

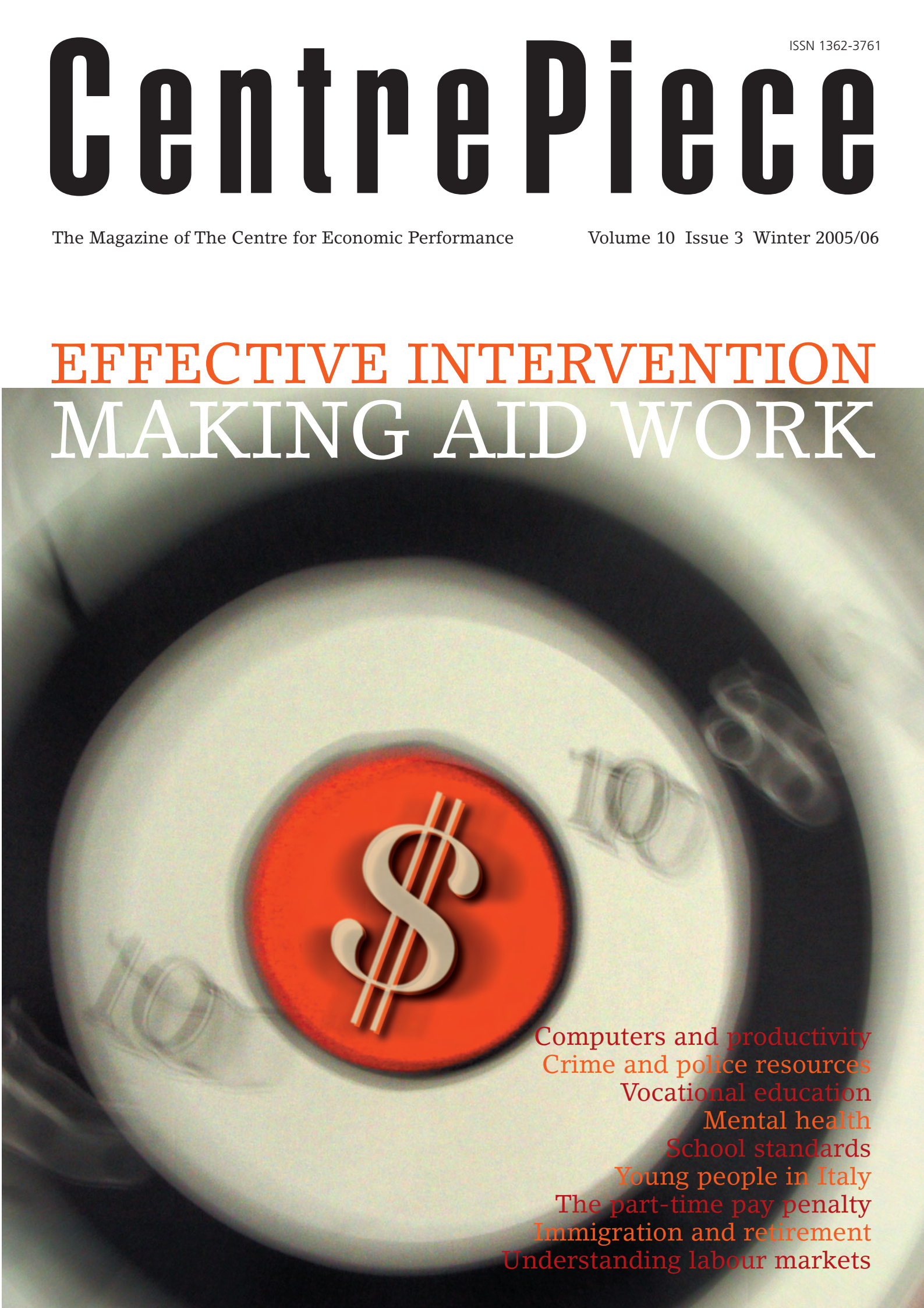
Centre Piece

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EFFECTIVE INTERVENTION MAKING AID WORK



Computers and productivity
Crime and police resources
Vocational education
Mental health
School standards
Young people in Italy
The part-time pay penalty
Immigration and retirement
Understanding labour markets

CentrePiece

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



Editorial

Despite years of spending in the name of 'development', the persistence of deep and widespread poverty in the vast majority of developing countries is far more striking than the handful of success stories. This has not stopped governments around the world making a series of bold commitments in the past few years – not just to the idea of reducing poverty but to its wholesale eradication.

Such initiatives as the United Nations' Millennium Development Goals, the Prime Minister's Commission for Africa and various campaigns to cancel poor countries' debt and 'make poverty history' indicate a growing sense of urgency about tackling this most challenging of global policy problems. Last year saw a string of summits devoted to development, culminating in the World Trade Organisation's ministerial conference in December, which sought to conclude the so-called 'Doha Development Agenda'.

So can today's renewed spirit of optimism in our ability to do something about world poverty be sustained by some tangible achievements? A decade ago, Peter Boone, the author of the lead article in this issue of *CentrePiece*, did pioneering work that revealed the failure of large aid flows either to raise growth or reduce poverty. In the hope that things will be different this time, he urges a far more scientific approach to aid projects, with returns estimated in advance and their effectiveness carefully monitored.

CEP researchers Tony Venables and Alan Winters have featured in another debate central to development – the impact of trade liberalisation on economic performance – which has been rumbling through the letters pages of the *Financial Times*. As a contribution to more informed discussion of the subject, some of the key articles have now been made available on the Royal Economic Society's website: <http://www.res.org.uk/tradeliberalisation>.

And following the success of our background briefings to debates in the UK General Election campaign, we have launched a series of Policy Analyses with a broader international focus. The first two, published on our website (<http://cep.lse.ac.uk>) in December, provided research evidence to inform discussion of the European Union's budget and the Doha Round, both of which centred on arguments about agricultural protection, another big challenge for development.

Elsewhere in this magazine are new findings from other core elements of our research agenda – productivity, education and the labour market – plus work on crime and police resources and on mental illness. As always, your comments on any of these reports would be very welcome.

Romesh Vaitilingam
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Understanding labour markets

Chris Pissarides has been honoured for his pioneering work on unemployment and job flows

Despite the many failures of the past, foreign aid is once again seen as a way to 'make poverty history'. **Peter Boone** argues that to have a real impact on extreme poverty, aid needs to be much more carefully targeted, allocated on the basis of good scientific evidence of its effectiveness and delivered through well-designed institutions.



Effective intervention: making aid work

Large foreign aid flows are making a comeback. In the past year, the members of the G-8 have promised to increase aid by \$50 billion annually by 2010, the European Union has promised to raise aid to 0.7% of GDP by 2015, while Live8, Tony Blair's Commission for Africa and Bill Clinton's Global Initiative have brought greater public awareness to the pressing problem of extreme poverty.

Jeffrey Sachs' book, *The End of Poverty*, is a brutally compelling document outlining the case for more funds. The situation he describes is dire: over 8,000 people die daily from AIDS having never received adequate antiretroviral therapies; and a further 27,000 children die each day from preventable infectious diseases and birthing problems. While in most parts of the world, extreme poverty is on the decline, in sub-Saharan Africa, the number of extremely poor has doubled, to 300 million, in the last 20 years. Sachs' book focuses on the need for much larger funding to end this 'poverty trap', calling for an increase of funding from \$65 billion now to \$135 billion in 2006.

Will more aid work?

Sachs is making an enormous contribution to the goal of poverty reduction by outlining poverty's terrible human impact. Indeed, given the scale of the problem and the relatively small effort that western countries make to help solve it, it seems cruel, bordering on immoral, to question whether more aid will work.

But critical analysis combined with action is essential to make sure we really do solve the problem. Unfortunately for Sachs, there is one very large problem with his plan: the history of large aid flows is, to date, a major failure.

In research I completed with CEP colleagues over a decade ago, we examined the relative performance of 96 countries to see whether increased aid flows led to higher growth or more rapid improvement in health indicators such as child mortality. The answer was clear: between 1970 and 1993, countries that received large aid flows fared no better than countries that received small aid flows either in terms of growth or measures of extreme poverty such as child mortality.

Subsequent research with more recent data has confirmed this finding. For example, in well-publicised studies, Craig

Burnside and David Dollar at the World Bank used the same data I used to modify the argument. After dividing countries into categories according to quality of economic policies, they concluded that countries with 'good economic policies' did benefit from aid though for most countries, the benefit was small.

This research was used by the World Bank to justify more targeted aid. But the conclusions were later shown to be a statistical fluke. When William Easterly and others extended the dataset by an additional five years, Burnside and Dollar's results disappeared, with the conclusion again being that cross-country data suggest larger aid flows don't raise growth or improve health, better economic policies notwithstanding.

Focusing aid on what works

The aid successes with which we are all familiar – the eradication of smallpox, vaccination programmes, antibiotics and emergency disaster aid to relieve famines – are important, but they've never been part of a case for large aid flows.

Indeed, these policies are cheap to implement and make up a small portion of all aid flows. In 2004, 4% of bilateral aid went to health, 12% to education and

The history of large aid flows is, to date, a major failure

6% to emergencies. The largest category is 'economic infrastructure', which receives 23% of total funds. The remaining aid is divided among a large number of small projects including civil society, trade promotion and administration.

In my view, the failures from the past are too often glossed over by aid advocates. Careful after-the-fact evaluations of aid projects by donors are rare, and when they are done, they are usually flawed by the standards of scientific analysis. This reluctance to make careful assessments may actually be counterproductive.

Sachs criticises former US Treasury Secretary Paul O'Neill for stating: 'We've spent trillions of dollars on these programs and we have damn near nothing to show for it.' In a recent survey, the UK public appeared to side with O'Neill: 83% of respondents thought aid would be wasted by recipient governments. But as the favourable public reaction to Live8 seems to show, the problem is not that the many critics don't believe in the moral agenda: rather they don't believe we've found a means to solve that agenda through large aid flows.

I've recently helped found an organisation, Effective Intervention, which sponsors programmes in Africa and Asia aimed at reducing extreme poverty. We've spent the last year examining alternative sectors and projects to decide where interventions can be most effective. We are presently helping design several projects in India and Africa that target large, inexpensive improvements in child health. We hope this research will contribute to a better understanding of how to reduce extreme poverty cheaply, and potentially improve allocation of aid budgets.

Reducing child mortality

Let's start by looking at what really can be achieved, and without too much money. Figure 1 illustrates the percentage of children that die before the age of 5 in low- and middle-income countries. In Niger, Malawi and Ethiopia, more than 10% of children die before the age of 5. This contrasts with Cuba and Sri Lanka, where fewer than 2% die.

Figure 2 shows child mortality rates across states in India and makes a similar point. Despite having the same national political and legal system, and similar

Figure 1: Comparing child mortality rates (deaths per 1,000 children aged 0 to 5) with incomes across countries

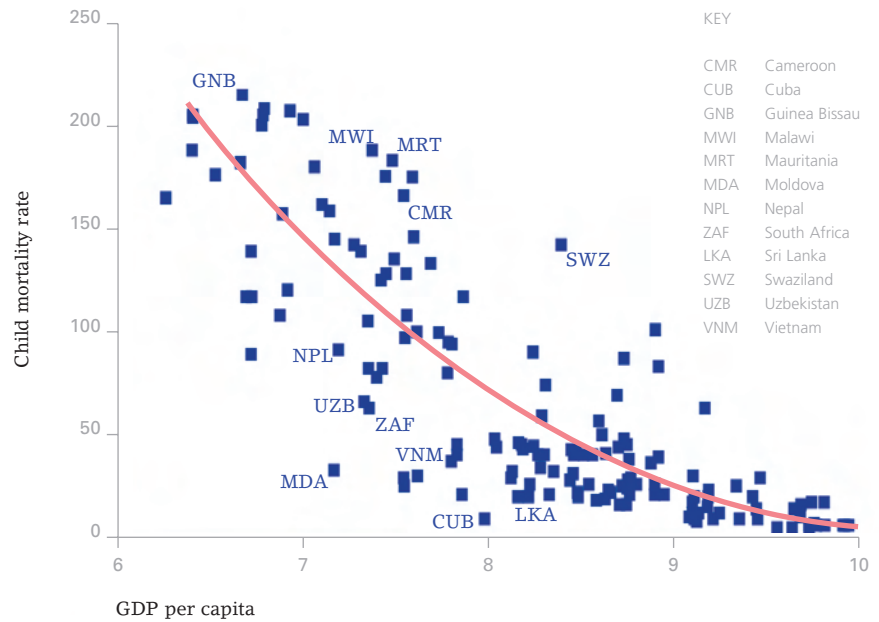
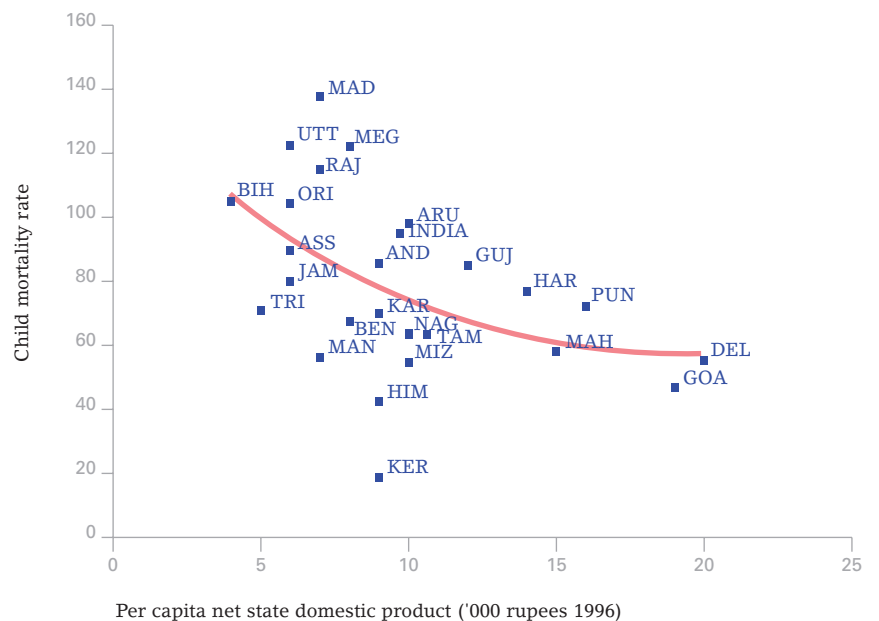


Figure 2: Comparing child mortality rates (deaths per 1,000 children aged 0 to 5) with incomes across states in India



Donors have never adopted the scientific discipline needed to measure carefully how well their projects work

levels of income across states, there are striking differences in child mortality. The state of Rajasthan has child mortality rates similar to the poorest sub-Saharan African countries, while Kerala has achieved levels that are not far from Western Europe.

The success of Kerala, Cuba, Sri Lanka, Costa Rica and many socialist countries is even more striking because it has been achieved in very different political and economic systems. The Cuban health system benefited from a socialist revolution that was instigated by paediatricians. They built a state-funded health system largely from scratch. The success in Kerala is more complex, but today is based on a private healthcare system. Roughly three-quarters of medical care in Kerala comes from the private sector. In all these cases, the total healthcare spending of these states is roughly equal to the average for low-income countries. Good healthcare can be cheap.

I have no doubt that we can fairly rapidly achieve the success of Kerala in other regions of India and in sub-Saharan Africa. The Bellagio Child Survival Papers, a series of reports by leading global medical and healthcare experts published in *The Lancet*, concluded that 70% of child mortality in low-income countries could be eliminated through universal access to 23 basic health interventions and treatments. The measures these studies specified are not expensive, but they require enormous institutional change in many countries. The conclusions are not surprising once the cause of death is understood: nearly all child deaths in low-income countries are from treatable causes, such as diarrhoea, pneumonia and infections acquired during birth.

At Effective Intervention, our furthest advanced programme is in tribal regions of Andhra Pradesh in India. In this extremely poor region, 6% of children die before they reach one month of age. Roughly 70% of these deaths are attributed to infections (mostly due to unclean procedures used when cutting the umbilical cord and subsequent care of the belly button) and poor procedures at delivery that lead to birth asphyxiation.

Together with the Naandi Foundation and colleagues at the London School of Hygiene and Tropical Medicine, we are planning a multi-year trial that aims to reduce neonatal mortality by 50%. The programme focuses on improving

Large-scale reductions in child mortality rates can be achieved at relatively low cost



antenatal care services, and raising education for village health workers and mothers. Since most neonatal deaths are caused by simple problems related to hygiene and delivery, there is good reason to believe that better education and techniques will go a long way to reducing mortality rates.

We've designed the intervention on the model of a pharmaceutical drug trial that would meet the highest standards of credibility set by the US Food and Drug Administration and comparable European regulators. We'll implement the programme in a region with a population of roughly 300,000, randomising villages and including a control group that initially receives no interventions.

Once our project has achieved a large reduction in neonatal mortality in the intervention area, as assessed by an independent data monitoring committee, we will then expand it to cover the control region. In this manner, we will be able to measure our success carefully. If we can't achieve a large mortality reduction relative to the region where implementation is delayed, there's little purpose in expanding it. If we can achieve it, we can make a case

for expanding the programme in similar regions elsewhere in India.

What does all this cost? The surprising answer is very little. The recurring costs of the project will be around \$80,000 a year. We could expand such a programme to all of Africa for under \$500 million a year. Of course we need to prove such a programme could work in different regions, and it would have to be modified, but the point is that large-scale reduction in child mortality can be achieved. Costs are not the issue: the much bigger problem is designing projects with specified, verifiable results, and creating the institutional structures to achieve such results.

The murky side of water infrastructure

So what's going wrong? If there are cheap means to reduce extreme poverty by addressing neonatal deaths and child mortality, why are we not focusing on those? Part of the problem is that the donor agencies have not adequately attempted to allocate aid where we know it works, and to complicate matters, they have never adopted the scientific discipline needed to measure carefully how well their projects work.

One of the first areas we looked into at Effective Intervention was investing in water infrastructure. This includes drilling wells, providing pumps and possibly pipes, so that households can have improved water sources. The potential benefits seem large: infectious diseases cause the bulk of child mortality in extremely poor regions, and these diseases can be prevented through better hygiene.

Water infrastructure varies sharply throughout India, and there are good data from national health surveys on household disease and mortality. So in regions with improved water quality (after controlling for incomes and education), do we see a

large reduction in child deaths or infectious disease? Based on surveys of 90,000 households across India, we've found that access to improved water supply has very little impact on the incidence of disease: you get sick as often whether you have improved water supplies or not.

The reason water supply fails to reduce the incidence of disease probably relates to multiple causes, including failure to service infrastructure properly, and contamination in storage containers at home, but also to the importance of hygiene. A systematic review by Val Curtis and Sandy Cairncross concludes that



Simple hygiene like washing hands with soap is more important than water infrastructure in reducing disease

washing hands with soap (and presumably hygiene in general) is more important than infrastructure at reducing morbidity. You can wash your hands with dirty water, but as long as you use soap, you will avoid much disease – and it is much less costly. It seems that clean water is not necessary to reduce disease substantially.

Despite the weak evidence linking water infrastructure to mortality and disease, there are large projects in progress and being planned. For example, in Uganda, a US consulting firm estimated the country needed \$2 billion in aid to modernise its water infrastructure. It may be easier to build a water system than to build sustainable rural healthcare and related education, but the evidence indicates it would not be wiser.

Getting aid to the right projects

The difficulty with water infrastructure highlights a key problem with aid programmes. To do them well, we need to be far more rigorous in deciding where to allocate money, and also ensuring that results are achieved. This requires a scientific approach to projects: we need to estimate returns in advance, monitor outcomes and design our projects so that we learn as we go.

The Millennium Challenge Corporation (MCC) is a good example of an attempt to allocate aid better. The MCC selects countries that have good records on 'ruling

justly, encouraging economic freedom, and investing in people' using independent rankings derived from 16 indicators. They offer the selected countries large grants to finance programmes that are 'transformational'. The programmes are selected by the national government, but they must be based on a nationwide consultative process. Each individual project needs to demonstrate that it will generate large positive economic returns before it can be agreed.

The actual proposals by each country are readily available on the MCC website (<http://www.mca.gov>) and make interesting reading. The bulk of the projects are for infrastructure and generally in areas where it is hard to assess the benefits. But the MCC is making a valiant effort to measure potential returns rigorously, and then monitor implementation and outcomes. They have rejected many projects because, after careful analysis, they found them to be uneconomical. This is a big step forward.

One weakness of the MCC is that they only provide funds to a select group of countries: the extremely poor live in many countries that do not satisfy MCC criteria.

What's more, the organisation limits funds to five-year allocations, so, for example, long-term projects aimed at improving healthcare and education could not be funded beyond five years. To solve the problem of the extremely poor, we need to select effective projects, and target funds to reach them also.

Ensuring it is the poor who benefit

Sachs' book is more concerned with total spending than the allocation of spending across sectors, and there is not much on how to ensure that the poor directly benefit. But one of his most contentious comments is that 'development economics is like eighteenth century medicine, when doctors used leeches to draw blood from their patients, often killing them in the process,' meaning that, in their crusade against profligacy, the IMF and the World Bank advise poor countries to raise taxes and cut spending, thus actually bleeding those countries of the funds they need to fight poverty.

Sachs' solution is to change the aid allocation process radically: national governments should design multi-sector programmes that aim to reduce extreme poverty, the United Nations should coordinate donors, and multilateral and bilateral agencies should find as much funds as needed to back all worthy programmes. To buttress his arguments, he mentions five poverty reduction programmes completed by Ethiopia, Ghana, Kenya, Senegal and Uganda, which he believes are of high quality and demonstrate how a revamped aid allocation system could work.

I took a close look at Ethiopia's three-year Sustainable Development and Poverty Reduction Programme published in 2002. Ethiopia is one of the poorest countries in the world. Roughly 10% of children die before one year of age, and only 30% of the rural population is literate. The country suffers a major AIDS epidemic. Their programme is described in 225 pages, including significant sections on AIDS, schooling and child health and a plan for very large spending on agriculture. There are also a few specific targets but these are goals rather than well-defined endpoints linked to projects. Despite the broad nature, a careful read raises questions as to whether this sufficiently addresses our goal of reducing extreme poverty.

In the document, Ethiopia's fiscal programme specifies how expenditures will be allocated. In 2005, already three years into the planned programme, the government expects to raise 22% of GDP in revenues, but spend 33% of GDP, leaving a budget deficit of 11% of GDP to be financed mostly by external debt and grants.

Of this spending, 3.8% of GDP is allocated to education and 1.1% to health. The GDP of the country is \$8 billion, so roughly \$90m goes to health or a little over \$1 per capita. While the document claims that the priorities and goals of the programmes were the result of widespread grassroots discussion and meetings, I find it hard to believe that the extremely poor had much say in the process. In a country with one of the highest child mortality rates in the world and a major AIDS epidemic, can we really believe the population is satisfied to have one of the lowest health budgets (in absolute terms and as a percentage of national expenditures) in the world?

This raises one of the most difficult issues in aid allocation: given the nature of national elites and the ambitions of the nation-state, it is unlikely that poverty reduction will trump other priorities anywhere, even in desperately poor countries. When giving aid, we need to recognise that we are actually setting different goals from those of the recipient's political system, so working through a national development plan designed by the central government may simply be the wrong way to start.

Targeting aid to reach people in extreme poverty

The Global Fund to fight AIDS, malaria and tuberculosis, which Sachs deserves credit for helping create, is a good example. The Fund finances AIDS prevention and antiretroviral therapies in recipient countries. To be eligible for funding, recipients need to come up with a credible programme agreed in a broad cross-section of the country. The implementation is monitored carefully, and the Fund has teeth: work in Uganda and Burma was suspended recently when it looked like local administrations were preventing success.

The advantage of the Fund structure is that it takes some of the politics out of aid allocation: recipients know there is money

available for a specific project that alleviates extreme poverty, and the donor agency has a clear guideline as to what should be achieved. There is a good scientific basis for believing that AIDS prevention strategies are cost effective and highly important for reducing extreme poverty. It seems this model, which can be applied to all countries, provides a good blueprint for more expanded targeting of aid.

While Sachs criticises the existing development economics paradigm practised by aid agencies, he could easily have extended the criticism to the broad array of untested projects that we currently implement as aid. While programmes have improved in recent years, we still have far to go if we are truly to target funds to the problems we believe they can best address.

I've argued that we need to revamp our aid allocation process if we are to achieve our goal to reduce extreme poverty. Specifically, we should allocate far more aid to areas where we have good scientific evidence that it works, and we should do this through well-designed institutions like the MCC and the Global Fund, which have a mandate to measure and monitor outcomes carefully. We also need to take much more care to evaluate and monitor the impact of large infrastructure projects, such as roads, water supply and electricity, given their poor track record and relatively high costs.

Through such mechanisms, we could dramatically improve child health and related education, along with greatly reducing the burden of AIDS. But we need to focus this aid where it is needed. Africa has seen major improvements in child healthcare, literacy and education over the last 20 years, and most African countries are richer than they ever have been. The continent is now the fastest growing market in the world for mobile telephones, and it looks set to benefit from a long-term recovery in commodity prices, along with demand for West African offshore oil, as India and China grow.

The problem is not that Africa will be mired in poverty without aid, but rather that there is a large population of extremely poor households who are being left behind. This makes it all the more imperative that we target aid at these groups, and make sure it works.

Peter Boone is a research associate in CEP's globalisation programme and the chair of Effective Intervention (<http://www.effint.org>).

Further reading

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It's taken a long time to confirm that computers boost productivity. But as **Nick Bloom**, **Raffaella Sadun** and **John Van Reenen** show, the key to their success seems to lie in management – and that's where US firms have been far more effective than their European counterparts.

It ain't what you do, it's the way that you do I.T.

What has been the impact of information and communication technologies (ICT) on productivity? This has been a burning question for policy-makers and business leaders for several decades. But it is only in recent years that computer power itself has enabled researchers to conduct the statistical interrogation of large-scale datasets on firms that can give us some more definitive answers. In this article, we report and synthesise some of the main messages emerging from this new line of research.

Perhaps the most intriguing finding comes from examining the use of ICT by global businesses. Multinational enterprises in general and US multinationals in particular appear to have higher productivity, and this seems to be linked to a distinct pattern in their use of ICT.

This fact may help unravel some of the puzzles in the macroeconomic data such as why the productivity acceleration witnessed in the United States since the mid-1990s has not been reflected in Europe. It may be that US firms have organised their management structures in a way that makes better use of ICT than their European counterparts.

We first set the historical scene over the last few decades, paying particular attention to the end of the paradox described by Nobel Laureate Robert Solow whereby computers were ubiquitous but seemed to have no effect on productivity. Then we discuss firm-level evidence on the impact of ICT on firm performance, focusing on the role of the organisational factors that make the difference between ICT projects being a success and failure. Finally, we delve into new research on the impact of ICT in multinationals.

The bottom line is that economists have confirmed what business leaders have long known: the returns to ICT are extremely variable and what makes the key difference is the management and organisation of the firm into which the ICT is placed.

The macro picture: Solow paradox lost?

Labour productivity – or output per hour worked – is the key indicator of material wellbeing as it allows sustainable income and consumption growth (which can be in the private sector or the public sector). Over the last 60 years, roughly three periods can be distinguished.

The first one, starting after the Second World War, was a period of strong

productivity growth in the developed world, interrupted in the mid-1970s after the first oil shock. Despite this slowdown in productivity growth, between the mid-1970s and the mid-1990s, Europe continued to catch up with US productivity levels and some countries even overtook the United States. This was the era of the 'Solow paradox': the observation that we could see computers everywhere except in the disappointing productivity statistics.

Since the mid-1990s, a new picture has emerged. The US economy experienced a rebound in productivity growth almost back to the levels seen between 1945 and 1973. Productivity growth continued to surge ahead even in the face of the bursting of the high-tech bubble in 2000 and the terrorist attacks of 9/11. By contrast, European countries did not have a productivity acceleration and the long catching-up process ground to a halt.

ICT matters for understanding the US 'productivity miracle'. Imagine we split the economy into three sectors: industries that intensively produce ICT (such as semi-conductors and computing); sectors that intensively use ICT (such as retail, wholesale and finance); and all other sectors in the economy. Surprisingly, it turns out that the ICT-producing and ICT-

using sectors essentially account for *all* of the acceleration in US productivity (see Stiroh, 2002a).

This is shown in Figure 1, which presents the acceleration in productivity in US and European productivity growth since 1995. Beginning with the US picture on the left hand side of the figure, we see that productivity growth accelerated by 3.5 percentage points a year in the ICT-using sectors: from 1.2% pre-1995 to 4.7% post-1995. It also accelerated by 1.9 percentage points in the ICT-producing sectors. But there was actually a small deceleration in all the other sectors of the economy.

Lying behind this was the enormous fall in the quality-adjusted prices of ICT since 1995, which has its roots in technical progress in the semi-conductor industry. Rapid improvements in the power of semi-conductors led to big increases in productivity growth in the ICT-producing sectors. Moore's Law (a rule of thumb for the rate at which computer power increases) seemed to accelerate after 1994

and the resulting fall in the price of a key input lowered prices across a whole range of products in the ICT-producing sectors.

As the price of ICT products plunged, firms deepened their use of ICT capital and this was naturally strongest in sectors that intensively used ICT. Increasing ICT per hour increased output per hour tremendously.

Looking at Europe, we also see a big increase in annual productivity growth rates in the ICT-producing sectors of 1.6 percentage points. The big difference between the United States and Europe is in the ICT-using sectors: in Europe, there was no productivity acceleration in the late 1990s as there was in the United States. Productivity growth remained static at about 2% a year.

The US productivity 'miracle' has been strongest in sectors like retail and wholesale, which use ICT intensively

Since ICT is available throughout the world at broadly similar prices, this raises a puzzle: why were European firms not able to reap the same benefits from ICT as their US counterparts? To answer this, we have to delve beneath the macroeconomic numbers into the firm-level evidence.

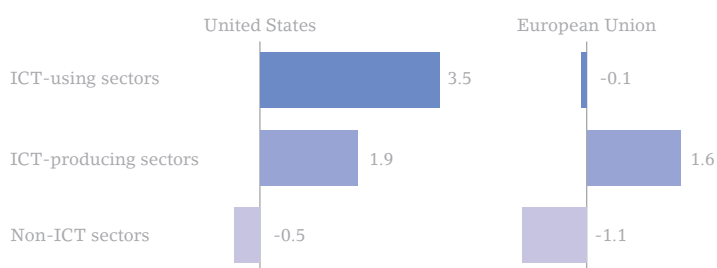
The microeconomic picture: paradox regained?

Advances in computer technology have enabled large datasets on company productivity and ICT to be amassed; they have also improved the ability of economists to analyse these data. The basic methodology to assess the return to ICT is to analyse a 'production function': the researcher will try to account statistically for the output of the firm with a large number of inputs, the input of most interest being ICT.

Since ICT is one form of capital, it is important to control for other forms of non-ICT capital, such as buildings, vehicles and non-ICT equipment. Labour and material inputs also have to be controlled



Figure 1: Changes in annual growth rates in output per hour from 1990-95 to 1995-2001 (percentage points)



Source: O'Mahony and Van Ark (2003)

for as well as other factors such as plant age, location and the state of the business cycle. The best studies use longitudinal data where the same firms are followed over time so the researcher can see if a burst of ICT capital is followed by a burst of productivity after controlling for other factors.

Several interesting findings have emerged from this research programme. First, on average, ICT does appear to be significantly associated with higher firm-level productivity. This stands in contrast with some of the earlier industry- and macro-level studies that struggled to find any effect of ICT on productivity. The

reason why the industry-level studies found little impact may have been because the industry averages disguise large differences between firms within industries.

Second, the magnitude of the association between ICT and company productivity is substantial. If ICT was simply a 'normal' form of capital earning the usual market return, we would expect that a doubling of the ICT capital stock would increase output by approximately the share of ICT in total revenues. Since the relevant share was only about 1 or 2% in most studies, it is interesting that they appear to find effects much greater than this. The meta-analysis of 20 studies reported in Stiroh (2002b) finds an average ICT elasticity of 5%, suggesting that a doubling of the ICT stock increases productivity by 5%. This would seem to suggest that there are some special features of ICT compared with other forms of capital.

Third, there is a huge variation around the average impact of ICT on firm productivity between different studies. Stiroh (2002b) reports estimates ranging from an upper end of over 25% to negative 5%. Some of these differences are due to methodological differences. But it is more likely that a large amount of this variation is due to genuine differences in the impact of ICT across firms and this is reflected in the different results from different datasets.

To understand this heterogeneity, we must move beyond looking only at technology and investigate other features of the firm.

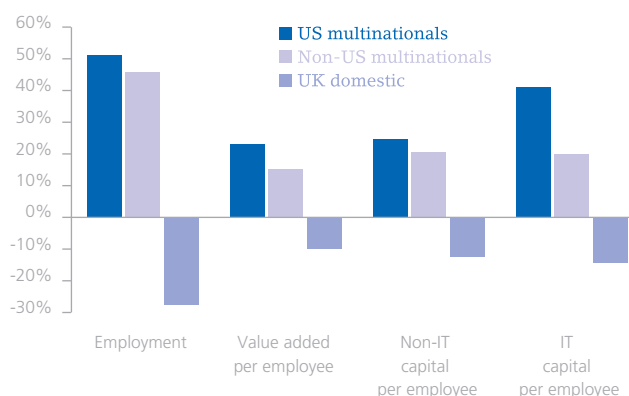
Beyond ICT: the role of complementary factors

An important reason why the returns to ICT differ across firms is that different firms have very different organisations into which ICT is placed. Often ICT spending is only the tip of the iceberg, and there are a whole host of other investments made in the firm to enhance the use of ICT (such as consultancy expenses).

Skills are also important. There is a great deal of evidence that educated workers tend to be much better at coping with the uncertainties of new ICT systems than less skilled workers. Other organisational factors such as decentralisation of decision-making and the steepness of the managerial hierarchy have been found to be important. Old-style

Figure 2:

Characteristics of establishments in the UK by ownership type (percentage differences from four-digit industry averages in 2001)



Notes: data from 576 US multinationals, 2,228 non-US multinationals and 4,770 domestic establishments

'Taylorist' organisations with rigid centralised hierarchies have, on average, produced lower returns to ICT than more 'organic' flexible firms.

Whether firms make these investments in complementary organisational capital seems to be very important. Bresnahan et al (2002) examined the impact of ICT on productivity in over 300 large US companies. A doubling of the ICT stock was associated with an increase in productivity of 3.6%, but this increased to 5.8% if a firm became more decentralised (in their study, a one unit increase on a decentralisation index based around teamwork and autonomy of workers).

Although this literature is in its early stages as it is tricky to quantify these organisational and managerial factors, the research suggests that other factors interact with the use of ICT, which cannot be studied in isolation.

The role of global businesses: US multinationals do IT better

One stylised fact emerging from the study of within-firm productivity is that establishments owned by multinational firms are more productive than establishments of wholly domestic firms. This is not surprising as multinationals have to be more efficient in order to start operating outside their home market. What is more interesting is that establishments owned by US multinationals appear to be more productive than those of non-US multinationals. This is true both within the United States and in other countries.

As an example of the evidence for this stylised fact, Figure 2 shows data from over 7,500 establishments located in the UK, which we have studied (see Bloom, Sadun and Van Reenen, 2005). In terms of value added per worker, US multinationals are 23% more productive than the industry average, non-US multinationals are 16% more productive than the industry average and domestic establishments are about 11% less productive. In terms of output per worker, the US advantage over domestic firms is 21.5% and the non-US advantage is 17.5%.

This is consistent with evidence that the plants of multinational US firms are more productive whether the plants are based on US soil or foreign soil. The US productivity advantage is partially linked to greater use of inputs: US establishments use about 10% more materials and 4% more non-ICT capital than non-US multinationals. But Figure 2 shows that ICT capital may also be a very important factor: US firms use a whopping 40% more ICT capital per worker than average whereas non-US multinationals use only 20% more.

But this difference in the usage of ICT is only one part of the story. When estimating a production function, we find that US establishments are 8.5% more productive than domestic firms after accounting for labour, non-ICT capital, materials and a host of other factors.

Controlling for the fact that US firms use more ICT accounts for only one percentage point of this gap. What matters is the way that US firms use ICT. A doubling of the ICT stock is associated

with an increase in productivity of 5% for a US firm but only 4% for a non-US firm. US firms appear simply to get more productivity out of the same amount of ICT (and this does not seem true of non-ICT capital).

A second interesting finding in our study is that the bigger returns to ICT usage for US firms are only found in certain sectors of the economy. These are exactly the same ICT-using sectors of wholesale and retail that account for the US productivity miracle. In other words, it is only in the ICT-using sectors in Figure 1 where US firms' ICT productivity is much higher.

Why are the returns so much higher for US firms? We investigated a wide variety of hypotheses such as whether the US firms simply had more skilled workers or better software. These do not seem to be the culprits. We suspect the main reason lies in the managerial structure of US firms.

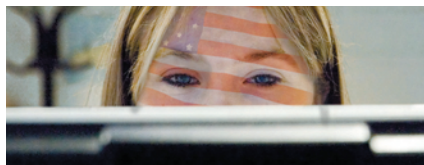
In joint work with McKinsey & Co (see Bloom, Dorgan et al, 2005, and the Summer 2005 issue of *CentrePiece*), we scored firms in four countries (France, Germany, the UK and the United States) on a range of managerial 'best practices', including incentives such as merit-based promotion and pay, the use of lean manufacturing techniques, performance management and effective targets. Across all firms, US firms are on average significantly better managed than European firms.

Looking within Europe at US subsidiaries, we also find that they are significantly better managed than non-US subsidiaries and domestic firms. What's more, US subsidiaries are also much more likely to allow greater autonomy to employees, a factor associated with higher returns from ICT. This suggests that what gives US firms their advantage are the organisational and managerial structures that they have that are conducive to getting the most out of ICT.

Taken together, these findings suggest that a reason for the slower growth of productivity in ICT-using sectors in Europe is that US firms have better internal firm organisation to get more from their ICT.

Changing European business practices

So why do European firms not adopt more US-style forms of business organisation? There is some evidence that they are doing



To obtain US-style productivity advances, European firms must adopt more US-style business processes

so. For example, the Wal-Mart system of supply chain management has been explicitly copied by Tesco, the UK's largest supermarket. It has also been transplanted directly as Wal-Mart has acquired Asda, which is now the UK's second largest supermarket.

But organisational changes are large and costly events so change is often slow and difficult. Furthermore, there are regulatory and cultural constraints to adopting US business practices in Europe – although these should not be overstated as US multinationals like Starbucks and McDonald's appear to be able to do as well in their European outlets as they do back home.

A deeper question is whether European firms really should change so radically? The older organisational forms served Europe well during the post-war catching-up period and it may be that as the new technologies bed down, they will again prove themselves reliable. On the other hand, if we have genuinely entered a new phase of development where individual performance, flexibility, decentralisation and general education are needed, then such complacency could be fatal.

Conclusions

The rebound of US productivity growth has been a major economic development over the last decade. This 'miracle' seems to be linked to ICT as the productivity acceleration was particularly strong in those sectors that used ICT intensively such as retail and wholesale. Europe did not experience this acceleration in the same sectors.

We have shown that the bulk of the evidence from firm-level, microeconomic studies is that ICT *does* have an economically and statistically significant impact on productivity but this varies dramatically between firms: having the right organisation helps a lot in making the most of ICT.

We have suggested that these organisational differences also lie behind the different productivity performance between the United States and Europe – US firms are better placed to take advantage of ICT. It is likely that European firms will have to adopt more US-style business processes to obtain the same level of productivity advances. This is probably simply a matter of time. The question is how long will it take?

Nick Bloom is assistant professor of economics at Stanford University and director of CEP's research programme on productivity and innovation. **Raffaella Sadun** is a research economist in the programme. **John Van Reenen** is director of CEP and professor of economics at LSE.

Further reading

Nick Bloom, Raffaella Sadun and John Van Reenen (2005), 'It Ain't What You Do, It's the Way that You Do I.T.: Testing Explanations of Productivity Growth using US Affiliates', Office for National Statistics (http://www.statistics.gov.uk/articles/nojournal/sadun_bvr25.pdf).

Nick Bloom, Stephen Dorgan, John Dowdy, Tom Rippin and John Van Reenen (2005), *Management Practices across Firms and Nations* (<http://cep.lse.ac.uk/management/management.pdf>).

Tim Bresnahan, Erik Brynjolfsson and Lorin Hitt (2002), 'Information Technology, Workplace Organization and the Demand for Skilled Labor', *Quarterly Journal of Economics* 117(1), 339-76.

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Kevin Stiroh (2002a), 'Information Technology and the US Productivity Revival: What Do the Industry Data Say?', *American Economic Review* 92(5), 1559-76.

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in brief...

Mamma's boys? Why most young Italian men live with their parents

It is a cliché that Italian children are particularly attached to their mothers, even when they're grown up. New research by **Marco Manacorda** and **Enrico Moretti** investigates why so many of them are still living with their parents.

Italian men – and Italian women too – tend to live much longer with their parents than adult children anywhere else in the West. In Britain, roughly five out of every ten men aged between 18 and 30 live with their parents. In the United States, the proportion is four out of ten. But in Italy, it is eight out of ten.

This high – and apparently increasing – propensity of young Italians to live with their parents is associated with at least three other striking facts that have characterised the Italian economy over the past two decades: extremely high youth unemployment; low and declining fertility; and low and declining migration rates. These facts are unlikely to be uncorrelated.

The prevailing rhetoric is that Italian parents are altruistic. Many of their children are unemployed and with no entitlement to unemployment benefits, or they find themselves jumping from one badly paid precarious job to another. So they are allowed to live at home until they become independent and get some stability in their lives. Indeed, children have no choice but to live with their altruistic parents: the family provides the support and insurance that the welfare state does not. In the absence of this support, young Italians would be unequivocally worse off.

Our research challenges this view. We argue that one important and neglected factor explaining these remarkably high rates of co-residence is that Italian parents like having their children around and are willing to 'bribe' them into cohabitation in exchange for some monetary transfers. Italian parents benefit from the companionship and other services their children provide, and most importantly, from the opportunity they have to get their children to 'conform' to their precepts when they live together.

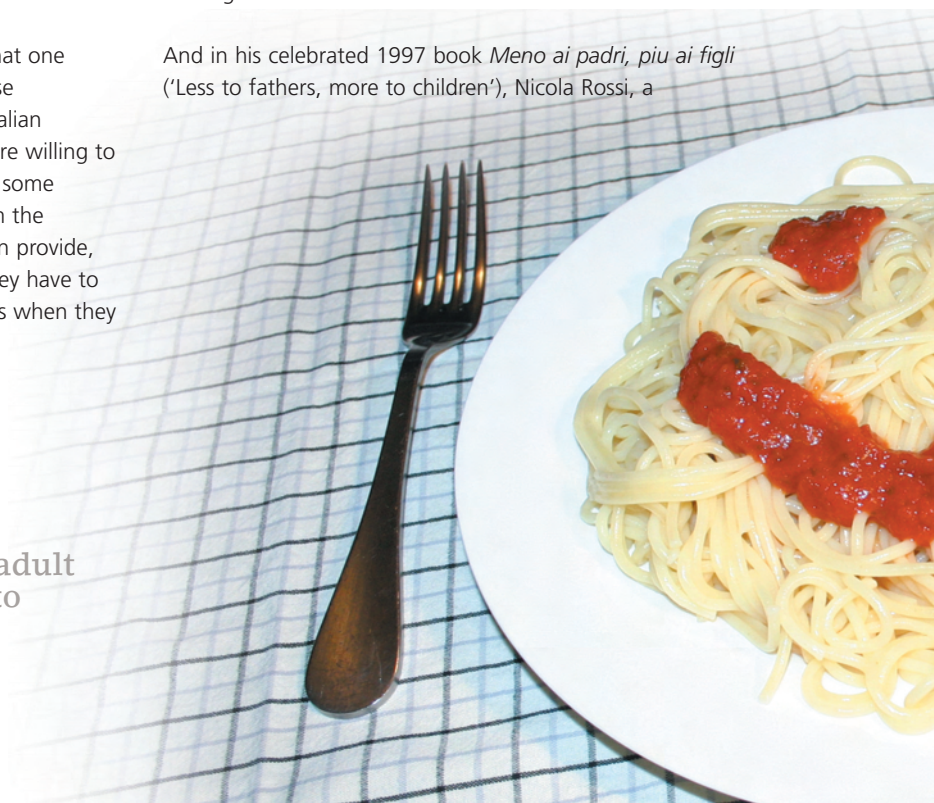
To corroborate our claim, we present evidence that, everything else equal, Italian parents report that they are happier when living with their adult children. This is the opposite of what happens in Britain and the United States.

The outcome of this process, we argue, is that children – who would rather live on their own – accept cohabitation in exchange for the bribe. Paradoxically, it is cohabitation that produces higher youth unemployment rather than the other way round: children tend to have lower incentives to find their own way in the labour market. The price young Italians pay in exchange for higher consumption today is lower independence and possibly lower lifetime satisfaction.

Our idea is related to a wider debate among social scientists studying Italy. For example, Harvard anthropologist Edward Banfield coined the term 'amoral familism' in his book *The Moral Basis of a Backward Society*, first published in the 1950s. This described (southern) Italians' restricted pursuit of family interests and their ensuing lack of civic engagement. One possibly unwanted consequence of this emphasis on family relationship is to curb children's independence, possibly making them worse off.

And in his celebrated 1997 book *Meno ai padri, piu ai figli* ('Less to fathers, more to children'), Nicola Rossi, a

Italian parents like having their adult children around and are willing to 'bribe' them to stay at home



A 10% rise in Italian parents' income leads to a 10% rise in the proportion of children living at home

professor at the University of Rome and an MP from the Democratic Party of the Left, showed how Italian public welfare is remarkably skewed towards the older generations: too much spent on pensions, he argues, and too little welfare for young people. It follows that entitlement to welfare (and jobs) endows parents with remarkable bargaining power towards their children.

The empirical strategy we use to test our hypothesis is straightforward. We argue that cultural preferences are an important determinant of the high rates of co-residence between parents and adult children. But these preferences would not translate into reality if parents were unable to get their children to behave according to their tastes. So if parents do indeed like to live with their children, we should observe that as their income increases (and keeping everything else equal), rates of co-residence should increase.

This is precisely what we find in our study. We use the fact that owing to major social security reforms in Italy during the 1990s, a certain generation of parents was forced to postpone their retirement. Had they been able to retire, most of these parents would have probably chosen to do so. But in exchange for some of their free time, these parents saw a temporary increase in their income.

We compare the children of these parents with otherwise observationally identical children, that is, children of

parents who were not affected by the reforms. The advantage of this empirical strategy is that it makes it possible to identify changes in parents' income that happened to affect only one cohort of parents and that are unlikely to be correlated with other determinants of parents' and children's decision on co-residence, such as local housing prices and the state of local labour demand.

We find that this temporary increase in parental income was associated with a rise in co-residence rates. A 10% increase in parents' income resulted in an increase of approximately 10% in the proportion of adult children living at home. Interestingly, US-based economists Mark Rosenzweig and Kenneth Wolpin find in contrast that in the United States, cohabitation rates tend to fall as parental income rises.

Although this result does not necessarily rule out alternative explanations, it is consistent with our 'bribery' story. When parents have more money, they buy more of their children's co-residence. If parents would rather live on their own, they would probably help their children to gain their independence as they become better off.

In sum, we think that Italian parents put quite a lot of effort into being loved by their children. And to some extent, they buy this love in exchange for their children's giving away some of their independence. Although this might at first sight appear like a mere curiosity, we argue that it has profound economic and social implications.

This article summarises 'Intergenerational Transfers and Household Structure: Why do Most Italian Young Men Live with their Parents?' by Marco Manacorda and Enrico Moretti, CEP Discussion Paper No. 536 (<http://cep.lse.ac.uk/pubs/download/DP0536.pdf>) and forthcoming in the *Journal of the European Economic Association*.

Marco Manacorda is at Queen Mary, University of London and a research associate in CEP's labour markets programme. **Enrico Moretti** is at the University of California, Berkeley.



New research by **Stephen Machin** and **Olivier Marie** finds that the Street Crime Initiative, introduced in 2002, has been highly effective in reducing the number of robberies. Increased police resources can have a big impact on crime rates.

Can more police resources reduce crime?

Increasing police resources is often perceived as a primary crime-fighting tool. But there is little hard evidence showing that more police do in fact reduce crime. The main reason for this is that it has been difficult to disentangle the causal relationship between the two: higher crime usually means more police and *vice versa*.

As a consequence, many studies have failed to find a relationship between the two and some have actually reported a *positive* association between police resources and crime. Although some researchers have used more sophisticated techniques to unravel the real nature of this relationship, there remains little or no consensus on its direction.

The 2002 introduction of the Street

Crime Initiative (SCI) offers an opportunity to answer the question more definitively. The SCI allocated £48 million of extra resources to ten of the 43 police forces of England and Wales to combat street crime, primarily robberies. Most of this money was spent on police overtime and additional staffing. As the SCI was introduced in certain areas, but not in others, it is possible to compare what happened to robberies before and after the introduction across areas so as to evaluate the policy's impact on robberies.

The SCI was introduced into the police forces with the worst street crime problem in the country, those that accounted for more than 80% of total robberies. This mode of selection rule could have proved a problem if there were different pre-

policy robbery trends in the SCI and non-SCI areas.

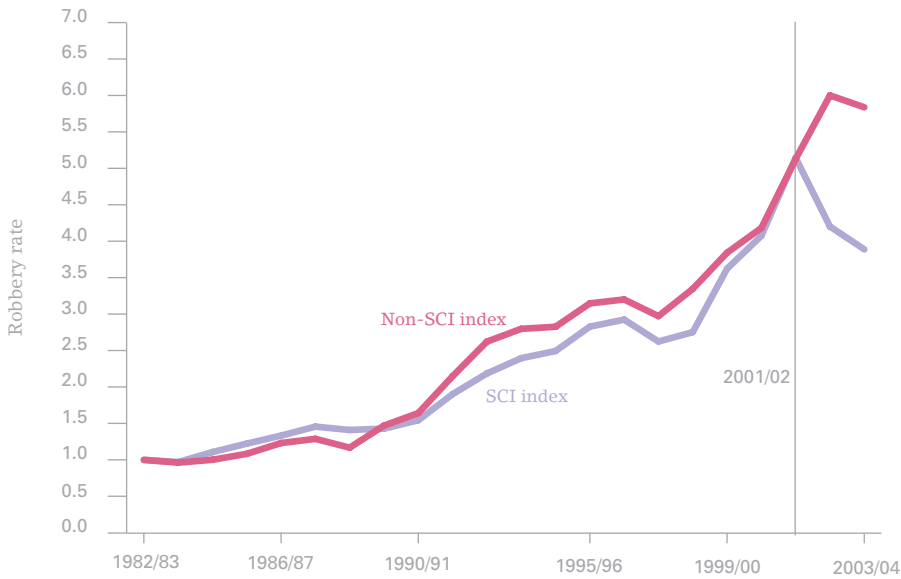
Fortunately, this is not the case as is clearly illustrated in Figure 1, which shows an index of the robbery rate in policy and non-policy areas between 1982 and 2003. Up to the introduction of the policy (denoted by a vertical line), the robbery rates in SCI and non-SCI areas followed an extremely similar trend. The figure also suggests a substantial crime reduction effect of extra police resources as the growth trend in the robbery rate was reversed only in areas where the SCI was introduced.

Our research also compares year-on-year differences in robbery rates across

The extra police resources of the Street Crime Initiative had a strong impact in reducing robberies



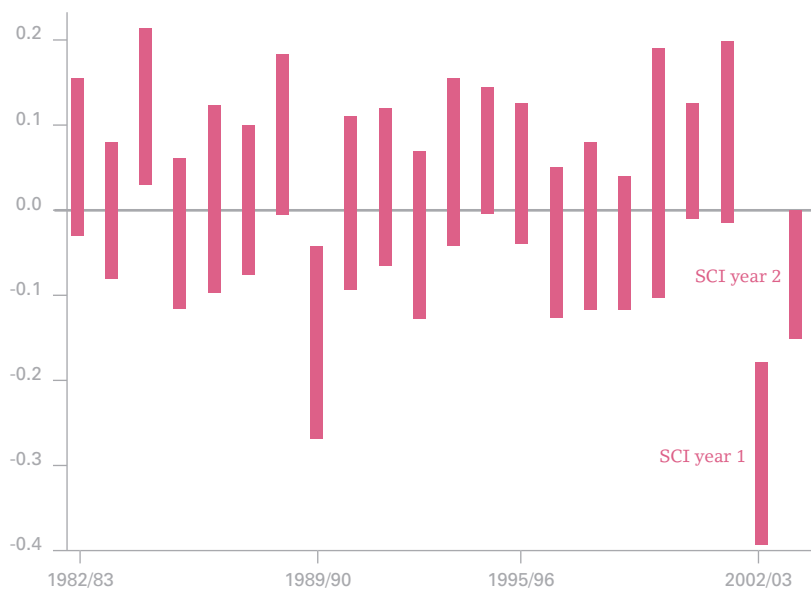
Figure 1:
Indexed changes in robbery rates
1982/83-2003/04 (1982/83 = 1)



SCI and non-SCI areas so as to ensure that we are really identifying a policy effect. Figure 2 shows these 'difference-in-differences' for year-on-year comparisons. The effect for the first SCI policy year is by far the most negative one and clearly different from zero, indicating that a step change occurred in robberies once the policy was in place.

To obtain precise estimates of the effect of the SCI on robberies, we use recorded crime data for the 376 'crime and disorder reduction partnerships' of England and Wales from 1999/00 to 2003/04. These have boundaries corresponding to administrative local authorities and we match a number of area socio-economic characteristics from the 2001 Census and the Labour Force Survey to this panel. These socio-economic characteristics are important as we find that they explain most of the difference in pre-policy robbery rate levels between the policy and non-policy areas.

Figure 2:
Year-on-year difference-in-differences estimates
(+/- two standard errors), 1982/83-2003/04



Comparing all the areas and their characteristics for the year prior to introduction of the SCI (2001/02) and the two following years (2002/03 and 2003/04), we estimate that the SCI decreased robbery rates by 29%. But because 2001 was a peak year in terms of robberies in the SCI areas, we could be overestimating the effect of extra police resources by limiting our pre-policy sample to this potentially abnormal year.

We therefore adopt a more conservative approach and decide to drop the year prior to introduction from our sample and use instead the two previous years (1999-2000) as the pre-policy period for our analysis. The new estimate of SCI effect on robberies is smaller but still very important at 17.4%.

We can be even more stringent and drop from our sample those crime and disorder reduction partnerships that



exhibit socio-economic characteristics so different that they cannot be compared across SCI and non-SCI areas. We find this to be the case for 29 areas. The new estimates are again relatively smaller but still show an important 14.8% effect of the SCI on robberies.

The ten forces that received extra SCI funding were relatively free to implement the policy in the way they thought best as long as it was to combat street crime. This may explain why, when we estimate different SCI effects for groupings of police forces where the policy was introduced, we find decreases in robbery rates ranging from 7 to 23 percentage points. This result deserves further investigation to understand how extra police resources should be used to maximise their effect on crime reduction.

So the extra police resources of the SCI did reduce robberies, the crime it was targeting. But this still does not automatically imply that the SCI was a socially beneficial policy. First, we must consider the costs of the SCI with respect to its crime reduction benefits. Second, we must also think of what are known as possible 'displacement' or 'diffusion' effects of the policy.

There are two possible types of displacement. First, as the police in SCI areas focus on robberies and perhaps divert resources to combating them, it is possible that criminals will substitute this crime for burglaries or vehicle crimes, which have become relatively less monitored. Second, there may be displacement from SCI areas to nearby non-SCI areas where the chances of being caught for a robbery are lower.

On the other hand, there could be some diffusion of the policy to other crimes within SCI areas, as the extra police resources not only reduce robberies but also other crimes. Diffusion of the SCI

Just a year after introduction of the policy in 2002, more than 10,000 robberies had been avoided

effect to neighbouring non-policy areas is also conceivable if the increased identification and incapacitation of criminals benefits all areas. We consider all these possible effects for their potential impact on our cost-benefit analysis. Finally, we want to see the variation of these costs and benefits across SCI areas.

To calculate the benefits of the SCI, we use our estimates for the full and reduced sample to find how many robberies were *avoided* as a result of the policy. As Table 1 shows, the number is between 10,846 and 12,751 for the year after introduction.

To cost these figures, we multiply this reduction in robberies by the average cost of a personal robbery, which the Home Office estimates to be £12,094. Once we subtract from these figures the cost for one year of the SCI, we find high net social benefits of the policy of between

£107 and £130 million. This is very large as it represents four to five times the initial input.

We also check for displacement or diffusion effects of the policy but do not find them to be significant and therefore do not have to revise our cost-benefit estimates.

When we consider differences of cost and benefits across SCI areas, using the different effects we estimate, we find it to be extremely socially beneficial in certain areas. We also find some diffusion effect on vehicle crime, which also decreases as a result of the SCI in the areas that experienced the highest reductions in robbery rates.

This article summarises 'Crime and Police Resources: The Street Crime Initiative' by Stephen Machin and Olivier Marie, CEP Discussion Paper No. 680 (<http://cep.lse.ac.uk/pubs/download/dp0680.pdf>)
Stephen Machin is CEP's research director.
Olivier Marie is a research assistant in CEP's labour markets programme.

Table 1:
Cost-benefit calculations for the year following introduction of the Street Crime Initiative (SCI)

Control years: 1999/00 and 2000/01	All sample	Reduced sample
Effect on robberies in percentage terms	-17.4	-14.8
SCI areas baseline number of robberies – average recorded in control years	73,282	73,282
Robberies reduction in SCI areas – baseline effect	12,751	10,846
Benefits from robbery reduction in SCI areas – effect baseline £12,094 (£ millions)	154.2	131.2
Average annual cost of SCI over 2002/03-2003/04 (£ millions)	24.1	24.1
Net social benefit (£ millions)	130.1	107.1



The policy has been highly cost effective with a net social benefit of between £107 and £130 million a year

in brief...

Immigrants in Europe: will they return home when they retire?

Many immigrants will 'va-et-vient'
after retirement, sharing their time
between home and host countries

Nearly a third of immigrants in Western Europe intend to spend part of the year in their host country and the rest back home when they retire. That at least is the implication of analysis of a representative sample of more than 6,000 immigrants currently living in France, a significant proportion of whom plan to pursue a previously undocumented strategy called 'va-et-vient' when they reach retirement age.

The study by Augustin de Coulon and François-Charles Wolff finds that only a small proportion of immigrants intend to return home when they retire (7%), while the majority (more than 60%) intends to stay in the host country.

Until now, immigrants' likely location decisions at retirement have barely been studied. But they have important policy implications in such areas as healthcare spending and aggregate consumption for both the home and host countries. And the questions they raise are imminent in many Western European economies, which recruited immigrants heavily in the 1960s and 1970s: individuals from these first immigration waves are now approaching retirement age.

It might be thought that most of these immigrants will return to their home country to enjoy a milder climate together with the higher purchasing power of their pensions and private savings. But what really influences their location decisions? It turns out that since labour market conditions do not matter so much at retirement, location decisions are based less on comparison of wages or employment opportunities across the host and home country and more on the location of other family members.

This research explores the causal link between the location of children and the location of retired parents, focusing in particular on whether children drive their parents' location decision or whether parents make the decision first and then encourage their kids to locate in the chosen country. For parents who intend to stay in the host country or return home, it is the current location of their children

that influences the decision. For those planning to 'va-et-vient', the current location of their children is not of primary importance – but simply having children makes them more likely to 'va-et-vient'.

Country of origin also has a big influence on immigrants' location decisions. For example, the probability of returning home is significantly higher for immigrants from Southern Europe (8.6%) and Central and Southern Africa (16.8%).

The probability of pursuing the 'va-et-vient' strategy is higher for immigrants from Southern Europe, Northern Africa and the Middle East. But it is less important for women and highly educated people. It also becomes less important the older immigrants are and the longer they have lived in the host country.

As might be expected, household income has a positive effect on the 'va-et-vient' decision. A simple explanation is that increased housing and travel costs are associated with 'va-et-vient' so that poorer households are less likely to share their time between two different countries.

Although these results are for immigrants in France, some evidence points to similar patterns in other countries, including Germany, Switzerland and the United States. In an extension of this work, the researchers plan to look at how intended location decisions are linked with the remittances sent to the home countries.

This article summarises 'Immigrants at Retirement: Stay/return or "Va-et-vient"?' by Augustin de Coulon and François-Charles Wolff, CEP Discussion Paper No. 691 (<http://cep.lse.ac.uk/pubs/download/dp0691.pdf>).

Augustin de Coulon is at the Institute of Education, University of London and a research associate in CEP's labour markets programme. **François-Charles Wolff** is at the University of Nantes.

Only a small proportion of immigrants in Europe
intend to return home when they retire

Evaluating 'Excellence in Cities'

Excellence in Cities has improved educational outcomes in our most disadvantaged urban schools

The government's Excellence in Cities

policy has improved the educational outcomes for secondary school pupils in disadvantaged areas, according to new economic research by Stephen Machin, Sandra McNally and Costas Meghir. But the study also shows that the educational benefits are not equally distributed: the most disadvantaged schools benefit and the effect is concentrated among pupils of medium to high ability.

Excellence in Cities (EiC) has been one of the government's flagship education policies. Initially introduced in 1999 in an effort to turn around the fortunes of inner city schools, it has since been expanded to cover a third of all secondary schools. Its three core strands involve funding for 'learning mentors' to help pupils overcome educational or behavioural problems; 'learning support units' to help difficult pupils; and a 'gifted and talented' programme to provide extra support for 5-10% of pupils in each school.

The CEP/IFS economic evaluation of the programme compares the outcomes of pupils in EiC schools with those in a comparison group outside the programme. It finds that:

- The rate of improvement in EiC schools has been higher than that of other LEA-maintained schools. This is true even after controlling for different pupil and school characteristics, such as prior attainment and pupil numbers.
- EiC has led to an improvement of 1.9 percentage points in the number of children reaching level 5 or above in key stage 3 mathematics. The estimate is higher in schools that have been in the programme the longest but still evident in schools that came into the programme later.
- There is no evidence of an effect on attainment in English after controlling for pupil and school characteristics. But the effects are positive for school attendance: EiC has raised attendance by the equivalent of one day per pupil in the first group of schools to enter the programme.

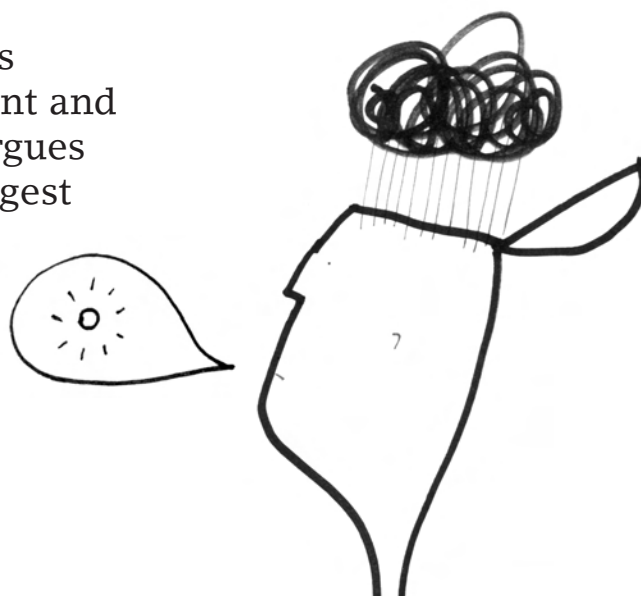


- The positive effects of EiC have increased over time. The effects are higher for more disadvantaged schools (as measured by eligibility for free school meals) and negligible for more advantaged schools.
- The effects of EiC are higher for pupils of medium to high ability (as measured by attainment at age 11). For example, it has delivered a 2.9 to 4.8 percentage point increase in the number of pupils achieving level 5 or above in key stage 3 mathematics for the most able pupils in schools with the highest rate of deprivation. This raises the question as to whether even bigger effects might be generated if it were possible to target resources more carefully.
- The big question is whether the overall benefits of EiC can be justified in terms of the per pupil cost. To know this for sure requires observing pupils as they progress through the education system and into the labour market. But initial estimates suggest that the EiC policy is potentially cost-effective. The relatively low cost of the policy – £120 per pupil on average for each year – suggests that the benefits do not have to be very large to generate a positive outcome.

The policy has raised attainment in maths and improved school attendance

'Excellence in Cities: Evaluation of an Education Policy in Disadvantaged Areas' by Stephen Machin, Sandra McNally and Costas Meghir is the final report of the economic evaluation of EiC for the Department for Education and Skills. The study was joint work between CEP and the Institute for Fiscal Studies (IFS). For the full report on EiC, which includes analysis by educationalists and economists, see: <http://www.dfes.gov.uk/research/data/uploadfiles/RR675A.pdf>

Richard Layard has spent much of his professional life tackling unemployment and inequality. But in his latest work, he argues that mental illness is now Britain's biggest social problem.



Mental health: the choice of therapy for all

As someone looking at mental health in Britain from outside the profession, it is clear that we are doing far too little for those who are mentally ill. I would like to persuade you of four propositions:

- There is a mass of suffering that is untreated and which imposes severe burdens on the economy.
- We have effective means of treating it, enshrined in guidelines from the National Institute for Clinical Excellence (NICE). But the guidelines cannot be implemented with the resources of people and money that are currently available. In particular, evidence-based

psychological therapies like cognitive behavioural therapy (CBT), which are in heavy demand, are not adequately available.

- We could meet reasonable demand within five to ten years by a major programme to train more therapists. But this will not be cost-effective unless we maintain the quality of training and of provision. This means that provision should be through psychological treatment centres, working on a 'hub-and-spoke' basis.
- For many people, work is a vital part of therapy and of the recovery process. But at present, there are more mentally ill people on incapacity benefit than the total number of unemployed people. The government's 'Pathways to Work' pilots show that many of these people can be helped back to work, and these programmes should become available throughout the country.

So these are my themes: the scale of suffering and the cost; the existence of known remedies; treatment centres to provide these therapies; and the key importance of work.

Suffering and cost

If you ask who are the unhappiest people

in our society, the answer is not the poor but the mentally ill. You can see this from the National Child Development Study, which shows that unhappiness is three times more closely related to mental health (measured ten years earlier) than it is to poverty (measured today). The cost to the economy in terms of lost output is around 2% of GDP and the cost to the Exchequer is similar, including £10 billion spent on incapacity benefit and £8 billion on mental health services.

At present, most public expenditure on mental health goes on the roughly quarter of a million people suffering from psychosis. But at any one time, there are a million people suffering from clinical depression and another four million suffering from clinical anxiety.

For these groups, the depressed and the fearful, there is almost no treatment available except a few minutes with their GP and some pills. Many of these people do not want pills but they do want psychological therapy. According to the Psychiatric Morbidity Survey, under a half of all the people suffering from depression were receiving any kind of treatment, and fewer than 10% were receiving any kind of psychological therapy. For people with anxiety, each of these figures should be halved.



This is totally unsatisfactory. If people have any persistent physical illness like asthma, high blood pressure or skin disease, they automatically see a specialist. But this is not the case if they suffer the torment of mental illness.

There are two reasons for this neglect. One is stigma. The other is an extraordinarily delayed response to the fact that we now have treatments that work, which we did not have 50 years ago.

Treatments that work

We have drugs that will end a depressive episode within four months for 60% of sufferers. And we have therapies (especially CBT) that will do the same as a result of a weekly session. Once the episode is over, relapse is less likely if the sufferer received CBT, unless drug therapy is continued. Thus, cost arguments are not decisive between drugs and psychotherapy – and many people do not want drugs for the best possible reason: they want to feel in conscious control of their mood.

For all these reasons, the NICE guidelines on depression say that 'cognitive-behavioural therapy should be offered, as it is of equal effectiveness to anti-depressants'. The NICE guidelines also cite clear evidence that even in purely economic terms, these treatments would pay for themselves – ignoring altogether the gain in happiness to the patient.

Yet as things are, the NICE guidelines

There is a mass of suffering that is untreated and which imposes severe burdens on the economy

cannot be implemented because the therapists are not available to meet the demand. So the next phase of improving our mental health services has to be based on a simple offer: 'Mentally ill people should have the choice of evidence-based psychological therapy'. The Labour Party's last election manifesto did not say quite that but it said enough for it to be worth discussing in concrete terms how such an expansion could be achieved.

Training therapists

First, there is the need for more therapists. A reasonable guess is that eventually in any year, roughly one million people would ask for therapy. If this lasted for ten sessions, that would require roughly 10,000 more therapists.

There should be two main types of therapist: clinical psychologists, who would lead the new effort; and more narrowly trained therapists, who would receive two years of part-time training while working in the NHS. Fortunately, there is huge demand for places in training as clinical psychologists, so it should be possible to produce 5,000 more of them within five to ten years. At the same time, two-year training would be offered to people with suitable experience and credentials – mental health nurses, social workers or occupational therapists – provided that, once trained, they were expected to change their job to become full-time therapists.

It is crucial that these people receive sufficient depth of training to achieve the success rates observed in the clinical trials. There is no point at all in expanding provision via second-rate therapy and it would not be justified on economic grounds – just as there is a major question mark over much of the counselling that GP practices currently provide for lack of any other way to provide talking help to their patients.

We desperately need a better NHS, delivering more help and understanding to the mentally ill

The case for treatment centres

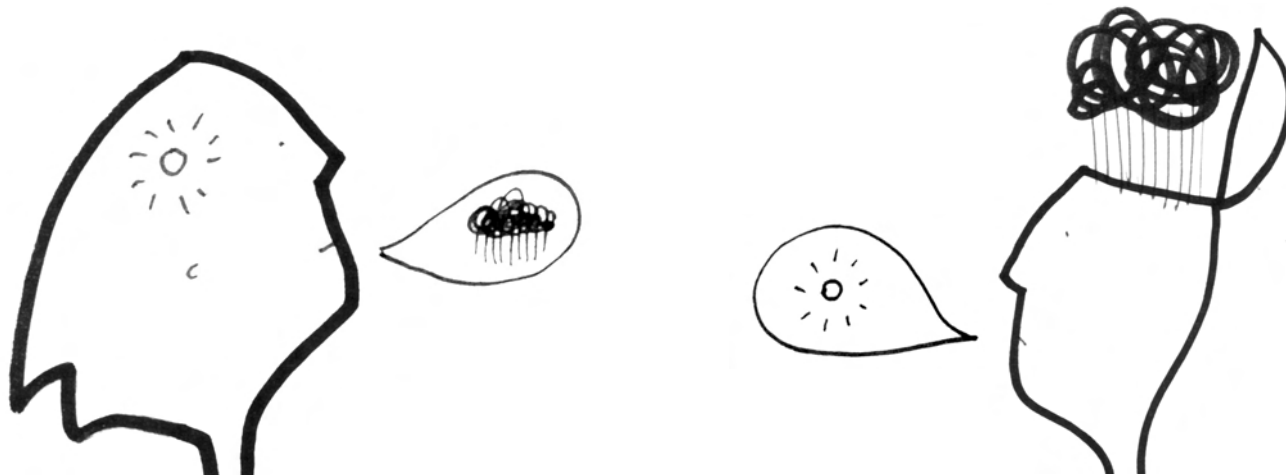
The training must be of good quality and so must the actual treatment that is provided. This raises the crucial question about how treatment should be organised. I suggest that there are five main criteria for a good system of delivering therapy:

- Patients should be able to be treated near where they live.
- Therapists should practise within a system of effective supervision and professional management.
- They should be part of a team of therapists, providing mutual stimulus and support, and offering clear prospects for professional advancement based on recognised excellence.
- There should be a clear funding stream to support the work based on national targets for the availability of services. This should not be left to the discretion of primary care trusts.
- The pattern of expansion should be similar enough in different areas for people to learn about it, for example, in the national media.

These criteria cannot be satisfied within a system of GP-led provision, and I suggest that the new offer of therapy to people with depression and anxiety disorders be delivered through treatment centres. Why?

- They would provide a much better framework for the supervision of casework and for in-service training and professional development than would a service run by GPs.
- They would make it possible to monitor whether therapists were achieving results through standard self-assessment measures where results were made available to the senior staff of the centre.
- They would make it easier to organise the right therapist for each patient, and reduce the chanciness of whether their own GP practice had the therapist they needed. They would make it easier to organise the effective use of human and physical resources, due to economies of scale.
- They could provide a route of self-referral for patients who did not want their GPs to know about their problem.





Treatment will help many people, but work can also be a major route to recovery

The centres would be headed by a psychologist/therapist and would concentrate mainly on CBT. They would be separate from community mental health teams, which deal mainly with more seriously disturbed patients.

There would within the next five years be very roughly one centre per quarter of a million population – or 250 centres in all. A centre would have a central location at which supervision, training and some treatment occurred. But most of the staff would spend at least half their clinical time giving treatment on GP premises: such staff would be jointly appointed by the centre and the relevant GP practices. A typical centre would have about 20-30 staff. The staff would operate under clear NICE guidelines relating to number of sessions, and patient progress would be monitored using a standard national system of recording completed at the beginning of each session.

The treatment centres would be chosen by a system of tendering organised through the Department of Health, and their funding would be protected through the department. Trusts and independent providers would be free to tender. There would in due course be waiting time targets.

In any major expansion, there is always the danger of dumbing down, and this is never a good idea. If it is not possible within the next five years to achieve the extra provision I propose, it is better to expand quantity more slowly while ensuring quality. If this means establishing centres initially in the worst deprived areas, so be it. These can provide valuable experience and lessons for further expansion.

But there must be a clear long-term vision of where we want to be in ten years' time, with a phased path of how we get from here to there. A newly dreamed-up initiative every few years is a certain recipe for dumbing down.

Pathways to work

We desperately need a better NHS, delivering more help and understanding to patients. But for many patients, work is also a major route to recovery. And as taxpayers who pay for incapacity benefits, we can all say amen to this.

There are at least three obstacles to overcome. First, doctors often find it easier to counsel against work: they do not have time to advise on employment problems. Second, the benefit system is a real problem: what if the job doesn't work out? And finally, employers and jobcentres have not wanted to know.

But the government is trying to tackle these problems through its Pathways to Work pilots. When people come on to incapacity benefit, they see an employment adviser once a month in months 3-8 for a work-focused interview. And the NHS has to offer them training in 'condition-management': how they would manage their condition if they were going out to work. Moreover, GPs are lectured on the merits of work.

The results have been astonishing. In the pilot areas, the exit rate of people from incapacity benefit within the first six months of being on it has increased by one half – one of the most successful experiments I know of. On any assessment, the economic benefits exceed the costs. The scheme should clearly go national. And employers everywhere

should become more friendly towards the problems of mental illness – keeping people in work as long as possible and giving a second chance to those who have had a break. The Health and Safety Executive has a real role here.

Britain's biggest social problem

I have spent most of my life working on unemployment. It was a national disgrace, and it has still not gone fully away. But mental illness is now our biggest social problem – bigger than unemployment and bigger than poverty.

We need our politicians to see it that way, because that is how it seems to the one third of the families in this country affected in some way by poor mental health. The politicians are now at least beginning to look in the right direction. But the test is how they act.

Richard Layard is director of CEP's research programme on wellbeing. He is also emeritus professor of economics at LSE, a member of the House of Lords and founder director of CEP. This article is an edited version of the inaugural Sainsbury Centre for Mental Health Lecture delivered on 12 September 2005. The lecture draws heavily on two recent publications by Richard Layard: *Mental Health: Britain's Biggest Social Problem?* (http://www.strategy.gov.uk/downloads/files/mh_layard.pdf) and *Happiness: Lessons from a New Science* (Allen Lane, 2005).

The part-time pay penalty

Women working part-time in the UK have hourly earnings that are on average 26% less than women working full-time. **Alan Manning** and **Barbara Petrongolo** investigate what's behind this part-time pay penalty.

The majority of British women will work part-time at some point in their lifetime, and around 45% of female workers in the UK are part-time. Consequently, the types of jobs and the levels of pay and conditions that are available on a part-time basis are of crucial importance in influencing the economic opportunities for women.

But although the overall pay gap between men and women in the UK has fallen in the last 30 years, there is an important difference in the fortunes of full- and part-time women over this period. While the earnings of full-time women have been rising relative to men's, this is not true of the earnings of part-time women. Indeed, the part-time pay penalty has widened since 1975 (when it was 10%) though most of the deterioration seems to have occurred prior to the mid-1990s.

Figure 1 shows the gap in average hourly earnings between full- and part-time women using data from the New Earnings Survey/Annual Survey of Hours and Earnings (NES/ASHE) for the period 1975-2005 and the Labour Force Survey (LFS) for 1993-2005.

The estimates differ but both suggest a very large part-time pay penalty: the NES/ASHE indicates that in 2005, average hourly earnings among part-time women were 29% below those of full-time women; for the LFS, the gap is somewhat lower though still substantial at 26%.

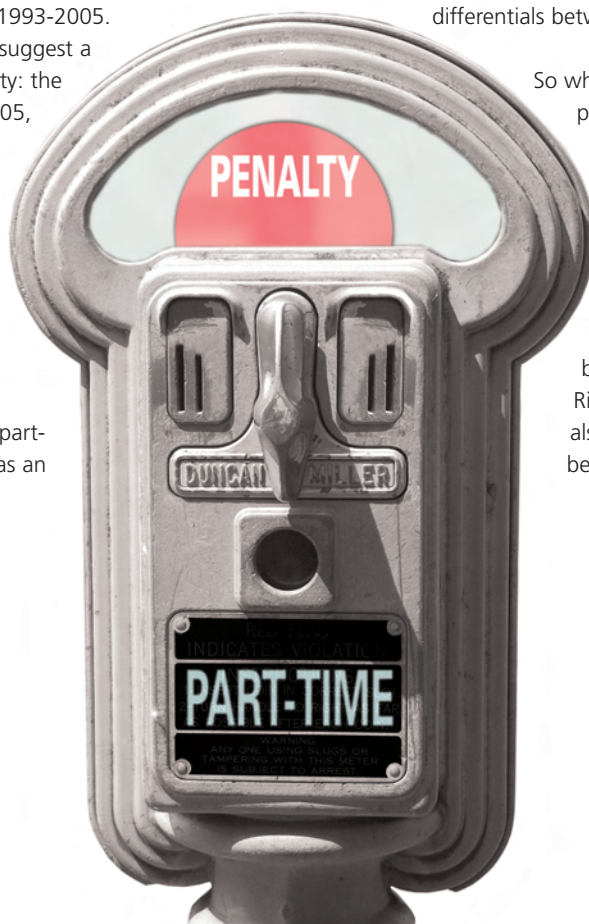
Of course, this average pay differential between full- and part-time women cannot be used as an

estimate of the pay penalty that would be suffered by a given woman moving from full-time work to part-time work. Women working part-time and women working full-time are very different in their characteristics and do very different jobs.

Compared with women who work full-time, part-time women are more likely to have low levels of education, to be in a couple, to have dependent children that are both young and numerous, to work in small establishments in distribution, hotels and restaurants and to be in low-level occupations. Almost 25% of part-time women are shop assistants, care assistants or cleaners. 15% of full-time women are managers but only 4.4% of part-time women.

Taking account of differences in employers, the part-time penalty for identical women doing the same job is estimated to be about 10% without taking account of differences in the occupations of full- and part-time women and 3% taking account of these differences. Hence, it is the difference in the occupations of full- and part-time women that explains most of the pay differentials between them.

So while the aggregate part-time pay penalty has risen over time, almost all of this rise can be explained by the rising contribution of occupational segregation. Women working part-time have failed to match the occupational upgrades made by women who work full-time. Rising UK wage inequality has also acted to widen the pay gap between women working part-



Many women working part-time are not making full use of their skills and experience

time and women working full-time as it has widened the pay gap between high-level and low-level occupations.

At the same time, there does seem to be a problem in the fact that women who want to move from full-time work to part-time work are often forced to change employer and/or occupation. On average, women moving from full-time work to part-time work make a downward occupational move, evidence that many women working part-time are not making full use of their skills and experience. There is also evidence of under-utilisation of the skills of women working part-time among women with nursing and teaching qualifications.

Downward occupational mobility is less marked for women who change their hours without changing their employer. But more research is needed on why employers do not make certain jobs available on a part-time basis and whether some combination of inertia, lack of imagination and prejudice is also involved.

Women working part-time in other European Union countries face similar problems to those in the UK. But the UK has the highest part-time pay penalty and one of the worst problems in enabling women to move between full- and part-time work without occupational demotions.

At the same time, part-time work in the UK carries a higher self-reported job satisfaction premium (or a lower job satisfaction penalty) than in most other countries. And part-time women in the UK do not actually report high levels of under-utilisation of their skills.

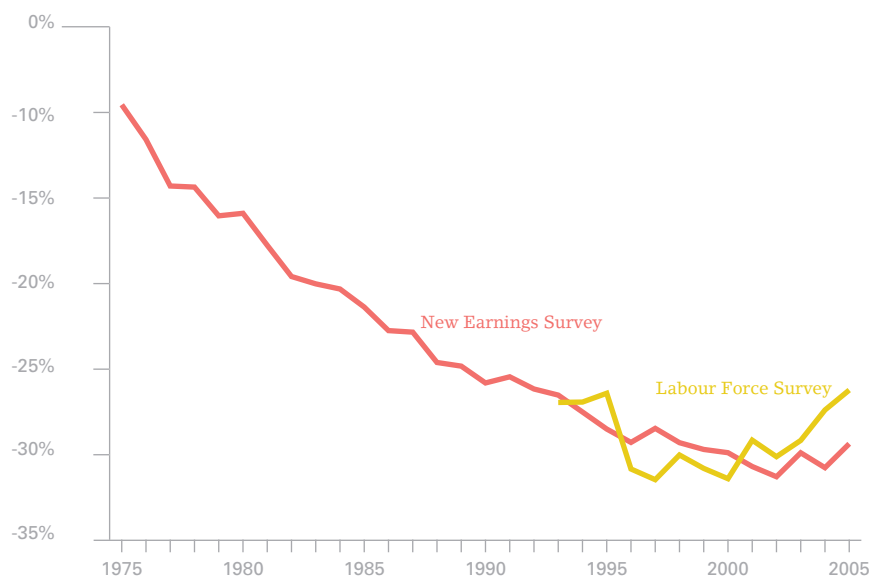
Differences in the occupations of full- and part-time women explain most of the pay differentials between them

Policy initiatives in recent years like the national minimum wage (1999), the part-time workers regulations (2000) and the right to request flexible working (2003) appear to have had little impact on the part-time pay penalty as yet although it is too early to make a definitive assessment of the full impact of some of these regulations.

The most likely explanation of this is that, with the exception of the right to request flexible working, none of these policies are targeted at the routes by which part-time women end up in low-level occupations. And the right to request flexible working is quite weak in that it allows employers many legitimate reasons for refusing requests.

But it seems likely that more moves in this direction – strengthening women’s rights to move between full- and part-time work without losing their current job and breaking down barriers to the availability of high-level jobs on a part-time basis – that will be the most effective way to reduce the part-time pay penalty.

Figure 1:
The part-time pay penalty
 (Percentages by which average hourly earnings of part-time women workers are below those of full-time women workers)



This article summarises ‘The Part-time Pay Penalty’ by Alan Manning and Barbara Petrongolo, published by the Women and Equality Unit of the Department of Trade and Industry (http://www.womenandequalityunit.gov.uk/research/part_time_paypenalty.pdf) and also available as CEP Discussion Paper No. 679 (<http://cep.lse.ac.uk/pubs/download/dp0679.pdf>)

Alan Manning is professor of economics at LSE and director of CEP’s research programme on labour markets.

Barbara Petrongolo is a lecturer in economics at LSE and a research associate in CEP’s labour markets programme.

CEP's *Skills for All* research programme has been looking at the life choices and life chances of the many young people in the UK who do not go to university. **Hilary Steedman** summarises the key findings and what they mean for recent government initiatives to improve vocational education and upgrade the nation's skills base.

Skills for all

More than half of all young people in the UK do not go on to university. Our research programme has examined the routes these young people take – or do not take – to higher levels of skills and education, their motivation (or lack of it), the quality of education and training they receive and the contribution of employers and colleges to their success.

One of our central conclusions is that at present, all our efforts to improve post-16 education and training, including apprenticeships, are seriously weakened by what happens pre-16. Specifically, pedagogic style and curriculum rigidity for young people up to the age of 16 are resulting in significant disaffection and under-achievement.

The most damaging manifestation is the reluctance of a significant proportion of school-leavers to continue to engage with any sort of formal learning. This undermines all our efforts post-16 – and apprenticeships in particular.

Disengagement 14-16

Young people's disengagement from education is not a new phenomenon. But

changes in the demand for skills and the importance of lifelong learning, together with a more inclusive employment and social agenda, have made it a high policy priority. Hence the need to estimate the size of the challenge presented by disengagement and to distinguish the variety of needs of those in this group.

Disengaged learners fall into two categories, for which different solutions may be needed: those who are disengaged but are achieving at or above their potential; and those who are disengaged and under-achieving. The disengaged are located within the broad group who achieve fewer than five GCSE A*-C grades at age 16. This is made up of three groups.

The first is a very small group of young people (1-2% of each cohort) who have practically lost contact with school between 14 and 16. This group – the 'out of touch' – appears to make some progress through individualised alternative provision that provides one-to-one contact, an adult and supportive approach and new opportunities to mark progress through certification. But success in even the best of these programmes is mixed and OFSTED (the Office for Standards in Education) has expressed deep concern about variability in the quality of provision.

The size of the second, larger group is difficult to estimate but it is probably contained within the 20% of the cohort who claim to have no GCSE qualifications at ages 17-19. These young people can be characterised as 'disaffected but in touch' and they appear to respond to a wide range of initiatives that take them out of school into a further education, work-related or leisure setting.

Evidence for improved attainment and progression to further education and training for this group is again mixed. OFSTED is cautious about this type of intervention (stressing the need for careful planning and monitoring of work placements) but, with some provisos, considers that well configured work-based learning may contribute to re-engagement and improved performance.

The third group is also difficult to quantify but approximates the further 20% who gain one or more (but fewer

We need to develop a vocational route to level 3 skills and higher education

Our efforts to improve post-16 education and training are seriously weakened by what happens pre-16

**“like,
whatEVER...”**
“duh!”
“boring!”

than five) grade C or higher GCSE passes. Within this '1-4 A-C grade' group, some may have reached their full potential, but others will be capable of much more if interest and enthusiasm can be aroused.

This group has been targeted by many initiatives that offer new/improved vocational subjects and qualifications, which allow students to demonstrate aptitudes and capabilities that are not required by more 'academic' subjects. OFSTED has expressed concern about the capacity of schools and teachers to offer such courses to the standard required. Nevertheless, the evidence suggests that such vocational courses can have a highly motivating effect on students' performance.

'Increased flexibilities'

Increased Flexibilities is a £120 million government programme aimed at creating enhanced vocational and work-related learning opportunities for 14-16 year olds who can benefit most, including provision of new GCSEs in vocational subjects. Our research finds encouraging evidence that the programme has reawakened interest in learning post-16 and we hope that the variety of learning location and choice that the programme makes available can be extended nationwide as soon as possible.

In particular, the research shows that including vocational courses and work-related learning pre-16 leads, in many cases, to: improved motivation among young people said, previously, to be lacking in motivation or to be potentially disaffected or disengaged; improved attendance and behaviour; and improved confidence and self-esteem. There are also indications of a greater preparedness for post-16 studies, especially among young

people studying vocational courses pre-16 at colleges.

Our qualitative research undertaken with 17 post-16 students in three colleges of further education largely supports these findings in terms of the perceived impact of pre-16 vocational experiences on young people's motivation, attendance and behaviour. The interviewees report that the practical nature of the courses increased their motivation and stimulated their learning; that they preferred the nature of teaching (with more individual attention and more group work) and student/teacher relationships in college;

and that their attendance and behaviour at college improved as a result of being involved in pre-16 vocational courses.

International comparisons of qualifications

So how does the UK's performance in producing skilled individuals compare with that of other major industrialised countries – France, Germany and the United States – and an Asian tiger – Singapore? Our 'skills audits' show that:

- In France and Germany, vocational qualifications continue to play an important role in enabling more young people to reach level 2 (GCSE) and

Figure 1: Percentages of national populations aged 25-28 at level 2 and above by type of qualification held, 2002/03



level 3 (A-level equivalent) and above by age 25-28 (see Figure 1).

- In France, Germany and Singapore, substantial proportions of higher education qualifications are vocational/applied. In the UK and the United States, proportions with short vocational/applied diplomas/degrees are much lower.
- At level 3 and above for the 19-21 age group, Germany had an advantage of 14 percentage points relative to the UK in 1994 and the gap with the United States was of a similar magnitude. The gap with respect to Singapore was slightly smaller. These gaps have now disappeared.
- But for 25-28 year olds at level 3 and above, not only the UK but also France and Singapore have experienced rapid growth with the result that the UK is just about 'keeping pace' with those countries rather than closing the gap (see Figure 2).
- Qualification levels in the UK increase much more slowly after ages 19-21 than in France and Germany. In the latter countries, qualifications at level 3 and above increase substantially between the ages of 19-21 and 25-28.

The rapid growth in qualifications of 19-21 year olds at level 3 and above in the UK between 1994 and 1998 resulted from the one-off rise in proportions gaining five or more GCSE A*-C grades between 1988 and 1992. Since 1998, growth has halved as post-compulsory enrolment rates have flattened out. Measures proposed in the Tomlinson Report – including a vocational route to level 2 and level 3 – are urgently needed to achieve another step-change in the post-compulsory enrolment rate.

The vocational route

The evidence from other countries shows convincingly that a vocational route to level 3 skills and to higher education is essential if 80% are to reach level 3 by age 25. To provide a vocational route to level 3 skills, employment and progression on to higher education, we also need a full-time vocational route to provide for the 20-30% who have left school with some good GCSE passes, currently take some vocational courses but fail to reach level 3.

We therefore welcome the government's White Paper on 14-19 education and look forward to its rapid

Figure 2: Narrowing the gap: 25-28 year olds at level 3 and above

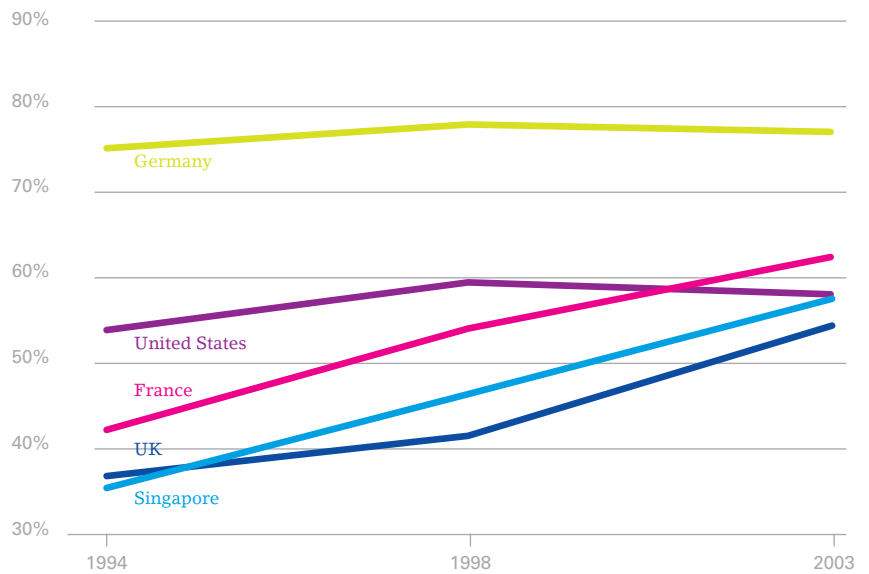
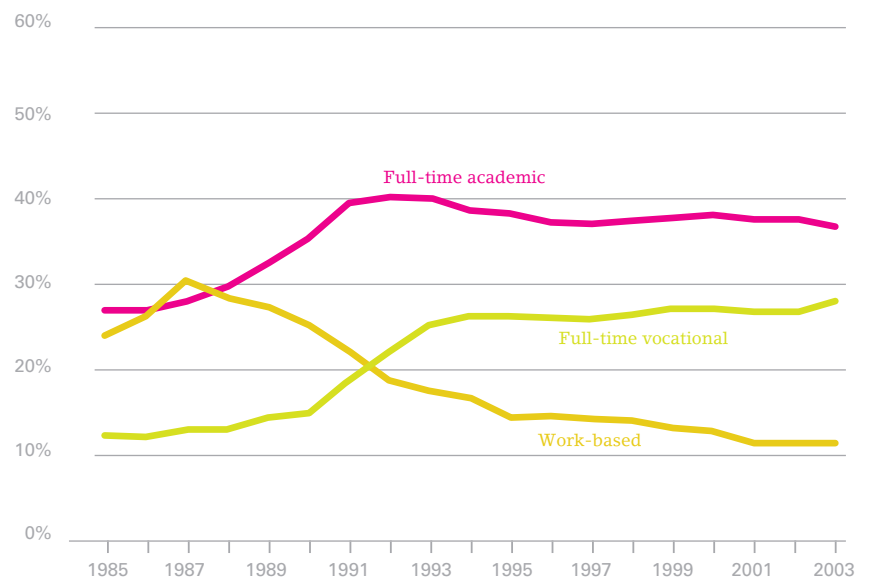


Figure 3: Percentages of 16 and 17 year olds in education and training



implementation. But the experience of other countries suggests that is important not to lose sight of the need for: transparency and clarity in order to overcome information failure; substantial practical vocational content and mandatory work experience in the relevant sector; and progression to level 3 and a clear expectation that level 3 is the goal even though a period of study longer than two years may be required.

There are strengths in our system with around 30% of 16 year olds opting for full-time vocational programmes in school or college, quite apart from the numbers

entering apprenticeships (see Figure 3). But vocational education has suffered a chequered history, being subject to many different initiatives over the years, each of which has had rather different purposes in mind. This overlay of initiatives, courses, qualifications and indeed philosophies has resulted in:

- a confusing plethora of qualifications, with no image in the minds of young people, parents and employers about what vocational education involves;
- high degrees of non-completion with switching between the many different

courses and a dropping off of participation at 17;

- poor linkages both between the various types of vocational courses on offer, and between them and vocational offerings in higher education – a third of vocational students are on courses that could not lead to higher education, either directly or through a further related course;
- and poor linkages to the labour market, which are not helped by the fact that the industry bodies that are meant to set standards have been reorganised five times in the last 30 years and twice in the last five years alone.

Other countries offer models of how to constitute programmes of full-time vocational education. These are common in continental Europe, even in countries that have a strong apprenticeship tradition. There is no single recipe, but the lessons for us are these:

- offering vocational courses both as pathways in their own right and as options that can be mixed with academic subjects is unlikely to succeed;
- linkages with both higher education and apprenticeship are both possible and desirable;
- vocational education can be a respectable option, and certainly is not seen abroad, as it sometimes is here, as an alternative to academic subjects for those who are struggling at school;
- and the quest for 'parity of esteem' between academic and vocational subjects is a wild goose chase – far from raising the reputation of vocational courses, it is likely to distort them and make them pale imitations of academic studies, with little purpose of their own.

The way forward

The way forward is to develop substantial national vocational programmes, perhaps 15-30 in all, each culminating in an award at level 3, the first point at which vocational education has a demonstrable payoff in the labour market. These programmes would:

- be designed through genuine working partnerships between industry, awarding bodies, higher education and vocational teachers;
- include a rich mixture of relevant physical and social science subjects to enable general education to be continued in a natural manner;
- give access to the large array of vocational subjects already present within higher education;
- enable students to gain credits towards 'advanced modern apprenticeships' or 'foundation apprenticeships';
- and include an introductory stage for young people with weaker GCSEs who need to build up their skills, and mesh in with preparatory programmes for those under 16 who want to sample a number of vocational options before committing themselves.

These vocational programmes would build on the structures and courses that already exist, but 'by gathering them together' make them much more coherent. They would reflect the best of successful practice abroad, where vocational studies are more esteemed than here and produce better results. And they would be consistent with emerging proposals for an 'English baccalaureate', providing the specialised vocational variants that are envisaged under this system.

Apprenticeships

While apprenticeships have a leading role to play in the provision of vocational education and training, a number of issues are still not satisfactorily resolved. Again, comparisons with other countries offer valuable lessons.

In continental Europe, apprenticeships tend to be 'demand-led': employers take on apprentices on the basis of their assessment of their future skill requirements. Individuals therefore get trained in relevant areas, while firms get the skills that they need. But in the UK, apprenticeship training is 'supply-led': training providers receive government funding to place young people with firms, with the aim of achieving government targets for numbers trained rather than to respond accurately to local skill needs and the aspirations of young people.

In continental Europe, apprenticeships tend to have a common identity across occupations, provided by statutory regulation of their key features, such as duration, standards and assessment. But in the UK, there are widespread differences in the quality of apprenticeships along these dimensions, such that there is no single definition of what an apprenticeship actually is and what it entails. Some apprentices are even unsure whether they are involved in an apprenticeship scheme or not.

There appears to have been little or no improvement in the quality and quantity of advice available to young people in school and college on following a chosen career by means of apprenticeship. Furthermore, apprenticeship is now overwhelmingly a programme aiming at level 2 skills rather than level 3. Elsewhere, vocational routes aim to take the majority to level 3 and our research shows good wage returns to this level.

Vocational courses for 14-16 year olds can have a highly motivating effect on students' performance

“brill.”
“...COOL.”
“yup.”

Hilary Steedman is a senior research fellow in CEP's education and skills programme. She co-directed *Skills for All* with Richard Layard and Sheila Stoney of the National Foundation for Educational Research. The programme was core-funded by the Esmée Fairbairn Foundation with additional financial support from the Anglo-German Foundation and the Economic and Social Research Council. For further information on *Skills for All*, see: <http://cep.lse.ac.uk/research/skills/skillsforall.asp>.

Understanding labour markets



Chris Pissarides, professor of economics at LSE and director of CEP's research programme on macroeconomics, has been jointly awarded the IZA Prize in Labor Economics 2005 with Professor Dale Mortensen of Northwestern University.

The prize, awarded by the Institute for the Study of Labor (IZA) in Bonn, honours the pioneering work of exceptionally creative scholars who have revolutionised theoretical and empirical research on labour markets. The prize committee includes Nobel Laureates George Akerlof and Joseph Stiglitz, and the previous winners are Jacob Mincer, Orley Ashenfelter and Ed Lazear. Pissarides is the first European scientist to receive this prestigious award.

Mortensen and Pissarides's work has focused on developing a better understanding of unemployment and job flows. In particular, they have shown how the intensity with which workers search for jobs and the timing of decisions of when to accept a job offer determine the distribution of unemployment durations.

The award team said: 'Professor Pissarides and Professor Mortensen have been awarded the prize for their path-breaking contributions to the analysis of markets with search and matching frictions. The vast literature that was stimulated by their fundamental contributions to search and matching theory is evidence of the power of their approach to the analysis of interactions in labour markets, marriage markets, housing markets, or generally all markets with frictions.'

'Both their individual contributions and their joint development of a dynamic equilibrium model of labour markets account for much of the success of job search theory and the flows approach in becoming a leading tool for microeconomic and macroeconomic analysis of labour markets. Their models, which are now widely used in labour economics and macroeconomics, have highly enriched research on unemployment as an equilibrium phenomenon, on labour market dynamics and cyclical adjustment. Dale Mortensen's and Christopher Pissarides's research on labour market search and job matching has also significantly directed and shaped the empirical literature.'

Commenting specifically on Pissarides's work, they note: '[it]... has broken new ground in studying macroeconomic implications of the flows approach to labour market analysis by using the matching function as a tool to study equilibrium unemployment... The matching function relates job creation to the number of unemployed, the number of job vacancies and the intensities with which workers search and firms recruit. It successfully captures the key implications of frictions that prevent an instantaneous encounter of trading partners and has proved a particularly powerful tool for modelling two-sided search frictions that stem from information imperfections about potential trading partners...'

'Pissarides further developed the matching model, which is at present the leading tool for studying imperfect labour markets in macroeconomics, in subsequent studies of equilibrium unemployment dynamics... [His work] highlights the effects of cyclical productivity changes on vacancy posting, labour market adjustment dynamics, unemployment and wage dynamics. It rationalises why vacancies respond more quickly and with greater amplitude to shocks than unemployment, that real wage changes do not fully reflect real output changes and that unemployment responds faster to a negative than to a positive shock.'

Further reading

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Dale Mortensen and Christopher Pissarides (1999), 'Job Reallocation, Employment Fluctuations and Unemployment', CEP Discussion Paper No. 421, and *Handbook of Macroeconomics*.

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PROGRAMME IN RWANDA
by Florence Kondylis
Discussion Paper No. 709
December 2005

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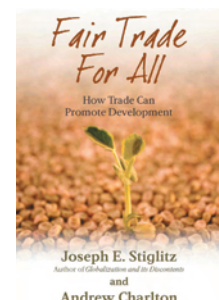
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Books

FAIR TRADE FOR ALL: HOW TRADE CAN
PROMOTE DEVELOPMENT
**By Joseph Stiglitz and Andrew
Charlton**

Oxford University Press
Price: £15.99 (Hardback)
ISBN-10: 0-19-929090-3
ISBN-13: 978-0-19-929090-1



Joseph Stiglitz and CEP's Andrew Charlton offer a challenging
and controversial argument about how globalisation can
actually help Third World countries to develop and prosper.

In *Fair Trade For All*, Stiglitz and Charlton address one of the key
issues facing world leaders today – how can the poorer
countries of the world be helped to help themselves through
freer, fairer trade?

Vividly written, highly topical and packed with insightful
analyses, *Fair Trade For All* offers a radical new solution to the
problems of world trade. It is a must read for anyone interested
in globalisation and development in the Third World.

Joseph Stiglitz is University Professor at Columbia University and
co-founder and executive director of the Initiative for Policy
Dialogue. He is a winner of the Nobel Prize in Economics (2001).

Andrew Charlton is a research officer in CEP's globalisation
programme.

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Lionel Robbins

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6.00pm Tuesday 21, Wednesday 22 and
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