ISSN 1362-3761

CentrePiece

The Magazine of The Centre for Economic Performance
Volume 11 Issue 2 Autumn 2006

CATASTROPHE ECONOMICS

The economic impact of 9/11
The China effect
Cutting child mortality
The failure of Doha
Post-7/7 policing and crime
AIDS prevention in Africa
Costs of conflict in Rwanda
Tackling depression

CentrePiece

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

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

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Design, Raphael Whittle
Print, Ghyllprint Ltd

Volume 11 Issue 2
(ISSN 1362-3761)

Editorial

Economics has long been known as the dismal science. So catastrophes – natural, man-made, economic, medical – would seem to be the perfect subject matter for economists. And so they are: the discipline now ranges freely across the full range of modern human concerns, including the global challenges of terrorism, extreme poverty, poor health and climate change.

But as several articles in this issue of *CentrePiece* show, some of the most recent findings of top-quality economic research are far from dismal. Indeed, they suggest a far more positive view of the future than those espoused by prophets of doom in certain other fields of enquiry and many activists in thinktanks, pressure groups and political campaigning.

Shocking events like the 9/11 attacks on New York do set the economy back but things recover pretty quickly. Increased resources for policing can have an impact in cutting crime. The rise of China is not going to be a disaster for all sectors and all workers in the old industrialised countries. And a little education – for both children and their parents – has the potential to go a long way in reducing disease and early death in the poorer nations of the world.

Of course, what many people consider to be the greatest catastrophe of all is human-induced global warming. Again though, economists tend to be relatively optimistic. The recent review led by Sir Nicholas Stern acknowledged that addressing climate change demands strong and costly action – but that need not be a major obstacle to future prosperity. Ralf Martin will examine policies for reducing carbon emissions in our next issue. In the meantime, our website has his recent CEP policy analysis on the topic: http://cep.lse.ac.uk/briefings/pa_climate_change.pdf.

Elsewhere on the website, there is more on the theme of catastrophe, including an audio interview with Alan Krueger of Princeton University who delivered the Lionel Robbins Memorial Lectures earlier this year on the causes and consequences of terrorism: http://cep.lse.ac.uk/interviews/default.asp. There is also our latest policy analysis, which focuses on the European Union's 'Lisbon agenda' for boosting innovation and productivity growth: http://cep.lse.ac.uk/briefings/default.asp.

As always, your comments on our policy analyses and the articles in *CentrePiece* would be very welcome. And do pass the magazine on to colleagues who might appreciate learning that even in the face of catastrophe, some dismal scientists can be surprisingly upbeat.

Romesh Vaitilingam
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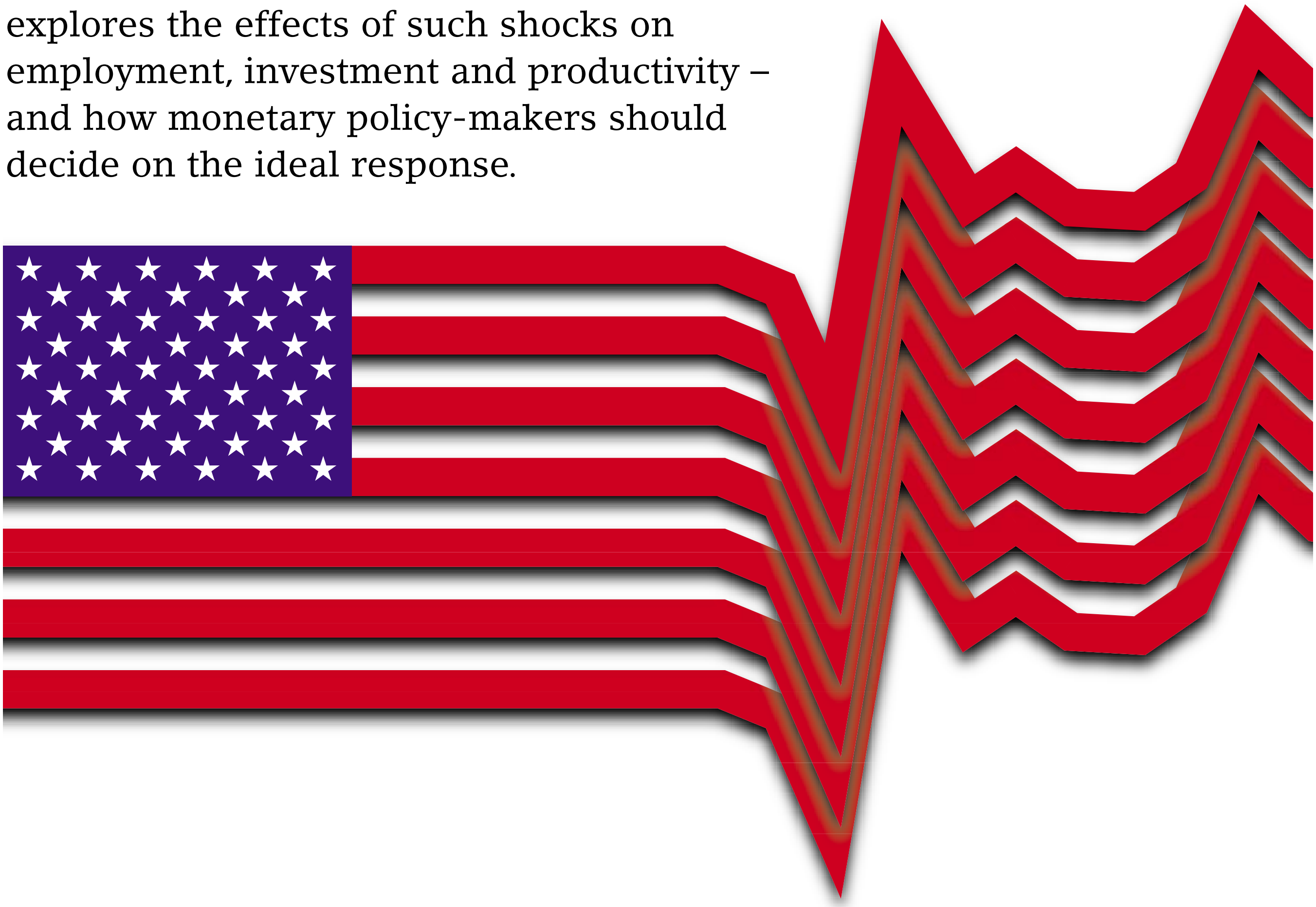
Contents

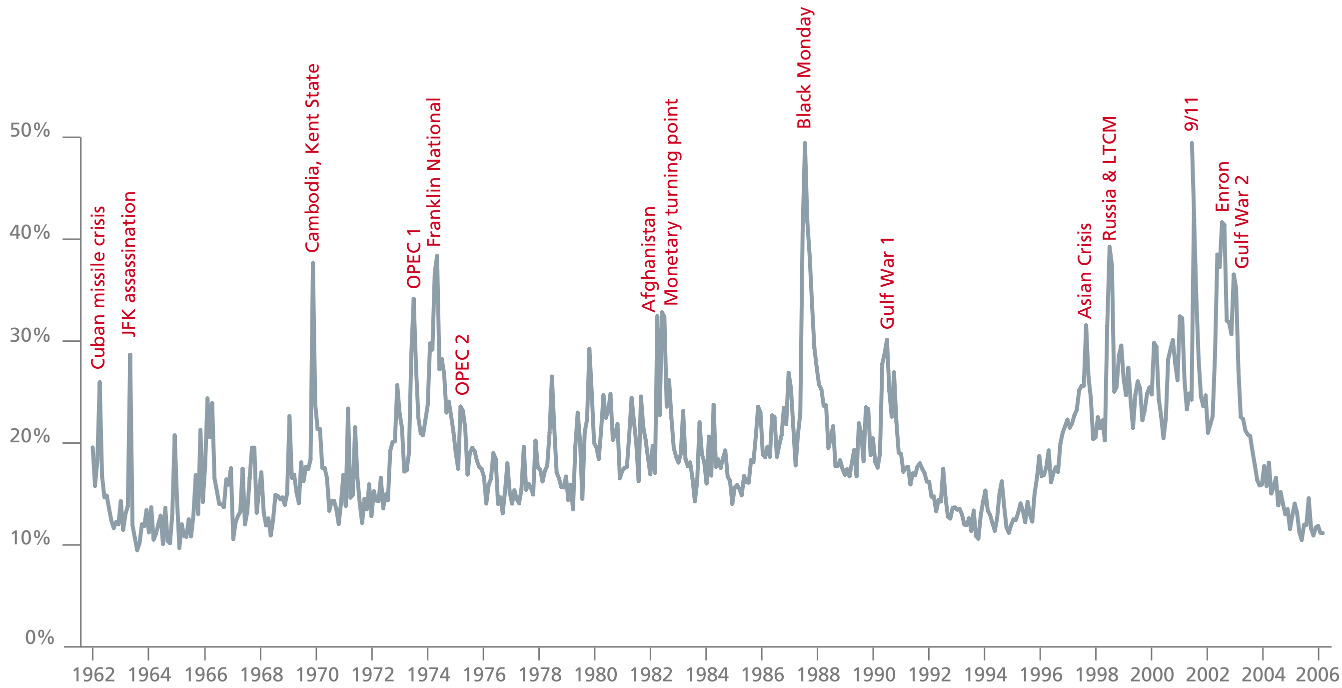
in brief...

Major events like the terrorist attacks on New York of 11 September 2001 generate large but typically short-lived bursts of uncertainty. New research by **Nick Bloom** explores the effects of such shocks on employment, investment and productivity – and how monetary policy-makers should decide on the ideal response.



The economic impact of 9/11

Figure 1:
Monthly US stock market volatility, 1962-2006



Note: The vertical axis shows a percentage measure of volatility known as 'annualised standard deviation'. Prior to 1986, this is calculated as the percentage actual volatility of monthly returns on the S&P500 index of the US stock market. After 1986, it is calculated using the percentage 'implied volatility' from an option on the S&P100 index.

What is the impact of shocks like high-profile terrorist attacks on firms' hiring and investment decisions and on their productivity? My research finds big short-run effects from the fear and uncertainty: a temporary drop in GDP as everyone pauses and the economy freezes. But six months on from one-off incidents like 9/11, the uncertainty effects are much more muted as firms resume activity and make up for lost time.

There has been extensive research on the impact of major shocks via the *levels* of future demand and productivity – what economists call 'first moment' effects (examined in the research literature on business cycles). But until now, there has been very little investigation of the *uncertainty* – or 'second moment' – effects of economic and political shocks.

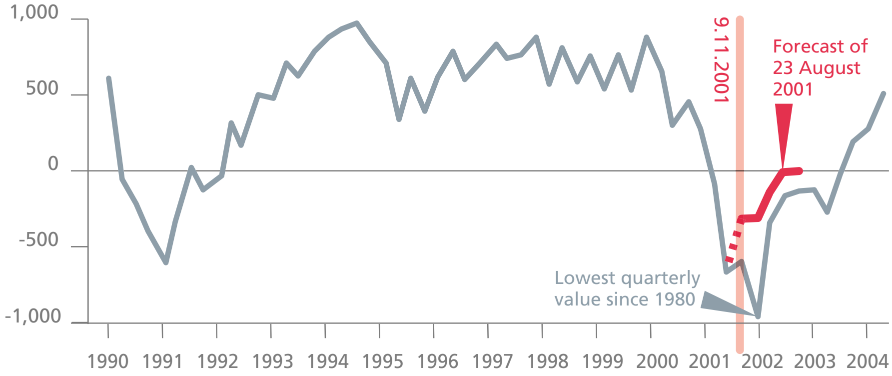
This is surprising as it turns out that uncertainty shocks occur regularly. As Figure 1 shows, uncertainty – as measured by the widely accepted indicator of monthly stock market volatility – doubled after events like the Cuban missile crisis, the assassination of President Kennedy, the Gulf War and 9/11.

The closest previous work to mine was done as a doctoral thesis over 20 years ago by the current chairman of the US Federal Reserve Ben Bernanke. Indeed, in a way, my study is a test of the 'Bernanke hypothesis': extending his examination of the impact of uncertainty on investment to its effects on hiring and productivity; quantifying it using firm-level data; and confirming via a simulation the prediction that the response to an uncertainty shock is a rapid drop and rebound in economic activity.

Comparing the simulated data with actual data from the period immediately following 9/11 produces a remarkably good fit. Figure 2, which plots actual quarterly changes in net employment, shows that there was a sharp drop in net employment growth in the quarter after 9/11, with a rapid rebound in the first quarter of 2002.

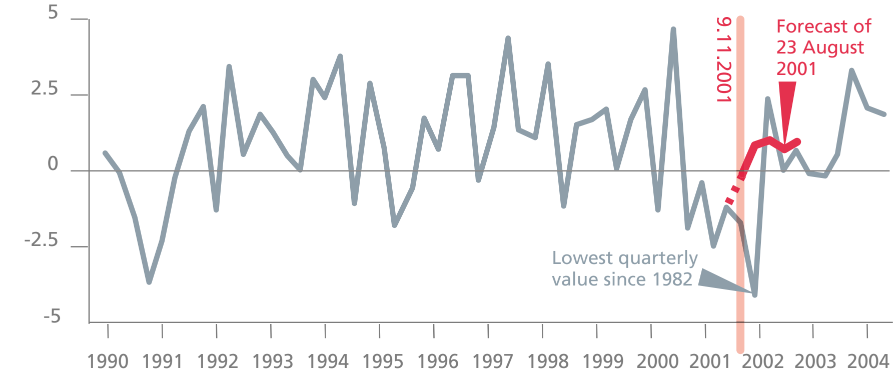
9/11 led to the loss of one million jobs and investment equivalent to 3% of GDP over the next four months

Figure 2:
US quarterly net hiring

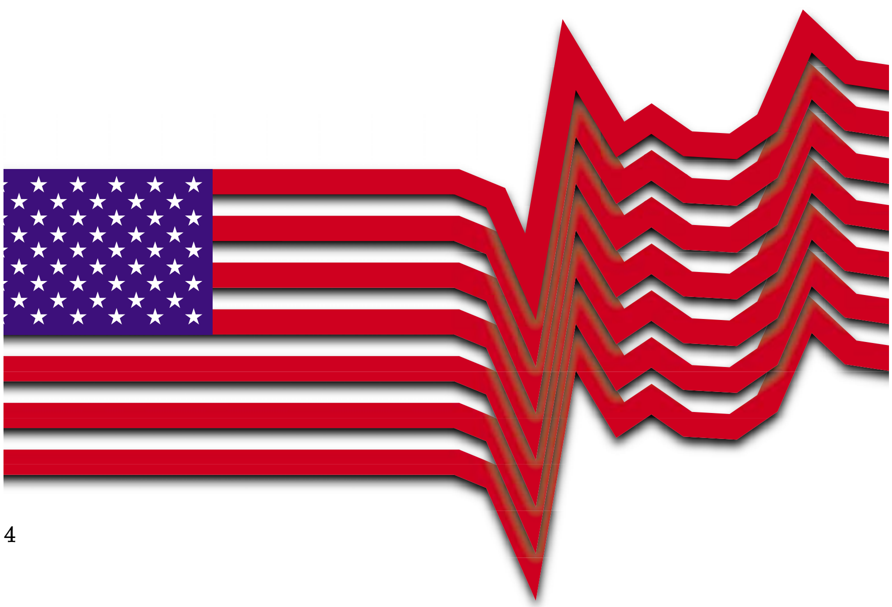


Note: The vertical axis measures quarterly changes in net employment in the private sector (in thousands of people); the data are from the Current Employment Statistics survey produced by the Bureau of Labor Statistics; the forecast is an average of 33 economic forecasters collected by the Federal Reserve Bank of Philadelphia on 23 August 2001.

Figure 3:
US quarterly investment



Note: The vertical axis measures the quarterly percentage contribution of investment to real GDP growth; the data are from the National Income and Product Accounts produced by the Bureau of Economic Analysis; the forecast is an average of 33 economic forecasters collected by the Federal Reserve Bank of Philadelphia on 23 August 2001.



The immediate decrease was the largest quarterly fall in employment growth since 1980, and compared with predicted employment changes from the consensus forecasts of 23 August 2001, 9/11 appears to have generated a net job loss of one million jobs in the subsequent four months. But comparison with the forecasts for further ahead suggests that there was little longer-run fall in employment growth.

The data for quarterly investment as a percentage contribution to real GDP growth follow a similar pattern. As Figure 3 shows, there was a sharp fall after 9/11, with the last quarter of 2001 representing the lowest quarterly value for investment since 1982.

Again, compared with the pre-9/11 consensus forecasts, the short-run effects were large – with the drop in investment cutting annual GDP growth by about 3% over the subsequent four months. But there was a rapid bounceback in the first quarter of 2002 and there were no apparent longer-run effects.

Central bank statements of the time provide a broader confirmation of the uncertainty that 9/11 created. Figure 4 plots the frequency of the word 'uncertain' in the minutes of the Federal Open Market Committee (FOMC), which displays a clear jump and subsequent decay around 9/11. For example, the minutes of 2 October 2001 said:

> 'The events of September 11 produced a marked increase in uncertainty… depressing investment by fostering an increasingly widespread wait-and-see attitude about undertaking new investment expenditures.'

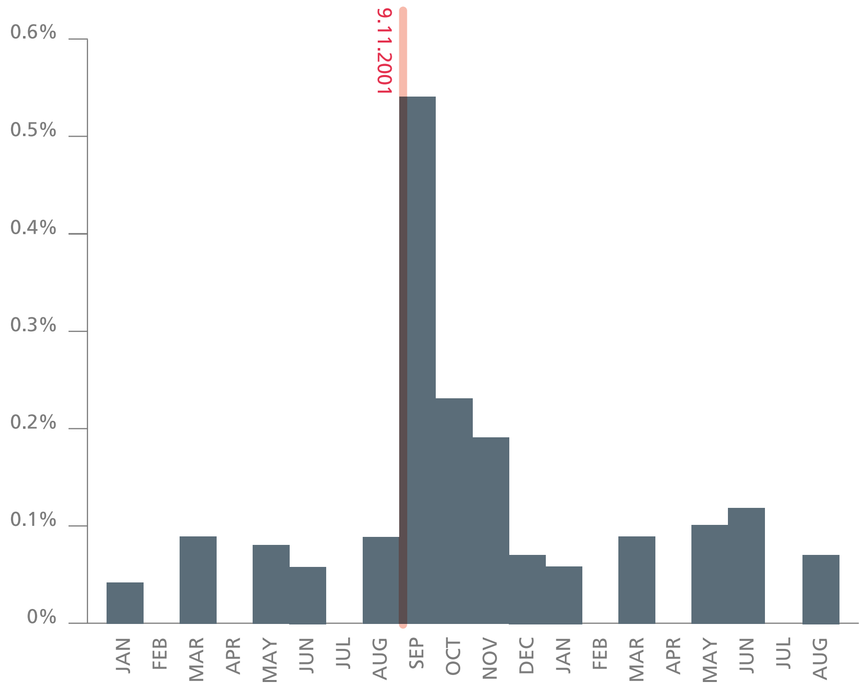
Almost two months later, on 27 November, FOMC member and president of the Chicago Federal Reserve Board Michael Moskow commented:

> 'Because the attack significantly heightened uncertainty, it appears that some households and some businesses would enter a wait-and-see mode… They are putting capital spending plans on hold.'

The FOMC minutes of 6 November noted the additional effects of uncertainty on risk aversion:

> 'The heightened degree of uncertainty and

Figure 4:
Frequency of the word 'uncertain' in the minutes of the Federal Open Market Committee (FOMC)



Source: FOMC minutes; note that the FOMC typically meets only eight times a year so some months have no meetings.

The rapid drop in economic activity was followed by a strong rebound with limited longer-term impact

> risk aversion following the terrorist attack seemed to be having a pronounced effect on business and household spending.'

And other central banks also discussed this phenomenon. For example, the 17 October minutes of the Bank of England's Monetary Policy Committee stated that:

> 'A general increase in uncertainty could lead to a greater reluctance to make commitments… Labour hiring and discretionary spending are likely to be deferred for a while, to allow time for the situation to clarify.'

Uncertainty is clearly a ubiquitous concern of monetary policy-makers – and it becomes of particular importance in the immediate aftermath of a major shock. When deciding whether to adopt a contractionary, neutral or expansionary stance in response, it is critical to distinguish between persistent first moment effects (which will generate a drop in activity lasting several quarters) and temporary second moment effects like those of 9/11 (which will generate a big drop in the first month but a complete rebound by six months out).

My research suggests two pieces of information that monetary policy-makers might use to assess the likely impact of any shock. The first thing to look at is measures of financial uncertainty from indices of implied stock market volatility. The second is the spread of activity across firms: first moment shocks will lead to a fall in activity across all firms while a second moment shock will lead to a compression of activity across firms.

Given the rapid drop and rebound from second moment shocks and the long delays in monetary policy, the best response is a limited one. So the cautious stabilisation pursued by the Federal Reserve and the Bank of England in late 2001 looks entirely appropriate based on these results, and with hindsight was proved correct.

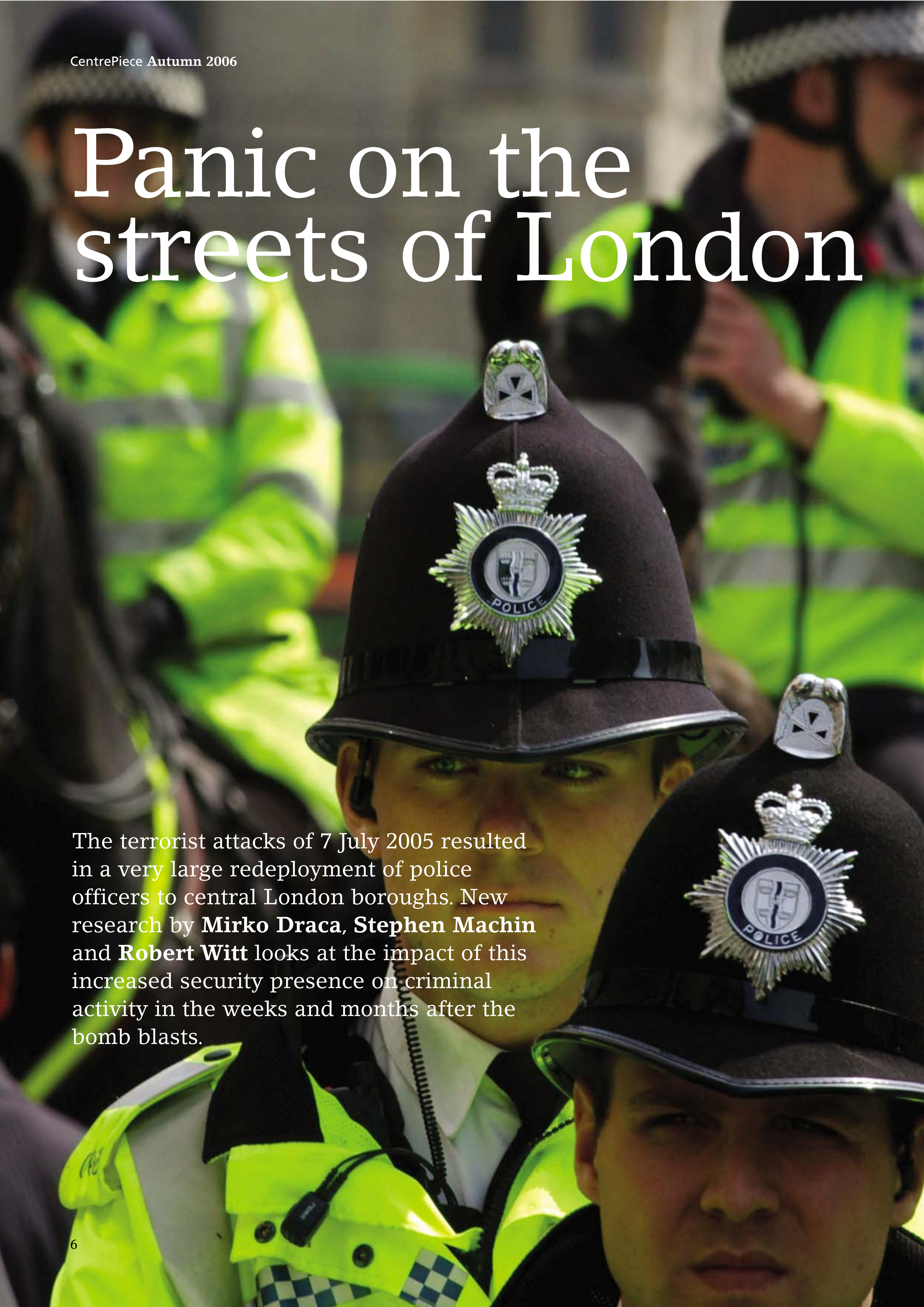
This article summarises 'The Impact of Uncertainty Shocks: Firm Level Estimation and a 9/11 Simulation' by Nick Bloom, CEP Discussion Paper No. 718 (http://cep.lse.ac.uk/pubs/download/dp0718.pdf).

Nick Bloom is an assistant professor of economics at Stanford University and a research associate in CEP's productivity and innovation programme.

Further reading

Ben Bernanke (1983), 'Irreversibility, Uncertainty and Cyclical Investment', *Quarterly Journal of Economics* 98, 85-106.

Panic on the streets of London



The terrorist attacks of 7 July 2005 resulted in a very large redeployment of police officers to central London boroughs. New research by **Mirko Draca**, **Stephen Machin** and **Robert Witt** looks at the impact of this increased security presence on criminal activity in the weeks and months after the bomb blasts.

Increasing police resources is often perceived as a primary tool for reducing crime – 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 result, it is difficult for governments and observers of public policy to evaluate the effectiveness of increasing police resources in comparison with other possible causes of falling crime rates, such as increased incarceration rates and improved economic conditions.

This problem has led researchers to consider the impact of unexpected changes in police deployment on crime rates. These types of changes are often characterised as 'natural experiments' – a research design based on events, which tries to reproduce the conditions of a scientific experiment without the pre-design that is available in controlled laboratory conditions.

For example, our research looks at police activity in central London in the wake of the 7 July 2005 terrorist attacks. Police deployment increased by over 30% in the six weeks immediately following the bombings, and the massive scale of this response provides a good opportunity to examine the causal relationship between the number of police deployed and the crime rate.

Specifically, our research investigates what the heightened security presence did to criminal activity in the five London boroughs that were hit. The central finding is that crime fell significantly in these places relative to outer London in the six weeks immediately after the attacks. Furthermore, crime appears to be highly responsive to higher police deployment – we calculate that a 10% increase in police deployment reduces the crime rate by approximately 3%.

7/7 as a natural experiment

As will be familiar to most readers, London's public transport system was subject to two waves of attacks in July 2005. The first wave occurred on 7 July and involved the detonation of four bombs. Three bombs were detonated on London Underground trains near the stations of Russell Square (in the borough of Camden), Liverpool Street (Tower Hamlets) and Edgware Road (Kensington and Chelsea). A fourth bomb was detonated on a bus in Tavistock Square, Bloomsbury (Camden).

The second wave of attacks occurred two weeks later on 21 July and involved four unsuccessful attempts at detonating bombs on trains near the stations of Shepherds Bush (Kensington and

Table 1:

Police deployment and crime rates before and after the 7/7 attacks, borough level

	Police deployment (Hours worked per 1,000 population)			**Crime rate** (Crimes per 1,000 population)		
	Pre-period: 8 July 2004 to 31 December 2004	Post-period: 7 July 2005 to 31 December 2005	Difference	Pre-period: 8 July 2004 to 31 December 2004	Post-period: 7 July 2005 to 31 December 2005	Difference
Central London 'treatment' boroughs	171.41	190.34	+18.93	4.26	3.88	-0.38
Outer London 'control' boroughs	84.19	85.40	+1.21	2.20	2.16	-0.04

Note: The central London 'treatment' boroughs are Camden, Islington, Kensington and Chelsea, Tower Hamlets and Westminster.
Police deployment is defined as total weekly hours worked by police staff at borough-level.

Chelsea), the Oval (Lambeth) and Warren Street (Westminster), and on a bus in Bethnal Green (Tower Hamlets). This second wave of attacks caused much turmoil in London.

The bomb attacks took place in five boroughs in central London and we have used these parts of the capital as the 'treatment' areas that were most affected in terms of a heightened security presence. We also need a set of control areas against which we can benchmark the observed changes in the treatment boroughs. We therefore use other boroughs located in outer London as the comparison group. Figure 1 shows the 32 London boroughs, picking out the five in the treatment group.

Basic street-level policing of London is carried out by 33 borough operational command units, which operate within the same boundaries as the 32 London borough councils plus one dedicated to Heathrow Airport. Our data are constituted of daily police reports of crime from the London Metropolitan Police Service before and after the attacks. They cover the period 1 January 2004 to 31 December 2005, aggregated up from ward to borough level and from days to weeks over the two-year period.

The impact of increased police deployment

Table 1 reports police deployment and crime rates before and after the attacks. Note that in this part of the analysis, we define the post-attack period as the whole period from the 7/7 attacks until the very end of 2005. So what do the data reveal?

Before the attacks, the hours worked by the police per head of population were higher in the central London treatment boroughs: 171.41 hours per 1,000 people compared with about half that in the control boroughs. After the attacks, deployment levels remained much the same in the control areas (85 hours per 1,000 people compared with 84 the year before) but rose very rapidly in central London: by 19 hours per 1,000 people, an increase of 11% over the level in the previous year.

The patterns of change in the total crime rate are similar. As with deployment, the crime rate was higher in central London before the attacks at 4.3

Crime fell significantly in central London relative to outer London in the six weeks after 7 July

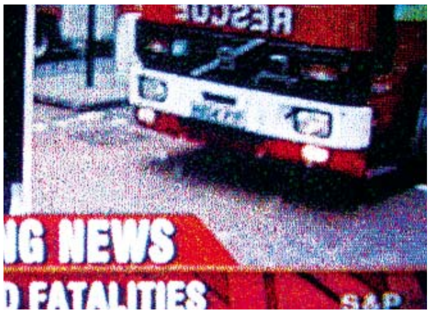
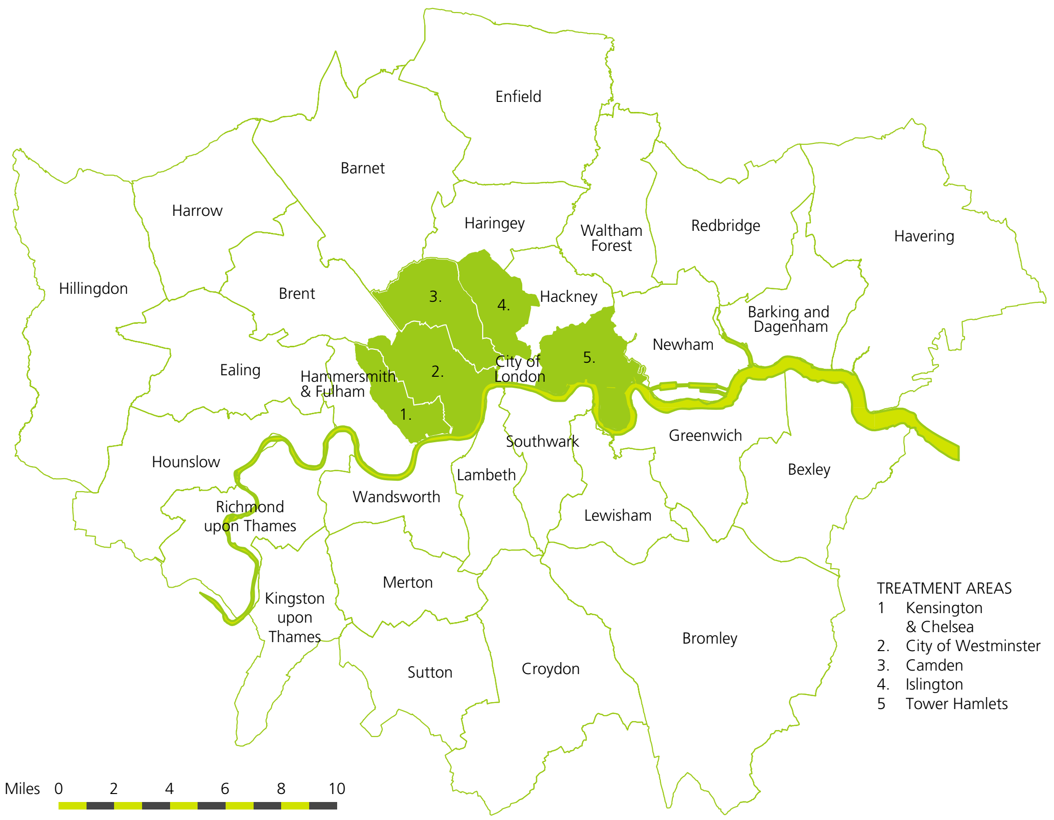


Figure 1:
A map of London boroughs



This article summarises 'Panic on the Streets of London: Police, Crime and the July 2005 Terror Attacks' by Mirko Draca, Stephen Machin and Robert Witt, a forthcoming CEP Discussion Paper.

Mirko Draca is a research economist in CEP's productivity and innovation programme. **Stephen Machin** is CEP's research director. **Robert Witt** is at the University of Surrey.

crimes per 1,000 people compared with 2.2 per 1,000 in the control boroughs. After the attacks, the crime rate changed very little in outer London, but in central London, crime fell very sharply to 3.9 crimes per 1,000 people, a 7% fall in the crime rate.

Our basic analysis strongly suggests that increased police presence after the London bomb attacks was linked to reduced crime levels. But there are several reasons why reaching this conclusion may be premature. There may be missing factors that determine crime, for example, the number of potential crime victims might have fallen after the attacks occurred (with fewer people travelling into central London) and this, rather than increased police presence, could have been the key driving factor.

Our more detailed analysis deals with some of these possibilities. For example, throughout the rest of 2005 after the attacks, police deployment in central London was about 8.5% higher than before. But levels of deployment were actually much higher in the six weeks after 7/7 at 34% higher. Between the end of August and December 2005, police deployment levels fell back to their pre-attack levels.

Crime fell significantly after 7/7 at an average of 6.3% over the remaining weeks of 2005. But again, as with police deployment, there was significant variation across the first six weeks and the rest of the year. The data show a 12% lower crime rate in the six weeks following 7/7 – the period when the heightened security presence occurred – and a smaller 4.5% lower level in the remaining weeks of the year.

The respective timings of the increase in police deployment and the fall in crime very much suggest that the increased security presence lowered crime. When the estimates for police deployment and crime are considered together, they suggest that a 10% increase in police activity reduces crime by around 3%.

The results so far show a significant causal impact of police on crime. But it seems reasonable to think that particular types of crime are more likely to have fallen. We can thus look at different crime types to provide a reality check on our results. The results (reported in our forthcoming CEP working paper) are reassuring. For public thefts and violent crime (two types of crime where we would expect increased police presence in central London to have an impact), there were significant reductions in crime after the attacks.

What's more, the effect was bigger in the six weeks in which the increase in police deployment was concentrated, providing further verification of our main hypothesis. Analysis of borough-specific effects also shows that crime fell significantly in all of the affected boroughs, with stronger effects evident in Westminster and Tower Hamlets.

These findings suggest that a 10% increase in police activity reduces crime by around 3%

The economic emergence of the world's most populous nation is having a big impact on everyone else. **Tony Venables** and **Linda Yueh** analyse which countries, industries and workers are likely to benefit and which may lose out from the continuing challenge of the China effect.

The China effect

China is a developing country in the midst of making the transition to a market economy. Yet it is already emerging as a major force in the world economy, and increasingly looks like a developed country – one that accounts for 20% of the world's population, more than four times the size of the United States and nearly three times that of the European Union.

China's size and integration with the world economy have contributed to uncertainty about the global inflationary environment; its currency has been a subject of contention; its trade has raised concerns for workers and firms in both developed and developing countries; its demand for energy has led to competition and conflict; it has rivalled the United States, the UK and developing countries as a destination for foreign direct investment; and the effects of its own overseas investments have begun to be felt across the world. As a result, China has generated incremental growth in the global economy that has made its success significant for the welfare of other countries.

Here we present an outline of the China effect and set out some of the key numbers, drawing on data from the National Bureau of Statistics in China, UNCTAD, the World Bank and the World Trade Organisation (WTO). We argue that the rise of China will benefit the process of globalisation, but it will also raise significant challenges for national economic structures and competitiveness in the rest of the world.

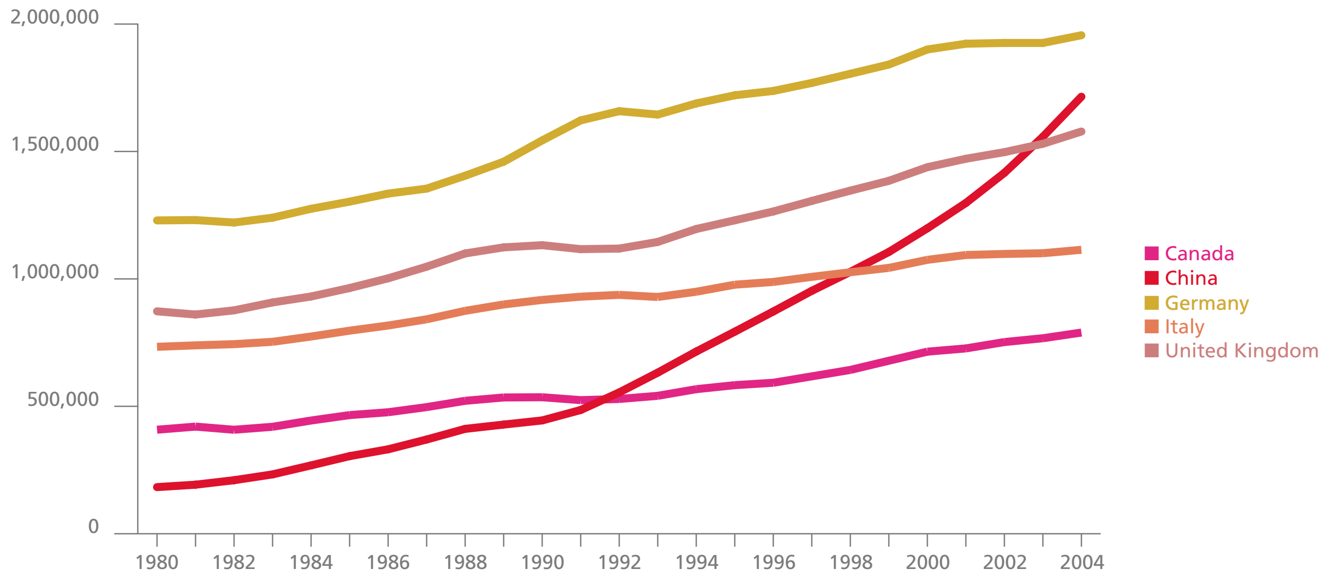
Chinese growth and trade

Since the process of economic liberalisation began in 1979, China's economic performance has been remarkable. With an average growth rate of 9.4% a year in real terms, GDP has increased twelve-fold, while Chinese trade with the rest of the world has risen by a factor of 30. As Figure 1 shows, China's GDP has overtaken Canada, Italy and the UK in the last decade, and is on course to overtake Germany by 2007. It will soon become the world's third largest economy, after the United States and Japan.

These numbers are at market exchange rates, so they grossly understate the real size of the Chinese economy once adjustment is made for the country's relatively low cost of living. China's per capita income at market exchange rates is $1,700, but estimates of its per capita income adjusted for the cost of living (that is, at 'purchasing power parity') are four times higher, at $7,200.

We can make a vivid comparison between the size of the UK and Chinese economies by comparing the two countries' installed capacity for electricity generation. At nearly 400GW, Chinese generating capacity is around five times larger than that of the UK, and each year, China is adding capacity equal to the total UK capacity.

Figure 1:
Real GDP, in millions of US dollars, 1980-2004



Source: World Bank; note that figures are at current market exchange rates not 'purchasing power parity' (PPPs).

A startling aspect of China's economic performance is its degree of openness to international trade. Total Chinese trade (exports plus imports) amounts to 70% of its GDP, which compares with 37% for the UK and just 20% for the United States. China's trade/GDP ratio is all the more remarkable given that one of the main determinants of this number is country size – large countries typically have low shares of trade in GDP (for example, the United States compared with the UK).

One reason why China's trade/GDP ratio is so large is the valuation of the GDP denominator, which at market exchange rates understates the true size of the economy. But even allowing for this, the Chinese economy is extremely open, reflecting its export-oriented growth strategy. China now accounts for 7% of world merchandise exports.

Mechanisms of the China effect

How does the growth of such a big economy affect other parts of the world? The primary mechanism is via China's effects on the global supply of, and demand for, goods, services and assets. The resulting shifts in supply and demand cause changes in prices and hence lead to adjustment in other countries.

The changes that other countries experience can be broken down into 'quantity effects' and 'income effects'. Quantity effects involve some sectors of a national economy contracting and other sectors expanding, requiring workers to be reallocated. In these circumstances there may be adjustment costs, but if an economy is operating at full employment, they are likely to be temporary as workers are re-employed elsewhere.

Income effects involve changes in a country's 'terms of trade' – the relationship between the prices of its exports and imports. A country will be better off if the prices of its exports increase relative to the prices of its imports – and worse off the other way round. So if the China effect is to increase the prices of oil and other commodities while reducing the prices of some manufactured goods, commodity-exporting countries will have their incomes raised while commodity importers will have their incomes reduced.

Something similar will happen with manufactures, although here we have to look carefully at the composition of the manufacturing trade of the countries concerned. Countries that tend to export goods similar to Chinese exports will lose out, while countries that import the goods that China is exporting will gain.

In addition to these national level effects, there will be gainers and losers within countries as the relative wages of different types of workers change. The simple prediction is that unskilled workers will lose and skilled workers will gain since what China brings to the world economy is a large increase in the supply of unskilled labour.

How does this happen? Again, the mechanisms are changes in the prices of goods, with the expectation that the largest price falls will be for goods where production relies on unskilled labour, such as textiles and garments. As Chinese exports of such goods expand, so their prices will fall, contracting production and employment of unskilled labour in other countries.

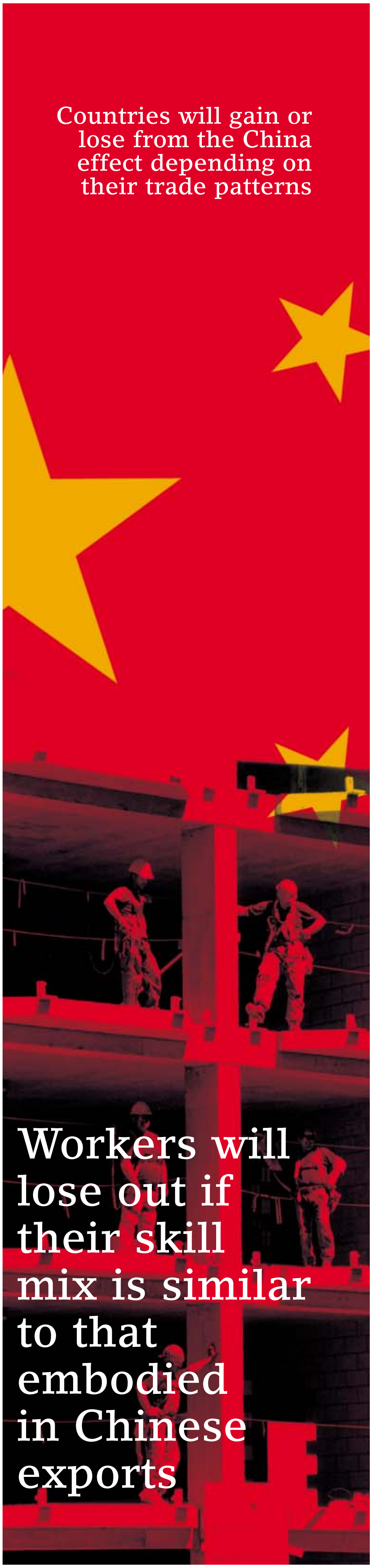
So, the overall predictions for the China effect are that other countries will gain or lose depending on their trade patterns. Similarly for workers: expect to lose out if your skill mix is similar to that embodied in Chinese exports – and to gain otherwise.

The changing structure of Chinese trade

Since the income and quantity effects of China are transmitted through trade, the next step is to analyse the composition of China's trade. Figures 2a and 2b show the growth of China's exports and imports, breaking them down into broad commodity and industrial groupings.

The first point to note is increasing Chinese imports of primary commodities. The reform of the state sector in the mid-1990s and the rise of the non-state sector have heralded a second industrialisation in China, which requires energy and raw materials. While these commodities constitute a relatively small share of total Chinese imports, they are large enough to impose a major impact on world markets.

Since the mid-1990s, China has become a net oil importer even though it is also one of the top ten world producers of oil. China is the world's second largest consumer of oil after only the United States. And, in 2004, with 4.4% of total world GDP, China consumed 30% of the world's iron ore, 31% of its coal, 27% of



its steel and 25% of its aluminium. Between 2000 and 2003, China's share of the increase in global demand for aluminium, steel, nickel and copper was, respectively, 76%, 95%, 99% and 100% (Kaplinsky, 2006).

Highly speculative estimates suggest that demand from China is responsible for about 50% of the recent boom in world commodity prices. One effect of this is to redistribute income between other countries in the world. Thus, primary commodity exporters have experienced dramatic improvements in their export earnings and terms of trade, which have been paid for by importers of these commodities, some of them developed countries.

At the same time, Chinese exports of a range of manufactures have resulted in some substantial price falls. China's terms of trade for manufactured goods fell by 14% between 1993 and 2000 (Zheng and Zhao, 2002). As Figure 3 shows, its overall terms of trade worsened by 17% between 1980 and 2003 (UNCTAD, 2004). Moreover, in one-third of 151 industrial sectors, the prices of Chinese imports into the European Union have fallen (Kaplinsky, 2006).

Which countries gain and which lose from these changes? The answer depends on whether a country is an importer of these goods (hence benefiting from the lower prices) or an exporter. Lower prices of many basic manufactures have been beneficial for high-income countries that have already moved out of production in these sectors, and also for low-income countries without such manufacturing capacity.

Lower import prices have also contributed to a more benign inflationary environment. Former IMF chief economist Kenneth Rogoff finds that China's rapid global integration and remarkable growth have generated a favourable terms of trade shock that produces lower than expected levels of inflation in the global economy (Rogoff, 2006).

But what about the competitive threat that China poses? In some countries in Latin America (Chile, Costa Rica and El Salvador), 60-70% of exports are directly threatened by China's rise because of a similar export product mix (Lall and Weiss, 2005). There are concerns for other developing countries. For example, the phasing out of the WTO Multi-Fibre Agreement in 2005, which had previously limited China's exports of clothing and textiles, raised concerns for Bangladesh and Sri Lanka whose export sectors are dominated by these goods. And while China's rise has induced more imports from its Asian neighbours, this has not been enough to offset displacement of their exports in third country markets (Greenaway et al., 2006).

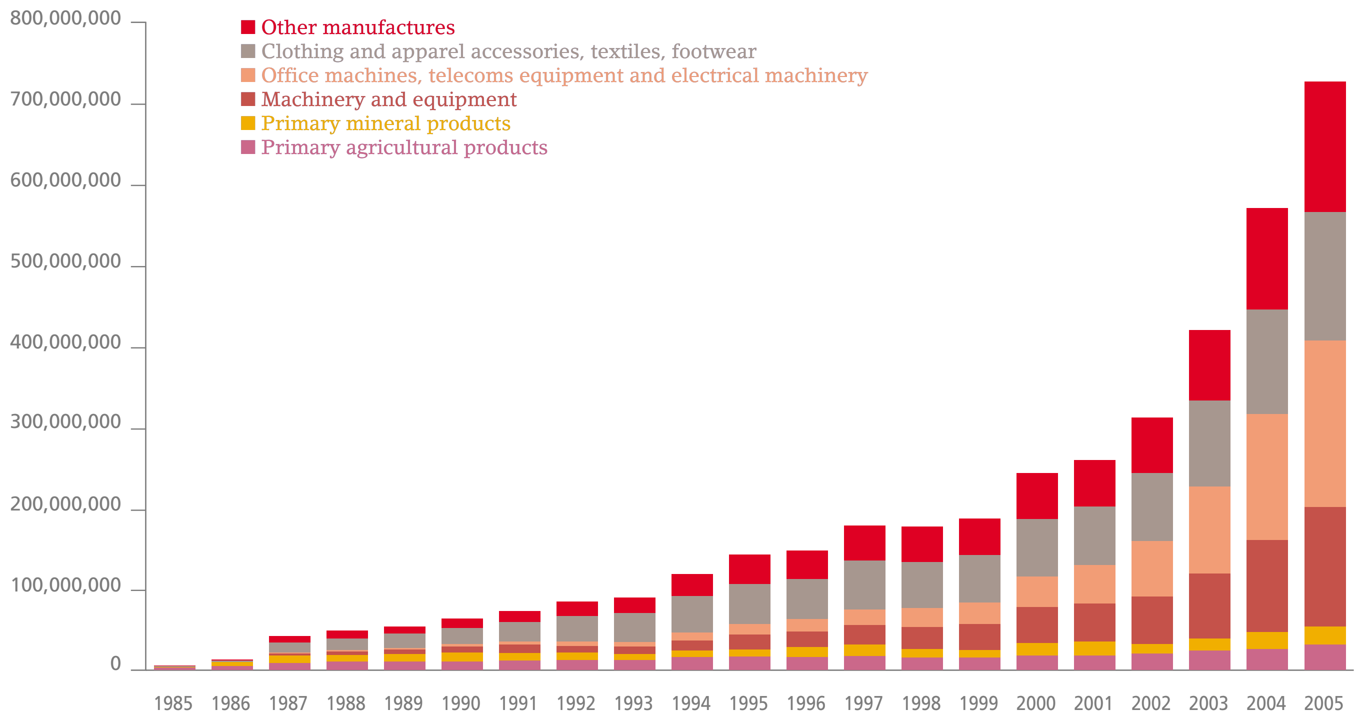
But exports of labour intensive products like clothing, apparel, textiles and footwear are a rapidly declining share of China's trade. These have gone from 40% of exports in the early 1990s to less than 20% now. Meanwhile, much of the fastest export growth has been in more advanced manufactured products, particularly electrical equipment.

Dani Rodrik argues that China's export structure is similar to that of a much higher income country (Rodrik, 2006). He looks at disaggregated trade data, and calculates for each commodity the average per capita income of countries exporting that commodity. (Thus, for example, aircraft are associated with high-income countries.) He then uses this to look at a particular country's export mix, and calculate the *predicted* income of the country, given its export mix.

On average, the prediction and the actual income coincide, as they must by construction. But this need not be true for

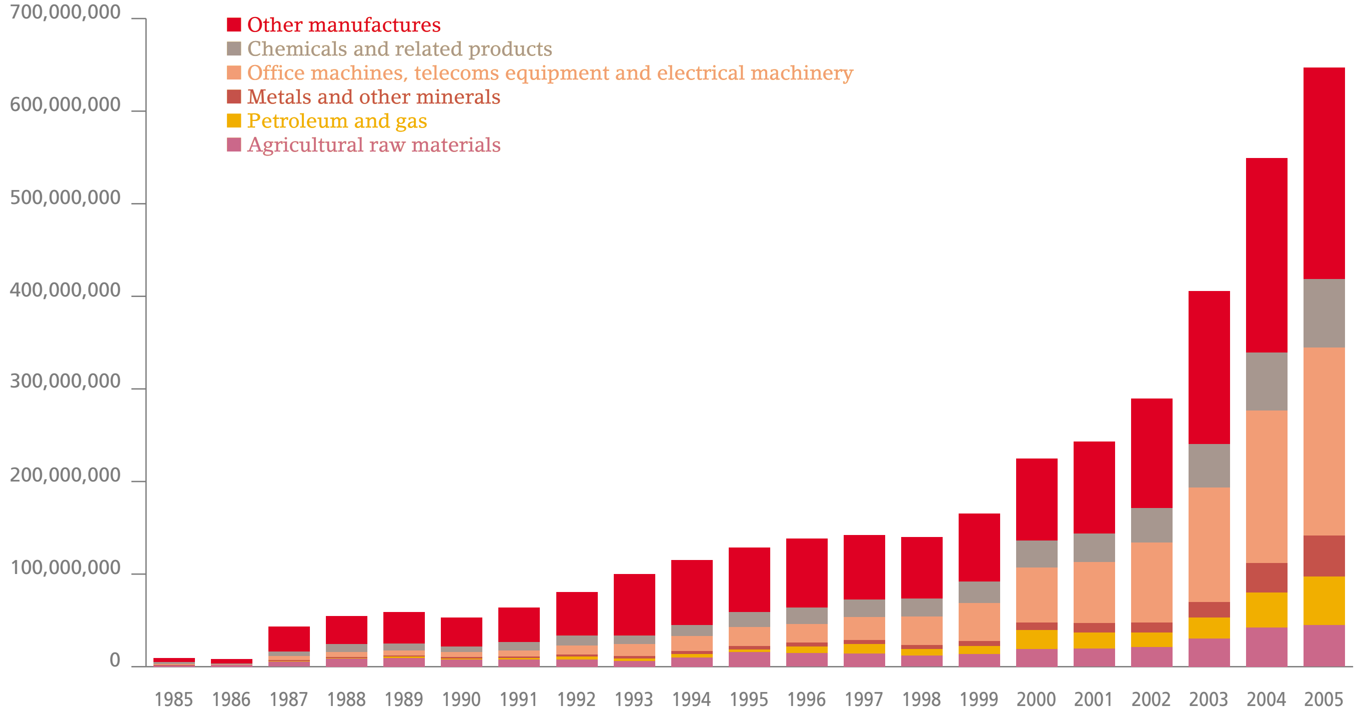
Figure 2a:

Total exports from China to the rest of the world, in thousands of US dollars, 1985-2005



Source: World Trade Organisation

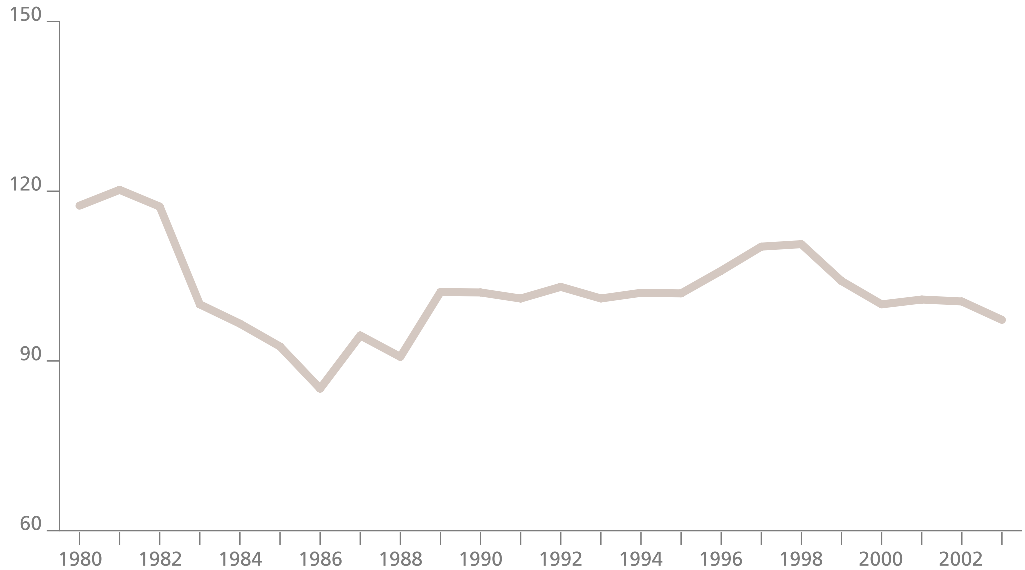
Figure 2b:
Total imports to China from the rest of the world, in thousands of US dollars, 1985-2005



Source: World Trade Organisation

China's comparative advantage is increasingly not determined by low cost labour

Figure 3:
China's terms of trade (2000=100)
1980-2004



Source: UNCTAD

all countries, and there are outliers. China's export mix is that of a country with per capita income three times higher. This supports the impression from the export data (in Figure 2a) that there has been significant upgrading of China's exports.

A key aspect of this upgrading is the growth of high levels of two-way trade in similar items, particularly electronics. This 'intra-industry trade' reflects cross-border production networks. For example, electrical and electronic equipment comprise 39% of all China's exports to Malaysia and 44% of China's imports from Malaysia. Electrical and electronic equipment are 33% of China's exports to, and 28% of imports from, Singapore (Wang, 2003). And the phenomenon is not limited to developing countries: vertical intra-industry trade between China and OECD countries is rising and accounted for around 20% of trade in the early 1990s (Hellvin, 1996).

Since around half of China's exports have been produced by foreign-owned enterprises in the past decade, the rise of intra-industry trade should not be surprising (Yueh, 2006). Multinational corporations seek low cost manufacturing bases and often diversify their production and supply chains.

Wages, costs and comparative advantage

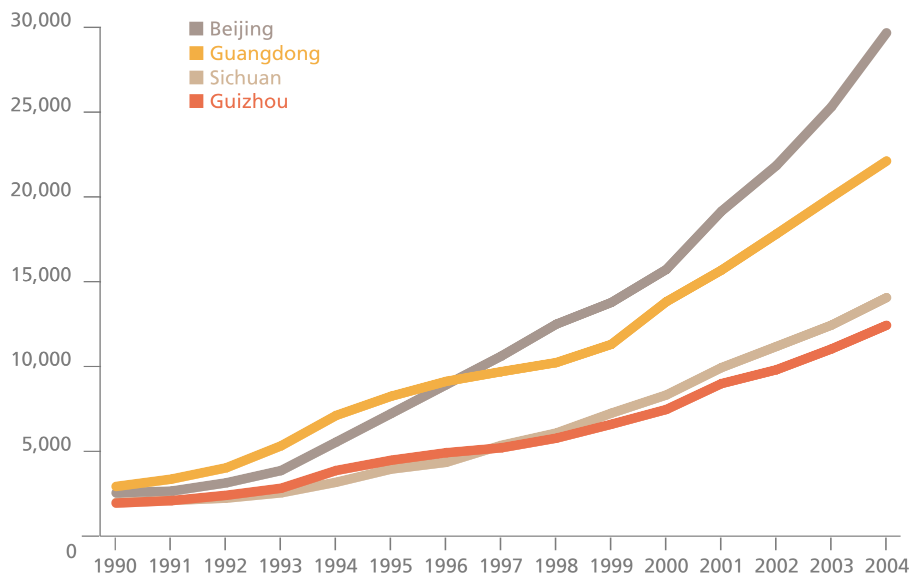
What is the China effect on wages? The simple prediction for the rest of the world is that skilled workers gain while unskilled workers lose. Richard Freeman draws attention to the doubling of the global labour force that has occurred in recent years as Asian and former communist countries have opened up to trade, and pointed to the likely impact of this on wages (Freeman, 2004). But neither the theory nor the evidence is quite this clear cut.

On the theory side, recent work points to the possibility that the use of offshoring and global production chains increases the efficiency of firms, enabling them to continue to maintain a presence in high-income countries (Grossman and Rossi-Hansberg, 2006). On the empirical side, there has been stagnation of the wages of unskilled workers, particularly in the United States. But the evidence suggests that skill-biased technical change has as least as much to do with this as does the rise of trade with developing countries like China (Machin and Van Reenen, 1998).

It is also interesting to record the changing patterns of wages in China. Figure 4 shows that economic growth has driven up wages in coastal areas, including

Figure 4:

Average annual real wages in selected provinces in renminbi, 1990-2004



Source: National Bureau of Statistics, China

China's export mix is that of a country with per capita income three times higher

Commodity exporting countries have benefited from growing Chinese demand for energy and raw materials

Chinese trade features high levels of two-way 'intra-industry trade', reflecting cross-border production networks

Beijing and Guangdong, to levels double those in interior provinces like Sichuan and Guizhou. There has also been an increasing skill premium, rising since the beginning of market-oriented reforms (Knight and Song, 2005). This may be because China's administered labour system meant that wages used to be centrally determined whereas they are now more closely linked to productivity or skills (Yueh, 2004).

What does this mean for the future? China's comparative advantage is no longer being driven simply by low cost, abundant labour. Some interior provinces may still compete on that basis, but for areas on the coast this advantage has been substantially eroded and competitive advantage is increasingly based on skills. China's industrial policies are aimed at technological upgrading, and China is now graduating well over a million scientists and engineers each year and a fast growing number of PhDs (National Bureau of Statistics, 2005).

This upgrading will alter the set of industries that experience competitive pressure from China, but we must avoid the fallacy of thinking that *all* sectors will suffer. Relative prices and exchange rates will change, and aggregate effects will turn on terms of trade effects, as described above.

Conclusions

China's remarkable economic growth in the past 27 years has propelled it to become the fourth largest economy in the world, recently surpassing the UK and closing in on Germany. Within the next couple of years, it is likely that the 'G3' will consist of the United States, Japan and China. China's WTO accession and its high degree of openness hold several implications for the global economy:

- First, there will be sectoral and employment shifts in other economies as some industries grow and others shrink. The development of outsourcing, offshoring and vertical production networks, together with the rapid skill upgrading of the Chinese economy mean that these effects will be felt not just in unskilled labour intensive industries.
- Second, countries that import from China (such as the UK) will gain from lower priced manufactures that contribute to a low inflationary environment, while putting pressure on countries that compete in the same products (including those in Latin America). But vast Chinese demand for raw materials and commodities will redistribute income from countries that also demand these resources (developed countries plus other fast-growing industrialising countries like India) to countries that export these products (such as in Africa). With greater market opening after WTO accession, there will be the further prospect of horizontal intra-industry trade, which will benefit both developed and developing countries with competitive products and services to sell to China.
- Third, China's comparative advantage is increasingly not determined by low cost labour. A sophisticated technical mix of export products and a policy focus on science and technology have resulted in a diverse set of determinants of international trade with a great deal of provincial variability. The evidence suggests that China's growing competitiveness will put pressure on the productivity of firms and workers around the world.
- Fourth, there is some evidence of increasing wage inequality in developed countries arising from the growth of developing countries, including China. But China's skills upgrading suggests that it will not only compete in terms of cost, but also in more technically advanced goods, which would affect the returns to skilled labour elsewhere.

China's continuing rate of economic growth is not assured, the road to development is rocky and the transition to a market economy is rife with instability. Yet the country's remarkable success so far has already made its economic impact felt worldwide. Continued growth and global integration of China will undoubtedly be of importance for the world economy, and countries will need to focus on their competitiveness to benefit.

Anthony J Venables is professor of international economics at LSE and director of CEP's research programme on globalisation. **Linda Yueh** is fellow in economics at Pembroke College, Oxford, a research associate in CEP's globalisation programme and co-editor (with Yang Yao of the China Center for Economic Research at Beijing University) of the forthcoming book *Globalisation and Economic Growth in China* (World Scientific Publishing, December 2006).

For more on 'new economic geography', see Professor Venables' paper 'Shifts in Economic Geography and their Causes' (http://www.kc.frb.org/publicat/sympos/2006/pdf/venables.paper.0901.pdf) and other papers from the symposium on 'The New Economic Geography: Effects and Policy Implications', sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, 24-26 August 2006 (http://www.kc.frb.org/publicat/sympos/2006/sym06prg.htm).

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Why do some poor communities have levels of child mortality as low as those in wealthy countries while others lose more than a fifth of their children under the age of five? Research by **Peter Boone** shows that the key lies in having parents with good general education and health knowledge – and the willingness to seek out modern healthcare.

Cutting child mortality: the power of parents

Every day, 30,000 children die from diseases that can be easily prevented or cheaply cured. This chronic, daily 'disaster' can't be blamed on a lack of technology: a recent study by leading health experts concluded that 63% of child deaths could be prevented with 24 simple and cost-effective measures. Nor is poverty to blame: the cures are inexpensive, and the success of many poor countries in lowering mortality is proof enough that much more can be achieved.

So why do so many children die, and what can be done to reduce deaths? In research with Zhaoguo Zhan, I compiled a unique set of survey data from 45 low-income countries to analyse the survival outcomes of 278,000 children. Our goal was to measure the relative importance of socio-economic factors, infrastructure (such as water and sanitation) and parents' health-seeking behaviour in child survival. We also examined whether predominantly public or private systems perform better.

As Figure 1 shows, the three main killers of children who survive past birth are diarrhoea, pneumonia and malaria. These are largely preventable deaths. Sugar and salt solutions can prevent dehydration due to diarrhoea. Oral antibiotics given early enough (and costing roughly 15 pence per course) can prevent most pneumonia deaths. And a course of effective anti-malarial drugs can prevent deaths for between 10 pence and 50 pence per course.

Faced with these facts, medical professionals and many people in wealthy countries conclude that we should expand and enhance public healthcare to ensure it reaches the needy populations. This is the path that countries like Cuba have taken, and it has generated large declines in child mortality.

But in theory, there is a second route to low mortality. The biological bond between a parent and child ensures that parents are their child's greatest advocates. If we can help the parent, by providing better health knowledge and general education, we may be able to direct that powerful advocacy to tackle the causes of child deaths.

And if markets respond to parents who seek out appropriate care, a private healthcare sector could arise to provide adequate services. This second route to low mortality doesn't rely on the continuing goodwill of foreign donors or domestic elites, and it may prove to be a more sustainable path to child health.

Our research shows that this second route is not just a theory. Indeed, Cuba seems to be the exception. Other places labelled 'socialist' – such as Vietnam and the Indian state of Kerala – have achieved low mortality via a large *private* healthcare sector. Roughly 50% of child healthcare services are provided privately in Egypt, Indonesia and Vietnam. The equivalent figure is 65% in Kerala, which is renowned for its good health outcomes. And in China, 73% of health services are financed by the user.

This prevalence of private healthcare is far from the common perception, but it may provide the key to lasting improvements in child health. If we can change demand for health services and treatment-seeking, we may be able to generate a sustainable system of healthcare that leads to low child mortality without needing to construct, finance, motivate and sustain large public health systems.

There are two essential outcomes of our analysis suggesting that much more focus should be placed on parents when targeting child mortality. The first is that child survival depends more on parents' education and healthcare-seeking activities than on disease prevalence, nearness of public services or quality of water and sanitation infrastructure.

We calculate that if we raise all parents' years of schooling to the level in Egypt (8.3 years for men and 6.3 for women), child mortality would fall by 19% in our 45 low-income countries. This is calculated after controlling for differences in wealth, so it should reflect the impact of schooling over and above the influence it has on incomes and general prosperity. Using an index that we created, we find that children of mothers who tend to seek out modern healthcare have substantially lower mortality than those who don't, once again after controlling for other socio-economic factors.

In India, the only country where adequate data are available, we also examined whether health knowledge or general education is more important. We find that both are highly important, suggesting that the expansion of health knowledge may lead to large mortality declines if it coincides with changes in behaviour.

This large parental role in child health contrasts with the recommendations of many health experts, who provide a list of urgently needed health services. They rarely consider health knowledge in the family and they assume that the medical profession must bring healthcare to the household.

Our analysis suggests that, in reality, in low-income countries, children survive best when they have educated parents with health knowledge who *choose to seek* modern care, regardless of whether public clinics are nearby and regardless of how frequently their children become ill. We believe this correlation reflects a simple fact: it is easy to cure the diseases that kill children, and parents who know how to do this can successfully prevent child deaths.

The second main outcome of our analysis is that public health systems in low-income countries are, on average, no better at generating equality or reducing child mortality than private-based systems.

Many public health advocates argue strongly against a private route to better healthcare. For example, the World Health Organisation's Commission on

Educated parents seek out healthcare regardless of their proximity to public health infrastructure

Macroeconomics and Health advocated a $47 billion expansion of annual public health provision in poor countries. They ruled out using the private sector because they believed it would not adequately reach the poor, and it would not provide equivalent quality services. But while this is plausible, no evidence was offered to back up these arguments.

Our research asked parents where they sought healthcare, so we were able to measure whether child healthcare was predominantly private or public. As Figure 2 shows, both public and private systems have achieved low child mortality. So there is no evidence to back claims that private-based systems don't work well enough.

The inequality of public systems will come as no surprise to people working in low-income countries. At Effective

Figure 1:
Estimated causes of post-neonatal child deaths in 2003

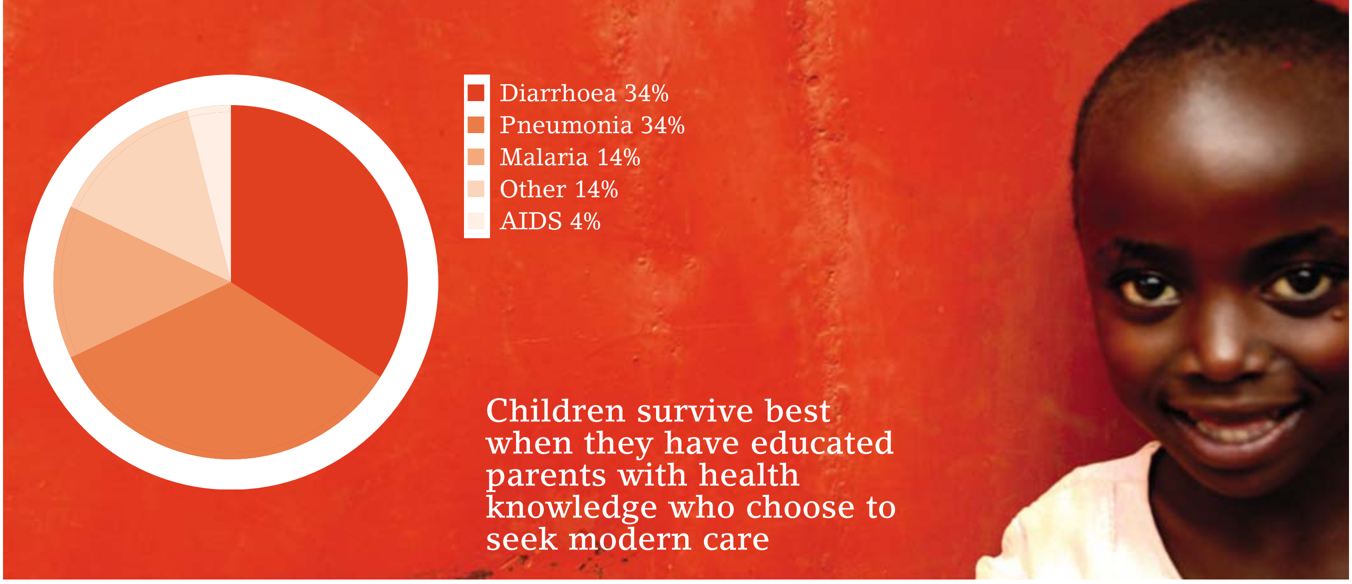
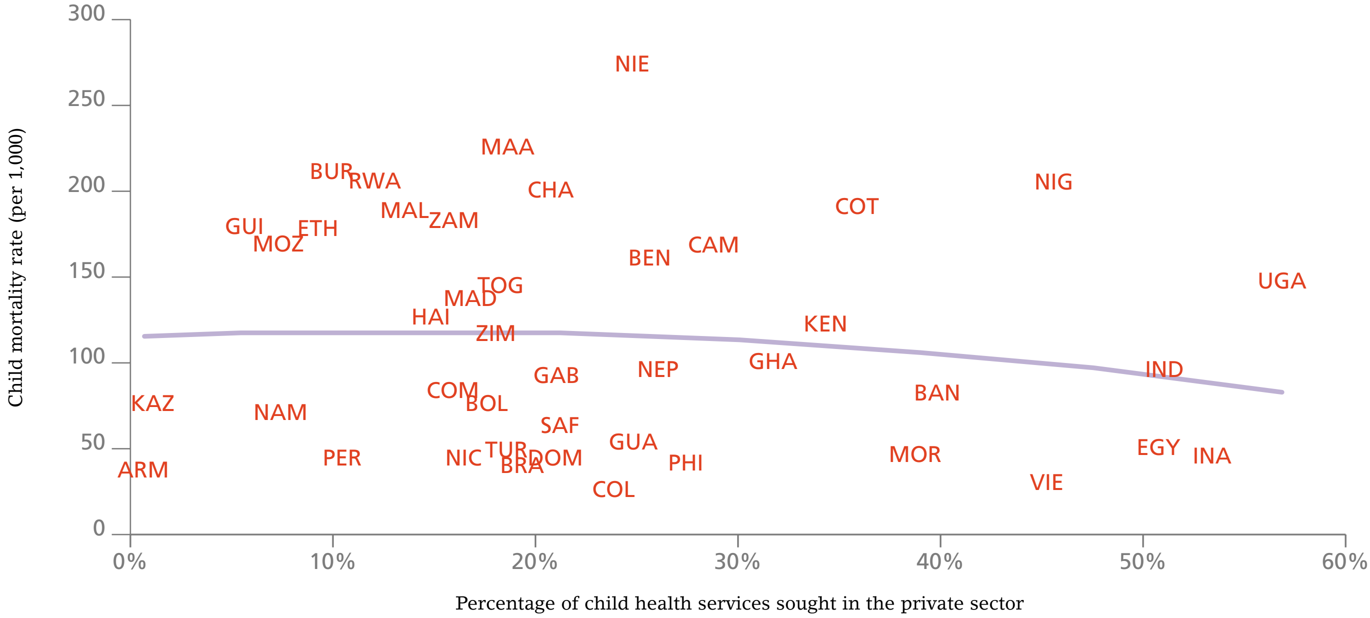


Image: Kresta King Cutcher

Figure 2:
The relationship between child mortality and the percentage of child health services sought in the private sector



Key to countries

ARM	Armenia	GHA	Ghana	NIC	Nicaragua
BAN	Bangladesh	GUA	Guatemala	NIE	Niger
BEN	Benin	GUI	Guinea	NIG	Nigeria
BOL	Bolivia	HAI	Haiti	PER	Peru
BRA	Brazil	IND	India	PHI	Philippines
BUR	Burkina Faso	INA	Indonesia	RWA	Rwanda
CAM	Cameroon	KAZ	Kazakhstan	SAF	South Africa
CHA	Chad	KEN	Kenya	TAN	Tanzania
COL	Colombia	MAD	Madagascar	TOG	Togo
COM	Comoros	MAL	Malawi	TUR	Turkey
COT	Cote d'Ivoire	MAA	Mali	UGA	Uganda
DOM	Dominican Republic	MOR	Morocco	VIE	Vietnam
EGY	Egypt	MOZ	Mozambique	ZAM	Zambia
ETH	Ethiopia	NAM	Namibia	ZIM	Zimbabwe
GAB	Gabon	NEP	Nepal		

Intervention (the organisation I chair), we are currently designing and sponsoring several large trials that aim to reduce child mortality in the poorest regions of India and Africa.

The public clinics where we work in Andhra Pradesh are in terrible condition: absenteeism among doctors is high, hygiene is poor and facilities lack medicines and staff to provide even basic services. While we originally planned to bolster the public clinics, we have now agreed with the government and our local partners to run a well-designed trial that experiments with contracting out services to the private sector while also running a large community health promotion campaign. The jury is still out, but we hope this new system will substantially reduce the 5-6% of babies that die before they are one month old.

In Guinea-Bissau, which still shows the destructive effects of civil conflict that ended eight years ago, military budgets continue to dwarf state expenditures on health, and public health clinics are effectively shells. We are working in a region where 30% of children die before the age of five. A vicious combination of lack of demand for health services due to poor knowledge and education, combined with the absence of an effective public health sector, probably explains the enormous mortality rates, which hark back to death rates last seen in Europe over a century ago.

Does it make sense to try to rebuild public systems in countries where instability and lack of public will mean that they may not be sustained? Or can better health and lower mortality levels be achieved by encouraging and empowering parents to seek out care for their children in the private sector?

There is growing evidence that this second route may work better in many regions of the world, and if so, perhaps our current lack of emphasis on education and knowledge-based routes may help explain why high child mortality persists, despite numerous efforts, in many regions of the world today.

Peter Boone is a research associate in CEP's globalisation programme and leads Effective Intervention, an organisation that sponsors, designs and runs programmes aimed at reducing extreme poverty in Africa and Asia (http://www.effint.org).

His new paper with Zhaoguo Zhan, which this article summarises, is called 'Lowering Child Mortality in Poor Countries: The Power of Knowledgeable Parents', CEP Discussion Paper No. 751 (http://cep.lse.ac.uk/pubs/download/dp0751.pdf).

'Socialist' countries like Vietnam have achieved low child mortality via a large private healthcare sector

in brief...

The collapse of the Doha trade round

The Doha failure may undermine WTO credibility and ferment distrust in developing countries

Negotiations for the Doha round of trade liberalisation have been suspended indefinitely. In the words of Brazilian foreign minister Celso Amorim, 'The Doha round is as near to a catastrophe as one can imagine'.

This outcome was not a foregone conclusion. For the last six months, a deal had been close, at least in the sense that its parameters had been fairly well-defined and each party knew the likely compromises that would be required to reach an agreement. The United States knew that its compromise lay in offering more farm subsidy cuts; the European Union knew it would be required to cut agricultural tariffs; and the larger emerging countries knew they would have to offer deeper industrial and agricultural tariff cuts. Yet after more than five years of preparations, when the deal was there for the taking, none of the key players stepped up to make it happen.

Certainly periods of deadlock and brinkmanship are common rites of passage for trade negotiations. The Uruguay round, optimists like to point out, came to a standstill more than once before reaching conclusion many years off schedule. But there are several reasons why the current round has been more complicated than its predecessors.

The first new element is the (welcome) presence of the poorest countries as an organised force in the negotiations. These countries are right to say that their circumstances should give them special treatment. But the political reality is that by offering nothing in return, they are a drag on the system. The preference-dependent countries (mainly small states in Africa, the Caribbean and the Pacific) have a vested interest in the round's failure: for them, no deal is a good deal and they have been a thorn in the side of the round from day one. The larger developing countries – particularly India and Brazil – have shown that they are willing to negotiate hard, and even risk derailing the round to achieve their aims.

The second reason for slower progress comes from the political calculus of trade negotiations. The two conditions for progress are that the net gains outweigh the losses in each jurisdiction, and that national governments are strong enough to weather resistance from domestic opposition. In major countries, political will is low. In both France and the United States, unpopular presidents face or have recently faced elections, and they are in no mood to invite further opposition from powerful farming lobbies.

At this stage, the critical question is whether the collapse of the Doha round is a catastrophe for the world. As it stands, the answer is no. The World Bank's estimates of likely gains from a successful Doha round are $100 billion, most of which would accrue to the rich countries. Much of the remainder (the Bank is at pains to say) would probably be eroded by concessions on 'special products' and other loopholes.

Had the negotiators been more ambitious, perhaps there would be larger potential gains from a successful agreement. But with the minimalist agenda that evolved, it is hard to identify any serious grouping of countries for which a successful deal is of critical significance.
The Cairns group of agricultural exporters – a diverse coalition that includes Argentina, Australia, Brazil, Canada, Indonesia, New Zealand and South Africa – is a possible exception.

But in the longer run, the collapse of the Doha round may be more significant. There is a long-term economic cost that is difficult to quantify, and there is an obvious symbolic failure. This may undermine the credibility of the World Trade Organisation and ferment distrust in the developing countries whose promised 'development round' has conspicuously failed to materialise.

Doha's minimalist agenda meant that a successful deal was of critical significance to few countries

Andrew Charlton is a research economist in CEP's globalisation programme, and co-author with Nobel laureate Joseph Stiglitz of *Fair Trade for All: How Trade can Promote Development* (Oxford University Press, 2006).

Can education policy offer solutions to Africa's AIDS epidemic? Harvard University's **Michael Kremer**, who visited CEP this past summer, reports on the evidence from four primary school-based interventions in Western Kenya.

HIV/AIDS prevention: the potential of primary education

Image: Chip Bury, ICS

The future course of the AIDS epidemic in Africa depends on the behaviour of the next generation. Children aged 5-14 have been referred to as a 'window of hope' because they have low HIV infection rates and because their sexual behaviours are not yet established. In Africa, the majority of these children now attend some primary school, which makes school a natural forum for targeted education on HIV prevention.

Many countries, including Kenya, have incorporated HIV/AIDS education into the curriculum. Evidence on the effectiveness of these policies is beginning to emerge, but many key questions remain: can teachers deliver the curriculum? Will the curriculum affect knowledge, attitudes or behaviour? What should the content emphasise? And are the policies cost-effective relative to alternatives, notably subsidising school attendance, thereby reducing the cost of education for families?

The Kenyan government's primary school AIDS prevention program, established in 1999, is an example of a policy intervention aimed at reducing risky behaviour among adolescents. At the heart of the program is a curriculum covering basic medical facts about AIDS, HIV transmission, prevention and care for people living with AIDS. It has a strong focus on abstinence and life skills as effective means to prevent pregnancies and infection with sexually transmitted diseases. Although teachers are not trained to promote condoms, they are given a lot of discretion in answering pupils' questions.

Esther Duflo, Pascaline Dupas, Samuel Sinei and I examined the impact of four school-based interventions on 70,000 pupils from 328 primary schools in Western Kenya. Some of these schools only participated in the national AIDS education program while the others participated in at least one of four other programs:

1. The *Teacher Training Program*, which provided in-service training for primary school teachers to enhance the delivery of the national HIV/AIDS education curriculum.
2. The *Active Learning Reinforcement Program*, which promoted school debates on the role of condoms and essay competitions on how pupils can protect themselves from HIV.
3. The *Relative Risk Information Program*, which provided adolescents with information about variation in HIV prevalence (risk) by age and sex. This aimed to reduce cross-generational sex, which exposes girls to higher HIV risk.
4. The *Reducing the Cost of Education Program*, which provided free school uniforms, with the aim of making education less costly for families and keeping teenagers in school longer.

Table 1:
Effects of Teacher Training and Active Learning Reinforcement on knowledge, attitudes and self-reported behaviours of pupils in grades 6-8 (12 to 16 years old) in 2005

	Girls			**Boys**		
	National AIDS Program only	Teacher Training	Teacher Training + Active Learning	National AIDS Program only	Teacher Training	Teacher Training + Active Learning
Knowledge						
Mentions abstinence as a way to protect from HIV	37%	n.s	n.s	37%	+6	+4
Mentions condoms as a way to protect against HIV	32%	n.s	+9	45%	n.s	+5
Used properly, condoms can prevent HIV transmission	52%	n.s	+7	64%	n.s	n.s
Attitudes						
People should buy food from shopkeeper who has HIV	38%	+3	+3	47%	n.s	n.s
It's OK to use a condom before marriage if one cannot abstain	43%	n.s	+5	59%	n.s	n.s
It's OK to remain a virgin while one is a teenager	24%	n.s	n.s	28%	n.s	n.s
Behaviour						
Has ever had sex	18%	n.s	n.s	42%	n.s	n.s
Has ever used a condom, if ever had sex	23%	n.s	n.s	33%	+3	+4
Used a condom last time had sex, if ever had sex	21%	n.s	n.s	28%	n.s	+5

Note: 'n.s' means that the difference from 'National AIDS Program only' is not statistically significant.

Random selection of schools for participation in a particular program meant that, on average, schools participating and not participating in that program had comparable characteristics before the program was implemented. This made it possible to conduct a rigorous evaluation of the isolated impact of each program by comparing the outcomes of participating schools with those of schools that did not participate.

In the absence of data on HIV status, the main outcome of interest was childbearing: in Kenya, where contraceptive use (other than condoms) is very rare among teenagers, the incidence of childbearing is a good proxy for the incidence of unprotected sex.

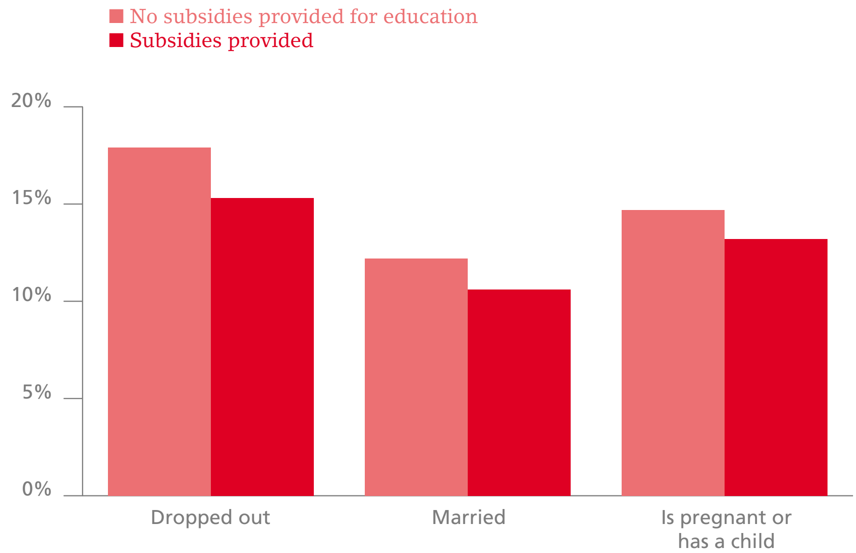
Teachers at schools that received training reinforcement are more likely to teach about HIV/AIDS on a weekly basis, to use a wider variety of methods to integrate HIV/AIDS education and to devote more time to HIV/AIDS education. They are also more likely to have started a functional health club, and to have mentioned HIV and condoms.

But as Table 1 shows, the *Teacher Training Program* has had no discernible impact on knowledge, aside from increasing the likelihood of boys mentioning abstinence as a means to prevent HIV infection. Nor has it had a discernible effect on self-reported sexual activity: the likelihood of boys reporting having ever used a condom has increased, but not the likelihood of them reporting having used one in their last sexual encounter.

For girls, there is no evidence that the program has had an effect on common measures of the skills needed to resist peer pressure. After two years, the Teacher Training Program had had no impact on teenage childbearing. But girls in schools that received extra training were more likely to be married if they had started childbearing. The impact in terms of HIV transmission is thus unclear: on the one hand, early marriage means a lower lifetime number of partners; on the other hand, early marriage is often associated with important age gaps between spouses. This could increase the risk of HIV infection among teenage girls since adult men have a high rate of HIV infection.

Figure 1:

The impact of Reducing the Cost of Education on girls enrolled in grade 6 in January 2003 (outcomes in October 2005)



Providing information on HIV risk associated with cross-generational sex reduces the number of girls having unprotected sex with older partners

The *Active Learning Reinforcement Program* seems to have had a little more impact on attitudes and self-reported behaviour. Participation in debates and essays has increased knowledge about condoms among both girls and boys. Girls in schools that held a debate and an essay competition are more likely to mention condom use as a way to protect oneself from HIV infection, and more likely to say condoms can prevent HIV transmission. Boys are more likely to mention condoms as a way to protect oneself from HIV and more likely to report having used a condom in their last sexual encounter. Follow-up data on childbearing is not yet available for this program.

Related research by Pascaline Dupas (2006) on the *Relative Risk Information Program* finds that providing children with information on variation in HIV rates by age and sex led to a reduction in the number of girls engaging in cross-generational partnerships. A year after the program, girls exposed to the information were 65% less likely to become pregnant by adult partners. Self-reported sexual activity with same-age partners has increased, but childbearing by teenage couples has not increased. Overall, teenage childbearing was reduced by 32% in the year following the program.

Finally, as Figure 1 shows, the *Reduced Cost of Education Program* has had a positive effect on the likelihood of pupils staying in school longer. Two years after the program inception, those who got free uniforms were 15% less likely to have dropped out. Girls from schools where free uniforms were provided were 10% less likely to have started childbearing and 12% less likely to be married.

Free school uniforms make pupils more likely to stay in school and reduce teenage pregnancy

This article summarises 'Primary School Education and HIV/AIDS Prevention: Evidence from Four School-based Interventions in Western Kenya' by Esther Duflo, Pascaline Dupas, Michael Kremer and Samuel Sinei (May 2006). The study by Pascaline Dupas is 'Relative Risks and the Market for Sex: Teenagers, Sugar Daddies and HIV in Kenya'.

in brief...

Tackling depression and anxiety disorders

Most people with mental illness should be offered the choice of psychological therapy

Crippling depression and chronic anxiety are the biggest causes of misery in Britain today. They are the great submerged problem, which shame keeps out of sight. But if you mention them, you soon discover how many families are affected. According to the respected Psychiatric Morbidity Survey, one in six of us would be diagnosed as having depression or chronic anxiety disorder, which means that one family in three is affected.

That is the bad news. The good news is that we now have evidence-based psychological therapies that can lift at least a half of those affected out of their depression or their chronic fear. These new therapies are not endless nor backward-looking treatments. They are short, forward-looking treatments that enable people to challenge their negative thinking and build on the positive side of their personalities and situations. The official guidelines from the National Institute for Clinical Excellence (NICE) say that these treatments should be available to all people with depression or anxiety disorders or schizophrenia, unless the problem is very mild or recent.

But the NICE guidelines cannot be implemented because we do not have enough therapists. In most areas, waiting lists for therapy are over nine months or there is no waiting list at all because there are no therapists. So if you go to the GP, all that can be provided is medication (plus a little counselling at some surgeries). But many people will not take medication, either because they dislike the side effects or because they want to control their own mood.

The result is tragic. Only one in four of those who suffer from depression or chronic anxiety is receiving any kind of treatment. The rest continue to suffer, even though at least half of them could be cured at a cost of no more than £750.

Only one in four people who suffer from depression or chronic anxiety is receiving treatment

This is a waste of people's lives. It is also costing a lot of money. For depression and anxiety make it difficult or impossible to work, and drive people onto incapacity benefits. We now have a million people on incapacity benefits because of mental illness – more than the total number of unemployed people receiving unemployment benefits. At one time, unemployment was our biggest social problem, but we have done a lot to reduce it. Mental illness is now the biggest problem, and we know what to do about it. It is time to use that knowledge.

But can we afford the £750 it costs to treat someone? The money that the government spends will pay for itself. For someone on incapacity benefit costs us £750 a month in extra benefits and lost taxes. If the person works just a month more as a result of the treatment, the treatment pays for itself.

So we have a massive problem – the biggest problem that one in three of our families experience. But we also have a solution that can improve the lives of millions of families, and cost the taxpayer nothing. We should implement the NICE guidelines; and most people with mental illness should be offered the choice of psychological therapy.

This article summarises *The Depression Report: A New Deal for Depression and Anxiety Disorders*, published in June 2006 by CEP's Mental Health Policy group led by the Centre's founder director Professor Lord **Richard Layard**.

The report was circulated to all readers of *The Observer* newspaper in September 2006, with the financial support of the Charlie Waller Memorial Trust, set up to commemorate Charlie Waller who took his own life due to depression at the age of 28. The report has also received the support of the Royal College of General Practitioners and leading mental health charities – Mind, Rethink, the Mental Health Foundation and the Sainsbury Centre for Mental Health.

in brief...

Rwanda: the costs of conflict for subsistence households

We know that civil conflict is hugely costly for poor countries but how can we measure the costs of such strife for individuals? **Florence Kondylis** looks at the impact of the waves of ethnic violence and consequent mass migrations in Rwanda on the economic performance of subsistence agricultural households.

Civil conflicts continue to affect some of the poorest countries in the world. Episodes of civil strife are often driven by poverty and socio-economic inequalities, and they can lead countries into even starker levels of deprivation than before the crisis – what is often called the 'conflict trap'.

My research looks at the economic impact of such civil strife at the individual level. I argue that taking the individual as the unit of analysis is crucial in economies that consist mainly of subsistence agricultural households, and where the provision of health care and access to education are precarious. By definition, subsistence households seldom have access to credit, live mostly on their own agricultural production or rely on informal markets to buy consumption goods and labour. Such behaviour has virtually no impact on consumption and credit figures, so aggregate wealth indicators fail to account for the effect of conflict on the economic performance of subsistence households.

Rwanda has experienced sustained waves of ethnic violence since 1959, with a peak in the intensity of killings in 1994. These episodes led to massive population displacements in the 1960s and after 1994. The resulting refugee populations were placed in camps either within Rwandan borders or in neighbouring countries. As the Rwandan conflict has lasted for over 30 years, some of the displaced were left in camps without economic prospects for long periods of time. It is only their children, born in the camps, who returned to Rwanda after 1994.

Those refugees were encouraged by the government to return en masse to Rwanda after the 1994 genocide. This resulted in a land and housing crisis, which threatened to trigger even more violent outbursts. The population density in Rwanda is one of the world's highest, and combined with the collapse of infrastructure resulting from the conflict, these return migrations put more strain on the demand for land and housing.

Land plays a critical role within Rwandan society since most households' survival depends on it. The legislation defining and enforcing access to land in Rwanda is mostly based on custom, corresponding more to a 'right to use' than to possess. As land became scarcer, there were fewer opportunities for returnees to rely on custom-based law to find a parcel of land.

In 1997, the government implemented a policy of 'village-isation', aimed at reducing land-related tensions through a programme of resettlement and land allocation to post-1994 returnees. In order to distribute parcels of arable land to the returnees, the government deforested large areas and redistributed some of the land left behind by the 1994 refugees that had not been reclaimed.

The chosen pattern of resettlement was to agglomerate new housing facilities (or *imidugudu*) in relatively small areas on the borders of existing Rwandan villages. Other forms of resettlement were forbidden within programme villages, and all returnees to these areas were moved into imidugudu. They were then allocated parcels of land within larger fields, not necessarily positioned alongside their house. Hence the density of population within imidugudu was much higher than in traditional Rwandan villages. It was argued that this would minimise the amount of wasteland, hence leading to a more efficient use of the land.

At the time that my data were collected, not all villages benefited from the programme. Hence it became possible to compare the economic performance of returning households that benefited from the programme with those who did not.

My study of Rwanda is based on the working assumption that periods spent in camps may have had some impact on the productivity of returnees, either through a depreciation of their skills or other sociological or psychological channels. Isolating the impact of this potential loss of 'human capital' on returnees' agricultural productivity relative to that of stayers is a new contribution to the assessment of the economic cost of conflict at a microeconomic level, which may bear important policy implications.

The data allow me to measure whether there are differentials in agricultural productivity across migration status. Moreover, exploiting the differences in patterns of resettlement across imidugudu and traditional villages, I can examine the impact on agricultural productivity of assimilation of the returnees with the stayers.

The government's resettlement policy is generating economic inequality and potential for discontent

If we assume that the stock of human capital varies between returnees and stayers, then assimilation is likely to be an important channel for returnees to acquire agricultural skills and knowledge. Exchange of skills between returnees and stayers is likely to be the fruit of neighbourhood interactions, and hence depend mainly on the patterns of settlement. Hence returnees living within imidugudu are likely to have less interaction with stayers compared to returnees living within traditional villages.

My results show that for the group of returnees that moved into imidugudu, who received more land than they would have otherwise, the programme had a positive asset effect on their agricultural production. Nevertheless, this group experienced lower returns to inputs than the group of returnees who were not in the imidugudu programme. Not only does this suggest that the episode of displacement lowered the returnees' level of know-how, but also that the imidugudu policy did not allow for transfer of skills between stayers and returnees.

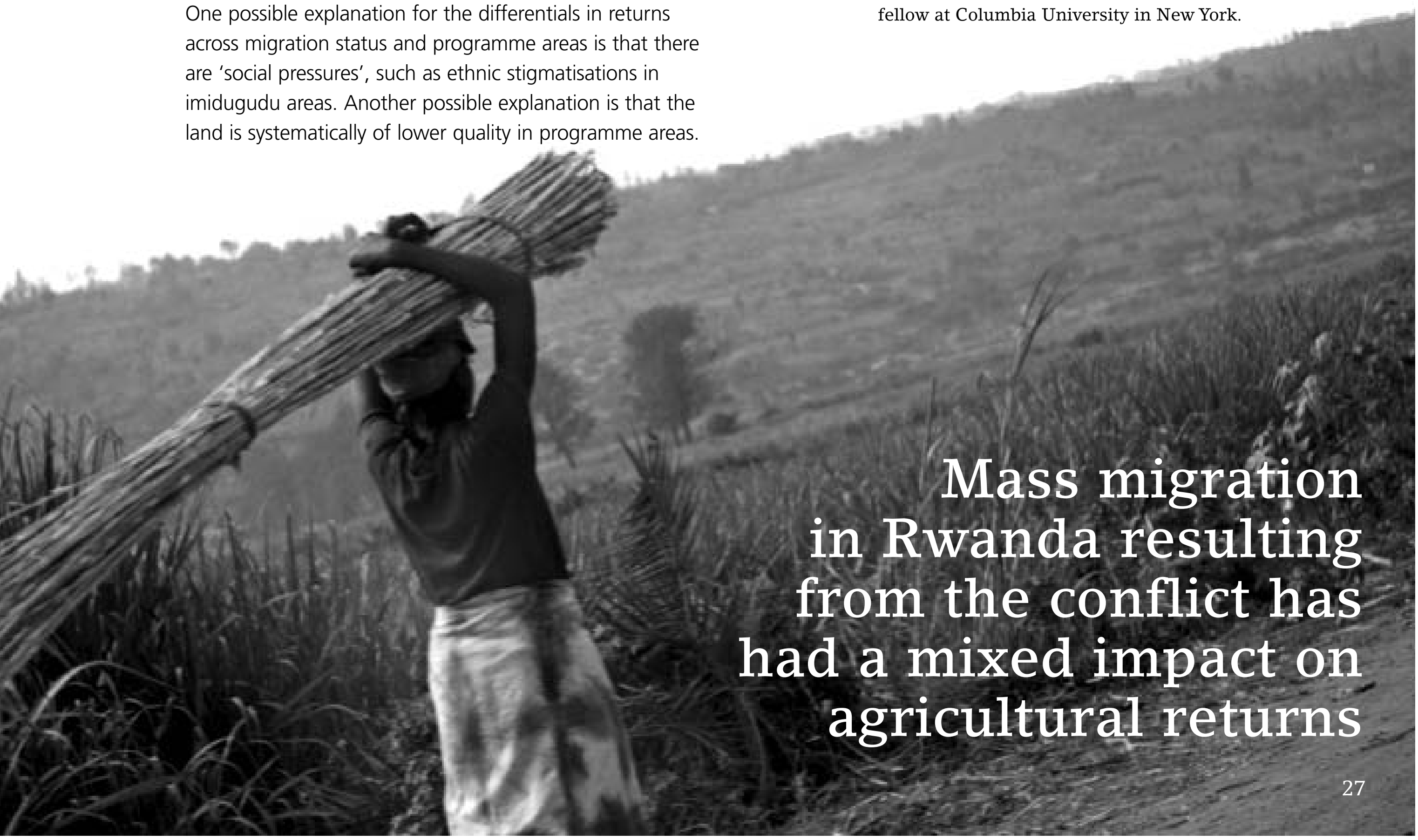
One possible explanation for the differentials in returns across migration status and programme areas is that there are 'social pressures', such as ethnic stigmatisations in imidugudu areas. Another possible explanation is that the land is systematically of lower quality in programme areas.

These findings suggest not only that conflict-induced migration had a mixed impact on agricultural returns, but also that the resettlement policy generated further sources of economic inequality between groups. A straightforward implication is that in order to prevent discontent from erupting among certain groups – and thus to promote durable peace – the sources of disparity should be tackled. One way of doing this would be to provide agricultural knowledge and training to the population of returnees in the programme areas.

This article summarises 'Agricultural Returns and Conflict: Quasi-experimental Evidence from a Policy Intervention Programme in Rwanda' by Florence Kondylis, CEP Discussion Paper No. 709 (http://cep.lse.ac.uk/pubs/download/dp0709.pdf).

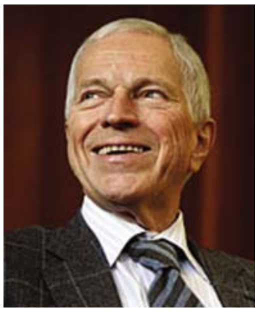
Florence Kondylis is a research economist at CEP and, from October 2006, a postdoctoral fellow at Columbia University in New York.

Image: Kresta King Cutcher



Mass migration in Rwanda resulting from the conflict has had a mixed impact on agricultural returns

Edmund Phelps, Nobel laureate



CEP congratulates **Professor Edmund S. Phelps** of Columbia University on being awarded the 2006 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

Professor Phelps has been recognised 'for his analysis of intertemporal tradeoffs in macroeconomic policy'. The detailed citation notes that his work on the microeconomic foundations of wage and price setting is a precursor of the search and matching theory of unemployment, where Christopher Pissarides – director of CEP's macroeconomics programme – has made especially important contributions. The citation also refers to the significant contribution to analysis of unemployment by CEP's founder director Richard Layard with Stephen Nickell and Richard Jackman.

Professor Pissarides comments on the new Nobel laureate:

> 'The prize was richly deserved. Ned Phelps made fundamental contributions to the analysis of economies in which the future has an impact on what we see happening in the present. Today we take it for granted that expectations about the future matter for policy. Phelps was one of the pioneers of this idea, and it is a measure of his success that we take it for granted today.'
>
> 'Along with Milton Friedman, Phelps revolutionised our way of thinking about the inflation-unemployment trade-off, which has influenced policy-makers since the 1960s. He showed that the economy has an 'equilibrium unemployment rate' (known by the name that Friedman gave to it, the natural unemployment rate) and attempts to reduce it below that level by monetary and fiscal policy intervention are doomed to failure. Left alone, the economy will get to that level.'
>
> 'But Phelps went beyond the claim of the mere existence of a natural rate, to show that the natural rate need not be the optimal rate. So governments may or perhaps should try and influence the natural rate, but not with stabilisation policy. He advocated the use of well-designed policies aimed at increasing the attractiveness of low-skilled workers to employers, and tax policies that give work incentives to workers with low earned incomes.'
>
> 'One of Phelps' most important articles – 'Phillips Curves, Expectations of Inflation and Optimal Unemployment over Time' – was written in 1966 when he was SSRC research fellow at LSE, and published in *Economica*, a leading economics journal edited at the School.'
>
> 'A few years later, his work was instrumental in my choice of PhD topic, and has since influenced many of us in our research on unemployment. Phelps visited LSE frequently to interact with the economists at CEP, especially during the preparation of his 1994 book *Structural Slumps*. We are all very pleased by the award.'

The full citation is available here:
http://nobelprize.org/nobel_prizes/economics/laureates/2006/ecoadv06.pdf

Photo: D. Bondareff/ Columbia University

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Volume 11 Issue 2
(ISSN 1362-3761)

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