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This issue of the *Bulletin* reports recent research on the future of European banking under EMU, and summarizes conference and workshop proceedings on the future directions of regionalism in Europe, the economic performance of metropolitan areas, the economics of the 'knowledge driven economy' Corporate Conglomerates, FDI and the multinational enterprise, and 'rethinking the welfare state'. Also reported is the discussion meeting on the mechanisms by which currency crises spread.

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The recent turmoil in European banking reflects not only the many structural changes that the industry is undergoing, but also the changing nature of the bank as an institution. With more changes in prospect on account of EMU, the ninth annual CEPR report on *Monitoring European Integration* analyses the nature and pace of the industry's transformation and offers an agenda for future regulatory and competition policy at both the national and supranational levels.
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A joint CEPR/Yrjö Jahnsson Foundation/ZEI conference in Bonn considered the post-2000 'geometries and strategies' for regional development in Europe, including issues of institutional design, trade-related topics, relationships between EMU and non-EMU countries in the EU, and the policy issues raised by the proposals for the EU's enlargement.
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- 21 Corporate Conglomerates**
What makes some corporate conglomerates a success was the subject of a joint CEPR/CSEF conference in Naples. Among the questions addressed were what are the incentives behind the current wave of mergers, and how problems arise in allocating capital internally.
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- NOTE: Abstracts of recent CEPR Discussion Papers are no longer published in the *Bulletin*, but are available instead on CEPR's website at www.cepr.org

CEPR NEWS

The consortium involving CEPR, the Stockholm Institute of Transition Economies (SITE) and DELTA, which manages and develops the Russian European Centre for Economic Policy (RECEP), has been awarded an extension of its contract until March 2000. RECEP is funded by the European Commission's TACIS programme.

Funding has also been secured from the Ford Foundation to finance the participation of Russian economists in the 'Annual Transition Economics Summer Workshop for Young Academics'.



The Centre for Economic Policy Research was established in 1983 to promote independent analysis and public discussion of open economies and the relations among them. It is pluralist and non-partisan, bringing economic research to bear on the analysis of medium- and long-run policy questions. Institutional (core) finance for the Centre is provided through major grants from the Esmée Fairbairn Charitable Trust and the Bank of England. The Economic and Social Research Council also supports CEPR's networking and dissemination activities, in particular this *Bulletin*, under a grant financing an ESRC Resource Centre within CEPR. None of these organizations gives prior review to the Centre's publications, nor do they necessarily endorse the views expressed therein.

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RESEARCH

European Banking

Impact of EMU

The European banking industry is in turmoil. Along with other financial-sector activities, formerly protected domestic banking markets are being opened to competition. As a result, banks throughout Europe are undergoing the most far-reaching process of consolidation and restructuring of the post-war period. The pace of mergers and acquisitions has accelerated and banks that have long been in trouble are disappearing more rapidly. This European phenomenon carries echoes of wider international trends. Following an unprecedented wave of cross-border mergers and acquisitions, a handful of huge global institutions seem prepared to dominate the scene. At the same time, the Asian crisis and its aftermath have left deep wounds. Banks – and European banks in particular – appear to be vulnerable to economic accidents like Asia and Russia; in some respects, banks have been shown to be more fragile than ever before, as the consequences of the recent near-collapse of Long Term Capital Management illustrate.

Not only the industry but also the bank as an institution is changing. Advances in information and financial technologies are transforming banking practices at the same time as regulatory changes have transformed banking markets. This has been true in the United States, with the Riegle-Neal Act of 1994 and the gradual repeal of the 1933 Glass-Steagall Act. It applies even more so in Europe, where the EU has been attempting to create a more level playing field in banking, as in other financial markets.

But Europe's financial markets are now also being hit by two additional shocks: first, the transition to a common currency under EMU; and second, the transition from pay-as-you-go to funded social security systems. Either shock on its own would cause an upheaval in European portfolios, as European households shift from holding bank deposits towards securities, especially equities, and towards more internationally-diversified portfolios. Their combined force is likely to further transform the European financial landscape. For banks, there are likely to be profound changes in their relationships with their clients, in both the household and corporate sectors.

These developments raise questions of fundamental importance for the European banking industry. What forces are driving this accelerated transition? Where is the industry heading? What risks lie ahead in the transition? At what speed, and towards which model, will the practice of banking and the process of financial intermediation in Europe converge? Will European banks come to resemble their US counterparts and

competitors? What are the implications for competition within the European market and for the competitiveness of European banks? And how should governments manage regulation and bank supervision?

These are some of the key questions addressed in a new CEPR Report, entitled 'The Future of European Banking', the ninth in the influential annual series, *Monitoring European Integration*. Published in February 1999, the Report was written by **Jean-Pierre Danthine** (Université de Lausanne, International Center for Asset Management and Financial Engineering (FAME), Geneva, and CEPR), **Francesco Giavazzi** (Università Bocconi, Milano, and CEPR), **Xavier Vives** (Institut d'Anàlisi Econòmica, CSIC, Barcelona, and CEPR) and **Ernst-Ludwig von Thadden** (Université de Lausanne and CEPR). The authors discuss the contemporary nature of the bank as an institution; describe the recent transformation of the US banking industry; assess the current condition of European banking markets; and explain the differences between the European and US commercial-banking sectors (and why these differences might be a source of concern). Then, focusing on the impact of EMU, they explain why the euro will transform the asset-management and investment-banking sectors; examine the policy issues facing Europe's regulatory and competition authorities at both the national and supranational levels; look forward to the nature of European banking in the 21st century; and, finally, offer an agenda for policy.

Will the European banking industry end up just like its US counterpart? The Report's authors note that, on purely objective grounds, the post-Riegle-Neal Act United States and post-EMU European banking sectors will be very similar, suggesting that the two may converge on a single model. But the transformations of the US and European banking industries differ in two important respects. First, the deregulation process in the United States is more advanced – not only because the currency segmentation of European markets has only now been removed (and only among 11 countries), but also because to date the EU's Single Market Directives, although substantial on paper, have not been as effective in practice. Second, despite the massive consolidation of the financial industry in the United States, concentration at the level of local banking markets has, if anything, decreased. In Europe, by contrast, mergers among commercial banks so far have been mostly within national markets.

Moreover, although the European banking industry will certainly undergo major changes, it is likely to remain quite different from its US counterpart because of three fundamental factors: (1) EMU countries are not US states: although seemingly counter-intuitive, the diversification of macroeconomic risk – which has been the driving force behind the wave of interstate mergers in the United States – in fact requires less cross-border consolidation in Europe, where regional diversity within national boundaries still provides adequate insurance; (2) the weight of different European cultures and languages will not disappear, at least at the retail, consumer-market level; and (3) the European financial framework – including law, taxation and, more importantly, regulatory and supervisory institutions – is still far from harmonized.

Current Issues in Monetary Policy

A CEPR/ESRC Macroeconomics Workshop on 'Current Issues in Monetary Policy' was held in London on 23 October 1998. The workshop, which was organized by **Michael Wickens** (University of York and CEPR), was held under the auspices of the ESRC Resource Centre, established at CEPR in 1993, to provide networking, dissemination, support and training services to the UK economics community. The following papers were presented:

'Centralized Wage Setting, Inflation Contracts, and the Optimal Choice of Central Banker', **Phillip Lawler** (University of Wales Swansea)

'Interest Rates, Optimal Control and Current Monetary Policy', **Sean Holly** (University of Cambridge) and **Paul Turner** (University of Sheffield)

'The Concept and Measurement of "Domestically Generated Inflation"', **David Barker** (Bank of England) and **Willem Buiter** (University of Cambridge and CEPR)

'Interactions Between Monetary and Fiscal Policy Rules', **Campbell Leith** (University of Exeter) and **Simon Wren-Lewis** (University of Exeter)

'The New UK Monetary Arrangements: A View From the Literature', **Charles Bean** (Centre for Economic Performance, LSE, HM Treasury and CEPR)

The workshop also included a Round Table discussion, chaired by Michael Wickens, on 'Monetary Policy: How Much Progress Have we Made and What Still Needs to be Done?'. The participants were Charles Bean, Willem Buiter and **John Driffill** (University of Southampton and CEPR)

Finally, history matters: in the restructuring process, European banks will benefit from the advantage of incumbency in European markets. Conversely, in the United States, the incumbency advantage of US investment banks and asset managers is likely to compensate more than enough for their inability to exploit existing economies of scope with commercial banking activities. The convergence of banking models in Europe and the United States will thus be conditioned by their histories of universal and specialized banking respectively.

Turning to the prospects for competition and consolidation among European banks, the Report argues that the limited evidence available suggests there is room for further intensification of competition, even though the industry appears already to have gone through a significant increase in competitive pressures. In part because of the current lack of regulatory harmonization, but also owing to past heritage, competitive conditions so far have provided only a limited impetus for change. The existence of different currencies has been an important factor in European market segmentation, playing in some sense the role of interstate banking restrictions in the United States. The advent of the euro will undermine this effect but will not be enough in itself to create a true single European financial market. Non-regulatory barriers – taxation and corporate law in particular – are also likely to remain

important for the foreseeable future as a source of continuing segmentation.

Again, the fact that diversification and consolidation possibilities in Europe are almost as good within countries as they are across countries is relevant here. A European bank's first bids for growth by acquisitions would more naturally be made nationally, where mergers are easier in terms of culture and regulation, and where they may also bring local market power – a welcome relief from increasing competitive pressures. But there will also be losers from such increases in market power, notably small businesses – which will not be big enough to access the new euro financial markets directly – and consumers, at least until direct banking becomes more widespread.

Competition is not the only argument why this tendency for national consolidation is unhealthy. Because national banking-market structures and lending practices differ across Europe, the same change in ECB-set interest rates will affect EU economies differently. This could be a serious hindrance to the operation of a single monetary policy. One reason transmission mechanisms differ across EMU states is precisely the heterogeneous structure of the European financial industry. The creation of new cross-border suppliers of financial services, at a time when European consumers and firms are likely to become more similar, would plausibly result in a homogenization of financial practices across EMU.

The Report's authors believe that the areas of European banking that will be most affected by the euro are asset management and investment banking. Both activities involve economies of scale that are likely to become more important with the introduction of the single currency. These scale economies will induce two types of mergers: first, acquisitions with the simple purpose of enlarging the stock of assets under management; and second, acquisitions with the purpose of buying human capital (teams) and technology. The first kind of merger need not be cross-border: domestic acquisitions may be good enough to build up volume. But acquisitions designed to build expertise in the technology and process of asset management will be cross-border, though mostly directed towards US and UK-based investment banks.

Economies of scope between investment and commercial banking provide an organizational advantage to universal banks. So, despite the fact that early attempts at integrating commercial and investment banking cultures have not been successful, the incentives of commercial banks will change. Relying on the experience of past failures at building universal banks may not be a good way to think about future developments.

That said, few European banks will make it to the status of universal banks. But those that do will try to exploit the economies of scale across EMU, fighting the battle with US universal banks and specialized investment banks. The outcome is uncertain. European universal banks will be boosted by the advantage of incumbency in most of the areas in which they are active. The difficulty of integrating investment and favourable commercial banking cultures are the main advantages

of the US specialized institutions – and the biggest challenges for the new European universal banks. But regulation, provoked by the desire to stop commercial banks taking on too much off-balance-sheet risk, could slow down the emergence of European universal banks.

If consolidation of the banking industries within individual European countries is undesirable for reasons of competition, it may prove popular nevertheless for other reasons. In particular, chauvinistic support for ‘national champions’ often hides behind the fear that local consumers and firms may be neglected by large institutions with headquarters located far away. Only domestic banks, so it is argued, preferably small and with a strong local presence, can understand and service local clients appropriately.

This argument, however, is not well-founded. Analysis of the effects of consolidation in the United States – where local competitive conditions have been preserved by authorities – on the availability of bank credit to small US firms, reveals no evidence that local consumers and firms are neglected.

The bottom line, therefore, is that cross-border consolidation should be encouraged by removing the barriers (legal, fiscal, regulatory and political) to such mergers. Cross-border mergers permit the emergence of efficient producers without prejudice to competitive conditions. They also help homogenize banking practices, promoting the desirable convergence of the mechanisms by which a single monetary policy will be transmitted to the real side of European economies. It is time, argues the Report, to favour the emergence of European competitors rather than national champions.

In this endeavour, the main players will be the national competition authorities. If domestic consolidation of the banking industry beyond a certain degree of concentration is made impossible by local competition authorities or by the European Commission, national banks will learn to go against their natural tendencies and start consolidating internationally. At the same time, the role of European competition policy will remain important, particularly in checking that state aids do not derail the necessary restructuring of inefficient banks that are regarded as national champions.

What impact will these changes have on European citizens? The transformation of the European banking industry is of no trivial consequence for the welfare of European citizens. An efficient system of intermediation should encourage savings by offering consumers a large choice of high-performance savings instruments, and promote investment by providing adequate and low-cost financing to all projects likely to feed economic growth.

Fulfilment of this objective is predicated on the increased efficiency of the European banking industry, and on the success of euro-wide securities markets – including markets for closed-end funds, venture capital and lower-grade commercial paper – where firms will be able to satisfy their capital and borrowing needs at low intermediation costs. Two factors, however, could prevent this from happening: first, the banks may

Unemployment Dynamics Workshops

Two CEPR/ESRC workshops on ‘Unemployment Dynamics’ were held in London on 20 May 1998 and 4 November 1998. The organizers were **Jennifer Greenslade** (London Business School), **Brian Henry** (London Business School) and **Dennis Snower** (Birkbeck College, London and CEPR).

The following papers were presented at the May meeting:

‘The Cost of Low Inflation? Nominal Wage Rigidity in the UK’, **Jennifer Smith** (University of Warwick)

‘Good Jobs versus Bad Jobs: Theory and Some Evidence’, **Daron Acemoglu** (Massachusetts Institute of Technology and CEPR)

‘Modelling Wages and the Supply Side of the UK Economy’, **Stephen Hall** (Imperial College, London, and CEF, London Business School) and **James Nixon** (CEF, London Business School)

‘Technical Progress and the Natural Rate in a Vintage Model’, **Julia Darby** (University of Glasgow), **Jonathan Ireland** (University of Strathclyde) and **Simon Wren-Lewis** (University of Exeter)

At the November meeting, the papers presented were:

‘The Missing Piece of the Unemployment Puzzle’, **Andrew Oswald** (University of Warwick)

‘Externalities in the Matching of Workers and Firms in Britain’, **Simon Burgess** (University of Bristol and CEPR) and **Stefan Probit** (Humboldt-Universität zu Berlin)

‘Dynamic Asymmetries in US Unemployment’, **Gary Koop** (University of Edinburgh) and **Simon Potter** (Federal Reserve Bank of New York)

‘Job Displacement, Non-Employment and Wages in Germany’, **Stefan Bender** (Institut für Arbeitsmarkt- und Berufsforschung, Nürnberg), **Christian Dustmann** (University College London, Institute for Fiscal Studies, London, and CEPR) and **Costas Meghir** (University College London, Institute for Fiscal Studies, London, and CEPR)

attempt to defend their turf by obstructing the rapid growth of such a market; and second, governments – inspired by national chauvinism – may act to foster and protect their ‘national champions’. In either case, European citizens will bear a high cost.

What do the Report’s conclusions imply for the policy agenda? Given the present uncertainty and turbulence in world financial markets, is there a case for the financial authorities to exercise greater control over the markets? Certainly, the recent financial crises in Asia and Latin America have increased the salience of calls for more restrictions on the activities of financial intermediaries.

The Report’s view is that a better approach would be to minimize interference with the market and use market mechanisms to improve regulation. The right word is therefore ‘regulation’, not ‘control’. It is vital, however, to

get regulation right. The authors consider that banking should be subject to two types of constraints only: those derived from a concern for the stability of the financial system; and those derived from the need to check market power.

On competition, the days in which banking was off-limits for competition policy are gone, and should not be permitted to return. The tendency towards national consolidation is a challenge for European competition authorities since it is likely to reinforce local monopoly power. This is particularly important for small-firm lending, as large firms will access the euro capital markets directly, and consumers will have the option of turning to specialized asset managers and direct banking.

Banking supervision is a particularly delicate and urgent issue in EMU. Traditionally, supervision has focused on the assessment of the quality of a bank's balance sheet at a specific point in time, and on whether it complies with capital requirements and restrictions on portfolio composition. The Report considers that this approach is no longer adequate in a world in which banks are active players in the capital market and, because of trading losses, can be driven into insolvency extremely rapidly.

As banks take on more market risk, their ability to withstand sudden fluctuations in market prices also depends on the readiness of the central bank to provide liquidity to the financial system and to banks in particular. In this respect, the ECB is a very different institution from the Fed – more concerned with, and more constrained by, the risks it may take onto its own books, and thus less likely to be ready to provide liquidity to banks. The implication is that *ex ante* regulation and supervision are correspondingly more important in EMU than they are in the United States.

An associated issue is whether bank supervision should be centralized. The Report concludes that there are a number of risks associated with the current decentralized supervisory system for European banking. The advent of cross-border banking, the likely emergence of pan-European universal banks and, more generally, the new competitive climate of European banking, confront national supervisors with delicate coordination issues. In the face of these challenges, it is unlikely that simple coordination among independent national authorities – as provided for by the Second Banking Directive – will be a safe arrangement.

Past European experience with national supervision has not always been satisfactory, with domestic supervisors sometimes being too close to the institutions they regulate, thus risking being 'captured'. The natural distance that a supranational regulator keeps would thus appear to be particularly healthy. It is ironic, however, that while the international financial community is studying the possibility of setting up a 'world financial regulator', petty national jealousies appear to be preventing this from happening at the European level. This situation puts at risk the stability of European financial markets.

Building a centralized supervisory body was a possibility foreseen in the Maastricht Treaty, but it appears only to

allow centralization of supervisory responsibilities inside the ECB. Although a clear improvement on decentralized supervision, this may not be the optimal arrangement, since the ECB is already being perceived as accumulating too much power, and issues of accountability have been raised. An independent European-wide regulatory agency, distinct from the ECB, may generate fewer concerns in this respect, while at the same time facilitating accountability.

Thinking about a new European agency would also allow fresh consideration of the desirability of combining the supervision of banks and markets. As universal banking makes it increasingly difficult to distinguish between market risk and the risk of individual banks, the argument for combining the two functions of bank and market supervision in an independent supranational EU agency seems overwhelming.

Finally, the Report draws attention to the fact that, important as it may be for the growth of European firms, an efficient euro corporate bond market will not spring up in a vacuum. Banks could see in such a market a strong competitor, and use their incumbency advantage to hamper its development. The authorities cannot guarantee that Europe-wide securities markets will thrive but – as in the case of cross-border consolidation – they can certainly ensure, through inappropriate regulation and taxation, that efforts to build them fail.

As importantly, a liquid corporate bond market will only blossom if the central bank is prepared to provide liquidity to the system whenever necessary. Although there is no direct mention of this task in the statutes of the ECB, the Board of the Bank should carefully consider the role that the Fed has played in fostering liquid markets in the United States.

The Future of European Banking Monitoring European Integration No. 9

*Jean-Pierre Danthine, Francesco Giavazzi, Xavier Vives
and Ernst-Ludwig von Thadden*

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CONFERENCES

Regionalism in Europe

Geometries and Strategies after 2000

A conference on 'Regionalism in Europe: Geometries and Strategies after 2000' was held on 6/7 November, 1998 at the Zentrum für Europäische Integrationsforschung (ZEI) in Bonn. The conference was organized jointly by CEPR, the Yrjö Jahnsson Foundation (Finland) and ZEI. The organizers were **Jürgen von Hagen** (ZEI, Universität Bonn, and CEPR) and **Mika Widgrén** (Yrjö Jahnsson Foundation, University of Helsinki, and CEPR).

The first conference session, on 'Theoretical and Institutional Issues', comprised three papers. 'Federalism with Overlapping Jurisdictions and Variable Levels of Integration: The Concept of FOCJ', was presented by **Bruno Frey** (Universität Zurich) and was a joint work with **Reiner Eichenberger** (Universität Zurich). The authors outlined their concept of functional, overlapping, competing jurisdictions (FOCJs). Such jurisdictions would each have their own powers of enforcement and taxation, would be designed separately for each function or task, would compete for members and, owing to the multiplicity of tasks, would overlap each other with regard to geographical area. The size and structure of each unit would be determined endogenously by the members. The authors evaluated the benefits of the concept and related it to past and present experience. They viewed the FOCJ as a mechanism for achieving a more democratic and efficient form of federalism, able to cope with future challenges, such as the integration of Central and Eastern European countries into the EU. They argued that the right to create such FOCJs should be included as a fifth freedom in any future European constitution.

Hans-Peter Grüner (Universität Bonn) thought that more formal research was needed to determine whether such a proposal to develop a new type of federalism would be helpful. He was sceptical about the value of FOCJs as a solution to problems of redistribution, free-riding jurisdictions and tendencies towards regional hegemony. On the contrary, he thought that the concept might well lead to additional problems, such as a 'supervision paradox' in the case of cross-border FOCJs, with an even stronger role for Brussels. **Carl Hamilton** (Svenska Handelsbanken and CEPR) argued that the scheme would not be characterized by free mobility, since if any individual was not liked by the group they wanted to enter, entry would be impossible. It was also unclear what roles would be left for political parties to play under FOCJs. **Alan Winters** (World Bank and CEPR) foresaw a

problem of instability on account of changes in membership and wondered whether, in the absence of an *a priori* definition of focus of a FOCJ, there was not scope for groups to behave opportunistically. **Bernd Hayo** (University of Bamberg, ZEI, and Universität Bonn) saw a potential problem of lack of solidarity in FOCJs compared to (say) neighbourhood solidarity, and wondered whether the disadvantages of structuring the organization of a firm by function might not apply also to government.

In 'Agenda Setting, the Rules of the Game and Optimal Integration', **Mika Widgrén** (Yrjö Jahnsson Foundation, University of Helsinki, and CEPR) developed a decision-making model based on a non-cooperative game in a principal-agent setting, involving national governments as agents and a supranational player as the principal. Widgrén focused on the optimal and efficient design of an integration treaty, concentrating primarily on the decision-making rules to be laid down and applied. The results depended on whether there was perfect information or whether national agents had an informational advantage as regards national preferences. He concluded that, under perfect information and common policies, there was a trade-off between *ex ante* optimality and *ex post* efficiency, with the result that only unanimity rules were efficient *ex post*. Under a flexible integration scheme, however, in which decision-makers could choose between a common policy adopted by a pre-defined majority and an alternative (the 'zero integration case'), both *ex ante* optimality and *ex post* efficiency could be achieved.

Reiner Eichenberger considered that the model did not lead to any testable propositions. Given that more complex models might prove intractable, he suggested starting with analysis of the important aspects of integration first and proceeding further only if this exercise identified something that was worth modelling. Alan Winters and **André Sapir** (ECARE, Université Libre de Bruxelles, and CEPR) wondered whether such a super-institution was really necessary for integration, with Sapir adding that it depended on the degree of integration. In the case of EFTA, for example, the free trade agenda was already given, so the only additional requirement was for an enforcement mechanism. Jürgen von Hagen noted that the model offered no scope for spontaneous formation of FOCJs, which implied that Frey and Eichenberger should think about the effect of asymmetry in information and uncertainty on their concept.

'Inequality and Convergence: Reconsidering European Regional Policies', was presented by **Michele Boldrin** (Universidad Carlos III, Madrid, and CEPR), and co-authored by Fabio Canova. The authors' aim was to interpret, in the light of convergence concepts in economic growth, their finding that regional economic inequality – measured in terms of per-capita income, unemployment and labour productivity – had not decreased in the European Union during the last 15 years. Analysis of three special data sets for Spain, Italy and Greece, had led the authors to their belief that regional and structural policies served mostly a redistributive purpose and had little positive impact on economic growth. They acknowledged, however, that their testing had been indirect at best and that their

results should be regarded as preliminary, since serious evaluation of the impact of current policies was limited by the lack of reliable and comparable official data on investments of structural funds.

Eckhardt Bode (Institut für Weltwirtschaft, Kiel) suggested that, in the absence of a control group – consisting of comparable poor regions in the EU that did not receive funds – the authors might look at regions/countries (such as Ireland) where convergence had happened for the probable causes of convergence, and to ask whether EU support had been helpful. Bode was critical of the value of modern economic growth theory which, for reasons of simplicity, always neglected important factors, and he wondered what a proper definition of divergence – as opposed to the convergence principle applied in the paper – would look like. For **Dalia Marin** (Universität München and CEPR) the non-convergence results were unsurprising, from both a theoretical and an empirical perspective. New growth theory would not necessarily predict convergence, given the limited mobility of production factors and the large role played by trade; and time-series tests typically did not point to convergence, whereas cross-country tests did. On this point, Michele Boldrin considered that Barro had been wrong to ignore the time dimension. **Michael Hutchinson** (University of California, Santa Cruz, and Copenhagen Business School) considered the time frame altogether too short, as a growth process was often discrete and was much slower to converge than (say) price levels.

There were four papers in the session on 'Trade'. In 'Trade Regionalism in Europe: Towards an Integrated Approach', **André Sapir** (ECARE, Université Libre de Bruxelles, and CEPR) focused on the network of 93 European Regional Trade Agreements (RTAs) in existence in 1998, apart from the EU, EFTA, CEFTA (the Central European Free Trade Area) and BFTA (the Baltic Free Trade Area). Sapir explored the evolution of these RTAs since 1960 and the problems to which they had given rise, extending Richard Baldwin's 1994 study of the same topic. Sapir identified the driving force of integration as a 'domino effect' in terms of which increased integration within a RTA generated negative consequences for non-members, prompting them to apply for membership. He addressed the problems faced by the current 'pan-European trading architecture' – which he described as a 'hub-and-spoke system' of bilateral RTAs with the EU as the focal point – and suggested different solutions to these problems.

Jürgen von Hagen commented that, even when taking the regressions at face value, Sapir's analysis was not really addressing welfare effects, such as trade creation versus trade diversion and whether the multiplicity of agreements was really an issue considering that there were 40 heterogeneous countries in Europe. There was also the question of whether the focus was on a static equilibrium situation or a dynamic process. Carl Hamilton argued that, although the multiplicity of free trade agreements might be a good thing, the current system did not involve negotiations between equal partners – a point clearly illustrated by the EU's exclusion of sensitive goods. Alan Winters wondered whether the solution originally proposed by Baldwin was even WTO-compatible. **Giorgia Giovannetti** (European

University Institute, Firenze) suggested that the different exchange-rate systems should also be taken into account when looking at the domino effects.

Alan Winters (World Bank and CEPR) presented 'Post Lomé Trading Arrangements: The Multilateral Option', in which he expanded on his previous research on the FTA route out of Lomé. Winters considered that the preferential access that would be granted to EU goods under the projected FTAs in a new Lomé agreement would probably be economically harmful to the ACP countries because of trade diversion effects and loss of tariff revenues. Since the benefits to be obtained from North-South FTAs were far from clear, but were no less likely to be achieved under multilateral arrangements, he made the case for solving the Lomé 'problem' multilaterally within the WTO.

Azefa Admassie (Addis-Ababa University and Centre for Development Studies, Bonn) argued for closer examination of the compatibility of trade reforms with other reforms, especially bearing in mind the objectives of poverty reduction and enhanced development. Carl Hamilton wanted to know how important the loss of tariff revenues would be for the ACP countries if their imports from the EU rose. He also pointed to the difficulties and costs being borne by ACP countries in redirecting manpower to the Lomé renegotiations. **Denise Eby Konan** (University of Hawaii) thought there was a need to reassess comparative advantage for (some) Lomé countries in the light of their actual export figures.

Bernard Hoekman (World Bank and CEPR) presented 'Deep Integration, Regionalism and Nondiscrimination', co-authored with **Denise Eby Konan** (University of Hawaii). The authors defined deep integration as 'explicit actions by governments to reduce the market segmenting effects of domestic (non-border) regulatory policies', and they investigated its potential importance for Egypt in the context of trade agreements with the EU, employing a general equilibrium model.

Giorgia Giovannetti noted that the authors' model and simulations were limited to the static gains from trade liberalization, but that the dynamic effects – not just those on trade, but also those on creditworthiness and foreign investment – seemed more important. **Eric Yeldan** (Bilkent University, Ankara) also argued for consideration of the dynamic effects, pointing to the limited effects of the changes suggested in the paper. **Michael Rauscher** (Universität Rostock and CEPR) asked whether it would be possible to disaggregate the numbers further by looking at the sector-specific effects of non-tariff barriers.

In her paper, 'On the Long-Run Effects of Expanding Regionalism', **Caroline Freund** (Federal Reserve System) examined the long-run impacts of expanding regionalism, if free trade afforded the original members first-mover advantage in their partners' markets. According to the model, expanding regionalism leads to a higher welfare level for the original members, compared to multilateral free trade, and a lower welfare level for original non-members and higher world welfare during the second period. Looking at data for the EU, Freund regarded the empirical evidence as consistent with the model.

Uwe Walz (Universität Tübingen and CEPR) said that, in the model, regionalism could be regarded as an investment in market share, introducing permanent asymmetries between otherwise perfectly symmetric countries. Both the argument and the model, however, had their limitations. On the welfare effects, he thought it necessary to look at how long the postulated advantages were likely to persist, which required understanding of the underlying microeconomics. Furthermore, all the usual objections against rent-shifting models would apply to the current setting of a partial-equilibrium model with its factor-endowment constraint. In addition, the model was less applicable to developing countries, and if major markets were dispersed, regionalism became less attractive as well. Alan Winters suggested using a gravity model with proper panel investigations to test the empirical implications, and Hans-Peter Grüner suggested there might be a severe problem of multicollinearity in Freund's model, as it might appear that income mattered if rich countries entered the regional arrangements first. Michael Hutchinson thought a permanent effect doubtful, given market dynamics, with new markets and technologies emerging. In contrast, Carl Hamilton thought there was an argument for the permanent discrimination case, considering that latecomers had to accept the rules of the game in Brussels (which was why he found the results so distasteful).

The session on 'EMU' began with 'Nordic Integration and European Integration', presented by **Thorvaldur Gylfason** (University of Iceland, SNS, Stockholm, and CEPR). The author concentrated on the implications of EU integration for the Nordic countries, which differed in their current relationships with the EU. Data comparisons, which included the role of the primary sector in these countries, confirmed the lack of homogeneity in their economic structures. The paper also highlighted both the problems and possible policy solutions for Iceland and Norway as the two countries with the highest primary-sector dependency.

Pertti Haaparanta (Helsinki School of Economics and Business Administration) challenged some of Gylfason's data, quoting Penn data which showed both the Finnish investment-to-GDP ratio and the growth rate to be among the highest in the world. He argued that the political-economy argument had to be constructed more carefully, and that it was necessary to enquire into the reasons for the different speeds of integration with the EU. Jürgen von Hagen was also sceptical about Gylfason's interpretation of the effects of natural-resource dependency: Latin American countries had decreased their primary-sector dependency in the last 20 years, but this had been at the cost of a worsening in their income rankings. Carl Hamilton thought the analysis should focus more on growth and welfare rather than being preoccupied with exports. **Torben Andersen** (Aarhus Universitet and CEPR) wondered whether it was right to disparage the primary sector in general, since it often comprised high-tech activities. A complicating factor, however, was that EU integration implied increased regulation for the sector. To evaluate whether the manufacturing sector fared better than the primary sector, he suggested a comparative look at their exports.

Michael Hutchinson (University of California, Santa Cruz, and Copenhagen Business School) presented 'Northern Light: Do Optimal Currency Area Criteria Explain Nordic Reluctance to Join EMU?' This paper, which was co-authored by Michael Bergman, concluded that optimal currency area (OCA) theory could neither explain why Denmark, for example, as a 'core' country, had opted to stay out of EMU, nor why Finland – a non-core country – had opted in. From a more forward-looking perspective, however, the Finnish decision was less surprising. The authors similarly concluded that political-economy arguments did not suggest that the lack of Nordic enthusiasm for EMU could be ascribed to an excessively 'conservative' institutional design for the ECB.

Torben Andersen agreed that the forward-looking economic argument was more appropriate than the static concepts underlying the OCA model, but that political considerations were really the most important factor in such decisions. This was true in Denmark, for example, where people were afraid that their 'sense of being different' would be compromised by their incorporation into the EU, and where the size and structure of the public sector and the nature of labour-market policies and institutions were relevant issues. Carl Hamilton, however, reminded participants that political decisions often were influenced by economic events: for example, it could be argued that the main reason Sweden had voted to join the EU was that it feared the economic consequences of not joining. Although accepting that such preferences were important, Bruno Frey noted that the authors had shied away from looking directly at preferences, for which they could have made use of Eurobarometer survey data. He suggested building a full-scale political model. Jürgen von Hagen proposed that elements of risk aversion be incorporated in the model in order to determine the optimal time of entry, given that the reticence of some countries could be explained by a wait-and-see attitude based on a desire to see how the various institutions and policies would develop.

In 'Europe's Outsiders and their Challenges with EMU', **Andreas Fischer** (Swiss National Bank and CEPR) surveyed the monetary-policy challenges posed by EMU for six outsiders, namely Denmark, Iceland, Norway, Sweden, Switzerland and the United Kingdom. Fischer paid particular attention to recent and potential changes in the overall framework of monetary policy, the current state of macroeconomic conditions in the EU-11, and shifts in credibility experienced since the declarations of intent by EMU participants in May 1998.

Kari Alho (The Research Institute of the Finnish Economy and University of Helsinki) suggested looking more at 'interdependencies', such as whether Finnish participation made it easier or harder for other Nordic countries, and whether Sweden might be a free rider in EMU through its links with Finland. It was also important to examine the goals of the 'outs': might Sweden, for example, not just be a 'pre-in' with its decision dependent on whether the United Kingdom entered? Giorgia Giovannetti was surprised to find no reference to the international role of the currencies of the 'outs', and the effects of the seignorage losses that would be incurred if they were replaced. Torben Andersen argued

for consideration of contagion effects, which might become even more important with the Nordic countries following different exchange-rate rules. Michael Hutchinson suspected that interest-rate differentials were caused by expectations of inflation differentials, as markets otherwise would appear irrational.

The topic of the last conference session was 'Central and Eastern Europe'. **Klaus Wallner** (SITE, Stockholm School of Economics) presented 'Leverage over Applicants: The Strategic Use of EU Accession', a paper co-authored by Erik Berglöf. The authors presented a model of the strategic aspects of the decision on whether to 'join a club', the context here being Eastern enlargement of the EU. One key element was the trade-off between late accession, which could be used to foster reforms in applicant countries, and the cost of the withholding of the financial transfers to applicants that would come with accession and would relieve their financial constraints in inducing reforms. The model was used to examine several issues central to the enlargement debate, including internal EU reforms, the absorption capacity for reforms in applicant countries, and imperfect information.

Pekka Sutela (Bank of Finland) thought the conclusions were sometimes too simple, and wondered whether the two-period model could adequately explain the dynamic aspects of the problem. He argued that issues both of credibility and of public goods might well be more important for potential members than the funding issue emphasized in the model. Caroline Freund remarked that there was a time-inconsistency problem in the model, if reforms undertaken by applicants were irreversible.

Erinc Yeldan (Bilkent University, Ankara) presented 'Turkey's Strategic Trade Policy Alternatives in a World of Multi-Polar Trade Blocs: Lessons from an Intertemporal, Multi-Region General Equilibrium Model', written together with Xinshen Dao. The authors' model embraced issues of trade liberalization, growth and capital accumulation in the context of a world economy moving towards a multipolar structure. Focusing on the Middle East, Turkey, the EU and the economies in transition, under various alternative scenarios of customs-union formations, they concluded that increased bilateral trade between these regions held out the prospect of significant gains.

Matthias Luecke (Kiel Institut für Weltwirtschaft) noted the special institutional framework of the Turkey-EU customs union in which the EU and Turkey remained separate customs areas with no delegation of sovereignty involved. The advantage of Yeldan's model was that it included dynamics, but other important integration effects and possible sources of benefit for Turkey – such as increased credibility of domestic reforms – were absent. On the determination of the optimal size of the RTAs, he suggested exploring Sapir's proposal for a pan-European FTA, including all of Central and Eastern Europe, which would offer Turkey more profitable access. Bernard Hoekman argued for quantification of the benefits.

The last paper of the conference was 'Visegrad Integration as a Strategy for EU Accession', presented

by **Kalman Dezseri** (Institute of World Economics, Budapest). The paper provided a detailed account of the development, and of the political and economic roles, of Visegrad cooperation, which recently had been revitalized by a meeting between the prime ministers of the Czech Republic, Hungary and Poland. The author claimed that, since these were relatively poor countries with little influence, not too much should be expected from integration. Although Visegrad cooperation might be seen as a step towards the ultimate goal of integration with the EU, which would replace the market previously provided by the former Soviet Union, there were also a number of problems to be confronted. Some of the problems stemmed from historical factors, some were due to different levels of development, some to the different routes chosen in the transition to a market economy, and some were related to the question of Poland's potential domination of the group.

In asking for more specific data on the countries, Dalia Marin thought that Dezseri's view of the potential dangers and benefits of regional integration was too negative. She suggested that alternative models – such as the one presented earlier by Caroline Freund – showed that regional cooperation could provide clear benefits. It was arguable, moreover, that less-developed countries should first integrate with countries at similar levels of development, in order to gain time to build up their human capital and technology sectors. The benefits of this strategy did not necessarily compare unfavourably with the opportunity costs of not integrating first with a richer region which offered immediate exploitation of knowledge spillovers. Klaus Wallner also thought there might well be advantages in the small countries first building up their infrastructure. Jürgen von Hagen said that the objection against Visegrad integration was based on the idea of strong hysteresis in industry structure – an argument which did not seem clear to him. Moreover, the Visegrad countries found themselves as price-takers facing trade-distorting prices. Visegrad integration would be a good thing, none the less, because it implied a reduction of trade barriers and would strengthen the countries' position in negotiations with the EU. Alan Winters took the opposing view on the issues of the hysteresis of industry structure and price-taking by the Visegrad countries.

The conference had begun by discussing matters of institutional design, some of them connected to the concept of 'deepening' the EU. Among the suggestions had been the new and quite radical concept of FOCJs as a means of achieving a more democratic and efficient form of federalism, but the need to look at the EU's existing regional policies had also been noted. Subsequently, discussion had focused on trade-related topics, especially RTAs and their theoretical and policy implications, before moving on to consideration of EMU and the situation of the 'outsiders', particularly the Nordic countries. Finally, the conference had dealt with issues raised by the proposals to 'widen' the EU to incorporate Central and Eastern European countries. The conference had therefore succeeded in covering a broad range of issues relevant to the future of regionalism in Europe.

Metropolitan Economic Performance Social Tensions and Economic Frictions

A CEPR conference on 'Metropolitan Economic Performance' was held in Lisbon, Portugal, on 29/31 October 1998. The conference, hosted by the Management Department of Universidade Nova de Lisboa, was organized by **Pedro Telhado Pereira** (Universidade Nova de Lisboa) and **Klaus Zimmermann** (IZA, Universität Bonn, and CEPR). The 21 papers presented covered several issues related to metropolitan economic performance, including crime, drugs and racism. Nevertheless, other topics were also addressed, including the social and economic exclusion of women, young people, the unemployed and immigrants. Return migration and the relative performance of migrants was also the subject of a number of the conference papers.

The first two papers were presented under the heading of 'Transformation and the Cities'. **Ira Gang** (Rutgers University) presented 'The Political Economy of Russian City Growth', co-authored by **Robert Stuart** (Rutgers University). Drawing on recently available data, the authors investigated the patterns of population growth in medium and large Russian cities in the 1970s and 1980s, focusing on the role that might have been played by the controls peculiar to the administrative command economy. These controls included formal administrative restrictions ('sticks'), variables directly controlled by the state ('carrots') and other forces less directly controlled by the state ('economic variables'). The authors' main conclusion was that, even when other state and economic variables were included in the model specification, direct controls mattered, while restrictions on expansion did not. These results were robust with respect to different specifications, including several types of 'carrots' and 'economic variables'. Other results obtained underlined the importance of broad regional differences, and the poor explanatory power of economic variables in explaining population shifts.

Francis Kramarz (CRESS-INSEE, CNRS Paris, and CEPR) suggested that since rents might have influenced immigration behaviour they should also be accounted for in the regressions. Pedro Telhado Pereira criticized the underlying assumption of price homogeneity, which might not have had a relevant influence on migration patterns. **Roxane Silberman** (LASMAS/CNRS, Paris) questioned the reliability of the migration data, given that some of the flows might have been illegal.

Rumiana Stoilova (Academy of Sciences, Sofia) presented 'The City: Lights and Shadows of the Post-Totalitarian Transformation', which adopted a sociological approach to the changes taking place in Bulgarian cities in general, and in Sofia in particular, since the early 1990s. Stoilova argued that the move from totalitarianism to a parliamentary democracy had destroyed not only the previous regime's artificial social structures, but also the solidarity nourished by public resistance against socialism. Consequently, success

and degradation were now simultaneously apparent, contributing to the disintegration and atomisation of post-totalitarian Bulgarian society. A further example of this was that, at a city level, the previous regime's 'equality in poverty' had been replaced by the stratification of city districts.

Crime rates in the cities had risen, because of increasing urban poverty, the lack of efficient authorities and the inherent nature of urban environments. Statistics reflected the crime-related shortcomings of urban reforms: apart from rising crime rates, fewer crimes were being reported, fewer criminals convicted, there was growing delinquency among children, and higher complicity among underaged persons. Ethnic problems with Gypsy, Turkish and Romanian groups had also become more serious, contributing further to the process of disintegration. Most conflicts occurred between Gypsies and native Bulgarians. There were, nevertheless, some positive aspects to city life: mostly, these had to do with better job opportunities, when compared to the countryside. But entrepreneurship, reflected in the growing numbers of new small businesses, was also more pervasive in the cities.

Ira Gang enquired about the prevalence of crime within the different ethnic groups. **Jeff Frank** (Royal Holloway College, London) and **Peder Pederson** (Aarhus Universitet) suggested the need for further research on income inequalities across ethnic groups and the contribution of reform to those inequalities.

The succeeding two papers addressed different aspects of social exclusion. In 'Unemployment and Crime: New Answers to an Old Question', Kerry Papps and **Rainer Winkelmann** (University of Canterbury, New Zealand, and CEPR) – who presented the paper – argued that establishing whether or not there was a causal link from crime to unemployment was a task with relevant policy implications. If such a link existed, it should be taken into account when performing cost-benefit analyses of policies with the potential to reduce unemployment. Analysing panel data for New Zealand's 16 regions, the authors regressed crime rates on unemployment for the period 1984–96. A pooled regression had indicated a significantly positive elasticity of crime rates with respect to unemployment rates, but a graphical analysis of the variables across time suggested that the preliminary model had been misspecified and that its results were not valid. The authors then estimated a two-way fixed-effects model, the results of which showed no evidence of a link between unemployment and crime. Since period effects were found to be significant when accounting for crime rates, they adopted a random-region, fixed time-effects model, which produced similar results, except in the two categories of drugs and other anti-social offences, and abuse-of-property offences.

An augmented model used to investigate the role of two other variables – the clearance rate and income per capita – showed that the former variable had an ambiguous impact overall, but with positive or negative effects for specific crime categories. The ambiguity of this result was tentatively explained by delays in the formation of beliefs and by the endogeneity of the

clearance-rate variable. The coefficient of income, however, was unambiguously negative, suggesting that the effect of an increase in legal income-earning opportunities outweighed that of increased illegal opportunities. Finally, to overcome problems of endogeneity and lagged perceptions, the authors considered the previous year's clearance rate, which provided more evidence for a negative effect of the deterrence rate. Their conclusions were thus that unemployment could not explain changes in the overall crime rate, and that policy-makers may have more success in fighting crime by attempting to manipulate the deterrence rate and the average household income, than by dealing with unemployment.

Jan van Ours (CentER, Tilburg University, and CEPR), argued that the authors should not completely dismiss an unemployment effect on overall crime since the similarity of patterns across regions decreased the power of the regressions. Francis Kramarz considered that different regressions should be run for each region. Jeff Frank suggested using either lagged values of unemployment or long-term unemployment instead of overall unemployment.

'The Effect of Neighbourhood Characteristics on the Labour Supply of Welfare Recipients', was written by **Gerard van den Berg** (Free University Amsterdam, Tinbergen Institute, and CEPR), **Bas van der Klaaw** (Free University Amsterdam, Tinbergen Institute) and **Jan van Ours** (CentER, Tilburg University, and CEPR), and was presented by van Ours. Their paper investigated the individual transition rate from welfare to work using 1994–6 data on Rotterdam and focusing on whether the individual's neighbourhood was a relevant variable. Assuming that demand-side conditions were not relevant at the neighbourhood level (since commuting costs were low), the authors concentrated on supply-side differences. They also concentrated on 'welfare recipients', namely those aged 18 years and older, who were legally allowed to stay in the Netherlands, had no other income but had an obligation to search for a job. Their data identified three different subsamples of recipients: Dutch job-losers, non-Dutch job-losers and Dutch school-leavers. Three neighbourhood effects were considered: local labour-market effects (when each neighbourhood acted independently of the others); spillover effects (when individuals adopted the behaviour of their neighbours); and selection effects (when individuals chose a neighbourhood with similar job-search patterns to their own).

The estimation results, based on a mixed proportional hazard model, indicated that the overall individual transition rate decreased as the duration of welfare collection increased. Furthermore, neighbourhood effects on the overall unemployment rate were relevant for the Dutch recipients (both job-losers and school-leavers), but did not matter for the non-Dutch job-losers. This phenomenon was particularly acute for younger Dutch welfare recipients. **Martin Klithäll** (Lunds Universitet) and Rainer Winkelmann suggested that administrative neighbourhood divisions might be somewhat arbitrary, thus weakening the results. **Andrea Ichino** (European University Institute, IGIER, Università Bocconi, Milano, and CEPR) stressed the

importance of controlling for the length of time during which immigrants have lived in a particular neighbourhood.

The session on 'Return Migration' was opened by **Martin Klithäll** (Lunds Universitet) with 'Patterns of Return Migration from Sweden 1970–93'. In a wider project, the author had been analysing the economic impact of immigration and the associated problems of social integration and exclusion. This paper paid particular attention to a comparison of the patterns of return migration to Germany and Greece, with the specific aim of testing the savings-target hypothesis, according to which immigrants see themselves as temporary migrants, planning to return to their home country when they have accomplished some savings target. The hazard of return migration, therefore, is expected to depend positively on age, income, unemployment in the host country, absence of children and being single. Conversely, it is supposed to depend negatively on unemployment in the home country, with an ambiguous effect from changing relative wages.

Klithäll drew on data from the Swedish Longitudinal Immigrant database, which accounts for several occurrences in immigrants' lives (although it might suffer from an under-registration problem). His sample included only men, aged between 16 and 65, born in either Germany or Greece, who had immigrated to Sweden after 1967. The hazard of return migration was estimated via the Cox proportional hazards model. Some of the results clashed with the model's predictions: for example, the older age groups did not show a significantly higher risk of return migration than younger cohorts. The author estimated different models for German and Greek immigrants, but again the savings-target hypothesis could not be confirmed, although for different reasons for each nationality. While income induced a U-shaped risk of return for German men, it had a negative effect for Greek men. With regard to age, the Greek group conformed to the hypothesis under scrutiny, while the German return risk decreased with age. A suggested explanation for the Greek immigrants' results pointed to the possibility of some 'exclusion effect', whereby successful immigrants, who obtained a high income, did not wish to return, while those who got stuck with a low income preferred to return to Greece. **Thomas Bauer** (IZA, Universität Bonn, and CEPR) suggested excluding underaged people from the regressions, since these might be the children of those immigrants who take the return decision. Most people in the younger cohorts did not return on account of their own economic status, thus distorting the results.

'Is there a Wage Premium for Returning Irish Migrants?' was the paper presented by **Alan Barrett** (Economic and Social Research Institute, Dublin, and CEPR), whose co-author was Philip O'Connell. The paper set out to characterize the educational profile of returning migrants, who currently outnumbered the traditional emigrants, and to investigate whether returnees received an above-average wage, after controlling for the standard relevant variables. Data from the Irish Labour Force Survey showed that return migrants (and non-Irish immigrants) had higher levels of education

CEPR/ESRC Transition Economics Workshop

A CEPR/ESRC workshop on Transition Economics was held in London on 19 November 1998. At the workshop, which was organized by **Mark Schaffer** (Heriot-Watt University, Edinburgh, and CEPR), the following papers were presented:

'Dominant Shareholders, Restructuring and Performance of Privatized Companies in Russia: An Analysis and Some Policy Implications', **Sergey Aukutsionek** (Russian Economic Barometer, Moscow), **Igor Filatotchev** (University of Nottingham), **Rostislav Kapeliushnikov** (University of Nottingham) and **Vladimir Zhukov** (Russian Economic Barometer, Moscow)

'Water and Waste Water Services in the Russian Federation: A Study of Four Vodokanals', **David Parker** (Aston University)

'Wealth Distribution, Occupational Choice and the Behavior of the Interest Rate', **Emilio Colombo** (University of Southampton and Università degli Studi di Milano) and **Ákos Valentinyi** (University of Southampton)

than the resident population. This pattern was unsurprising, since the proportion of skilled emigrants during the 1980s was higher than that for the overall population. Another possible contributory factor might have been the rise in earnings dispersion, which was likely to increase the return to more educated individuals. A policy-related outcome of these findings was that concerns about 'skill shortages' (and 'brain drain') were less relevant, in that the migration mechanism itself was dealing with them.

The issue of the return migrants' wage premium was addressed by analysing answers to questionnaires sent out to a random sample of 1992 graduates. Some of these individuals were return migrants, having been abroad for six months or more since graduation. Estimations performed – without accounting for self-selection – indicated a significantly positive wage premium for returnees. The premium was large for men, but was not statistically significant for women, although the length of time away was a variable more relevant for women than for men. These results were understandable given that, on average, men stayed abroad longer than women.

Andrea Ichino wondered whether some Irish emigrants had received further education while abroad, thus decreasing the scope for a 'brain drain'. Francis Kramarz thought that threshold levels should be accounted for when estimating the returnees' wage premium. He also suggested drawing on the British Labour Force survey for further information on Irish migrants in the United Kingdom.

A second panel on 'Social Exclusion' was opened by **Jacques Silber** (Bar-Ilan University, Ramat Gan) who presented 'On Inequality in the Quality of Life in Israel: New Immigrants Versus Old-Timers', a paper written together with Nira Yacouel. The authors attempted to devise separate measurements for the standard of living, the quality of life, and the efficiency in transforming the former into the latter, among Israeli individuals in 1992–3. Their approach drew on the distinction between resources (standards of living) and functionings (quality of life), and also on the concept of a 'distance function', namely the amount by which a given quantity vector should be divided so that a given utility level was achieved).

The authors used data obtained from a time-survey to build a vector of resources (including information about households, such as number of cars or TV sets), a vector of functionings (with information on – say – the number of recreational activities or the individual's satisfaction with her health), and general information on the individual's characteristics. The regressions performed indicated that there was no significant relation between the standard-of-living and the quality-of-living indices, while the opposite held true for the relation between the transformation-efficiency index and both the standard- and the quality-of-living indices. The results also showed that there was more inequality between the individuals in terms of their standard of living than in terms of both their quality of life and the efficiency of their transformation.

Francis Kramarz remarked on the need to control for household size and to consider the characteristics of products, as reflected in their different degrees of substitutability. **Christian Dustmann** (University College London and CEPR) claimed that some of the survey questions were ambiguous in the sense that it was difficult to tell whether a specific answer meant more or less welfare. Andrea Ichino felt there was a need for more information on the individuals' characteristics, especially their education, and suggested that some of the questions be dropped from subsequent analyses.

Christian Dustmann's (University College London and CEPR) own paper was entitled 'Attitudes to Ethnic Minorities, Ethnic Context and Locational Decisions', and was co-authored by Ian Preston. Their point of departure was that negative attitudes towards minorities may be affected by the ethnic composition of the locality in which individuals live. Although racially intolerant people were unlikely to choose to live in areas with large ethnic populations, the latter were also unlikely to be keen on areas where they might expect to experience racial intolerance. Therefore, empirical results on the impact of ethnic composition on attitudes, which did not account for such phenomena, were likely to be biased downwards.

The authors tested their prediction with 1980s data for England, drawn from the British Social Attitudes survey. This dataset provided information on a range of attitudes towards minorities (both directly and indirectly reported), which was then collapsed into binary

indicators. There was also extensive socio-economic information on respondents, including education, income, age and labour-market status. The estimation strategy was based on an instrumental-variables estimator, whereby it was assumed that individuals were constrained to choose their neighbourhood within their initial district.

The results of a 'standard' estimation indicated, *inter alia*, that manual workers tended to have more hostile attitudes, that being unemployed had positive effects on attitudes, and that individuals educated beyond age 18 had more favourable attitudes. The scope of ethnic concentration yielded an (insignificantly) negative effect on attitudes. The picture changed, however, with a second estimation that accounted for potential location biases: the effect of ethnic concentration on attitudes became clearly more negative. Both results were interpreted by the authors as evidence that high concentrations of ethnic minorities in England were associated with more hostile attitudes and that there was a considerable downward bias in estimations which regressed attitude variables straightforwardly on ethnic concentration indicators.

Rainer Winkelmann pointed out that in a long-term equilibrium location issues would not matter and thus there would be no such bias. Francis Kramarz suggested that the estimation should account for the likely relative ease with which richer individuals could travel and move to a different district or country. Andrea Ichino proposed that survey non-respondents should be considered as either anti- or pro-immigrant so as to set lower and upper boundaries for the results. He also suggested that there should be some testing for non-linearities in the ethnic concentration effect, in the sense that there might be a threshold when previously unimportant concentration levels became relevant and hostility increased. Martin Klinthäll thought that more weight should be attached to the public housing variable, since it might constrain those individuals living in such places not to move, regardless of the ethnic mix in their ward and their attitudes towards ethnic minorities.

The first paper in a session on 'Discrimination' was 'Estimating Labour Market Discrimination with Selectivity Corrected Wage Equations: Methodological Considerations and an Illustration from Israel', presented by **Shoshana Neuman** (Bar-Ilan University, Ramat Gan, and CEPR) and written with Ronald Oaxaca. The authors put forward several methods for decomposing wages when there is sample-selection or selectivity bias, a phenomenon that might arise at the stage of joining the employed labour force and when a specific occupation is chosen. Three new terms arise when selectivity is accounted for in a wage inequality analysis. The first measures the effects of, say, gender differences in the parameters of the selectivity equation on the wage differential. The second accounts for the effects of gender differences in the variables that determine employment in the area under comparison. And the third term captures the effects of gender differences in the wage response to the probability of employment in such an area.

The interpretation of these terms along the lines of discrimination, endowments or selectivity is somewhat ambiguous, which led the authors to define four different types of wage decompositions: considering the first term as discrimination and the following two as endowments; considering the first and third terms as discrimination and the middle one as endowments; regarding the first term as discrimination, the second as an endowments-related measure, and the last as a measure of selectivity; and deeming all three coefficients as accounting for selectivity, with the discrimination and endowments components treated according to the standard Oaxaca approach.

The authors illustrated these different methodologies with an analysis of wage discrimination among Israeli professionals due to both ethnicity (Easterners or Westerners) and gender. They drew on census data covering earnings, human-capital variables, socio-economic attributes and labour-market characteristics of individuals. First, they estimated entrance equations (which provided a correction for the selectivity bias). Second, they estimated Mincer-type wage equations, using one set for the standard Oaxaca decomposition, and correcting the second for the selectivity bias (using the Heckman procedure). Overall, gender wage differentials were found to be larger than ethnic wage differentials. Among several other results, the authors found that three out of the five decompositions used indicated the existence of some favouritism towards Eastern men, although their wages were lower, on average, than those of Western men. Andrea Ichino questioned the adequacy of the particular instrumental variable used in the estimation and pointed out that the results were bound to be very sensitive to such a variable.

In 'Glass Ceilings or Sticky Floors?' Alison Booth, Marco Francesconi and the presenter, **Jeff Frank** (Royal Holloway College, London), accounted for the empirical result that women in Britain are as likely as men to be promoted, but receive lower pay rises upon promotion. (The British Household Panel Data indicated that, upon promotion, men received 20.4% pay rises, but women only 9.8%.) The authors built a three-period model which reproduced this result. Its underlying features were that firms induced workers to invest in human capital by committing to a promotion rule and to a minimum post-promotion wage. Furthermore, firms had the option to match a higher offer from another firm to a promoted worker. Discrimination was brought in by assuming that firms regarded women as less productive than men, although objectively this was not true. Under these circumstances, whereas the incentive to acquire human capital worked similarly for both sexes leading to similar promotion rates, discrimination made it less likely that firms would match outside wage offers to women. Thus women ended up receiving lower pay rises. The model's predictions were tested empirically. The most important result was that the gender gap of the promotion rate became insignificant when the occupation variable was accounted for, whether or not proxies for the worker's effort were included, thus supporting the theoretical conclusions.

Jan van Ours remarked that the estimation results were bound to be sensitive to the definition of a 'promotion', since a change of occupation might easily be mistaken for promotion. Francis Kramarz suggested that job complexity increased as people moved up the hierarchy, which might explain the empirical results, if men were relatively more numerous in higher ranks.

The third session on 'Social Exclusion' was opened by **Adrian Ziderman** (Bar-Ilan University, Ramat Gan), who presented 'Vocational Education in Israel: Wage Effects of Vocational Education, Occupation, and the VocEd-Occupation Match', which was written jointly with **Shoshana Neuman** (Bar-Ilan University, Ramat Gan, and CEPR). The aim of the paper was to verify the authors' claim (based on an earlier study of an Israeli sample) that the wage advantage of vocational-school graduates over others working in related occupations stemmed from work in occupations related to their vocational studies, or from employment in a well-paid occupation, and was not the direct result of the training received (as Hotchkiss had suggested for a US sample). The wage effects of vocational education ('VocEd') were estimated using Hotchkiss' specification, i.e. including a variable representing vocational-school attenders currently employed in training-related occupations, among others. The estimates showed that VocEd alone did not confer higher earnings on Israeli workers, and that VocEd completers employed in a training-related occupation did earn more than other groups, even when a matched-occupation variable was included.

The authors explained the differences between their and Hotchkiss' results by pointing to his 'problematic' use of the 'wage of the first job after leaving high school' as the dependent variable. In their view, this led to results that were unduly pessimistic with regard to the labour-market outcomes of vocational schooling in the United States. Christian Dustmann stressed that there was a problem of selectivity relating to those individuals who were matched to the jobs for which they were trained. Francis Kramarz argued that the authors' approach to determining the training-related occupation was not consistent.

Peter Jensen (Aarhus Universitet) presented 'Labour Market Integration of Immigrants in Denmark', which was a joint work with **Peder Pedersen** (Aarhus Universitet), M. Rosholm and N. Smith. In enquiring whether immigrants in Denmark were integrated or marginalized in the labour market, the authors considered several specific issues: transitions in the labour market between the states of employment, unemployment and withdrawal from the labour force; the length of time spent on welfare or income-support benefits; differences between first- and second-generation immigrants; differences between immigrants and refugees; and issues of discrimination, lack of qualifications, educational attainment and intergenerational transmission. The period of analysis was 1984–96. A competing-risks model was used for studying the durations of unemployment and welfare benefits, and a decomposition analysis was employed to compare the immigrants with the rest of the Danish population.

Several preliminary results were obtained: (1) the duration of unemployment was longer for the first than for the second generation of immigrants, and longer for all immigrants than for native Danes; (2) duration dependence was negative; (3) immigrants and the Danes were alike in terms of destinations; (4) the duration of subsequent employment was longer for Danes than for immigrants, and longer for second than for first generation immigrants; and (5) education was more important for immigrants. Christian Dustmann remarked that the decomposition technique was meaningful only if the characteristics were comparable, which was not the case with education for natives and immigrants. Francis Kramarz and Jan van Ours disagreed over whether there was some sort of unobserved heterogeneity present, and van Ours remarked on the limited nature of the investigation given that the authors were talking about reduced form models.

Andrea Ichino (European University Institute, IGER, Università Bocconi, Milano, and CEPR) opened the session on 'Unemployment and Employment' with a paper entitled 'How Painful is Unemployment? Consumption and Job Losses in Four European Countries', which was written with **Samuel Bentolila** (CEMFI, Madrid, and CEPR). The authors analysed the relationship between unemployment and consumption in Italy, Germany, Spain and Great Britain with a view to exploring how this relationship could be affected by different social and institutional frameworks. In particular, they focused on the role of extended family networks in unemployment. Their preliminary results indicated first, that consumption losses associated with unemployment were higher in Germany than in Italy, and higher in Italy than in Spain; and second, that Britain was the only country in which unemployment of a male household head was associated with significant reductions in food expenditures. The findings supported the hypothesis that extended family networks provided a fundamental source of insurance against unemployment in southern Europe. The authors acknowledged, however, that their analysis suffered from a potentially serious problem of endogeneity of the unemployment indicators with respect to consumption decisions, and that this made it very difficult to interpret the observed associations between unemployment and consumption losses as causal effects.

Klaus Zimmermann questioned whether savings rates behaved differently in Germany and in Italy, but remarked further that there were some differences between replacement rates in Germany and Britain. Jan van Ours said that the relationship between unemployment and consumption differed in a boom and in a depression. Consequently, differences between the two countries, especially in terms of the duration of unemployment, may be ascribable to the business-cycle phase. He also criticized the authors' apparent lack of attention to issues concerning unemployment duration. Francis Kramarz suggested using the expected duration of unemployment as a control variable.

'Self-employment and Windfall Gains in Britain: Evidence from Panel Data' was presented by **Mark**

Taylor (Institute for Social and Economic Research, University of Essex). Taylor set out to investigate the effects of unanticipated windfall gains on entry to self-employment, survival in self-employment and – given survival – the subsequent growth of enterprise income. He developed a framework in which income and the utility derived from self-employment were dependent upon tastes, preferences and effort expended in the business. This allowed individuals with varying preferences and wealth to choose to devote less time to work in favour of increased leisure, or to concentrate on areas of their businesses that provided more job satisfaction at the cost of a smaller financial return. The receipt of a windfall in this framework could result in falls in self-employment income, or even transitions out of self-employment.

Multivariate analysis led to the conclusion that the amount and type of payment received were important predictors of becoming self-employed. Redundancy payments increased the probability of entering self-employment, but job-related bonus payments had the opposite effect. This suggested that losing a job, together with the associated lump-sum compensation payment, provided a catalyst for self-employment, while individuals in jobs that rewarded individual performances were less likely to start a business. The size of the windfall also had significant effects on the income of the self-employed, suggesting that the growth of enterprises was constrained by a lack of capital. Clearly, however, receipt of a payment of a particular magnitude enabled the self-employed to maximize their utility elsewhere.

Jan van Ours suggested that the age at which a windfall was received might be relevant for the response. He also recommended that the possibilities of non-linearities in responses be looked at more carefully. For Christian Dustmann, the intensity of participation was also related in some way to the windfall gain.

Peder Pedersen (Aarhus Universitet) opened the extended conference sessions on 'Performance of Migrants' by reverting to the issue of return migration – a question that lay at the very frontier of research on international migration. Drawing on the results of the recent publication, 'Scandinavians without Borders – Skill Migration and the European Integration Process', of which he had been editor, Pedersen referred to the analysis of return migration by nationals of Norway, Denmark and Sweden who had emigrated in 1981. The high proportion of Danish returnees – about 65% were back within five years – indicated that most of the emigration was of a temporary nature. Norway presented a very similar return rate, but for Sweden the share was only slightly above 45%. A crucial factor at work was the influence of skills, since the return rates differed for different education levels. Although the cumulative return rates were not monotonically related to the level of education in any of the three national groups – at least for the whole period from 1981–90 – they were lower for the lowest educational level, when considering a migration period longer than five years.

Pedersen also presented the main points of the joint paper 'Declining Employment Assimilation of

Immigrants in Sweden: Observed or Unobserved Characteristics?', written by **Pieter Bevelander** (Lund University) and **Helena Skyt Nielsen** (Aarhus Universitet and Centre for Labour Market and Social Research), neither of whom was able to be present. The paper sought to throw light on the reasons for the big decline in employment assimilation of immigrants in Sweden between 1970 and 1990 by analysing the determinants of the probability of full-time employment for immigrants. Apart from growing differences in formal qualifications between native Swedes and immigrants, two factors of major potential relevance here were changes in the composition of the immigrant population, and a change in the 'character' of the Swedish economy. The former were reflected in a rise in 'family reunion immigration' and in flows of refugees from non-European countries from the mid-1970s onwards, in place of the labour flows from European countries that previously had characterized immigration into Sweden. At the same time, the economy had undergone a structural transformation, with working processes becoming more information- and communication-intensive. The labour-market consequences were an increase in the demand for highly skilled workers, and a rise in the importance of informal skills, such as cultural-specific proficiency and language skills.

The authors had estimated a logit model for the probability of obtaining full-time employment and had decomposed the differences into explained (differences in qualifications) and unexplained parts. The most striking finding was that low qualifications, in terms of observed human capital, did not explain much of the difference between the employment rates of Swedes and immigrants in 1990. The main part was unexplained. Although some evidence of discrimination was found, this could not be the only explanation because for all groups, including the more culturally similar, there was a significant unexplained component. The structural-change hypothesis offered an alternative explanation.

Roxane Silberman (LASMAS-Institut du Longitudinal, CNRS, Paris) presented 'Educational Attainment and Unemployment for Immigrants' Children in France: An Investigation of the Discrimination Hypothesis', which was written with Irène Fournier. Since unemployment, especially structural unemployment, can lead to problems with integration of immigrants, the authors' objective was to describe more precisely the rates and determinants of unemployment for immigrants' children. Numerous studies had stressed the increasing role of educational attainment levels as unemployment grows. Some recent studies pointed to social background as an explanation for the unfavourable academic achievements of immigrants' children. The authors therefore employed a classic two-phase model of status attainment to examine the determinants of educational level and subsequently used these to explore the labour-market position. Although there was no specific discriminatory mechanism against immigrants' children in the educational system, the possibility that nationality might be a factor underlying inequality in the level of education attained, as well as in the position regarding unemployment, needed to be considered. Being a highly synthetic variable, however, national origin could hide

several effects and required careful interpretation. Silberman also referred to more recent work about the importance of networks for successful job search.

The main results suggested that the traditional variables of social origin and parental achievement were important factors explaining the gross differences observed between native French and immigrants' children. In terms of labour-market position, the observed difference between the level of education of French and immigrant workers was an important explanatory factor. The results, however, did not support the thesis of selective and intentional discrimination linked to national origin. Klaus Zimmermann questioned the alleged effects of networks on firms. Francis Kramarz suggested the *Enquête Emploi* as a possible source of additional information on wages.

The paper entitled 'Portuguese Migrants in the German Labour Market: Performance and Self-selection' was written jointly by **Thomas Bauer** (IZA, Universität Bonn, and CEPR), **Pedro Pereira** (Aarhus Universitet), Michael Vogler and **Klaus Zimmermann** (IZA, Universität Bonn, and CEPR), and was presented by Pedro Pereira. The paper's results confirmed the effectiveness of the German guestworker system – an active recruitment policy that began in the 1950s, but ceased after the first oil shock in 1973 – the purpose of which had been to meet the excess demand for unskilled blue-collar workers. Since recruitment of guestworkers was oriented towards the needs of German firms, the workers had been selected on the basis of qualifications. A demand for particular types of workers, however, engenders a self-selecting supply response, with the consequence that the individuals who decide to migrate might not be those in whom the receiving country otherwise would be interested. The authors sought to study this self-selection problem by analysing the characteristics of Portuguese guestworkers. In addition, the migrants' performance was compared not only with the natives' performance but also with that of non-migrating Portuguese workers. To this end, matched micro data from the sending and receiving regions was used.

The comparisons revealed that Portuguese guestworkers had a lower level of education than Germans and those who stayed in Portugal. Compared with the Portuguese non-migrants, however, a higher proportion of the migrants had vocational training. Estimates of earnings equations showed that non-migrating Portuguese workers would have received higher wages, if they had migrated to Germany, than those who actually did migrate. The reason for this was that non-migrant Portuguese workers had better characteristics, in the sense that they had higher education levels and that, for each educational level, remuneration in Portugal was higher than in Germany. Conversely, those who did migrate would have earned less than their German counterparts if they had remained in Portugal.

Rainer Winkelmann wondered why the returns to education in Germany were so low. If hours of work were controlled for, might this provide the basis for explaining the higher Portuguese earnings? Andrea

Ichino thought that it made no sense to control for the returns to education for the three different occupational statuses considered in the paper. Pedro Pereira replied that it is known that the returns to education came not only through wages but also from the occupation.

Thomas Bauer (IZA, Universität Bonn, and CEPR) presented 'Occupational Mobility of Ethnic Migrants', a joint paper with **Klaus Zimmermann** (IZA, Universität Bonn, and CEPR). The authors examined the determinants of the probability of a post-migration change in occupational status, and its variability with length of residency in Germany. Of particular interest was the experience of ethnically German immigrants, and the possibility of downward mobility in occupational status. Drawing on the 'immigration sample' of the German Socio-economic Panel, the authors analysed the inflows in 1994–6, dividing the sample into three sub-groups: two kinds of ethnic Germans – the *Übersiedler* (from the former German Democratic Republic) and the *Aussiedler* (from elsewhere in eastern Europe) – and non-Germans.

The authors' hypothesis was that the ethnic Germans, having obtained their human capital in socialist economies, would experience some downward occupational mobility in the West German market economy. Their rationale was that there existed a problem of international transferability of human capital, with higher levels of education likely to be less transferable, and more educated migrants therefore experienced a larger downward adjustment in their relative labour-market position. As these migrants also had stronger incentives to invest in the host country's country-specific human capital, however, they could be expected to regain their former labour-market position more rapidly.

Two different models of occupational mobility were estimated. The first – a standard binomial probit model – accounted for the possibility that a change in occupational status occurred after migration; the second – an ordered probit model – considered several possibilities: the individual was not working, experienced downward mobility, experienced no change or moved upwards. The results showed that a representative *Übersiedler* had a lower probability of a change in occupational status than a similar *Aussiedler*, whose probability was slightly lower than that for a similar foreigner. The downward-mobility results showed the same pattern. Overall, the results confirmed the human capital transferability hypothesis. Interestingly, although migrants with a university degree regained their original occupational status after 14 years of residence in Germany, migrants with only primary-school qualifications needed 28 years.

Eric Zwiint (SELAPO, Universität München, and IZA, Universität Bonn) presented 'Panel Analysis of Wages and Unemployment of Ethnic Germans'. The aim of this paper was to analyse the earnings and unemployment of ethnic German immigrants who had moved to Germany shortly before and after the fall of the Iron Curtain. Zwiint noted that there had been a change in the dominant countries of origin of these *Aussiedler* migrants from Poland or Romania to the territories of

the former USSR. Migrants from the former USSR, however, exhibited poor language skills and had a significantly higher risk of being unemployed. Thus ethnic German immigrants from Eastern Europe did not seem to have been in an advantageous position relative to other immigrants – indeed, their integration into the labour market had proved rather problematical.

Francis Kramarz was critical of the use of a random-effects probit estimation because, with panel data, there would be a correlation between the mean of the independent variable and the error term, and a consequent loss of efficiency. Andrea Ichino, however, took issue with Kramarz's view. **Maria Baganha** (Universidade de Coimbra) enquired whether language might be a major factor in explaining differences in migration experiences between Polish and Romanian migrants.

Kirk Scott (Lunds Universitet) presented 'Labour Market Entrance and Income Assimilation: An Analysis of Longitudinal Data from Sweden, 1970–1994', written jointly with **Tommy Bengtsson** (Lunds Universitet). The objective of the paper was to analyse why post-1970 immigrants to Sweden had assimilated less well economically into Swedish society than earlier cohorts. The evidence was that, while controlling for education, age and country of origin, immigrants increasingly had fared worse in terms of income and employment. The authors found the explanation in the structural changes in the Swedish economy, which had led to increasing emphasis on interpersonal skills as a primary factor in securing employment.

They estimated the effects of structural change on different nationalities and individual characteristic categories by controlling for the effects of cyclical changes in labour demand and through the use of the vacancy/unemployment ratio. The results revealed that the structural variable 'relative machine prices' – which was a measure of demand for skilled versus unskilled labour – had differing impacts on different nationalities, at least initially. These impacts supported the hypothesis that immigrants from countries that are culturally and historically 'closer' to Sweden (e.g. Norwegians) should have less difficulty than those from a greater distance (e.g. Greeks and Poles). The findings also showed that higher educational levels lessened the impact of structural change. Thus the paper concluded that it is not merely changes in the supply of immigrants, but also changes in the structural demand for labour, that affect immigrants' prospects in the destination country.

Rainer Winkelmann suggested undertaking the analysis by industry. Francis Kramarz supported the idea of industrial decomposition to see whether prices had changed, and proposed the use of international, instead of Swedish, prices because these would be less endogenous and more appropriate given that Sweden is an open economy.

The final paper was 'The Duration Until First Investment in Post-Migration Education' by **Dan-Olof Rooth** (Lunds Universitet). This study identified the determinants of the time that elapsed before adult immigrants into

Sweden between 1987 and 1991 were able to receive post-migration education. Two different measures of duration were used: the time until first enrolment in a Swedish university, and the time until first enrolment in a Swedish secondary-primary educational institution. A distinction was also made between refugee immigrants and others receiving a permanent visa.

The results showed that immigrants from different origins differed in terms of their pre-immigration education levels, but the processes determining which individuals invested first in a Swedish university education and which in a secondary-primary education were quite similar. The higher the level of pre-immigration education the larger the positive effect on the inflow to education. Age was also relevant, especially for the oldest immigrants, who appeared to be deterred from going into education. The 1991 increase in the level of Swedish unemployment increased the inflow to secondary-primary education, and decreased the inflow to university, implying a desire to invest in Swedish-specific human capital.

The Knowledge Driven Economy

Analytical and Policy Implications

On 27 January 1999, CEPR held a conference with the UK's Department of Trade and Industry (DTI) on the economics of the knowledge driven economy. The starting point for the discussion was the UK government's Competitiveness White Paper published at the end of 1998, *Our Competitive Future: Building the Knowledge Driven Economy*. The conference was opened by **Lord Sainsbury** (Under Secretary of State for Science), and the central messages of the White Paper were presented by **David Coates** and **Ken Warwick** (both DTI).

The conference explored the meaning of the knowledge driven economy; what the growing importance of knowledge implies for industrial structure, for national economic performance, and for the sources of competitive advantage for both firms and nations; and how government policy should be directed towards building UK capabilities, facilitating collaboration within and between businesses, and encouraging competition.

The White Paper defines the knowledge driven economy as 'one in which the generation and the exploitation of knowledge have come to play the predominant part in the creation of wealth. It is not simply about pushing back the frontiers of knowledge; it is also about the more effective use and exploitation of all types of knowledge in all manner of economic activity'. The document goes on to describe four structural forces driving economic transformation: revolutionary changes in information and communications technology (ICT); rapid scientific and technological advance; increasingly global competition; and shifting consumer demand.

So how does the knowledge driven economy differ from its predecessors? Keynote speaker Professor **Joseph Stiglitz** (World Bank) argued that knowledge has fundamentally different characteristics from ordinary

commodities and these differences have crucial implications for the way a knowledge economy must be organized. Most importantly, knowledge is a global public good: it is 'infinitely expandable' or 'non-rival in consumption'. Stiglitz noted that Thomas Jefferson captured this idea best when he wrote: 'He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me'.

What Stiglitz called 'the scarcity-defying expansiveness of knowledge' is the root of its other important defining features. Once knowledge is discovered and made public, there is essentially zero marginal cost to adding more users; ideas and innovations have extensive externalities, their benefits typically extending well beyond those who first put them forward; and it can be difficult to exclude other potential users of knowledge through intellectual property rights. What is more, there is an inherent 'unknowability' in knowledge: it is like an experience good, which consumers find hard to value unless they have used it before.

Danny Quah (London School of Economics and CEPR) outlined what he saw as different in the knowledge driven economy or, as he preferred to call it, the weightless economy. First, there is a proliferation of knowledge products that share the infinite expansibility and related characteristics of knowledge. Of particular importance is Information Communication Technology (ICT), which includes the internet; intellectual property, including not only patents and copyright, but also branding, development of images, advertising, trademarks and logos; and libraries and data bases, both silicon-based electronic compilations of information and bio-technology or carbon-based forms.

What is central about the new technology, Quah suggested, is that it brings consumers ever closer to the chalk face of technological development. In the traditional industrial economy, knowledge is the first point in a chain running through intellectual property protection in the form of patents and then into machinery and manufacturing for producing goods for consumers. In the knowledge economy, the chain disappears and consumers and knowledge producers interact directly with each other. This is the real 'death of distance': not in the sense that ICT reduces the importance of physical geography but as a closing of the gap between knowledge producers and consumers.

The impact of the new technologies on industrial structure was explored by **John Kay** (Said Business School, Oxford University), who pointed out some fallacies in much contemporary analysis. For example, it is feared that with a strong system of intellectual property rights, the characteristics of knowledge imply 'winner-takes-all' markets and hence concentration into a relatively small number of global players, the 'superstars'. In addition, many believe that market dominance and commercial success will be based on those who control standards and/or the delivery processes.

Making a comparison with the impact of the printing press on the dominant position of the Roman Catholic Church, Kay contended that, on the contrary, the

expansion of the knowledge driven economy will create a proliferation of material, firms and activities at all points and at all levels, suggesting that no one can expect to enjoy continued control of these markets. There may be temporary monopolies but they cannot last. And it is misconceived to think that the key lies in greater horizontal diversification, in vertical integration or in being at the point of delivery of the product: the low cost and ease of access to the delivery mechanism mean that rents are driven down at the delivery level and instead migrate back up the value chain to those with genuinely scarce factors and competitive advantages.

Kay explored the changing nature of competitive advantage during the twentieth century. He noted that there has been a shift from competitive advantages based on market position, size and power to competitive advantages based on the incorporation of knowledge into no longer important raw materials. Knowledge-based competitive advantages, some of which may enable temporary monopolies, include: the power of brands as signals of reputation; standards like Microsoft's operating systems or the English language; innovations protected through patents, copyrights or secrecy as with Merck or Coca-Cola; or simply a reputation for innovation, such as Sony enjoys. Equally important as sources of knowledge-based competitive advantage are what Kay called the internal and external architecture of firms: the networks of trust, knowledge-sharing and information processing both within and between organizations.

Networks and geographical clusters of firms are a particularly important feature of the knowledge driven economy. **John Cantwell** (Reading University) claimed that firms are finding it more and more necessary to work with other firms in technology-based alliances. The costs of research and development (R&D) are rising and firms often find it beneficial to spread costs among themselves. Meanwhile, as consumers become more sophisticated and the goods they demand more complex, R&D is having to draw on a wider range of technologies and a broad array of inputs. Many larger multinational firms are becoming 'multi-technology corporations', locating themselves around centres of excellence in different countries.

But why are clusters important if ICT supposedly diminishes the role of physical geography? The answer seems to be that although the internet is certainly effective at spreading information around the world, it is not so effective at spreading understanding. Firms 'co-locate' because it is a better way of sharing such understanding. One key activity that is dependent on face-to-face contact is hiring new people. Firms in a cluster benefit from a vibrant labour market, and repeated contact helps build up relationships of trust with potential collaborators. These considerations seem to be particularly important for high-tech smaller firms, as **Alan Hughes** (University of Cambridge) demonstrated.

Of course, given the nature of knowledge, not all the benefits of a new idea flow to the company whose research department has developed it. It is difficult to

protect new ideas, particularly basic research, which is often unpatentable, and the researchers involved may move to a competitor. This is where the justification for government involvement in the knowledge economy begins: left to their own devices, businesses will not invest as much in R&D as might be beneficial for the country as a whole. Joseph Stiglitz argued that there needed to be real recognition of the fact that knowledge is a global public good. If everybody is doing applied research, taking ideas out of the basic knowledge pool and converting them into patentable innovations, there must be more cooperation in enhancing the supply of basic research.

Stiglitz suggested that governments should not be engaged in picking winners but in trying to identify important externality-generating research projects. In his view, governments have had a remarkable record of doing this successfully and in ways that have had really profound effects on the economy. For the United States, these include support of agricultural research in the nineteenth century economy, which led to huge productivity increases; construction of the first telegraph line in 1842, which encouraged businesses to invest in expanding the network; and the development of the internet. In each case, there was a large difference between the initial benefits to the private sector of such work and to the economy and society as a whole.

Paul Stoneman (Warwick Business School) emphasized the value of government support for basic research in giving a country the advantages of technological leadership. Despite the fact that others ultimately can make use of the knowledge developed, the first use of knowledge, or the temporarily exclusive use of knowledge, can yield great benefits. An individual country, in fact, may be much more prosperous than other countries either because it uses more knowledge, or because it uses knowledge more quickly than others. But as other countries use that knowledge, the leader's advantage tends to get whittled away.

This raises the question of what government actually should be doing in the knowledge driven economy. Having demonstrated that firms should see competitive strategy as the business of establishing a match between their distinctive irreproducible capabilities and the competitive environment in which they operate, John Kay argued that industrial policy should be thought of in the same way. The contribution of government is to recognise, understand and develop the distinctive capabilities of a national economy and match these to the competitive environment that a country faces.

As both Stiglitz and Stoneman indicated, an important part of developing a country's capabilities is the support of universities and graduate education in basic science and technology. Investing in R&D does not just lead to new ideas; it develops the expertise to understand what researchers have been doing in other countries. Furthermore, spending on a research budget creates the kind of technical skills in the workforce that enable effective use of other people's results. It is difficult for a

country to access the global pool of knowledge without its own R&D experience.

On the broader role of education and training, **Stephen Nickell** (London School of Economics and CEPR) presented a skills profile of the United Kingdom: broadly level with the Germans and Americans on the numbers of people with higher level skills; comparable with the United States but well below Germany on the numbers who have attained at least lower-level skills; but behind both on the numbers with middle-level skills. Nickell suggested that it is at this skill level, corresponding to further education, that the need for improvement in the United Kingdom is greatest. He added that although US and UK numbers are comparable for lower level skills, a great advantage of the United States is that a far higher percentage of businesses operate at 'best practice', the most efficient way of doing any task.

Stiglitz emphasized the value to the knowledge driven economy of vibrant financial markets, suggesting that one key to the success of Silicon Valley is the large number of venture capital firms, which provide not only capital but also know-how and managerial skills. Other conference participants focused on the potential advantages of capital markets encouraged to focus more on the long-term and tax measures that might achieve such an aim. The goal of providing a stable environment for investment was also raised, including the benefits of macroeconomic stability. And Danny Quah stressed the importance of consumers, noting that according to some economic historians, fourteenth century China was an industrial revolution waiting to happen with the supply side of technology fully in place. Yet tight control by the state prevented the emergence of a sophisticated demand base and dramatically stifled growth.

The issue of competition policy, particularly in relation to intellectual property rights, looms large in the knowledge economy. Quah described the basic trade-off for society: *ex-post* social efficiency outcome, where everyone enjoys access to the benefits of new ideas, versus *ex-ante* incentives for firms to produce knowledge and new knowledge products. If firms are unable to appropriate a significant part of the rents from their research efforts, why should they conduct research in the first place, he asked. Yet a strong intellectual property rights system offers the potential for monopoly power, which even if temporary, may not be desirable for society.

Although commending the White Paper's coverage of important public policy issues, Stiglitz was concerned that its discussion of collaboration and cooperation between firms may have underplayed the danger of collusion, where firms can work together to raise prices and reduce effective competition. He viewed the need to develop safeguards that encourage constructive knowledge-creating cooperation without tacit or explicit collusion as one of the real challenges for government in the knowledge driven economy. In contrast with Kay's perspective, he was worried about the potential for new technology to undermine competition through increasing returns to scale, 'winner-takes-all' and 'lock-in' effects.

Others were less concerned. On the dangers of collusion, Alan Hughes reported survey results showing that the forms of collaboration undertaken by high-tech firms are much more likely to involve sharing R&D, knowledge and information systems, rather than entering into arrangements to keep current customers. John Cantwell also took the view that, in a framework of 'Schumpeterian competition', the benefits of technological cooperation are quite distinct from the effects of market-based collusion and price-fixing.

John Kay pointed out that past concerns about monopoly have turned out to be unfounded. For example, in the 1930s, there were many worries about monopoly capitalism and what the new industrial economy was going to do to competition. As it turned out, technology changed, the scale of operations went down, transport costs fell, markets became global and the number of monopolies probably decreased rather than increased.

However, Stiglitz argued, it is possible that today's powerful corporations may have learned from the past, seen how monopolies were destroyed and determined to use anti-competitive practices to make sure it does not happen again. Of course, competition will have its day, but the question is the length of time monopoly power exists, the speed of innovation and the consequences of what happens in the interim. In this respect, Stiglitz agreed that a Schumpeterian model of competition was more appropriate than the traditional Arrow-Debreu model.

Paul Seabright (Cambridge University and CEPR) raised the question of whether there is a case for systematically favourable treatment by regulators of mergers and/or joint ventures in high-tech industries on the basis of the scale economies in information-intensive processes and the weak character of many intellectual property rights. He concluded that, while such an idea has some sense analytically, there would be a danger of strategic manipulation of innovation by firms. For example, firms might exaggerate the character of an alliance, making it seem more high-tech than it really is. Seabright added that competition authorities need to develop an understanding of the benefits and dangers that can come from joint ventures as opposed to mergers, since the former organizational form is becoming increasingly important.

The last session of the conference, chaired by **John Battle** (Minister for Energy and Industry), featured a panel discussion on the future challenges for government, industry and the academic community. Among a broad range of issues raised were: the widespread need for better measures – of human capital, of firms' intangible assets and of the growth of total factor productivity; the related possibility of benchmarking the United Kingdom's innovative progress; the fact that on some measures, such as the proportion of high-tech exports in total exports, and revenues from patents and royalties, the United Kingdom is already performing well as a knowledge economy; and the impact of organizational structures on knowledge generation, particularly the contrast between Japan's hierarchical structures, which are

good at incremental innovation, and the flatter and more individual structures of the United States, which are better at generating and exploiting radical ideas.

Finally, in terms of policy, for both government and industry, many conference participants emphasized the importance of establishing a culture of creativity. Pluralism, openness, competition and a willingness to experiment are vital to the generation and creative use of knowledge. And, as Stiglitz concluded, the government has an important role in facilitating these changes: for example, through the provision of education, by encouraging creativity and risk-taking, and by helping to develop institutions, including introducing the appropriate regulatory and tax environment.

Corporate Conglomerates

Costs, Benefits and Internal Capital Markets

Corporate conglomerates have received an increasingly bad press both in the business world and in academic research. They are deemed to be wasteful and inefficient in allocating resources. In the wake of a merger, conglomerates' shares trade at an average discount of 13–15%. However, merger and acquisition activity proceeds relentlessly, with around 40% succeeding. This variation in performance has attracted the attention of researchers, who are now trying to understand its reasons. What are the factors that lead 40% of mergers to succeed? Is the recent merger-mania an attempt to imitate the 'winners'? What are the consequences of this merger wave for internal and external capital markets?

These were the questions discussed at a joint CEPR/CSEF Conference on 'Core Competencies, Diversification and the Role of Internal Capital Markets', which took place at the Istituto Italiano degli Studi Filosofici in Naples on 28/30 January 1999.

The existing literature largely focuses on corporate governance (how external investors can discipline both controlling shareholders and management), and on the boundaries of the firm (what should be managed inside a firm and what should be left to the markets). The papers presented in the conference mark a shift in focus from external to internal capital markets. Instead of posing the question of the external control mechanisms and boundaries of the firm, the conference focused on the mechanisms of the capital budgeting decision within organizations. The analysis concentrated mainly on the case of conglomerate corporations, where the allocation of capital across divisions is the main activity of headquarters. Other cases were also discussed, such as leverage buy out associations and venture capital.

The conference revolved around two main (related) themes: how the incentive problems that arise in organizations affect the rules used to allocate capital internally, and what are the cost and benefits of conglomerate corporations.

An immediate implication of the incentive constraints under which capital must be allocated internally is that a simple rule, such as net present value (NPV) maximization, may fail to be the efficient criterion to use for corporate headquarters. The paper by **Elazar Berkovitch** (Tel Aviv University) and **Ronen Israel** (University of Michigan), entitled 'Why the NPV Criterion Does not Maximize the NPV', shows how NPV criterion can fail, if divisional managers have more information than headquarters about the relative merits of alternative projects and their incentives are not perfectly aligned with shareholders' value maximization. In these situations, alternatives, such as the Internal Rate of Return, the Profitability Index or other statistics, may produce a better allocation criterion than NPV maximization.

The tension between these conflicting objectives – eliciting information from various units within the company and providing them with incentives to exert effort – was also illustrated by the paper by **Robert Gertner** (University of Chicago) on 'Coordination, Dispute Resolution, and the Scope of the Firm'. He studied how the conflict is modified by changing the allocation of control rights within the organization. In his model, two units need to coordinate on a decision such as the design of a new product. Each unit has private information about its own input. The question is, under which structure are the two units willing to share information efficiently in order to implement the value maximizing design? Gertner's results suggest that organizations where both units report to a manager entrusted with the allocation of capital, achieve more information sharing than a direct contractual relationship between the units.

In certain circumstances, however, contracts may turn out to be a preferable arrangement. In his paper on 'Financing Mechanism and R&D Investment', co-authored by **Haizhou Huang** (IMF), **Chenggang Xu** (London School of Economics and HUID, Harvard University) suggested that the efficiency of the venture capital mechanism in financing R&D investments may lie in its contractual foundation for soft budget constraints.

A second group of papers shed light on the costs and benefits of conglomerates and other diversified organizations such as universal banks. Understanding these costs and benefits is crucial to determining the motivations behind the current wave of mergers.

First among the benefits stands the conglomerates' superior ability in taking advantage of deregulation and technological advances: being well-diversified

across markets, this mode of organization possesses the option value of being in a market "before the others". This option may be more valuable at times of great technological progress, and this can help explain the current merger-mania. This argument was offered by **Arnoud Boot** (Universiteit van Amsterdam and CEPR) with special reference to banking and financial conglomerates in his paper on 'Expansion of Banking Scale and Scope: Don't Banks Know the Value of Focus?' co-authored with **Todd Milbourn** (London Business School) and Anjan Thakor. In the discussion it was pointed out that the model might be more suited to non-financial companies than to the financial sector, where technical innovation has been comparatively limited.

A second benefit of merger activity is directly related to the efficiency of internal capital markets. This theme, which connects directly with the contributions of the first set of papers discussed above, was highlighted by **Zsuzsanna Fluck** (Stern School of Business, New York University) in her paper with Anthony W. Lynch on 'Why Do Firms Merge and Then Divest: A Theory of Financial Synergy'. They develop a model where, in the presence of agency costs, mergers can increase efficiency in the allocation of capital across companies. In their view, a conglomerate merger is a technology that allows the financing of marginally profitable projects which, due to agency problems, would not otherwise be financed. Interestingly, the model predicts that merger activity would not proceed unchecked; external pressure by capital markets is predicted to lead conglomerates to divest of projects which have already been financed and are able to proceed more profitably as standalone companies.

It is generally argued that a third benefit of mergers derives from the fact that diversification creates value. Synergies that arise from the merger of two or more firms can lead to cost reductions, to higher and more stable demand, to the ability to organize activities more efficiently, and to the exploitation of a greater range of opportunities. The value of diversification is at the heart of the paper by **Arnoud W. Boot** (Universiteit van Amsterdam and CEPR) and **Anjolein Schmeits** (Washington University) on "Market Discipline and Incentive Problems in Conglomerate Banks". In their model, the cost of capital reflects the company's risk, implying that a conglomerate – and in particular a conglomerate bank – benefits from a lower cost of capital because of diversification, other things being equal. However, Boot and Schmeits show that other things are not equal: because diversification also allows cross-subsidies and free riding between divisions in a conglomerate, the cost of capital ends up holding an ambiguous relationship with risk taking.

The unpleasant side-effects of synergies was central to the paper by **Raghuram Rajan** (University of Chicago), Henri Servaes and Luigi Zingales on 'The Cost of Diversity: The Diversification Discount and

Inefficient Investment', where the attempt to exploit these synergies may actually impose considerable costs. Rajan explained that it could be very expensive to exploit synergies when the incentives of different divisions are not aligned: the friction between divisions can lead them to forfeit value-enhancing investments that would potentially make them more dependent upon each other. To persuade the divisions to proceed with investments that require them to integrate their operations, corporate headquarters need to make transfers among divisions to align their incentives. As a result, the benefit of the synergies can only be reaped at the cost of distorting the allocation of resources in internal capital markets, allocating a disproportionate amount of funds to less profitable divisions in order to 'bribe' them into cooperating with the others.

Further implications of the emergence of conglomerates are the extent of market power they are able to exercise and their ability to span various interrelated markets. This point is emphasized in the paper by **Oved Yosha** (Berglas School of Economics, Tel Aviv University and Bank of Israel), Hedva Ber and Yishay Yafeh on 'Conflict of Interest in Universal Banking: Bank Lending, Stock Underwriting and Fund Management'. Based on the analysis of a panel data set on Israeli banks, the authors find that the hypothesis that bank conglomerates use their market power to overprice the stocks they sell to their own mutual funds (thus inflicting a cost on investors in those funds) could not be rejected.

There are essentially two questions that the conference left for further research:

First, because of time constraints in processing information a lot of capital allocation is inevitably delegated to financial intermediaries and corporate headquarters within organizations. What we need to understand better is the extent to which the market achieves an efficient level of decentralization and how incentive problems and corporate politics disrupt the process of capital allocation. More research is needed on the design of internal organizations for the allocation of capital within multi-divisional firms. The scope of investigation must be broadened beyond the allocation of capital to include the allocation of human resources and other inputs. The allocation of human resources is the least studied. This is partly due to the fact that little systematic research has been done to identify empirical facts on human resource management. These issues clearly go beyond the narrow boundaries of economic analysis. What has emerged from the discussions during the conference is that a theory that wants to explain capital budgeting also has to take into account issues related to the sociology of organizations. Politics, power, authority and leadership, which influence behavior at the top of an organization, all play an important role when trying to understand internal capital markets.

Second, the relationship between internal and external capital markets needs to be investigated further. The existing literature has shown how external capital markets may impose some discipline on insiders, thus shaping corporate governance. Contributions at this conference have instead shown how organizations determine the allocation of capital across alternative uses via internal capital markets, taking the external constraints on chief executive officers (CEOs) as given. In fact, external investors can influence the appointment and removal of CEOs, therefore affecting how they allocate capital within a conglomerate company. The power and authority of the CEO within the organization ultimately rests upon these external factors. Hence the next step must be to understand how the two decision mechanisms – internal and external capital markets – interact with each other.

WORKSHOPS

FDI and the Multinational Corporation

Devising Appropriate Policies

A CEPR workshop on 'Foreign Direct Investment and the Multinational Corporation' was held in London on 27/28 November 1998. The workshop, which dealt with various policy issues concerning FDI, formed part of a research network funded by the TMR Programme of the European Commission, and was organized by **Riccardo Faini** (Università degli Studi di Brescia, IMF and CEPR) and **Anthony Venables** (LSE, World Bank, and CEPR).

Andrea Fosfuri (Universitat Pompeu Fabra, Barcelona) presented 'Foreign Direct Investments and Spillovers through Workers' Mobility', which was written with Massimo Motta and Thomas Rønde. The paper investigated the technological spillovers from FDI due to the movement of trained workers from a multinational subsidiary to a local firm. The authors showed that if industry profits were higher when both the multinational corporation (MNC) and local firms produced, as against when the MNC was a monopolist, then spillovers would arise. This was more likely to happen when the two firms were not close competitors, and when the knowledge acquired by the workers was broad rather than specific. **Frank Barry** (University College Dublin) pointed out that domestic labour, rather than the MNC, was normally observed to bear the costs of the training. Anthony Venables questioned the robustness of the product market with respect to changes in the number of MNC firms.

In 'FDI, Soft Budget Constraints and Expropriation Incentives', **Klaus Wallner** (Stockholm School of Economics) investigated the incentives for a host country to invite FDI under soft budget constraints and expropriation possibilities. FDI raised the social cost of domestic subsidies because part of the payments went to foreign owners. Thus, foreign participation hardened the budget constraint, which favoured restructuring. In general, however, it was optimal to set binding upper limits on foreign ownership because of a negative externality.

In her paper on 'Trade, FDI, and Unions', which was written with David Collie, **Hylke Vandenbussche** (Universiteit Antwerpen, UFSIA, and CEPR) showed that trade and FDI were not substitutes when labour markets were unionized. Furthermore, when firms were footloose, the optimal domestic tariff was always lower than, or equal to, the tariff policy in the absence of relocation possibilities. The authors also showed that a tariff that deterred outward FDI, or induced inward FDI, could improve domestic welfare.

Niko Matouschek (LSE) presented 'FDI and Quality Linkages', which examined the impact on the host economy of a high-quality foreign investment project. On the one hand, the foreign investment induced local firms to downgrade their product quality owing to the intense competition. At the same time, however, the demand generated by the multinational might lead local input suppliers to invest in quality improvements. The local output firms would benefit then from better inputs which might thereby induce them to improve their product quality. The model showed that local quality upgrading in the product market would occur only if the MNE used several independent input suppliers, thus generating a net increase in production of high quality inputs. The multinational had an interest in the spillover which improved the firm's bargaining position with the local input suppliers. Anthony Venables remarked that the model was useful in that it assisted understanding of the mechanisms leading to domestic quality upgrading following the entry of a multinational.

Through their empirical work on Ireland and Spain, **Salvador Barrios** (FEDEA, Universidad Complutense de Madrid, and Institut d'Etudes Politiques de Paris), **Frank Barry** (University College Dublin), and **Eric Strobl** (University College Dublin) attempted to study the impact of FDI on the structure of industry and employment in the EU periphery countries. Their paper, 'FDI and the Convergence of Employment and Industry in the EU Periphery: The Cases of Ireland and Spain', found that the peripheral countries had a weaker presence than the core countries in increasing-returns sectors, and that FDI flows into the periphery caused industrial structures to converge. The authors suggested that differences in industrial structure provided part of the explanation for asymmetries in the business cycles of core and periphery. If the periphery continued to receive greater FDI flows than the core, the scope for asymmetric shocks would be reduced. Irish data on the average length of jobs in indigenous and foreign industries suggested that shocks affecting FDI location decisions were less frequent and less pronounced than shocks affecting indigenous industry.

Giorgio Barba Navaretti (Università degli Studi di Milano) presented 'Italian Multinationals and Localisation of Production', which was co-authored by **Anna Falzoni** (CESPRI, Università Bocconi, Milano, and Università degli Studi di Bergamo) and **Alessandro Turrini** (CESPRI, Università Bocconi, Milano, and CEPR). Using data from Italian multinationals in the textile and mechanics industries, the authors found that subsidiaries in LDCs were mostly of a vertical type, and that they were driven by the need to reduce production costs and exploit cheap resources in the host country. The subsidiaries were found to have a large share of intra-firm trade with their parent companies.

Helen Louri (Athens University of Economics and Business and IMOP) presented 'FDI in the EU Periphery: A Multinomial Logit Analysis of Greek Firm Strategies'. This was an empirical paper on investments by Greek firms in the Balkan states, and it was written with John Lantouris and Marina Papanastassiou. The authors found that Greek firms that had a long- and medium-term borrowing capacity, and a solid market

basis (as evidenced by larger relative firm size and greater growth rate of sales), were more likely to engage in FDI. In addition, the more intense the acquired familiarity of firms with foreign markets, the more likely it was that they would undertake FDI. Hylke Vandenbussche wondered how the framework could be used to answer interesting questions, such as the profitability of Greek multinationals in the Balkans as against domestic firms.

Jan Haaland (Norwegian School of Economics and Business Administration, Bergen, and CEPR) presented 'International Competition for Multinational Investment', which was written with Ian Wooton. The paper showed how linkages between the MNC and domestic input suppliers could give rise to gains from providing inducements to attract FDI. Agglomerating forces implied that MNCs had incentives to locate together, while pressure from rising wages in the labour market worked in the opposite direction. The incentives for host countries to use active policies, such as subsidizing production to attract MNCs, were particularly strong when the agglomerating forces dominated. Whether the policy competition between different host countries would result in subsidies that were so high that all net benefits for the countries would be dissipated, would depend on the parameters of the model.

Rethinking the Welfare Society

Designing Policy Reforms and Incentive Mechanisms

The second in a series of three CEPR workshops entitled 'Rethinking the Welfare Society' was held jointly with the Instituto de Estudios Económicos de Galicia, Pedro Barrié de la Maza (IIEG/PBM) at La Coruña on 27/28 September 1998. The workshop was organized by **Kai Konrad** (Freie Universität Berlin and CEPR), **Martin Rein** (Massachusetts Institute of Technology), and **Dennis Snower** (Birkbeck College, London, and CEPR).

CEPR's welfare state network has been examining alternative strategies for reforming welfare activities, namely social insurance, life-cycle transfers, redistribution, and the provision of welfare services such as healthcare, education and training. The focus has been on the design of policy reforms and incentive mechanisms in the advanced market economies, especially those of the EU and the United States. The intention of this workshop was to explore how the various welfare activities were to be divided between the government, business enterprises, households and other economic and political institutions. With government being only one of several sources of welfare activities, the papers covered the whole of 'welfare society' rather than just the 'welfare state'.

Pedro Pita Barros (Universidade Nova de Lisboa and CEPR) opened the first session on 'Efficiency and Redistribution' with a presentation on 'Efficient Capitation Transfer Systems'. The author addressed the issue of how to set incentives in payment schemes for health-care purchasers, such as insurance funds,

without allowing them to select the best risks. Reform proposals in several countries had advocated some type of capitation system, in which fixed amounts would be paid *ex ante* for each insured individual. These proposals faced the problem that incentives to risk-selection were prevalent in the system. A considerable literature has been devoted to ways of mitigating, if not eliminating, the problem without destroying incentives to efficiency. Pita Barros proposed a transfer system that, under some circumstances, would attain efficiency without risk-selection. The system would extend typical linear capitation formulas and could be interpreted as a fixed transfer at the beginning of the period plus an *ex-post* fund at the end of the period. The *ex-post* adjustment fund was defined to be a financially balanced scheme inducing a socially optimal level of cost-reducing effort. The novelty lay in the way contributions to the fund were defined. The risks could be categorized in principle by exogenous characteristics such as age, sex or other variables.

Dennis Snower suggested that if this risk grouping were not sufficiently detailed there might still be adverse selection within each category across different insurances. **Jean-Charles Rochet** (GREQAM, IDEI, Université des Sciences Sociales de Toulouse, and CEPR) pointed out that the model did not control for the effect of different quality in health care provision.

Graziella Bertocchi (Università di Modena and CEPR) presented 'The Politics of Co-optation and the Origin of the Welfare State' which she had co-authored with Jody Overland and Michael Spagat. The authors considered the historical origins and determinants of the current welfare state. Acknowledging the diverse nature of the social and political contexts in which welfare regimes came into existence in different countries, they constructed a theoretical framework illustrating how a self-interested elite could make strategic use of co-optation to control the threat of revolution by the poor. Assuming non-overlapping generations, such an elite could reduce the probability of overthrow by co-opting some poor individuals into the middle class. In the authors' view, the model captured the essentials of the early evolution of the welfare state, class structure, and political stability.

In a lively discussion, **Gianni di Fraja** (University of York and CEPR) noted that it mattered whether the probability of a revolution was modelled as a function solely of the number of the poor, as opposed to their relative incomes. **Michele Boldrin** (Universidad Carlos III, Madrid, and CEPR) developed this point by observing that, in the authors' model, where the probability was solely a function of the number of the poor, the elite classes might prevent the revolution by leaving a fixed number of individuals very poor and supporting the others instead of providing general transfers. Kai Konrad questioned the historical validity of the model on the grounds that the original welfare-state provisions did not aim to provide general poverty relief, but only to address the needs of those in deepest misery. Jean-Charles Rochet suggested that the model might gain in applicability by reinterpreting the threat of a revolution as the threat to vote for leftist parties, with the result that co-optation might represent the buyout of

European Summer Symposium in Labour Economics and Migration

The European Summer Symposium in Labour Economics and Migration was held from 7/12 September 1998 in Gerzensee, where it was hosted by Studienzentrums Gerzensee. The organizers were **Philippe Bacchetta** (Studienzentrums Gerzensee, Université de Lausanne and CEPR), **Alan Barrett** (Economic and Social Research Institute, Dublin, and CEPR), **Dennis Snower** (Birkbeck College, London, and CEPR) and **Klaus F Zimmermann** (IZA, Universität Bonn and CEPR). The symposium included sessions devoted to migration and language, training, skill-biased technical change, migration effects, decomposition methodologies, labour flows and institutions, quits, recruits and retentions, and education returns.

Papers delivered were as follows:

'Language Practice and Economic Well-Being Among Immigrants in Canada', **Barry Chiswick** (University of Illinois, Chicago) and **Paul Miller** (University of Western Australia)

'The Labour Market Outcomes of New Zealand's Old and New Immigrants', **Liliana Winkelmann** (University of Canterbury, New Zealand) and **Rainer Winkelmann** (University of Canterbury, New Zealand, Universität München and CEPR)

'Temporary Migrants from Egypt: How Long do they Stay Abroad?', **Thomas Bauer** (IZA, Universität München, Rutgers University and CEPR) and **Ira Gang** (Rutgers University and IZA, Bonn)

'Does Training Generally Work? The Return to In-Company Training', **Alan Barrett** (Economic and Social Research Institute, Dublin, and CEPR) and **Philip O'Connell** (Economic and Social Research Institute, Dublin)

'Training, Rent-sharing and Unions', **Alison Booth** (University of Essex and CEPR), **Marco Francesconi** (University of Essex and CEPR) and **Gylfi Zoega** (Birkbeck College, London, and CEPR)

'The Impact of Globalization on European Labour Markets', **Michael Burda** (Humboldt Universität zu Berlin and CEPR) and **Barbara Dluhosch** (Universität zu Köln)

'Does the Sector Bias of Skill-Biased Technical Change Explain Changing Wage Inequality?', **Jonathan Haskel** (Queen Mary and Westfield College, London, and CEPR) and **Matthew Slaughter** (Dartmouth College, Hanover)

'The Changing Distribution of Male and Female Wages 1978-1996', **Amanda Gosling** (Institute for Fiscal Studies, London and CEPR)

'Glass Ceilings or Sticky Floors?', **Alison Booth** (University of Essex and CEPR), **Marco Francesconi** (University of Essex and CEPR) and **Jeff Frank** (Royal Holloway College, University of London)

'Regional Disparities and Labour Mobility: The United States vs the European Monetary Union', **Chiara Bentivogli** (Banca d'Italia) and **Patrizio Pagano** (Banca d'Italia)

'The Effects of Migration on the Relative Demand of Skilled versus Unskilled Labour: Evidence from Spain', **Juan Dolado** (Universidad Carlos III, Madrid, and CEPR), **Rosa Duce** (FEDEA, Madrid, and Universidad de Alcalá de Henares) and **Juan Francisco Jimeno** (FEDEA, Madrid, Universidad de Alcalá de Henares and CEPR)

'The Absorption of Highly Skilled Immigrants: Israel 1990-95', **Zvi Eckstein** (Tel Aviv University and CEPR) and **Yoram Weiss** (Tel Aviv University and University of Chicago)

'Immigration and Unemployment: An Investigation of a Modern Version of an Old Conspiracy', **Gil Epstein** (Bar-Ilan University, Ramat Gan, and CEPR) and **Arye Hillman** (Bar-Ilan University, Ramat Gan, and CEPR)

'On Measuring Discrimination and Convergence', **Christoph Schmidt** (Alfred-Weber-Institut and CEPR)

'Estimating Labour-Market Discrimination with Selectivity Corrected Wage Equations: Methodological Considerations and an Illustration from Israel', **Shoshana Neuman** (Bar-Ilan University, Ramat Gan, and CEPR) and **Ronald Oaxaca** (University of Arizona, Tucson)

'Labour Reallocation, Job Tenure, Labour Flows and Labour Market Institutions: Evidence from Spain', **Carlos Garcia-Serrano** (Universidad de Alcalá de Henares) and **Juan Francisco Jimeno** (FEDEA, Madrid, Universidad de Alcalá de Henares and CEPR)

'Firing Costs: Eurosclerosis or Eurosuccesses', **Yu-Fu Chen** (University of Dundee), **Dennis Snower** (Birkbeck College, London, and CEPR) and **Gylfi Zoega** (Birkbeck College, London, and CEPR)

'A Model of Disability', **Michael Orszag** (Birkbeck College, London) and **Dennis Snower** (Birkbeck College, London, and CEPR)

'Options to Quit', **Gérard Pfann** (Universiteit van Limburg, Maastricht, and CEPR)

'Optimal Contracts in a Frictional Labour Market: Firms' Strategies for Recruitment or Retention', **Margaret Stevens** (Institute of Economics and Statistics, Oxford, and CEPR)

'Should I Stay Or Should I Go? Educational Choices and Earnings: An Empirical Study for Portugal', **Leonor Modesto** (Universidade Católica Portuguesa, Lisboa)

'The Rate of Return to Private Education', **Robert Wright** (University of Stirling and CEPR)

votes. **Hans-Peter Grüner** (Universität Bonn and CEPR) remarked that a dictator might choose to pay either for a military force to suppress the poor or for transfers to co-opt. The point to be explained is then why the transition from military to transfer expenditures might occur.

The paper given by **Jeff Frank** (Royal Holloway College, University of London), and entitled 'How to Ration the Public Provision of Private Goods', looked at the provision of private goods as a redistributive mechanism and posed the question of how such redistribution could be achieved at minimum cost. The question was high on the agenda of public policy discussion: it was now accepted that, in order to cut welfare-state costs, benefits needed to be better targeted, and that targeting efficiency could be better reached by self-selection as opposed to reliance on the intervention of bureaucrats. Frank discussed alternative targeting provisions, such as low-quality public provision, queuing or waiting lists, by means of which the authority could deter better-off households. His paper concluded that the optimal policy was to combine low-quality provision with waiting lists. Self-selection by quality was preferred to rationing by queues and by other forms of 'ordeals'. In contrast, rationing via a waiting list which led to the household obtaining the good on the private market while waiting, could be desirable. Qualifying restrictions on the waiting list were found to be optimal only if the public quality of provision was at the minimum possible level.

Frank's conclusions provoked considerable debate, not least because of the suggestion that individuals in need of assistance should be placed on waiting lists without regard for the urgency of their need – a seemingly counter-intuitive proposal that derived from the formulation of the utility function and the particular set-up of the model. Kai Konrad argued that a queuing-only solution might very well be first best if the quality of the private good provision was already at the minimum level. Using the example of public housing, however, Dennis Snower pointed out that letting individuals wait for provision of acceptable dwellings could hardly be optimal if unmet need was not even considered in the allocation of the housing stock. In response, Frank emphasized that the decision of a middle-class individual to consume slum housing might well be voluntary, in which case the queuing solution would be justified.

The ensuing three papers dealt with the theme of 'Risk Management'. In 'Rethinking the Welfare Society: The Case for Equal Opportunity Policies', **Hans-Peter Grüner** (Universität Bonn and CEPR) compared two social welfare systems with respect to their consequences for risk-taking, entrepreneurship, aggregate output, and individual and social welfare. System 1 was the classical welfare state, relying exclusively on the redistribution of earned income. In system 2, the state provided equal opportunities for all individuals before investment decisions were made. This was achieved by state redistribution of initial financial wealth, with the rest left to the market. Income in Grüner's model was generated only by risky investments in which the agents were either entrepreneurs or providers of finance. In contrast with

previous studies, agent heterogeneity in the form of wealth endowment was observable in this model, while entrepreneurial effort constituted private information.

The author concluded first that *ex-post* redistribution was detrimental to entrepreneurial incentives, but that *ex-ante* redistribution could enhance productive efficiency. He demonstrated that the set of equilibrium allocations coincided with the set of constrained Pareto-optimal allocations. This implied that *ex-ante* redistribution was at least as good as, and did not need to be supplemented by, any *ex-post* redistributive measure. The paper also compared the roles of the two welfare systems when agents differed in their entrepreneurial ability. Equal opportunity policies then led the market to select entrepreneurs of higher quality by generating an equilibrium in which only the most talented individuals received credit for their projects. Finally, it was shown that there were cases where individual gambling behaviour could completely offset attempts to generate more *ex-post* equality through *ex-ante* redistribution.

Kai Konrad commented that it is possible in principle to render an economy less, rather than more, equal by *ex-ante* redistribution. Jeff Frank noted that Grüner's results depended on the existence of a minimum firm size, an assumption which Grüner considered reasonable. Responding to a question from Dennis Snower about the implications for welfare-policy reform, Grüner argued that it was important to create equal *ex-ante* opportunities, and that involuntary insurance should be abandoned as an incentive-reducing *ex-post* redistributive mechanism.

Jean-Charles Rochet (GREQAM, IDEI, Université des Sciences Sociales de Toulouse, and CEPR) presented 'The Political Economy of Public Health Insurance', which was co-authored with Dominique Henriët. The paper examined the determinants of the principle and the scale of public provision of health insurance, which was observed to vary widely across countries. A large positive correlation existed between preferences for redistribution and the share of the public sector in health expenditures, suggesting that health insurance was being used as a redistributive device. The study was based on Mirrlees's classic 1971 income-tax model, and introduced an illness risk that varied across the population and was not observable *a priori* by individuals. The government had available the income-tax schedule and public insurance coverage as policy tools. It was assumed that the insurance company had the same information as individuals, thereby obviating any adverse selection problems in the model.

The authors showed that public provision of health insurance occurred only if, on average, the probability of illness (or the morbidity index) was bigger for lower income groups. This was in accordance with theoretical predictions that, in such circumstances, public provision constituted an efficient instrument for income redistribution, complementary to income taxation. Different governments then chose different levels of public coverage according to their redistributive preferences. The theory also predicted a positive correlation between the extent of public health

insurance and the progressivity of income taxes. Dennis Snower pointed out that the model would have different implications if the probability of illness was a more direct function of income rather than of productivity. Pedro Pita Barros suggested that there might be alternative explanations for the empirical correlation between healthcare provision and the propensity for redistribution.

Fiorella Padoa Schioppa Kostoris (Università degli Studi di Roma, ISPE, and CEPR) presented 'Family Income and Wealth, Youth Unemployment and Active Labour Market Policies', written jointly with **Claudio Lupi** (ISPE). This empirical study investigated the unemployment situation among younger workers, based on cross-section micro data from Italy. The results showed that, together with product-market and labour-market conditions, personal and family characteristics played a crucial role in explaining youth activity and unemployment rates of short and long duration. In particular, the income effect seemed relevant for participation decisions, while family wealth helped reduce youth unemployment. The study simulated the effectiveness of various policy instruments in reducing youth unemployment, and found support for those that were long lasting and were targeted through means-testing of family income and wealth. The empirical analysis was careful to distinguish between first-time job seekers and those who had been previously employed.

Four papers were included in the conference session on 'Social Insurance'. **Assaf Razin** (Tel Aviv University, and CEPR) presented 'Migration and Pension', which was written with Efraim Sadka. Their analysis was motivated by the frequently-observed opposition to immigration, based on the assumption that immigrants were net beneficiaries of the welfare state and net consumers at the expense of the native population. The paper evaluated the impact of immigrants in a society with a pay-as-you-go social security system with redistribution. The authors accepted that migration would have implications for the financial soundness of a state pension system which is an important pillar of any welfare state. Although it was reasonable to expect that young migrants, even if low-skilled, could help society to pay benefits to the current cohort of the elderly, it might also be reasonable to argue that, by virtue of being net beneficiaries of the welfare state, they (the migrants) would adversely affect the current younger generation of natives.

In the static model, migration was found to have adverse effects. When Samuelson's concept of the economy as an everlasting machine was employed, however, migration was shown to be a Pareto-improving measure. Thus, all income groups (low and high) and all age groups (young and old) existing at the time of the migrants' arrival were rendered better off once allowance was made for the possibility of a surplus in the pension system. In response to Jeff Frank's observation that pensions in the model were not differentiated by skill, Razin explained that this was representative of the redistributive aspects of the system. Michele Boldrin pointed out that immigration might allow governments temporarily to postpone necessary reforms. Dennis Snower argued that the

results hinged on the immigrants' employment status in the official, as opposed to the shadow, economy. Kai Konrad stressed that the positive immigration effect was determined by the positive productivity and employability assumptions for immigrants.

'Informal Family Insurance and the Design of the Welfare State' was presented by **Robert MacCulloch** (ZEI, Universität Bonn, and University of Oxford). The paper, which was co-authored with Rafael Di Tella, investigated the problem of unemployment benefit provision when the family was also a provider of social insurance. The model sought to explain why extended families seemed to be more prevalent in countries with a relatively undeveloped welfare state, and why political parties appeared to associate a large welfare state with 'weak' families.

The authors first presented a model in which risk-sharing motives governed intra-family transfers and in which more generous unemployment benefits, provided by the state, replaced and crowded out family risk-sharing arrangements one-for-one. The model was then extended to capture the idea that the state had an advantage *vis-à-vis* the family in the provision of insurance because it could tax individuals, whereas the family had to rely on self-enforcing agreements. In this case, the effect of state transfers on intra-family transfers and on total insurance transfers to the unemployed fell more than one-to-one with increases in the state's generosity. This implied that any increases in state-provided benefits would be followed by a one-for-one reduction in intra-family transfers as families sought to return to the initial level of risk-sharing. The increased generosity of state benefits, however, made defecting from the informal family risk-sharing contract more attractive. Hence, family transfers had to be reduced even further to maintain the incentive-compatibility of the informal risk-sharing contract. An interesting implication was that if families could sustain generous informal insurance arrangements, then the state could maximize social welfare either by staying out, or by becoming the sole provider of unemployment benefits. The results still held when families were assumed to be better than the state at monitoring the job-search activities of the unemployed.

Discussion of the paper centred on the effect of welfare provisions on the stability of the family and the endogeneity of family formation. Assaf Razin pointed out that the model presented a simplified depiction of intra-family decision-making which imposed severe constraints on household allocation. In response to Dennis Snower's question about the paper's implications for welfare state reform, the presenter pointed out that the potentially drastic effects of changes in state benefits needed to be considered, where even an increase in benefit provision might cause a net decline in total benefits.

The paper entitled 'Can and Should a Pay-As-You-Go Pension System Mimic a Funded System?' was presented by **John Hassler** (Institute for International Economic Studies, Stockholm, and CEPR) and was written jointly with Assar Lindbeck. The authors set out to answer two questions: first, whether a pay-as-you-go

Economic and Social Reform in Russia

A European-Russian Dialogue on 'Economic and Social Reform in Russia' was held in Moscow on 11/12 September 1998. The conference was held under the joint auspices of CEPR and the Russian European Centre for Economic Policy Research (RECEP) and organized by **Eric Bergl f** (Stockholm Institute of Transition Economics and East European Economies, and CEPR). The discussions included sessions on monetary and fiscal policy, industrial policy and financial-industrial groups, labour markets and social policy, trade policy, and financial issues. Among the participants were several ministers and deputy ministers holding relevant portfolios.

The following were among the papers presented:

'Macroeconomic Effects of Arrears', **Charles Wyplosz** (Graduate Institute of International Studies, Geneva, and CEPR)

'A Comparative Perspective on Russia's Budget', **Rory MacFarquar** (RECEP, Moscow)

'Russian Financial-Industrial Groups in a Comparative Perspective', **Enrico Perotti** (Universiteit van Amsterdam and CEPR)

'Industrial Policy in Post Soviet Russia', **Irena Grosfield** (DELTA-ENS, Paris)

'Pension Reform in Russia', **Vladimir Kosmarsky** (RECEP, Moscow)

'Labour Market Regulations and Human Resource Practices: Urgent Needs for Reforms', **Tito Boeri** (IGIER, Universit  Bocconi, Milano, and CEPR)

'Enterprise Restructuring, Trade and Competition', **Damien Neven** (Universit  de Lausanne and CEPR)

'Comparative Advantage of Russia', **Simon Johnson** (RECEP and Sloan School of Management, MIT)

'Competition and Performance', **Annette Brown** (RECEP, SITE, Stockholm School of Economics, Western Michigan University and CEPR) and **J David Brown** (RECEP, SITE, Stockholm School of Economics, and CEPR)

'New Firms in Transition – A Comparative Study', **Simon Johnson** (RECEP and Sloan School of Management, MIT)

'Fiscal Federalism', **Ekaterina Zhuravskaya** (RECEP, Harvard University, and CEPR)

'Financial Crises', **Ksenia Yudeva** (RECEP and Harvard University)

'Explaining Wage Arrears', **John Earle** (SITE, Stockholm School of Economics)

'Disorganization, Financial Squeeze, and Barter', **Dalia Marin** (Universit t M nchen and CEPR)

pension system could be made sufficiently actuarially fair to avoid labour market distortions; and second, which generations would benefit if the pay-as-you-go

system set actuarially fair returns. The paper considered the possibility of letting a pay-as-you-go pension system mimic a fully-funded system. Generally, it turned out to be impossible to make a less-than-fully-funded system actuarially fair on average. But a non-funded pay-as-you-go system could provide an actuarially fair implicit return on the margin, thereby increasing economic efficiency. The benefits of this would accrue entirely to current pensioners as a windfall gain, unless compensating transfers were implemented. Such a system could be thought of as a pay-as-you-go system that mimicked a fully-funded system in combination with lump-sum transfers to current pensioners from current and future workers.

Michele Boldrin criticized the failure to consider the changing rate of return on capital, which was empirically important. Kai Konrad questioned the use of a welfare function in an overlapping-generations framework.

David Miles (Imperial College, London, Merrill Lynch, and CEPR) presented his paper, written jointly with Andreas Iben, on 'The Reform of Pension Systems: Winners and Losers Across Generations in the UK and Germany'. The authors used a stylized model of the United Kingdom and Germany to perform simulations to show which generations might be direct gainers, and which losers, from a transition to funded state pensions. The authors estimated the required pre-reform equilibrium structure of inter-generational bequests, if different generations were to be insulated from the effects of a transition to a fully-funded pension system. They showed that it was likely that more than one generation would be direct losers from such a transition, especially in Germany. To prevent those generations from being net losers, the chain of bequests (in the initial equilibrium) needed to satisfy one condition: namely, that the cumulated value of the sum of the losses of all the previous generations of direct losers needed to be less than the pre-reform bequest of each generation to the next generation. Calculating the required chain of bequests given the actual demographic structure and the pension system, it was shown that the critical level of bequests was highly sensitive to the rate of return on assets, the initial generosity of the state pension scheme, and the scale of future demographic shifts.

Michele Boldrin pointed out that it was not possible to assume that the growth of the wage bill would be permanently below the return on capital. Either the capital stock would disappear to maintain a given capital-labour ratio, or the labour share would need to go to zero. John Hassler noted that an underlying assumption was that both the return on capital and the growth of the wage bill had the same stochastic characteristics. Fiorella Padoa Schioppa Kostoris commented that the fact that labour union representatives are typically of advanced age, and do not represent the interests of the younger workers, might present a problem for the transition to a fully- or partially-funded pension system.

In the final conference session – devoted to 'Education' – **Michele Boldrin** (Universidad Carlos III, Madrid, and CEPR) presented a paper, written jointly with **Ana**

Montes Alonso (Universidad Carlos III, Madrid), on 'Intergenerational Transfer Institutions: Public Education and Public Pensions'. The authors noted that credit markets for the financing of human capital investments are rare, with the consequence that competitive equilibrium allocations cannot achieve either static or dynamic efficiency. They suggested, however, that public funding for education of the young could be interpreted as a means for the younger generation to 'borrow' from the older generations in order to accumulate human capital. Pay-as-you-go public pension systems could then be seen as a mechanism for the 'borrowers' to repay the capitalized value of their educational debt to the 'lenders' via their social security contributions from which the pensions are financed. The two welfare state institutions – public education and public pensions – could thus be viewed as mutually supportive and, in an overlapping-generations model, a properly designed intergenerational pact of this nature would help to achieve a more efficient allocation of resources over time.

The authors tested the main predictions of their model by using micro and macro data from Spain. Among the policy implications of their analysis were that individual contributions and investments in human capital should be compared when considering the rate of return in the pension system. Hans-Peter Grüner pointed out that the model assumed that only market participants, but not the government, were subject to moral-hazard behaviour. Jean-Charles Rochet suggested that there might be business-cycle implications if the rate of return in the pension system changed over time. David Miles thought that it was counter-intuitive to assume that the capital market malfunctioned only for the group of young individuals seeking to invest in human capital.

The final paper was presented by **Gianni de Fraja** (University of York and CEPR) under the title 'The Design of Optimal Education Policies'. The paper considered the optimal education policy of a budget-constrained utilitarian government. The key assumptions were that households differ in their income, and in the intellectual ability of their children; income is observable by the government, but ability is private information; and households can choose to use private education, but cannot borrow to finance it. The optimal education policy derived by de Fraja is elitist: it increases the spread between the educational achievements of the bright and the less bright children, compared to both private provision and the first-best policy. It also implies that the education received by less bright children depends positively on parental income. Finally, it is input-regressive, in the sense of Arrow (1971): thus, households with higher incomes and brighter children contribute less towards the cost of the education system than do households with lower incomes and less bright children.

Hans-Peter Grüner drew attention to the underlying assumption in the paper that moral hazard did not affect state activity. Jean-Charles Rochet suggested that de Fraja's model implied that inequality would increase in the long term, a fact confirmed by empirical observations.

Advances in Risk Management

A CEPR/ESRC/IFR Finance Network workshop on 'Advances in Risk Management' was held in London on 8 October 1998. The workshop was organized by **Kevin Dowd** (University of Sheffield) and **William Perraudin** (Birkbeck College, London, Bank of England and CEPR). The programme was comprised of the following papers:

'Value at Risk for a Mixture of Normal Distributions: The Use of Quasi-Bayesian Estimation Techniques', **Subu Venkataraman** (Morgan Stanley)

'Non-Linear Value-at-Risk', **Mark Britten Jones** (London Business School) and **Stephen Schaefer** (London Business School)

'Ratings Versus Equity-Based Credit Risk Modelling: An Empirical Analysis', **Pamela Nickell** (Bank of England), **William Perraudin** (Birkbeck College, London, Bank of England and CEPR) and **Simone Varotto** (Bank of England)

'Financial Risk Management, the Sharpe Rule, and VAR: An Integrated Approach', **Kevin Dowd** (University of Sheffield)

DISCUSSION MEETINGS

How Do Currency Crises Spread? Trade Links vs Macroeconomic Fundamentals

Macroeconomic fundamentals are not enough to explain the currency crises of the 1990s. These currency crises were regional because trade is regional, and contagion tends to spread between countries with tight trade linkages. This linkage is intuitive, economically significant, statistically robust and the key to understanding the regional nature of speculative attacks. This was the essence of the views expressed by **Andrew Rose** (Haas School of Business, University of California, Berkeley, and CEPR) at a CEPR lunchtime meeting in London on 2 October 1998.

In elaborating on these views, Rose noted first that the world had experienced three waves of speculative attacks on fixed exchange rates in the 1990s. The attacks on the European Monetary System in 1992–3 had forced a number of devaluations, with floatations of the Finnish markka, sterling, the Italian lira, and the Swedish krona, and, eventually, the widening of the EMS bands to $\pm 15\%$. The meltdown of the Mexican peso in late 1994 had been followed by ‘Tequila hangover’ crises in Argentina and Brazil. And the collapse of the Thai baht in July 1997 had been quickly followed by speculative attacks on the currencies of Malaysia, the Philippines, Indonesia, Hong Kong and Korea.

A noteworthy, indeed obvious, feature of all these currency crises was that they had been regional. Yet standard economic models did not predict that such crises would be regional, at least not without auxiliary features. Most economists thought about currency crises using one of two standard models of speculative attacks. ‘First-generation’ models directed attention to inconsistencies between an exchange-rate commitment and domestic economic fundamentals, such as an underlying excess creation of domestic credit, typically prompted by a fiscal imbalance. ‘Second-generation’ models viewed currency crises as shifts between different monetary policy equilibria in response to self-fulfilling speculative attacks. Common to both classes of models was their emphasis on macroeconomic and financial fundamentals as determinants of currency crises – and macroeconomic phenomena did not tend to be regional. Thus it was hard to understand why currency crises exhibited such a clear regional character, at least without an extra ingredient explaining why the relevant macro fundamentals were intra-regionally correlated.

A second feature of the crises was that they tended to be ‘contagious’. This was more readily explicable, given that countries were linked by trade – and, unlike macroeconomic phenomena, trade patterns tended to be regional. Countries tended to export to, and import from, other countries in geographic proximity. *Prima facie*, therefore, trade linkages seemed an obvious place to look for a regional explanation of currency crises. It was easy to imagine why the trade channel might potentially play this role. If prices tended to be sticky, a nominal devaluation would deliver a real exchange-rate pricing advantage, at least in the short run. Countries lost competitiveness when their trading partners devalued; they were therefore more likely to be attacked – and to be forced to devalue – themselves.

Of course, this channel might not be important in practice: nominal devaluations did not necessarily result in real exchange-rate changes for extended periods of time. Moreover, devaluations were costly and could be resisted. Making the case for the trade channel was thus primarily an empirical exercise. None the less, casual empirical observation was highly suggestive. For example, once Thailand had floated the baht, its main trade competitors (Malaysia and Indonesia) were suddenly at a competitive disadvantage, and so were themselves likely to be attacked.

Rose proceeded, however, to present persuasive empirical evidence confirming that trade linkages were the primary channel through which currency crises spread. This evidence was derived from a recent CEPR Discussion Paper, written jointly by Rose and Reuven Glick (Federal Reserve Bank of San Francisco), in which they had systematically assessed the role of trade linkages as a channel for contagion. Using data from five waves of speculative attacks that had led to currency crisis episodes (in 1971, 1973, 1992, 1994–5, and 1997), Rose and Glick estimated equations which predicted the probability of a crisis and the strength of pressure on the exchange rate, as functions of trade variables and macroeconomic variables.

The regression results showed that trade variables had a consistently stronger effect than the macroeconomic fundamentals. These results were consistent with the hypothesis that currency crises spread because of trade linkages. The evidence also confirmed that countries that trade and compete with the targets of speculative attacks are themselves likely to be attacked, whatever their economic fundamentals. Such crises therefore affect clusters of countries tied together by international trade – a linkage that is important in understanding both the regional nature and the order of speculative attacks. Thus, for example, once Finland had floated the markka in 1992, Sweden – as Finland’s most important trading partner – was next in line. After Sweden was attacked, the crisis logically spread south in turn to Sweden’s competitor, Denmark. A similar pattern had characterized the sequence of events after the Thai baht was floated in July 1997.

As Rose pointed out, if it is true that countries may be attacked because of the actions (or inaction) of their neighbours, who tend to be trading partners merely because of geographic proximity, then this is an externality with important implications for policy. The

existence of this effect would constitute a strong argument for international monitoring. It would also warrant a lower threshold for international and/or regional assistance than would be the case if speculative attacks were solely the result of domestic factors.

In seeking to model 'contagion' in currency crises, Rose did not rule out the possibility of (regional) shocks common to a number of countries; nor had he attempted to study the timing of currency crises. Instead, his research had been designed to show that, given the occurrence of a currency crisis, the incidence of speculative attacks across countries was linked to the importance of international trade linkages. In short, currency crises spread along the lines of trade linkages, after accounting for the effects of macroeconomic and financial factors. Indeed, macroeconomic factors consistently failed to offer much help in explaining the cross-country incidence of speculative attacks.

Reuven Glick and Andrew K Rose, 'Contagion and Trade: Why are Currency Crises Regional', CEPR Discussion Paper No. 1947, August 1998

DISCUSSION PAPERS

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Conferences and workshops are indicated in grey and attendance is *by invitation only*.

Lunchtime meetings, however, are *open* and are indicated in orange.

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28 JUN/
9 JUL

European Summer Symposium in Economic Theory (hosted by Studienzentrums Gerzensee), Gerzensee.

2/3
JUL

Economic Geography and Public Policies (Workshop with CERAS), Paris.

12/23
JUL

European Summer Symposium in Financial Markets (hosted by the Studienzentrums Gerzensee), Gerzensee.

16 JUL

Transition Economics Workshop (with the University of Sussex and the Economic and Social Research Council), Sussex.

22/25
JUL

Twenty Years After: China's Reforms and its Place in the World Economy. International Conference in Transition Economics (Conference with the Ford Foundation Beijing/Tsinghua University/WDI/World Bank), Beijing.

1 SEP

CEPR Reception at EEA Congress, Santiago de Compostela.

14/18
SEP

European Summer Symposium in Labour Economics (hosted by IZA), Ammersee.

17/18
SEP

Foreign Direct Investment and the Multinational Corporation (Workshop hosted by IMOP), Vouliagmeni.

24/25
SEP

Expectations, Economic Theory and Economic Policy (Conference with Banca d'Italia and the European University Institute), Perugia.

10/12
OCT

Marginal Labour Markets in Metropolitan Areas (Conference), Dublin.

15/16
OCT

Thirtieth Economic Policy Panel Meeting (Conference), Helsinki.

21/23
OCT

The Econometrics of Price and Product Competition (Conference with CREST/IDEI/NBER), Toulouse.

22
OCT

International Trade and Wage Inequality: Theory and Measurement (Workshop), Milan.

27
OCT

Unemployment Dynamics (Workshop with ESRC), London.

21
NOV

Labour Demand, Education and the Dynamics of Social Exclusion (Workshop), Ramat-Gan.

25
NOV

ESRC/IFR Workshop: Finance Network, London.

26
NOV

Banking and Finance Markets (Workshop), Barcelona.

10
DEC

The Evolution of Market Structures in Networked Industries (Workshop), Fontainebleau.

2000 •

25 FEB

Market Microstructure and Corporate Finance (Workshop), London.

16 JUN

The Design of Primary Equity Markets (Conference), Capri.