ISSN 1362-3761

CentrePiece

The Magazine of The Centre for Economic Performance Volume 10 Issue 2 Summer 2005

A TYPICAL UK MANAGER?

A NEW LOOK AT MANAGEMENT PRACTICES AND THEIR IMPACT ON PERFORMANCE ACROSS FIRMS AND NATIONS

Britain's trade unions
French revolutionaries
Germany's post-war division
Performance pay for teachers
Small remote economies

CentrePiece

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Editorial and Subscriptions Office
Centre for Economic Performance
London School of Economics
Houghton Street
London WC2A 2AE

Annual subscriptions for one year (3 issues):
Individuals £13.00
Students £8.00
Organisations (UK and Europe) £30.00
Rest of world £39.00
Visa and Mastercard accepted
Cheques payable to London School of Economics

Volume 10 Issue 2
(ISSN 1362-3761)

Editor, Romesh Vaitilingam
Design, Raphael Whittle
Print, Ghyllprint Ltd

CentrePiece is printed on environmentally friendly, chlorine-free paper.

THE QUEEN'S ANNIVERSARY PRIZES
FOR HIGHER AND FURTHER EDUCATION
2002

Editorial

text

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page 8
Trade unions: resurgence or demise?

page 11
From the Webbs to the Web

Contents

in brief...

There are wide and persistent differences in productivity across firms and countries. A new CEP study – conducted jointly with McKinsey & Company – uses a pioneering approach to measure management practices and assess their importance in driving these variations in economic performance.

Management practices:
the impact on company performance

Business schools and popular discussions of the corporate world tend to place huge stress on the importance of good management in top performing companies. Economists, meanwhile, have had relatively little to say about the role of management in driving productivity and other key performance indicators. This is largely because until now, there has been an absence of good quality data on management practices measured in a systematic way across countries and firms.

A new report – by CEP's Nick Bloom and John Van Reenen, and Stephen Dorgan, John Dowdy and Tom Rippin, all consultants at McKinsey – attempts to fill this void, using an innovative survey approach to measure management practices in more than 730 manufacturing firms in France, Germany, the UK and the United States. By matching these data with information from firm accounts, they are able to explore in detail the relationship between management practices and company performance.

Overall, the report finds compelling evidence that better management practices are significantly associated with higher productivity and other indicators of corporate performance, including return on capital employed, sales per employee, sales growth and growth in market share. This is true in both the Anglo-Saxon and the continental European countries, suggesting that the researchers' characterisation of good management practice is not intrinsically biased towards UK and US approaches.

Across the whole sample, a conservative estimate indicates that differences in management practices account for a significant proportion – 10-20% – of the differences in productivity between firms and between countries. This figure may actually be substantially greater, which raises the question of why there is such variation in the management practices and productivity of competing companies – and, in particular, how badly managed firms are able to survive, often for years.

Measuring management practices

Measuring management requires codifying the concept of good and bad management into a measure applicable to different firms within the manufacturing sector. An interview-based management practice evaluation tool that defines and scores from 1 (worst practice) to 5 (best practice) across 18 of the key management practices was used, which appear to matter to industrials firms based on their expertise in working with thousands of companies across several decades. The 18 practices fall into four broad areas:

- Shopfloor operations: have companies adopted both the letter and the spirit of lean manufacturing?
- Performance monitoring: how well do companies track what goes on inside their firms?
- Target setting: do companies set the right targets, track the right outcomes and take appropriate action if the two don't tally?
- Incentive setting: are companies hiring, developing and keeping the right people (rather than people they could do without) and providing them with incentives to succeed?

For each company in this study, researchers interviewed one or two senior plant-level managers, who knew only that they were taking part in a 'research' project. These managers were selected because they are senior enough to have a reasonable perspective on what happens

Some UK firms use world-class management practices while others are among the worst

in a company but not so senior that they might be out of touch with the shopfloor. The interviews relied on open questions and the interviewers were trained to probe for details of practices on the ground.

To ensure impartiality, only companies that had no relationship with McKinsey were included in the study. And medium-sized firms, which tend to rely on local management, were selected in preference to large firms whose multinational operations might obscure differences between countries.

Management practices across countries

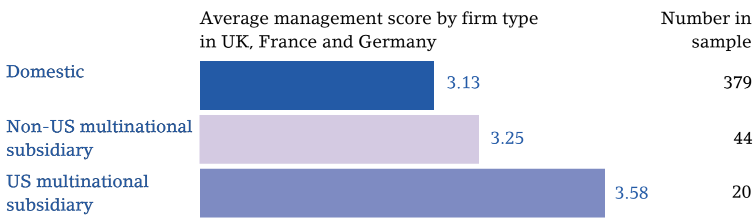
Analysis of the survey data confirms a range of anecdotal evidence that US companies are the better managed than companies elsewhere in the world. As Figure 1 shows, US firms are statistically significantly better managed than continental European or UK firms. The researchers estimate that the differences in management practices between the UK and the United States account for 10-15% of the productivity gap between the two countries.

As Figure 2 shows, US companies also excel even when their operations are located overseas. The research finds that US multinational subsidiaries based in the

Figure 1:
Country level management scores

Note: All gaps between country groups are statistically significant at the 5% level.

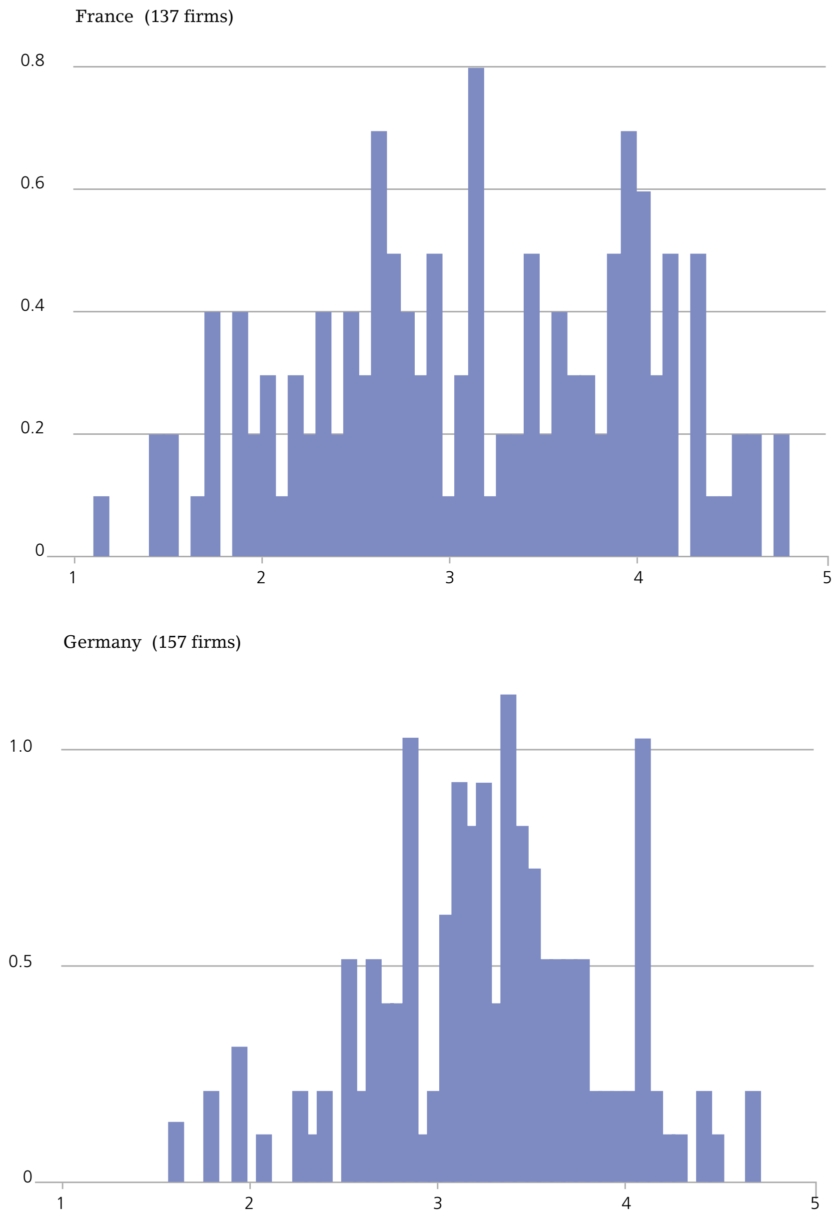
Figure 2:
Management scores of European firms



Note: The gap between domestic firms and US multinational subsidiaries is statistically significant at the 5% level.

Product market competition and weak labour market regulation are key drivers of good management practice

Figure 3:
Firm level management scores



UK, France and Germany are better managed than either domestic firms or other non-US multinational subsidiaries operating in these countries. This suggests that barriers to foreign ownership and cross-border deals are likely to be damaging to the spread of good management.

The data also suggest that countries have distinct management 'cultures'. For example, Germans firms excel at operations management – shopfloor and process management – while US firms excel at people management – targets and particularly incentives management.

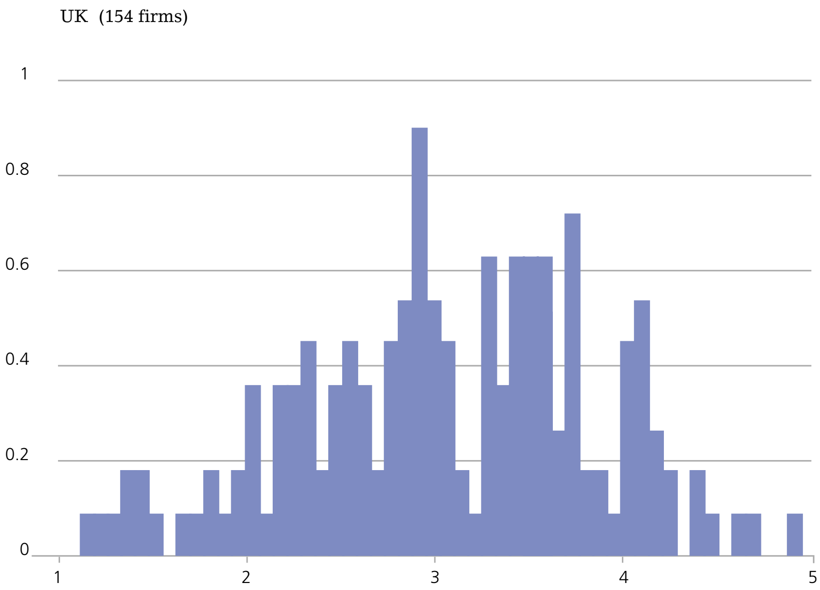
Management practices across firms

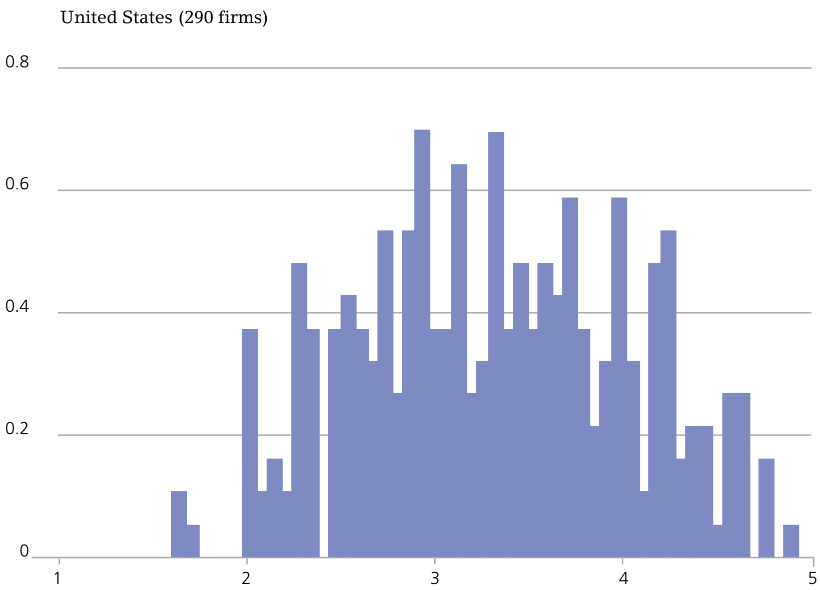
On top of the clear national differences, there is also a huge spread of management practices across firms in every country, as indicated in Figure 3. For example, some UK firms use world-class management practices while others are among the worst in the whole sample.

About 50% of this variation is explained by a firm's country and industry pairing, with the remainder due to the wide underlying distribution of management practices among firms in the same country and industry. Most notably, the data indicate that a large number of firms are extremely badly managed with ineffective monitoring, targets and incentives.

Well-managed firms perform significantly better than poorly managed firms, with higher levels of productivity, profitability, growth rates and market values. So why do these variations in management practices persist? The researchers present three reasons:

- Product market competition, at the industry level, appears to be a primary driver of good management practices. This could work both by making managers work harder – an 'effort effect' - and also by driving out badly performing firms – a 'selection effect'. The research finds little evidence for an 'effort effect', suggesting that competition may improve management practices mainly by forcing badly run firms to shape-up or close.
- A firm's age also seems to matter with very old firms having the lowest average scores for quality of management practices, particularly those in uncompetitive industries where competition does not weed out underperformers. This is consistent with the idea that new entrants find it easier than their older counterparts to adopt the best management practices of the era in which they were founded.
- Stronger labour market regulation significantly impedes good management practice, particularly in firms with longer





tenured employees. This suggests that regulation impedes the adoption of new management practices.

These factors also play a role in the national differences in management practices and productivity performance. For example, countries with lower levels of competition and tougher labour market regulation – France and Germany – are worse managed on average than countries with weak regulation – the United States.

The UK is something of a puzzle in this dimension: while it has moderately high levels of competition and low levels of regulation, it is the worse managed on average. One hypothesis that the researchers hope to investigate in future is to what extent the UK's poor management performance in manufacturing is driven by low skills, a common complaint of UK manufacturers?

Overall, superior US management seems to be driven by lower levels of labour regulation and a greater degree of product market competition. Compared with the UK, the country's firms also seem to benefit from higher levels of management skills.

Surveying management practices

The interview was run on an amazing array of firms. Products included:

- Magnetic plastic balls that float on water near airports to prevent birds from nesting – this firm reported facing few competitors.
- German sex toys (mainly for the domestic market as tastes vary by country).
- Human tissue grafts from corpses – this firm scored highly on 'just-in-time' production.

And the comments the interviewers received included:

- 'I spend most of my time walking around cuddling and encouraging people – my staff tell me that I give great hugs.'
- 'Improvement process? That's something that happens once a year before the Christmas Tombola.'
- 'We don't do KPIs [key performance indicators]… the only person I report to is God.'
- '[long silence]… sorry I just got distracted by a submarine surfacing in front of my window.'
- On motivating employees: 'Forget it… if you work here, you drew the short straw.'
- To a female interviewer: 'Your voice sounds really great, and I love your accent… are you married by the way?'

Scoring management practices

How is performance tracked?

Firms score 1 if:

measures tracked do not indicate directly if overall business objectives are being met, and certain processes aren't tracked at all.

For example:

A US manager who tracked a range of measures when he didn't think output was sufficient. He last requested reports eight months ago, checked them for one week, and then stopped checking once output had increased again.

Firms score 3 if:

most key performance indicators are tracked formally, and tracking is overseen by senior management.

For example:

A US firm bar-coded every product, and performance indicators were tracked throughout the production; but this information was not communicated to workers.

Firms score 5 if:

performance is continuously tracked and communicated, both formally and informally, to all staff using a range of visual management tools.

For example:

A US firm that had screens visible to every line displaying hourly progress to target. The manager met daily with shopfloor staff to discuss these, and monthly with the whole company to discuss overall performance. He even stamped canteen napkins with key performance achievements.

What are your firm's targets?

Firms score 1 if:

goals are exclusively financial or operational.

For example:

A UK firm performance targets only output volume.

Firms score 3 if:

goals include non-financial targets, but they form part of the performance appraisal of top management only and are not reinforced throughout the rest of organisation.

For example:

For a French firm, strategic goals are very important. They focus on market share and try to hold their position in technology leadership. But workers on the shopfloor are not aware of those targets.

Firms score 5 if:

goals are a balance of financial and non-financial targets, and senior managers believe the non-financial targets are often more inspiring and challenging than financials alone.

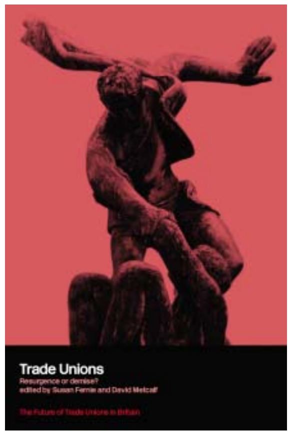
For example:

A US firm gives everyone a mix of operational and financial targets. They communicate financial targets to the shopfloor by telling workers that they pack boxes to pay the overheads until lunch and after lunch it is all profit for the business. If they are having a good day, the boards immediately adjust and play the profit jingle. Everyone cheers when the jingle is played.

This article summarises 'Management Practices across Firms and Nations' by Nick Bloom, Stephen Dorgan, John Dowdy, Tom Rippin and John Van Reenen (http://cep.lse.ac.uk/management/).

Nick Bloom is director of CEP's research programme on productivity and innovation.
Stephen Dorgan, John Dowdy and **Tom Rippin** are at McKinsey & Company.
John Van Reenen is director of CEP.

Trade unions have been in decline in Britain for 25 years. A new book edited by **Sue Fernie** and **David Metcalf** – and featuring contributions from most leading analysts of the labour movement – takes a generally pessimistic view of their likely future.



Trade unions: resurgence or demise?

A quarter of a century ago, only one quarter of the workforce had never been a member of a union. Since then, union membership has fallen by five million and the corresponding fraction now is one half. Today, the public sector, where three in five workers are members, has greater aggregate membership than the private sector, where only one employee in six is a member.

It is not surprising that union membership crumbled away in the 1980s and 1990s. The composition of jobs in the economy changed so that employment declined in unions' traditional heartlands of manufacturing, mining, utilities and the public sector. The state did what it could to undermine collectivism through successive tranches of industrial relations legislation, privatisation, contracting-out and the introduction of performance related pay for its own employees. In turn, employers responded to these signals and were more likely to oppose unions – so new recognition became difficult to achieve.

At the same time, many workers lost their taste for membership. Unions' own structures – 'male, pale and stale' – and policies – notably the pursuit of mergers seemingly for their own sake – compounded their problems. What had previously been conforming behaviour – to recognise or belong to a union – became deviant.

Our book concludes that whether unions continue in the twilight – or instead become resurgent – largely depends on two things: first, what impact they have on firm performance and fairness at work; and second, whether the intersection of what they see as the malevolent forces of the 1980s and 1990s continues over the next decade or so.

With around 12% of privately employed workers as members, the future for private sector unionisation looks bleak

The impact of unions as a vested interest is much weaker now than in the past. The roots of union power – the closed shop and the strike threat – are shut down and product market competition is more intense. As a result, the evidence suggests that:

∑

- The average wage mark-up for unionised workplaces over comparable non-union workplaces is now low or zero.
- Unionised workplaces no longer have lower labour productivity than their non-union counterparts.
- Therefore, financial performance is, on average, similar to that in non-union workplaces, although where the firm has some monopoly power, a union can siphon off some of the rent from capital to labour.
- But there is no evidence that such transfers lower investment rates in firms and workplaces with union recognition compared to similar

non-union organisations – indeed, investment in skills is stronger in unionised workplaces.

But there remains one acutely worrying economic outcome from the union viewpoint. On average, employment in a unionised workplace grows 3% more slowly (or falls 3% more quickly) than in a similar non-union workplace. Even though union activity is unlikely to be the cause of this differential growth in jobs, if it persists, the implications for future membership levels are serious. This evidence suggests that the employer now has less incentive to oppose unions, but the worker has less incentive to join.

Unions do continue to wield the 'sword of justice': they narrow the spread of earnings, cut accidents and promote family friendly and equal opportunity policies. Furthermore, from around 1870 and for most of the twentieth century, the share of profit in national income gradually declined, though this long-run trend has reversed in the last two decades. This too suggests a role for unions in countering exploitation – a return to the rationale for unions set out by the Webbs a century ago.

It is unlikely that future employment in the more highly unionised segments of the economy – such as the public sector and utilities – will grow more rapidly than jobs in private services where union density (the proportion of the workforce that belongs to a union) is well below average. Therefore, the future of unions turns, in part, on the thorny matter of the balance between servicing existing members and organising new ones.

Unions have seven million members, but 1.6 million of these are not covered by collective bargaining because, in many cases, the employer abandoned collective bargaining without formally 'derecognising' the union. Unions face a hard task convincing such members that it remains worthwhile to continue to belong to the union.

Unions must also service their 5.4 million members who are covered by collective bargaining, the majority of whom are in the public sector. Key tasks here include maintaining terms and conditions and providing services to individuals, including advice on employment matters, promoting lifelong learning and representing members in

> **Employers now have fewer incentives to oppose unions – but workers have fewer incentives to join them**

employers' procedures and before labour courts.

There are 8.7 million workers covered by collective bargaining, but 3.3 million of these are 'free-riders', benefiting from union activity without actually belonging to a union. Absorbing such workers is a potentially low cost route to boosting membership. But much more difficult to organise are the 14 million employees who are neither members nor covered by collective bargaining.

Between 2000 and 2002, unions achieved a 25-year high in annual recruitment from this group. But this figure represented only 1% a year of the total of unorganised workers and was insufficient to offset the outflow of members because of workplace closures and contractions, redundancies, new free-riders and derecognitions. And in 2003 and 2004, the numbers newly organised by successful recognition campaigns fell sharply.

Since New Labour came to power in 1997, the hostile forces of the 1980s and 1990s have largely evaporated. Public sector employment is rising, the state is at worst neutral in its dealings with unions and new state initiatives include recognition machinery, a national minimum wage and various family friendly policies. Almost three million non-union workers say they would be likely to join if there was a union at their workplace. And the union movement has generated a series of initiatives aimed at revitalisation.

But despite all this, union membership is now the same as it was in 1997 and union density has fallen two percentage points. One plausible explanation for this paradox is that when unions were powerful, they pursued their 'monopoly face' in manufacturing, mining, utilities and the public sector and they largely ignored the significant groups of low paid workers who suffered the worst inequalities in power and conditions.

Subsequently, that monopoly face has mostly disappeared so there is less incentive for such workers to belong to a union. At the same time, state initiatives displaced many of the 'collective voice' and 'sword of justice' activities, including promoting better grievance procedures, enhanced rights for part-time workers, limits on working time, better parental leave and the national minimum wage. In addition, both the voice and monopoly faces of unions have been supplanted by the huge but largely unremarked expansion in occupational licensing and certification, again a state initiative.

In the longer run, the passage of the European Union directive on information and consultation may be an important influence on the future of unions. This establishes, for the first time, permanent and general arrangements for information and consultation for all workers in organisations of more than 50 employees and will cover three quarters of the labour force by 2007. The tough job for unions is to build on these schemes and to maintain and expand their role in them so that they are seen as the legitimate voice representing employees. Alternatively, this indirect voice institution may crowd out the union voice.

Finally, it is worth re-emphasising the numbers. For the first three years of the new millennium, unions' organising rate was at a 25-year high of 150,000 workers a year newly recognised. Of these, perhaps 100,000 – 0.4% of employees – became union members. Assume that the net depreciation of density from closures and lost appetite for membership is 2% (though, in fact, it was larger than this in the 1980s and 1990s). In such circumstances – remember that the organising figure is probably overgenerous and the depreciation rate understated – 'steady state' union density is 20% (0.4/2), implying private sector density of around 12% of the workforce. The future for private sector unionisation looks bleak indeed.

Despite rising public sector employment and a variety of New Labour initiatives, union membership is unchanged since 1997

Trade Unions: Resurgence or Demise?, edited by Sue Fernie and David Metcalf and published by Routledge (2005), summarises the output from CEP's five-year research programme on the future of unions in modern Britain, which was funded by the Leverhulme Trust (http://cep.lse.ac.uk/future_of_unions).

David Metcalf, who directed the programme and was formerly CEP's deputy director, is Professor of Industrial Relations at LSE. **Sue Fernie** is a lecturer in industrial relations at LSE. The next four articles summarise a selection of chapters in the book.

in brief...

Circling the wagons: unions' part in their own decline

Without substantial internal reform, it is unlikely that unions could take advantage of even the most favourable circumstances for growth

The conventional explanation of union decline in Britain tends to stress the impact of outside forces. Manufacturing employment collapsed and there was massive membership loss. Unemployment rose. Hostile legislation impaired unions' ability to represent and recruit. In short, macroeconomic and political factors restricted unions' ability to sustain the membership advances of the 1970s across subsequent decades.

What are the implications of this argument? First, it sustains the hope of revitalisation: if macroeconomic conditions generate decline, you wait for their reversal to stimulate growth. But second, it diverts attention from union behaviour. Adverse trends in organising success, resource accumulation and service development are not, on this argument, predictors of future performance but merely symptoms of present malaise.

Since 1997, with better macroeconomic conditions and more favourable politics, decline has not been reversed. In the private sector, it has continued apace. Why? Union behaviour is important. This is not to discount outside forces but rather to argue that once decline sets in, the unions' response may not only fail to reverse it but exacerbate the decline. There are several elements in the argument.

First, there are no new, big unions. The union 'business' consists of a set of large, 'oligopolistic' enterprises seeking to expand into non-unionised sectors but, largely, failing to do so. Whenever large-scale expansion of membership has taken place in peacetime, as in the 1880s and 1970s, new and different types of unions have emerged. They are not doing so now.

Union mergers fail to bring down costs, fail to improve performance and fail to attract new members

Second, mergers don't work. They don't bring down costs, improve organisational performance or attract new members. On the contrary, they simply generate organisations that are good at merging. They are conglomerate federations with limited ability to generate scale economies and limited incentives to organise the unorganised.

Third, unions don't deliver in the workplace. The private sector wage differential has disappeared. Employers seldom rely on union-only arrangements, supplementing them with consultation and participation. Membership under collective bargaining has shrunk. Collective bargaining agendas have narrowed. There are far fewer union reps around. If an employee is seeking to resolve a grievance or a firm is seeking to establish better employee relations, there are non-union alternatives.

Fourth, unions can't spend their way out of decline. Structurally, they have had a long-term revenue deficit of subscription income over total expenditure, which means that asset revenue or sales must cover operating expenditure. Asset bases have slowly declined over the post-war period to an historical low. Competition between conglomerates keeps subscriptions down. Federated structures in merged unions keeps expenditure up, as does the collapse of workplace representation.

In short, it is not likely that unions could take advantage of even the most favourable circumstances for growth without substantial internal reform. The strategies of many large unions reflect a need to survive, but growth strategies might look very different and require different structures and policies. The first thing you do when you circle the wagons is uncouple the horses.

'Circling the Wagons: Endogeneity in Union Decline' by Paul Willman is a chapter in *Trade Unions: Resurgence or Demise?* (Routledge, 2005).

Paul Willman is at Oxford University.

in brief...

Public service unions: challenges of the reform agenda

The unions could attract public support for their distinctive vision of public service provision

The government's 'modernisation' agenda for the public services has put considerable pressure on unions in the sector, giving them the dual challenges of articulating a coherent national policy response and ensuring effective organisation and representation at workplace level. These challenges are exemplified in their responses to the private finance initiative (PFI), which is now the dominant system of procuring public infrastructure. UNISON estimates that 100,000 of its 1.3 million members have been transferred to a private contractor or not-for-profit provider in recent years.

Union responses have included campaigning against PFI, lobbying the government for enhanced staff protection to end the 'two-tier workforce', as well as engaging with PFI implementation at workplace level. And different unions have had different responses depending on the occupations and professional identities of their members and the direct impact that PFI has on their employment.

While all unions have been willing to follow their members into the private sector, this has been more straightforward – organisationally and ideologically – for those with an established presence in the private sector. UNISON has recently established a Private Contractors Unit to provide a co-ordinated approach to organising in the sector and to target selected companies. This has created tensions with activists committed to removing private contractors from the public services. Several unions have also secured national recognition agreements with big contractors like Serco and Sodexho.

In the workplace, unions have found it difficult actively to engage members as employees are often unsure of the implications of PFI prior to their transfer to a new facility. This process is made more difficult because of its technical complexity and the amount of time union reps need to commit to analysing complex business cases and attending project meetings if they are to be able to influence the procurement process.

An additional complication is the legacy of successive rounds of competitive tendering. Workers doing the same work in the same workplace can be employed under a plethora of different terms and conditions. The strain on over-burdened union officials in servicing a fragmented membership is exacerbated by patchy local organisation. Nonetheless, pressure to extend NHS pay restructuring to contracted out workers has brought significant benefits for ancillary workers.

With employees in a single workplace employed by several different employers, representation becomes more complex. When an employer provides facilities time to a public service union rep, it is generally not possible to use it to represent individuals employed by private contractors. But if the private contractor provides no facilities time for its own union rep, then there will be a representation gap, with the union unable to provide full services to subcontracted staff.

The PFI experience has varied widely across workplaces. There is a strong sense within the union movement that some private contractors are much more open to union involvement than others. Where staff are consulted about design and operational issues, both staff and patients comment more favourably on new buildings and services. By contrast, the absence of consultation leads to far less positive perceptions.

The experience of PFI has highlighted the degree to which public service unions operate in an environment of continuous restructuring, in which they have to contend with numerous public and private sector employers, and invest in workplace organisation to ensure a visible union presence that can deal with multiple terms and conditions of employment. At the national level, the government needs to be persuaded that the unions have a convincing vision for the future of public services. But at the same time, the unions are starting to develop their own reform principles, which could attract public support for a distinctive vision of public service provision.

'Union Responses to Public-Private Partnerships in the NHS' by Stephen Bach and Rebecca Kolins Givan is a chapter in *Trade Unions: Resurgence or Demise?* (Routledge, 2005). **Stephen Bach** is at King's College London. **Rebecca Kolins Givan** is at Cornell University.

in brief...

Unions in Germany: better placed than their British counterparts?

Like British unions, unions in Germany face the serious problem of crumbling membership. Union membership peaked in 1981 and has fallen ever since. Union density too has fallen with less than a quarter of German employees now members. And as in Britain, the sustained decline in membership and density seems to have been the consequence of both external factors – such as changes in the composition of the workforce – and internal factors – unions' own structures and policies.

The resulting financial problems have not made union revitalisation easier. Union mergers have been one consequence with the emergence of a small number of multi-sector unions. But again as in Britain, it is an open question whether a smaller number of larger unions is better suited to the modern world. And although unions in Germany have made innovative use of modern information and communications technologies to deliver services to members, it is doubtful whether this can compensate for the loss of face-to-face contact and organisational withdrawal from low membership areas.

Both countries have also experienced a decentralisation of collective bargaining and a substantial decline in bargaining coverage. But in contrast to Britain, multi-employer collective bargaining still dominates in Germany, even though there has been a shift of bargaining competences to the plant level in sectoral agreements. Still, two out of three German employees work in an establishment that is covered either by multi-employer or single-employer bargaining. As with membership, unions in both countries have had problems in organising new establishments, which implies that bargaining coverage can be expected to decline further, particularly in the private sector.

Two out of three German employees work in an establishment covered by collective bargaining

The fall in membership and bargaining coverage goes hand in hand with a decline in bargaining power and problems of legitimacy and political effectiveness. Union relations with the government and the Social Democratic Party have soured since March 2003, when Chancellor Schröder outlined his reform programme for reinvigorating the stagnating German economy. This included reforms of the labour market and the welfare state – such as changes to job protection law and unemployment insurance –that were fiercely but unsuccessfully opposed by the unions.

In the political arena as well as in the fields of collective bargaining and industrial relations, the German unions face difficult decisions, in particular whether to be more pragmatic and try to influence reforms or to oppose them for ideological reasons. Behind the mask of a unified labour movement in Germany there is a whole range of different union views and strategies, ranging from 'social partnership' to 'countervailing power' against both employers and government. It is high time for the unions to define what they stand for in the twenty-first century and to find convincing strategies for reversing the various economic and political trends working against them.

Behind the mask of a unified German labour movement, there is a range of different views and strategies

'Trade Unions in Germany: On the Road to Perdition?' by Claus Schnabel is a chapter in *Trade Unions: Resurgence or Demise?* (Routledge, 2005). **Claus Schnabel** is at the University of Erlangen-Nürnberg.

in brief...

From the Webbs to the Web: a new union form?

Combining online activities with offline activities could create a new form of worker power

UNIONREPS.org.uk is the web portal for trade union reps, from the TUC

An inappropriate pessimism dominates discussions of the future of unions. Yes, union density is falling in the private sector and union influence is falling in Britain and many other countries. And, yes, the finances of many unions are shaky. But some unions are responding to their difficulties by undertaking innovations using the internet that have the potential to improve union services and lower costs to members.

In Britain, these innovations include the website www.unionreps.org.uk, on which union reps share information; the website www.worksmart.org.uk, which provides information about rights at work to both union and non-union workers; and a weekly email bulletin on occupational health and safety. Nearly 70% of union reps who use the unionreps.org website communicate with their members through email, creating an 'e-unionism' with great potential for rapid delivery of services to members at minimal cost.

Innovations in the United States include a massive email list – Working Families Network – that allows the AFL-CIO (the US equivalent of the Trades Union Congress) to contact millions of members and friends of labour and ask them to participate in campaigns of public interest, as well as to get volunteers for demonstrations. It also includes various experiments with 'open source' union forms, in which workers unable to gain a collective bargaining contract use a union website to connect activists.

Last summer, the AFL-CIO initiated an 'affiliate organisation', Working America (www.workingamerica.org), whose website offers legal advice on overtime issues as well as diverse other information. Combining the internet with face-to-face contact, by July 2005, the AFL-CIO had signed up 900,000 workers in 10 US cities to the new organisation (though there is still uncertainty about what services it will deliver to members and how it will finance itself). Other US union organisations have also developed such open source forms, some along occupational lines, others at particular firms such as the Communication Workers of America local at IBM.

These efforts to use the internet will expand, if only because they allow unions the opportunity to reach many workers and workplaces at low cost, irrespective of the attitudes of employers. If successful, the innovations will profoundly affect union membership and the institution of the union. If unions find the right way to combine online activities with offline activities, possibly in local communities, and to use their expertise on labour issues to build loyalty to the institution, they could create a new form of worker power in place of strikes, based on their ability to generate support for workers outside any given workplace from a broader union community.

Unions in Britain, the United States and virtually every other advanced capitalist country have grown in sudden spurts, usually around a new union structure that reaches workers in a different way. With unions engaged in diverse innovations, it is possible that an open source form may find the 'killer application' that touches off a new spurt.

The internet allows unions the opportunity to reach many workers and workplaces at low cost

'From the Webbs to the Web: The Contribution of the Internet to Reviving Union Fortunes' by Richard Freeman is a chapter in *Trade Unions: Resurgence or Demise?* (Routledge, 2005).

Richard Freeman is Professor of Economics at Harvard University and a senior research fellow in CEP's labour markets programme.

in brief...

Performance pay for teachers: is it working?

The introduction of performance-related pay in England's schools has had a generally bad press. But **David Marsden** and **Richard Belfield** find that it is starting to have a positive impact both on school management and pupils' academic achievements.

Performance pay and performance management were first introduced into schools in England and Wales in the autumn of 2000. With their specific focus on both the contribution of teachers' performance to the achievements of their pupils and how they can be measured and linked to the overall targets set for schools, these reforms represent a radical departure from long-established methods of paying teachers and managing state schools. But are they working? To answer this question, we have been carrying out a regular survey of more than 300 head teachers and 1,000 classroom teachers since just before the new system was launched.

The new performance management scheme gives heads a mechanism for linking teachers' classroom objectives with those of the school as a whole. It involves annual performance reviews for all teachers in which they agree targets for the coming year with their team leaders or the head. There is also a 'threshold assessment' of performance, which is situated at the top of the old pay scale. If teachers pass, they then move onto a new upper pay scale in which progression depends on performance.

Passing the threshold brings a large salary increase and movement up the upper pay scale. When it was first introduced, the pay rise would take the annual salary of teachers who were at the top of the old pay scale from about £24,000 to £26,000 with the opportunity to rise to £30,000. This was at a time when average white-collar full-time annual earnings stood at a little over £25,000.

The success of the new performance pay system can be evaluated in a number of ways:

- whether the opportunity to earn more has improved motivation and given teachers' greater incentives;
- whether the performance reviews have improved co-ordination of teachers' efforts through better goal-setting;
- whether the system has helped to improve management within schools;
- and whether it has led to better academic results for pupils.

Motivation and incentives

Only a small minority of the classroom teachers we survey say that performance pay gives them extra incentives and motivates increased effort. This fits with other studies of teachers' attitudes to financial rewards: they look to other aspects of their work for positive motivation. Nevertheless, a greater proportion of younger than older teachers think that the extended pay scales make it more worthwhile to stay in teaching.

Goal-setting

In contrast to the rather negative findings on motivation, much larger numbers of both teachers and heads think that performance management has helped to improve goal-setting within their schools. What's more, the percentage of those reporting improvements has increased with each wave of the survey.

Initially, there were widespread fears that heads would adopt simplistic goals based on test pass rates. In contrast, examples include reviewing performance weaknesses of a whole class or school year and agreeing targets that would seek to address these, such as narrowing the gap between girls' and boys' achievements in a particular subject. This suggests how reviews can help to focus teachers' efforts less on weaknesses in their own performance and more on the needs of their pupils and the school.

Performance management makes it possible to integrate classroom teaching objectives with those of the whole school

Schools that improve their goal-setting also improve their pupils' academic results

In practice, the new scheme leaves quite a lot of freedom to individual schools in how they approach performance reviews, and this no doubt helps to explain why a sizeable minority of heads and teachers report negatively. We also find that schools with improved goal-setting are more likely to 'benchmark' their educational practices against those of schools that are doing well in the league tables.

School management

Before the new system was introduced, we speculated that heads might adopt one of two potential strategies when implementing performance management. They might act like 'fire-fighters', filling in the required forms simply to get the extra money for teachers' salaries. Or they might adopt a 'reformer' strategy, using the new provisions as an opportunity to improve the way the school was managed.

In the first year, it seems that many, but not all, schools adopted the 'fire-fighter' strategy. But by the 2004 survey, the percentage of 'reformer' schools had increased. One aspect of the change has been the extent to which heads use 'joined-up' targets, linking those of their teachers to the wider objectives of the school, as set out, for example, in the school improvement plan.

We measure this by comparing the survey responses of heads, team leaders and classroom teachers in the same school. If all three categories report that the new system has improved goal-setting, then it is likely that the school has a fairly systematic approach. Lack of agreement might indicate that policies are not felt in reality throughout the school. On this measure, we find that a growing percentage of schools in our sample has taken the new system as an opportunity to reform school management: between 15% and 25% have adopted the 'reformer' strategy, and this proportion has grown from 10-20% in 2001 to 20-30% in 2004.

Academic results

So does all this make any difference to pupils' achievements? We compare schools that showed an improvement in goal-setting between 2001 and 2004, with those that showed an improvement in their pupil results over the same period relative to other local schools, looking at Key Stage 2 results for primary schools and GCSE results for secondary schools.

Despite the rather small sample of schools for which we have a complete set of observations, we find that schools that improve their goal-setting also improve their academic results. Statistically, there is a less than 10% likelihood that this could have come about by chance.

Thus, performance pay and management for teachers seem to have achieved a moderate success so far. And if the share of 'reformer' schools continues to grow, then it is likely to bring longer-lasting benefits to children and the wider community. Though much maligned, reforms like these are potentially a key means by which democratic governments can influence the work of public sector professional employees.

This article summarises 'Performance Pay for Teachers: Linking Individual and Organisational-level Targets' by David Marsden and Richard Belfield, CEP Discussion Paper No. 703 (http://cep.lse.ac.uk/pubs/download/dp0703.pdf).

David Marsden is Professor of Industrial Relations at LSE and a research associate in CEP's labour markets programme. **Richard Belfield** is a research assistant in CEP's labour markets programme.

Further reading

David Marsden and Richard Belfield (2004), 'Unions, Performance-related Pay and Procedural Justice: The Case of Classroom Teachers', CEP Discussion Paper No. 660 (http://cep.lse.ac.uk/pubs/download/dp0660.pdf).

David Marsden (2000), 'Teachers Before the "Threshold"', CEP Discussion Paper No. 454 (http://cep.lse.ac.uk/pubs/download/dp0454.pdf).

New research by **Eric Maurin** and **Sandra McNally** reveals that France's short-lived 'revolution' of May 1968 had long-term benefits for the angry students – and later for their children. These findings have important implications for the debate about widening access to higher education.

Children of the revolution

The student revolt of May 1968 led to chaos across France, temporarily shaking the economic and political establishment. But while the revolution was short-lived, it had significant long-term consequences – not only for the students taking important exams that year but also for the next generation. It turns out that the revolutionaries of 1968 were successful in ways that they were unlikely to have foreseen.

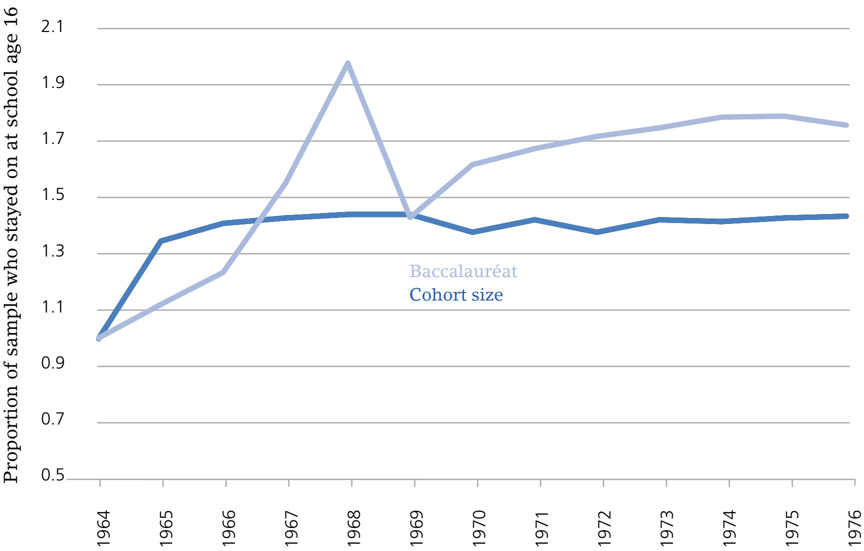
The famous '1968 events' coincided with the examination season and, in universities, exams became a central aspect of the bargaining process between students and the authorities. The rebellious students successfully bargained for 'light-touch' exams 'to avoid harming students who have spent a lot of time struggling for a better university'.

But it was not only university exams that were affected in 1968. That year, the baccalauréat exam – success at which guarantees entry to university – only involved oral tests. As a result, as Figure 1 shows, the pass rate increased enormously.

Our research finds that this lowering of thresholds at an early – and highly selective – stage of the higher education system enabled a significant proportion of students born between 1947 and 1950 (particularly those born in 1948 and 1949) to pursue more years of higher education that would otherwise have been possible.

This was followed by a significant increase in their subsequent wages and occupational attainment, particularly for students from a middle-class family background. What's more, because there is a relationship between parents'

Figure 1:
Trends in cohort size and the number of students passing the baccalauréat exam



Sources: The French Ministry of Education and the French Statistical Office.
The size of the cohort for year t corresponds to the number of people born at t minus 19 (19 is the median age of candidates). The two series are normalised to 1 in 1945.

educational achievement and that of their children, these returns were transmitted to the next generation.

These findings are of great relevance to the current debate in many countries about widening access to higher education. The 1968 events are an important example of a situation where lower thresholds at critical stages enabled those on the margin to go to university or pursue further years of higher education. The experience of 1968 suggests that enabling the 'marginal' person to enter higher education can result in high private returns in the labour market and, because this is transmitted to the next generation, may have a long-run effect on overall educational attainment.

We use 1968 as a 'natural experiment' to address key questions about the effects of education: what is its true causal impact on labour market outcomes like the jobs people end up doing and the wages they earn? And what is the causal relationship between the education of parents and that of their children?

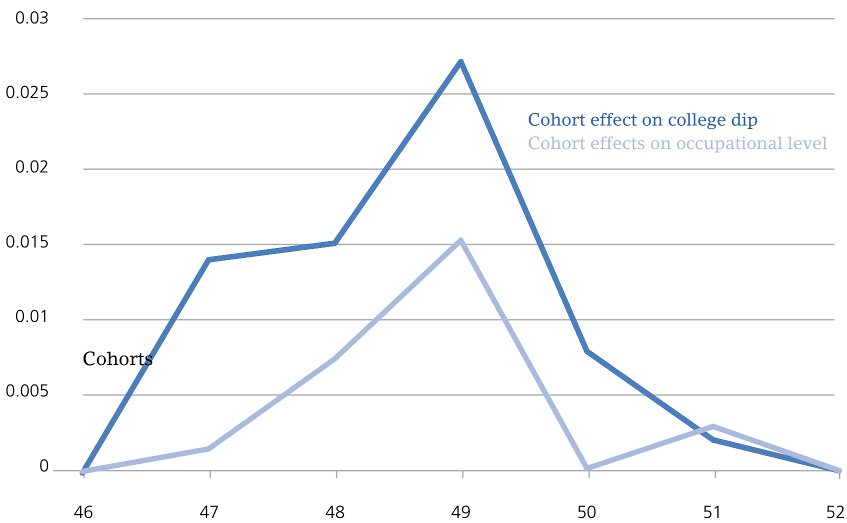
It is normally very difficult to identify the causal effects of education on subsequent outcomes. We estimate the returns to education using an approach that involves finding a variable that predicts years of higher education without otherwise influencing the outcome measure such as wages. In this context, we can use birth cohort as that variable and also the fact that within the most affected cohorts (1948 and 1949), there was a disproportionate effect on the education of middle-class students.

The essence of our results can be very simply illustrated using data from the French Labour Force Survey (l'Enquête Emploi) on men in their forties. Figure 2 shows the net effect of birth cohort on the probability of these men having at least a university diploma and of them being in an upper-level white-collar job. The pattern in the data shows a marked similarity for the two different effects and provides good prima facie evidence of the relationship between educational and labour market outcomes, with a pronounced upward shift for people born in 1949.

This 1949 cohort, the one whose education was most substantively affected by the 1968 events, comprised students taking the baccalauréat exam at the end of their secondary education. And within this group, middle-class students were much more likely to be affected. This is because people from a lower social background are more likely to leave education before taking the exam and people from a higher social background are more likely to pass the exam even without the advantage of easier exams.

Figure 2:

The net effects of birth cohort on the probability of having at least a university diploma and on the probability of being in an upper-level white-collar position



The returns to an extra year of higher education may be at least as large as to an extra year of compulsory schooling

We use these facts to estimate the relationship between wages and years of higher education using data for the 1949 birth cohort and two control groups that were much less likely to have been affected by the relaxation of exam standards in 1968, namely the 1946 and 1952 birth cohorts. Specifically, belonging to the 1949 birth cohort is used to predict years of higher education and thus reveal the true causal relationship between education and wages.

The results indicate that each additional year spent in higher education increases wages by about 14 percentage points and the probability of holding a high-status occupation by 10 percentage points. These are high estimates and suggest that the private returns to an additional year of higher education may be at least as large as to an additional year of compulsory schooling.

We can't say whether employers were rewarding the 'human capital' gains from additional years of higher education or the signalling value of these years (and the educational credentials). But we can say that enabling the marginal university entrant to gain years of higher education led to high private gains. In fact, we estimate that the effect on wages corresponds to a gain in permanent income which exceeds private costs (that is, forgone earnings) by a factor of 7 and which exceeds the social costs of one year of education by an even larger factor. (The annual cost of higher education in France is about £4,400 per student.)

We might hypothesise that a similar group could be affected in this way by policies designed to widen access to higher education – to the extent that this involves some lowering of thresholds and hence making the system less selective.

We use a similar approach to analyse whether the gain in education and earnings for the affected cohorts had an impact on the outcomes of their children. More generally, we use 1968 to address the important policy issue as to whether providing additional education to parents is transmitted to the next generation, thus breaking the cycle of low intergenerational mobility that occurs in many countries.

The outcome we consider corresponds to children's 'educational advancement' at the age of 15. This describes the difference between the actual grade of the adolescent concerned and the normal grade for his or her age group. France is one of several countries where grade repetition is an important phenomenon (most children repeat at least one grade at school). Grade repetition is strongly correlated with other measures of educational achievement, and international data show that children who repeat a grade are likely to obtain much lower scores in maths, reading or science at age 15.

The results show that the benefits accruing to fathers born in 1948 and 1949 were transmitted to the next generation in terms of educational advancement. The children of fathers who benefited from the relaxation of exam standards in 1968 were doing significantly better at school than the children of those born too early or too late to be affected in the same way (the 1946 or 1952 birth cohorts). We use these facts to estimate the causal relationship between fathers' education and their children's educational advancement, and the results suggest a strong positive relationship.

But it is unlikely that fathers' education was the only family resource affected by the 1968 events. Since similarly educated men and women are more likely to marry each other, the estimated impact of a father's years of higher education reflects both the direct effect of his resources and the indirect effect of his wife's resources on the educational performance of their children.

Our estimates indicate that the true causal impact of parental education on children's outcomes is considerably larger than is suggested by more descriptive analysis. Measures to improve family resources via parents' education are therefore an effective way to improve outcomes for the next generation.

Measures to improve family resources via parents' education are an effective way to improve outcomes for the next generation

Eric Maurin is research director at Paris-Jourdan Sciences Economiques and a research affiliate of the Centre for Economic Policy Research. **Sandra McNally** is a CEP research fellow and deputy director of the Centre for the Economics of Education (CEE).

More details on the research discussed here are in 'Vive la Révolution! Long Term Returns of 1968 to the Angry Students', CEE Discussion Paper No. 49 (http://cee.lse.ac.uk/cee%20dps/ceedp49.pdf). The study is also available in French: 'Vive la Révolution! Les Bénéfices de Long Terme de Mai 1968', La République des Idées, Paris (http://www.repid.com/IMG/pdf/doc-95.pdf).

How important is access to markets as a driver of economic prosperity? In new research **Stephen Redding** and **Daniel Sturm** address this question by analysing the post-war division of Germany and its impact on the border cities in the West suddenly cut off from their nearby trading partners.

Location, location, location

The division of Germany after World War II and the reunification of East and West Germany in 1990 can be thought of as a 'natural experiment' in which it is possible to assess the importance of market access for economic development. With the foundation of East and West Germany as separate states in 1949, West German cities close to the border went from being at the heart of an integrated Germany to being on the edge of the Western world. As a result, these cities experienced a disproportionate loss of market access, losing numerous nearby trading partners with whom they could previously interact at low cost.

Our research finds that following division, West German cities close to the new border experienced a marked decline in population growth relative to other West German cities. We estimate that over the 40-year period of division, there was a decline in their annual rate of population growth of 0.75 percentage points, which implies a cumulative reduction of about one third in the size of border cities relative to non-border cities.

The difference in population growth rates for the two groups of cities was not apparent prior to division but emerged immediately afterwards. And the effect was strongest in the 1950s and 1960s, declining over time. This is consistent with gradual adjustment to a new long-run distribution of population. We also find evidence to confirm that our results are capturing loss of market access rather than other potential explanations, such as systematic differences in city structure, destruction during World War II or the fear of further armed conflict.

Germany's post-war division

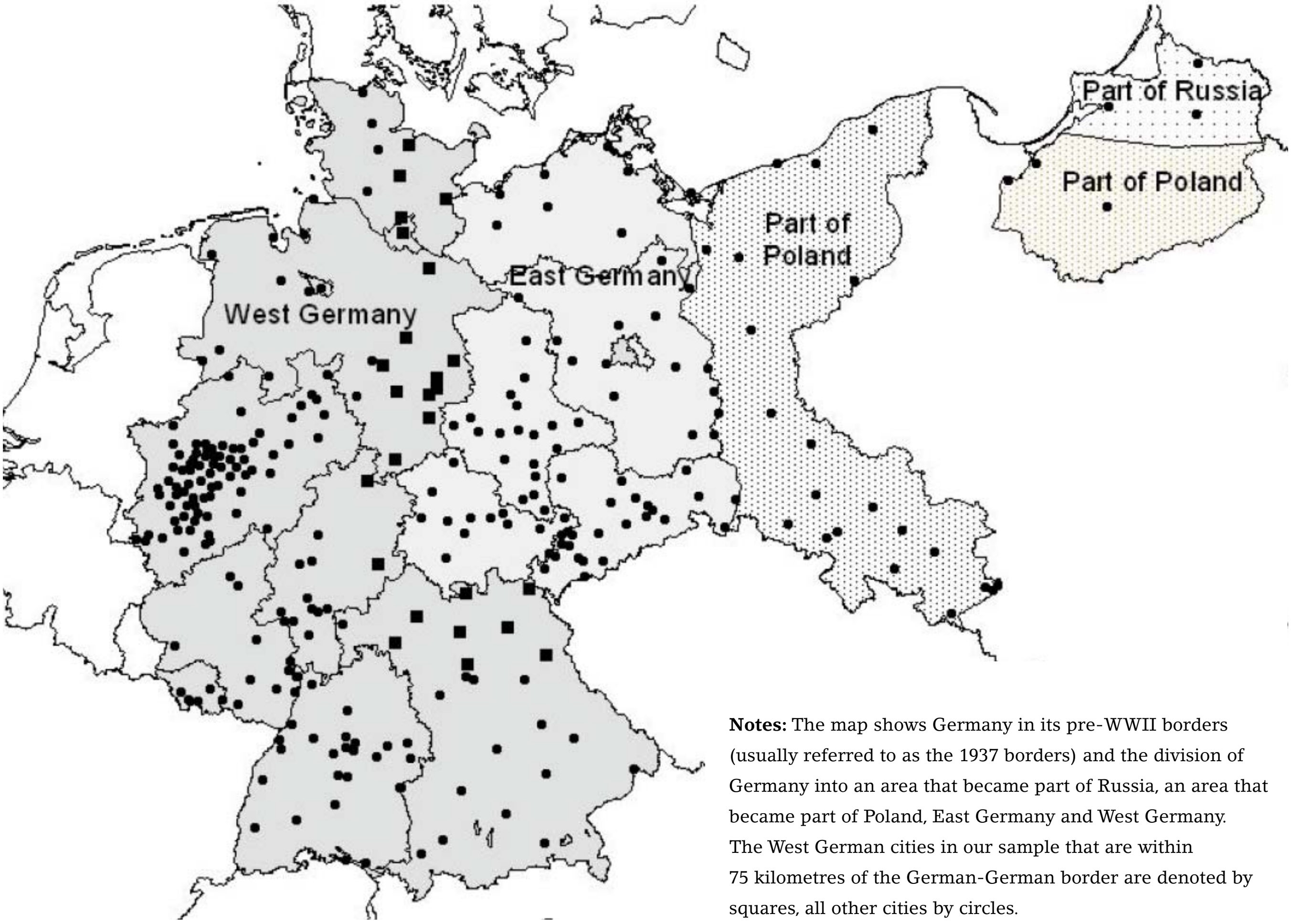
Following World War II, Germany's boundaries changed dramatically. Map 1 illustrates how the pre-war country was divided into four different parts: West and East Germany and two areas that became parts of Poland and Russia. West Germany made up roughly 53% of the pre-war area and just over 58% of the pre-war population of 69.3 million. East Germany comprised 23% of the area and 22% of the population. And the areas that became parts of Poland and Russia contained 24% of the area and 14% of the population. The remaining 6% of the population was in East and West Berlin.

The political process leading to the division of Germany took several unexpected turns. While various proposals to divide the country after its eventual defeat were discussed during the early phase of World War II, the United States and Russia backed off such plans towards the end of the war. Instead, the main planning effort was to organise the military occupation of Germany. Early on, it was decided that separate zones of occupation would be allocated to the American, British and Russian armies. The planning process for the zones began in spring 1943, negotiations continued during 1944 and the protocol formalising the zones was signed in London in September 1944.

The protocol divided Germany into zones of roughly equal population after excluding the areas expected to become parts of Poland and Russia. In line with the location of the advancing armies, the northern part of what would later become West Germany was to be occupied by British forces, the southern part was to be controlled by American forces, and the remaining eastern parts of the country were to be occupied by the Russian army. In addition, it was agreed that American, British and Russian forces would jointly occupy Berlin. The protocol was modified in 1945 to create a small French zone in the south-western corner of Germany, which was achieved by reducing the size of the American and British zones.

As tensions between the Western

Map 1:
Germany before World War II



Notes: The map shows Germany in its pre-WWII borders (usually referred to as the 1937 borders) and the division of Germany into an area that became part of Russia, an area that became part of Poland, East Germany and West Germany. The West German cities in our sample that are within 75 kilometres of the German-German border are denoted by squares, all other cities by circles.

allies and Russia increased with the onset of the cold war, the zones of occupation became the basis for the foundation of separate East and West German states in 1949. The territory of West Germany was the combined area of the American, British and French zones, and was extended to include the Saarland from 1957. East Germany was founded on the Russian zone.

While the two new countries maintained some politically motivated and largely symbolic economic co-operation, any local economic links between areas on either side of the border were entirely suppressed from 1949, when East Germany introduced central planning. From 1952, there were extensive border fortifications and the new border between East and West Germany became one of the most sealed and best guarded in the world. Limited transit between East and West Berlin remained possible until 1961, when the Berlin Wall was built.

The division of Germany was formalised in international treaties and was generally believed to be permanent. But growing dissatisfaction among East Germans about heavy restrictions on mobility, lack of personal freedom and the declining performance of the economy led to large-scale demonstrations in 1989, culminating in the fall of the Berlin Wall on 9 November 1989. East Germany rapidly disintegrated and only eleven months later, East and West Germany were formally reunified on 3 October 1990.

Following Germany's division, West German cities close to the border experienced a marked relative decline in population

New economic geography

Our research examines the implications of German divison and reunification using the analytical techniques of the 'new economic geography' (Fujita et al, 1999; Helpman, 1998). In these models, the location of economic activity and the distribution of population across cities are determined by the balance between 'agglomeration' and 'dispersion' – those forces that attract firms and workers to large markets and those that repel them from those markets.

Agglomeration forces arise from increasing returns to scale, transport costs and consumer preferences for variety. Firms like to concentrate production because of economies of scale, and they like to concentrate production close to large markets because of transport costs. Workers like to consume a variety of goods and, combined with transport costs, this means that they like to be near to where many firms produce.

Dispersion forces arise from the limited

Population in border cities actually fell between 1960 and 1980, while population in non-border cities continued to grow

Table 1:

The 20 West German 'border cities'

Those lying within 75 kilometres of the former border between East and West Germany

Bamberg	Hannover
Bayreuth	Hildesheim
Braunschweig	Hof
Celle	Kassel
Coburg	Kiel
Erlangen	Lübeck
Fulda	Lüneberg
Göttingen	Neumünster
Goslar	Schweinfurt
Hamburg	Würzberg

Figure 1:

Indices of border and non-border city populations

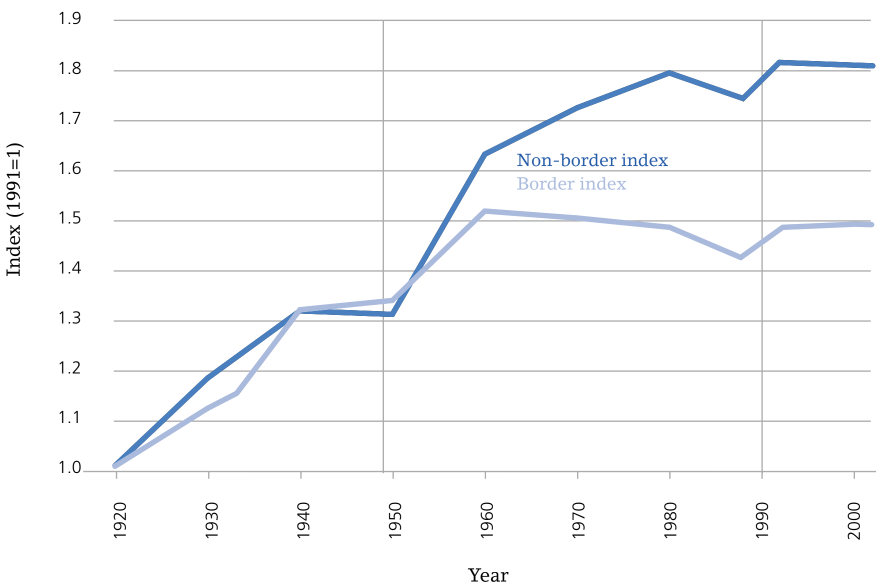
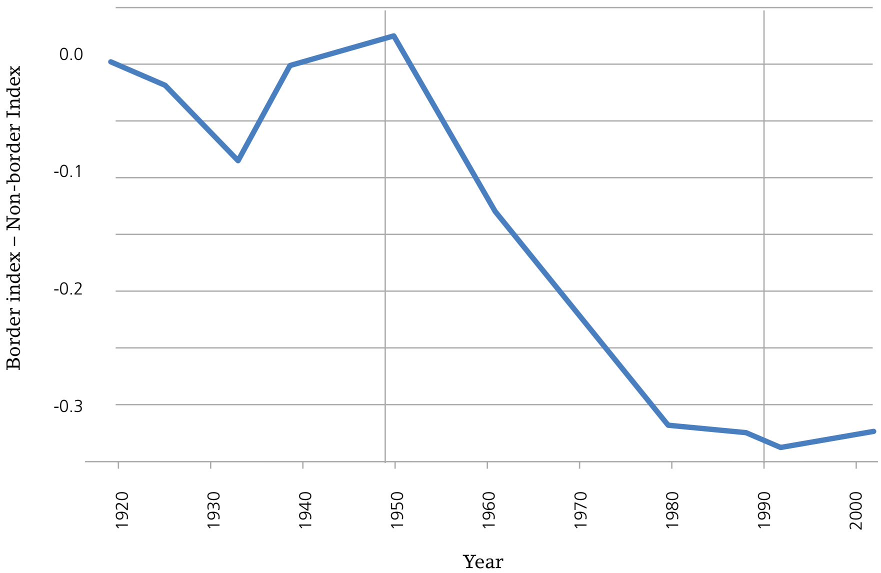


Figure 2:

Difference in population indices, border/non-border



supply of immobile resources like land and housing. As the size of a city grows, the prices of immobile resources increase, raising workers' cost of living. Workers are assumed to be geographically mobile and will relocate until the real wage is equalised across cities.

We use the model to simulate the division of Germany. The key prediction that emerges from the simulation is that West German cities close to the border should decline relative to other cities because they are disproportionately affected by the loss of access to markets and sources of supply on the other side of the border. Among the border cities, the decline in relative size is predicted to be greater for smaller cities, where their own markets are smaller and where access to economic activity elsewhere is correspondingly more important.

Changing populations of West German cities, 1919-2002

To examine whether the predictions of the economic geography model are confirmed, we examine data for the period 1919-2002 and measure the population changes in 119 West German cities that had more than 20,000 inhabitants in 1919. Pre-war populations are only available for the census years of 1919, 1925, 1933 and 1939. For the post-war period, we have data at 10-year intervals between 1950 and 1980 plus 1988 and 1992 (immediately before and after reunification) and 2002. Table 1 lists the 20 cities in our data that we classify as border cities, those located within 75 kilometres of the border. Our basic empirical strategy is to compare the population growth of these cities with the population growth of the remaining cities both before and after Germany was divided.

Figure 1 shows the changing city populations over time of the two groups as a whole. (For each group, population is expressed as an index relative to its 1919 value, and the two vertical lines indicate the year 1949 when the Federal Republic of Germany (West Germany) and the German Democratic Republic (East Germany) were established and the year 1990 when the two countries were reunited.) Figure 2 represents the difference between the two population indices, indicating the impact of division on the population of border cities relative to non-border cities.

Before World War II, the population growth of border and non-border cities was very similar, with the former growing slightly slower during the Great Depression of the early 1930s but recovering their trend growth rate by 1939. During World War II and its immediate aftermath, border cities experienced marginally higher population growth than non-border cities, probably due to migration from East Germany and the areas of pre-war Germany that became part of Poland and Russia.

This pattern changed sharply after 1949, when East and West Germany emerged as separate states with different economic systems and local economic links were severed. From this point, West German cities close to the new border experienced substantially lower rates of population growth than non-border cities. Population in the border cities actually fell between 1960 and 1980, whereas population in non-border cities continued to grow.

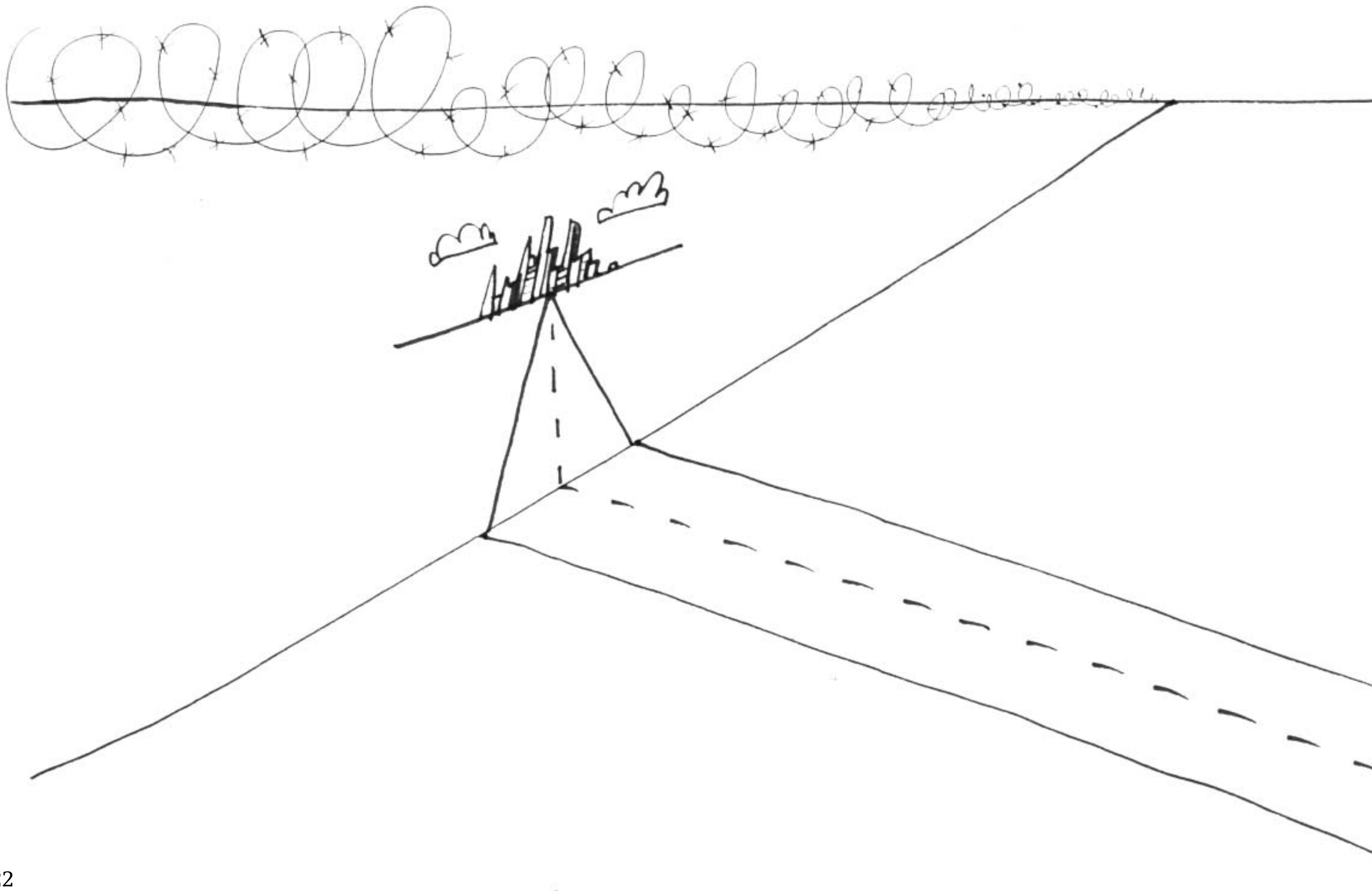
By the early 1980s, the discrepancy in rates of population growth was beginning to close, which is consistent with the idea that the negative effect of division on border cities had gradually worked itself out and the distribution of population in West Germany was approaching a new 'steady state'. But the slower decline of the border cities during the 1970s and 1980s may also be explained in part by the extensive regional policy programmes aimed at supporting the areas close to the border with East Germany, which grew substantially during this period. To the extent that these subsidy programmes were successful in promoting the development of the border regions, our estimates provide a lower bound to the negative effect of division on border cities.

Following reunification in 1990, there was a step-increase in city populations in West Germany, reflecting migration from the former East Germany. This migration raised population in non-border cities by somewhat more than in border cities. From 1992, population in the border cities grew somewhat faster than in non-border cities, which is consistent with the beginning of a recovery arising from improved market access after reunification.

Is market access the explanation?

The observed decline of the border cities is consistent with market access being an important determinant of regional property as predicted by the economic geography model. Furthermore, the results are hard to explain in terms of institutions or natural endowments, which are the two main competing explanations for

Over the 40 years of division, there was a cumulative reduction of one third in the size of border cities relative to non-border cities



variations in economic prosperity. Our sample of West German cities shared the same institutions and also had very similar natural endowments over time.

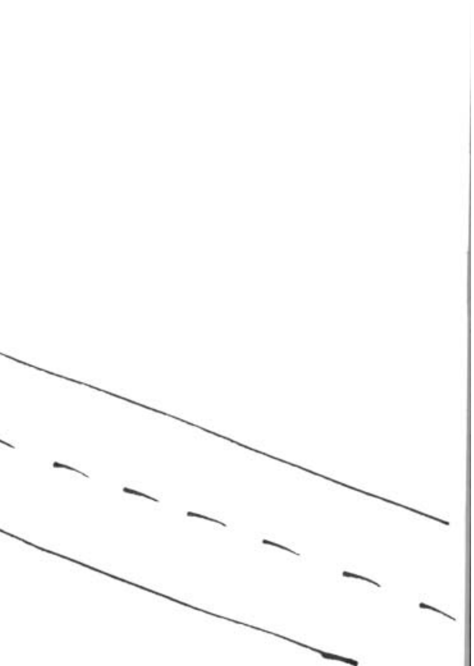
Nonetheless, there are other possible explanations for the results:

- First, cities close to the new border could have specialised in industries that experienced a secular decline in the post-war period.
- Second, the border cities could have suffered a disproportionate amount of war-related damage, which may have hindered their post-war development.
- Finally, people may have moved away from the border out of a belief that these cities would be particularly vulnerable in case of a new armed conflict in Western Europe.

We provide a number of additional pieces of evidence to show that the decline of the border cities is explained by their loss of market access and not by these alternative explanations:

- First, we use a measure of market potential – a widely used proxy for market access – to estimate the loss of market access due to the new border for each city in our dataset. The drop in market potential caused by the new border provides a complete explanation of the differential growth of the border cities.
- Second, as suggested by the new economic geography model, the decline of the border cities was not uniform. Smaller cities were disproportionately affected by the loss of hinterland.
- Third, those parts of the population that were no longer economically active reacted less to the imposition of the border than the economically active population.
- Finally, we establish that neither the degree of war-related destruction nor patterns of specialisation can explain the relative decline of the border cities.

Our research findings do not imply that institutions and natural endowments are irrelevant in determining economic development: the experience of East Germany during the period of division is itself an interesting case study demonstrating the relevance of institutions. The contribution of our work is to provide clear evidence for the importance of market access as a driver of economic prosperity.



Germany's experiences provide clear evidence for the importance of market access as a driver of economic prosperity

Smaller cities were disproportionately affected by being cut off from their nearby trading partners in East Germany

This article summarises 'The Costs of Remoteness: Evidence from German Division and Reunification' by Stephen Redding and Daniel Sturm, CEP Discussion Paper No. 688 (http://cep.lse.ac.uk/pubs/download/dp0688.pdf).

Stephen Redding is a senior lecturer in economics at LSE and a group leader in CEP's research programme on globalisation. **Daniel Sturm** is assistant professor at the University of Munich and an associate of CEP's globalisation programme.

Further reading

Masahisa Fujita, Paul Krugman and Anthony J Venables (1999), *The Spatial Economy: Cities, Regions and International Trade*, MIT Press.

Elhanan Helpman (1998), 'The Size of Regions', in David Pines, Efraim Sadka and Itzhak Zilcha (eds), *Topics in Public Economics*, Cambridge University Press.

Small remote economies like Anguilla and Vanuatu face huge competitive challenges, not least the higher costs of doing business. **L Alan Winters** and **Pedro Martins** measure the size of their cost disadvantages and explore potential solutions.

Small isn't beautiful: the cost disadvantages of small remote economies

The supposed problems of small remote economies have long occupied the economics profession. It is well established that smaller economies – those with populations of up to 4 million people, the size of Singapore – are less diversified and more vulnerable to shocks. And yet it has been hard to find evidence either that they grow less rapidly or that they have lower incomes per person.

But as the world economy becomes more integrated, small economies are starting to feel greater competitive pressure and to lose some of the advantages they had previously taken for granted, such as preferential trade access to the markets of rich countries. These concerns have been articulated in international trade negotiations and the creation of dedicated organisations like the World Bank and Commonwealth Secretariat's Small States Forum.

Our research addresses a key element of this debate: whether the costs of doing business are higher in smaller, more remote economies. If so, such economies may be unable to generate acceptable incomes for their residents – and the problem will be exacerbated if they lose their trade preferences.

The problem of smallness

The economist's stock answer to complaints about the costs of smallness is to argue that international trade allows a small economy to buy from the most efficient producers in the world and to reap at least some economies of scale by concentrating production in a very small number of sectors.

But when we add remoteness to the equation, this response is attenuated because, even setting aside the risks inherent in specialisation, trade is costly. Once the cost of transporting goods to and from a remote economy is taken into account (a small economy facing given world prices has to pay for transport both ways), incomes will necessarily be lower than in bigger and better-located economies. Moreover, the extra transport costs will typically be larger the smaller the economy since consignment sizes are smaller and infrastructure less developed. If transport is prohibitively expensive, the small economy's costs are inflated by the absence of economies of scale.

Figure 1 illustrates the problem. Imagine an industry in which a manufactured good produced in the average-sized (median) economy requires $20 of power, $40 of materials and $40 of labour, and sells on the world market for $100. If a small economy pays 50% extra for its power because it lacks scale and 50% extra for its materials because of transport costs, it only has $10 left over for labour. If labour productivity is the same as in the average economy, wages will a quarter of those in the average economy.

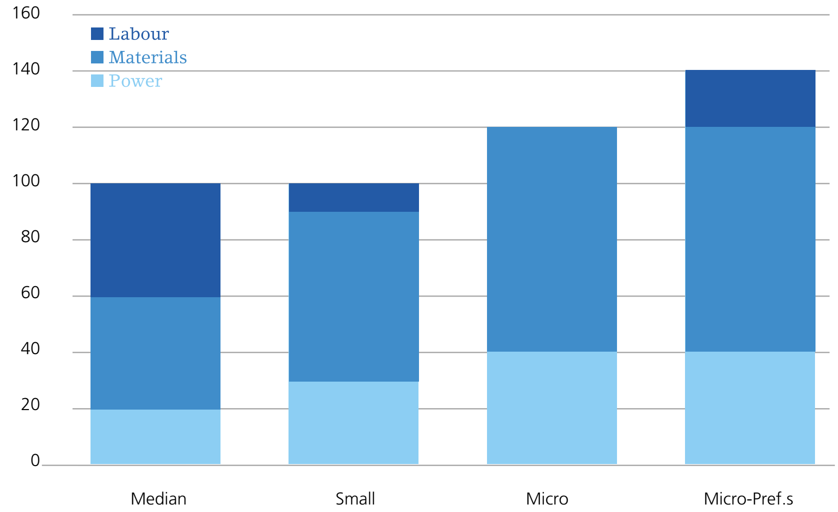
Now consider a 'micro economy' where power and materials cost twice their average economy levels: there is nothing left for labour. Even if wages were zero, this industry would still be unviable. What can be done?

Improving efficiency to reduce the value of inputs could solve the problem, but failing that, the small economy needs higher prices if it is to keep this industry. A niche market – a unique product with high demand – is one source, but more common is a trade preference. If there were a market that imported this good and levied a 40% tariff, its internal price would be $140. If it were to exempt the small economy from the tariff, the latter could earn $140 per unit on its exports and suddenly the industry is viable, albeit still with lower returns to labour.

The worry would then be what happens if improved efficiency elsewhere drives the world price down? Think of this as the emergence of China, perhaps. If

'Micro' and very small economies – with 200,000 inhabitants or fewer – face particularly tough challenges

Figure 1:
Excess costs cut incomes

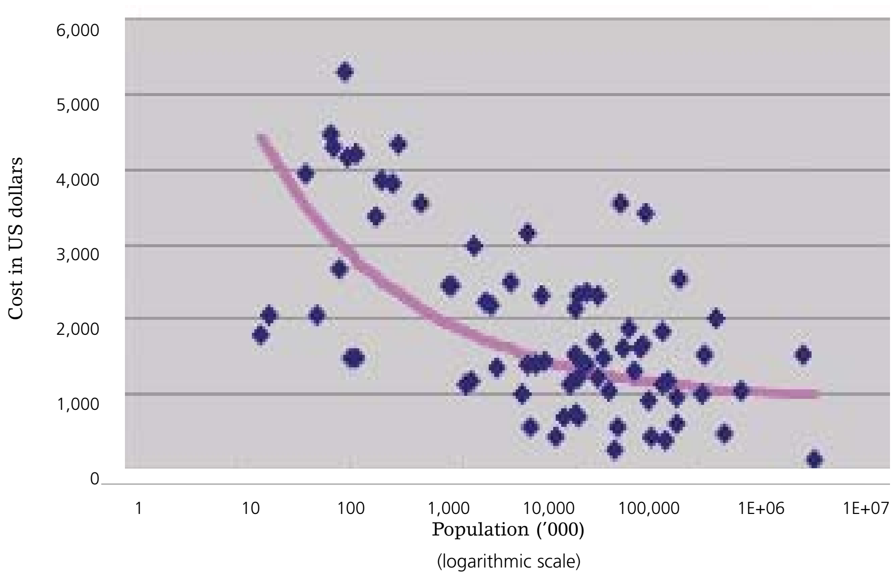


the world price fell to, say, $85, the 40% tariff would now yield a price of only $119 – below costs again. Or suppose the tariff fell in a round of trade liberalisation or other countries objected to the preference: the small economy would be back in trouble again. These are the shocks that loom for the world's small remote economies.

Cost disadvantages

We have assembled survey data on business costs for 92 economies from four sources: the Economist Intelligence Unit, which surveys 54 medium-sized and large countries; and Imani Capricorn, the Caribbean Community and the Pacific Islands Forum, which were commissioned by the Commonwealth Secretariat to

Figure 2:
Shipping costs 'from Yokohama'



survey small economies in their areas. The questions covered air and sea transport costs for exports and imports, the costs and reliability of utilities, the wages of different types of labour, taxes, rents, labour shortages and policy regimes.

Using these data, we can examine the relationships between country size and different cost components. Figure 2, for example, illustrates how the costs of sending a 20' full container from Yokohama to a country's capital fall as population size increases.

We can also calculate the predicted cost disadvantage for four specimen countries – chosen to represent micro (12,000 inhabitants), very small (200,000), 'threshold' (1.6 million) and small economies (4 million) – relative to the average country of roughly 10 million inhabitants. The population values for these representative countries correspond

Tourist industries on small tropical islands may be viable but they need to manage costs carefully to Anguilla, Vanuatu, Botswana, Singapore and Hungary, respectively.

Our calculations suggest that there are significant costs to small size in almost all areas. Table 1 summarises these estimates, indicating, for example, that there are very high cost disadvantages for seafreight and utilities and rather lower cost disadvantages for airfreight. And while small countries apparently have an advantage in rents, this is because rents reflect the value of land in commercial exploitation. The negative numbers reinforce the view that small economies are disadvantaged: it is obvious why a plot in Manhattan costs more than one in Vanuatu.

The next step is to aggregate these cost disadvantage factors into overall competitive disadvantages for small economies in three potential export industries: electronic assembly, clothing and tourism. Using data from nearly 60 countries on the structure of costs of supplying exports to the world market, we can bring the cost disadvantage factors together to calculate an index of the excess costs of exports from small economies.

For the two manufacturing sectors, the competitive disadvantage of 'Singapore' is around 2.7%, well within the likely range of data error and also easily coped with by good management. For a Botswana-sized economy, the excess is around 5%, again not a huge worry. But for the very small and micro economies, the size disadvantages of 14% and 36% respectively are huge. For tourism, in which personal air travel figures large in the cost structure, the disadvantages are larger but have the same pattern as in manufacturing.

If these cost disadvantages cannot be passed onto customers – if small economies have to sell their goods and services at world prices – then the only way that very small economies can export is if some input accepts lower payments than it would get in the average economy. Quantifying these 'penalties' requires an assumption about which inputs have unavoidably higher costs and which can be squeezed to accommodate the excess costs elsewhere.

Table 2 outlines the results of five exercises for the overall clothing sector. The top row shows the cost disadvantage factors, while the remaining rows report income penalties. The first assumes that only tradable material inputs and final outputs face excess costs and that all the rest of the economy can be squeezed to maintain competitiveness. Even here, the penalties are large for micro and very small economies.

The next row assumes that traded inputs, outputs and utilities have unavoidable cost excesses, and the third that all intermediate inputs including services do. In the latter, the burden falls

Table 2:
Cost disadvantages and income penalties in the clothing sector (percentage of average economy costs or incomes)

		Economy size			
		micro	**Very small**	**threshold**	**small**
Cost disadvantage factor		36.3	14.3	5.1	2.7
Income penalties					
Inputs assumed to have unavoidable cost disadvantages	Inputs bearing the costs of inefficiency				
Internationally traded intermediate inputs	All domestic supplies primary factors, services and non-traded intermediates	-40.1	-12.0	-3.1	-1.3
Traded intermediate inputs and utilities	Primary factors and services	-44.7	-14.0	-3.8	-1.6
All intermediate inputs including services	Primary factors	-86.0	-28.6	-8.4	-3.7
All intermediate inputs and labour	Capital	-263.9	-99.9	-34.0	-15.6
All intermediate inputs and capital	Labour	-161.0	-57.3	-18.4	-10.2

Table 1:
Summary of cost disadvantages
Percentage deviation of costs from those in the average economy

Area of cost*	**Micro**	**Very small**	**Threshold**	**Small**
Airfreight	31.8	4.1	-1.8	-1.7
Seafreight	219.6	70.5	20.5	9.1
Unskilled wages	60.1	31.6	13.6	6.6
Semi-skilled wages	22.4	12.1	5.3	2.6
Skilled wages	38.0	20.3	8.9	4.3
Telephone (marginal costs)	98.5	47.2	19.1	9.0
Electricity (marginal costs)	93.1	47.0	19.7	9.4
Water (marginal costs)	0	0	0	0
Fuel	53.8	28.3	12.3	5.9
Personal air travel	115.7	56.8	23.3	11.0
Land rent	-3.5	-17.2	-14.2	-8.9

*The figures cited are averages over several specific costs such as types of fuel or transport to different destinations

The sources of income necessary to keep small economies going are likely to be external

on value added and it is plain that there is almost no room for value added in micro economies.

The final two rows divide up value added. The data suggest that if capital were the only residual claimant (that is, excess wages are taken as given), then it would earn negative returns in micro economies and zero in very small ones. Similarly, if wages were the residual income recipient, then there would be nothing to pay them in a micro economy and they would be only 43% of average wages in very small economies. For a micro economy, this means that even if wages were zero, total costs in manufacturing would still exceed the world price.

Local solutions?

While circumstances vary, it is clear that micro and very small economies are likely to face huge competitive challenges. These economies will not be suitable locations for industry or even tourism unless they have very specific advantages that allow them to charge substantially higher prices than the average economy. For hotels and tourism, the attractions of small tropical islands are plausible and we do see viable tourist industries on them. Our results merely indicate that they will need to manage costs carefully and will never achieve mass market penetration.

But for manufacturing, the challenges look very tough unless countries are fortunate enough to find very specific niche markets. One common response is that since the costs of trade are so high, small countries need the right to protect their industries. This is completely misguided. The problem is not that imports can get in too easily but the very opposite. Adding barriers to trade will exacerbate not relieve the problems of smallness. Even where local industries could be successfully established behind tariff walls, there is nothing to suggest that such an approach would be economically beneficial. Pursuing comparative advantage maximises real income – though it might not be sufficient to provide an adequate standard of living.

A related response is to suggest subsidising business investment in order to overcome the cost disadvantages of smallness. There are many arguments for subsidising business in any economy. We do not accept most of them but even if we did, smallness adds nothing to them. If business should not be subsidised in a large economy, neither should it be in an equivalent small one. Smallness does not introduce distortions that need to be countervailed, but an overall feasibility constraint. If income is insufficient when it maximised, it will certainly be insufficient if is not maximised. And in the absence of the market failures usually adduced to justify subsidies, offering support to manufacturing means income is not being maximised.

Another approach is to economise on the costs of economic management or statehood by combining to provide various functions of government. We doubt whether such efficiencies are sufficient to overcome the disadvantages of smallness, but there is undoubtedly a case for seeking such efficiency gains. And in places where smallness doesn't seem to matter – Luxembourg, Liechtenstein, Andorra – the secret seems to be to integrate extremely closely with the neighbouring large countries.

But combining to produce government services does not mean establishing regional authorities and then maintaining local capacity to influence and monitor those authorities. It means a genuine pooling of sovereignty with no local shadowing – as, for example, Yorkshire and Lancashire (counties that are larger than many small economies) combine in England.

External sources of income

In the end, the sources of income necessary to keep some small economies going are likely to be external. Several already exist and account for the relatively high incomes that many small economies currently maintain. Trade preferences allow them to earn higher prices for exports, as do niche markets like high-end tourism. High remittances from expatriates support some economies: Tonga, for example, where 41% of income comes from remittances. Aid supports others: the Marshall Islands, for example, with aid flows of $1,178 per person in 2002. The policy issue is that some of these sources are under threat and not all very small economies seem likely to find niche markets.

The most favourable case for using a one-off capital transfer as a solution is probably building communications links. If these are of good quality and inexpensive, services relying on electronic interchange may become competitive. But even if exports avoid transport costs, imports do not (and ships and planes have to return home). And even in 'electronic services', personal contacts are important so small remote economies will still be disadvantaged by their high travel costs and long travel times.

Another possibility would be for rich countries to subsidise small economy industries. Unlike where small economies fund their own subsidies, this could be attractive. But the idea raises very particular political challenges. Many of the cost disadvantages of smallness apply equally to insular or isolated parts of larger countries. These disadvantaged regions are often subsidised via regional policies, but if small economies were permitted to have export subsidies, it needs to be explained why parts of larger economies should not. The reason is not hard to formulate, but it may be uncomfortable: within a country, people can move out of uneconomic locations.

Migration opportunities

Ultimately, we must face the possibility that if small countries' current trade preferences are eroded and their incomes are not somehow maintained in other ways, many of their inhabitants will seek to work abroad. Liberalising the temporary movement of labour within the world economy promises huge economic gains. This could be a key factor for very small economies, essentially allowing residents to earn abroad but live and consume mostly at home.

Temporary workers from small countries would still be at a disadvantage relative to those from larger ones: they would face higher transport costs, smaller networks for finding jobs and easing migratory strains, and higher consumption costs at home. But especially if they had preferential access – like the guaranteed quotas that New Zealand offers Polynesia – the benefits could outweigh the disadvantages.

The alternative to temporary mobility would be permanent migration. In the current political climate, this seems to combine the worst fears of both sides: of depopulation, and maybe eventual cultural extinction, in the very small economies; and of immigration in most developed countries. But the latter fear is not well-founded since the magnitudes are so small.

Whether we are talking about transfers or flows of people, it is perfectly feasible for the rich countries to accommodate the micro or very small economies. For example, only around 3.1 million people (0.05% of the world's population) live in countries of below 200,000 population, 6.3 million in those below 400,000 and 16.4 million in those below 1 million population. These are not insurmountable numbers by any yardstick.

Where smallness doesn't seem to matter, the secret is to integrate extremely closely with neighbouring large countries

If small countries' income sources are not maintained, many of their inhabitants may seek to work abroad

This article summarises 'When Comparative Advantage is Not Enough: Business Costs in Small Remote Economies' by L Alan Winters and Pedro Martins, *World Trade Review 3*(3). The same issue contains a comment by CEP's Anthony J Venables. Further discussion of the data is in 'Beautiful but Costly: Business Costs in Small Remote Economies', Economic Paper 67, Commonwealth Secretariat, and of the policy issues is in 'Policy Challenges for Small Economies in a Globalising World' by L Alan Winters, mimeo, Development Research Group, The World Bank.

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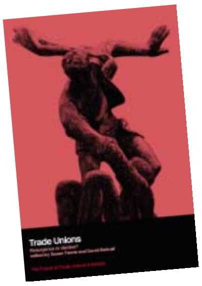

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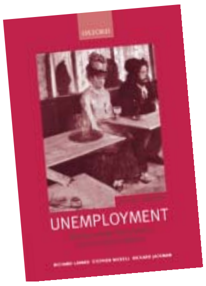

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THE QUEEN'S ANNIVERSARY PRIZES
FOR HIGHER AND FURTHER EDUCATION
2002

Volume 10 Issue 2
(ISSN 1362-3761)

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