscription to university and school economics departments as a teaching tool. In the New Year there will be a pilot subscription drive in the United States. Articles in *CentrePiece* are regularly picked up by the press, thus drawing attention to the original research.

4. Public Events

The Centre continued to organise an ambitious programme of public events, running 10 public lectures covering emerging markets, the use of economics, frontier work on unemployment and inflation targeting. Distinguished speakers included Olivier Blanchard, Robert Solow, Jacob Frenkel, Adair Turner and Robert Reich. The Senior Business Forum, the Centre’s link with business through FTSE CEO’s, organised three events: the government’s relationship to the processes of entrepreneurship, with Philip Putman of HM Treasury; the future of capitalism in the 21st century, with Adair Turner of Merrill Lynch; the commercial pros and cons of the e-economy, with Lord Hollick of United Business Media.
INFORMATION SYSTEMS

The Centre’s move back to the newly refurbished Lionel Robbins Building provided an opportunity to join forces with the IT Systems team of another major LSE research Centre, provided an outstandingly fast and stable new IT network, provided newly designed workstations with one highly specified computer per member of staff in the centre. As well as a major building move and kitting out, staff devoted effort to providing a more stable Windows 2000 build with standard applications for all staff, upgraded software such as STATA 7 and Stat Transfer 6, improved access to networked resources, installing backup systems supplementing all servers and user networked drives by automatic archiving each weekday night; and installing improved virus protection whereby each PC can be automatically remotely upgraded with the latest anti-virus software.

The CEP website [http://cep.lse.ac.uk/] has been completely overhauled and now provides more information than ever before about research, events, news and staff at the Centre. The web has now become a principal dissemination vehicle and the facility to update particular sections and personal webpages in a uniform way has now been extended to all staff. The website has also been developed as an in-house resource with access to a wide range of links, self-help tips and a data library housing all the major data sets used by the Centre which are being worked through systematically to make data series consistent, to document their use and highlight any problems, and to allow immediate selective downloading of variables. In addition to these projects, the Data Service has continued with its core role of maintaining a library of data to support the research interests within the department; supporting researchers in identifying and using suitable data sources; licensing researchers to use restricted data sets; formatting and documenting data so that it is easy to access; following up problems with data identified by researchers and providing training in data related issues.

An important extension to CEP’s own web facilities has been the launch of the LSE Research Lab Website (http://rlab.lse.ac.uk/) which provides an overview of the work of all LSE’s ESRC research centres and extends a Data Service to them at http://rlab.lse.ac.uk/DataService.

A library of core data has also been set up on a 30gb disc that has been added to the LSE’s Sun UNIX system. This enables researchers working outside the LSE and particularly abroad, to access and analyse the data they need while maintaining the security necessary to meet our license agreements.

With the move to Windows 2000 and the new server, we have taken the opportunity to introduce group permissions to restrict access to license data, rather than granting individual permissions. This will not only increase our security, but greatly minimize the time needed to restore the library in the event of a serious system failure.
FUNDING

Full details of our income and expenditure are provided in Annex G. In addition to expenditure from the ESRC core grant of £884k we financed £1,063k of work from funds raised in 2000/01 and previous years. This is the first time in the history of the CEP that funding from non-ESRC grants has exceeded that from our core grant and represents a 75% increase in the proportion of externally funded work over last year. This is largely due to the considerable success of our fundraising efforts from Government, EU and Foundations over the past three years. We would like to express our gratitude to the ESRC and to all our other funders for their continued support of the Centre.

Funds raised this year for use in the future total £852k, with most of our additional funding continuing to come from foundations and government. Details are as follows:

ESRC Funding

Core Grant to the Centre for Economic Performance
31/10/00 – 30/9/01
£977,600

ESRC Macroeconomy Programme
Pissarides, Overman and Winters
1/11/00 – 31/10/02
£147,254

ESRC Economics of Education Research Seminars
Machin, McIntosh
1/9/01 – 27/2/03
£11,086

Government

DfES: Excellence in Cities Evaluation
Machin, Conlon
12/6/00 – 31/12/03
£85,285

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2 We raised an additional £528k which financed partners on CEP coordinated programmes, e.g. the Centre for the Economics of Education financing IFS and Institute of Education; EU Pay inequality project financing 7 European partners
DfES: School Resources and Pupil Attainment  
Machin, Levacic  
1/10/00 – 28/2/01  
£20,577

DfES: Evaluation of Pupil Learning Credits Initiative  
Machin, Conlon  
1/8/01 – 31/7/03  
£53,200

DfES: Advice on Modern Apprenticeship  
Steedman  
6/3/01 – 27/4/01  
£10,875

Cabinet Office: Forward Strategy Unit  
Layard  
1/8/01 – 31/10/01  
£3,750

Charitable Trusts

Esmee Fairbairn Charitable Trust: Skills for All Programme  
Layard, Steedman  
1/4/01 – 31/3/04  
£360,000

Nuffield Foundation: Modelling Crime  
Hansen  
1/5/01 – 30/9/01  
£5,300

Other

Bank of England: Labour Market Structural Change  
Nickell  
1/2/01 – 31/1/04  
£90,000

NBER: Emerging Labour Markets Institutions  
Freeman  
1/8/01 – 30/9/02  
£30,888

Harvard: Unions and the Internet Programme  
Freeman  
1/8/01 – 30/9/01  
£10,135
TUC: Unions and Internet Data Surveys
Freeman
1/8/01 – 30/9/01
£24,000