Newsletter

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Peter Neary delivers The World Economy Annual Lecture 2009

The World Economy Annual Lecture, sponsored by Wiley-Blackwell, publisher of The World Economy, is one of the cornerstones of GEP's various lecture series – themselves a key component of the Centre's outreach strategy. This year's lecture was delivered at the University of Nottingham on June 18 by Peter Neary (University of Oxford).

GEP was delighted to welcome Peter Neary, Professor of Economics at the University of Oxford, to give The World Econony Annual Lecture 2009.

Entitled Two-and-a-Half Theories of Trade, it discussed the position of oligopoly in international trade theory and illustrated how the models of oligopoly might be developed in the future.

Before delivering his address Professor Neary spoke to GEP's Professor Daniel Bernhofen about the inspiration behind his own theories on international trade.

DB: Your lecture is entitled Two-and-a-Half Theories of Trade. What does that mean?

PN: International trade theory, as a branch of economics, goes back 200 years to the English economist David Ricardo, who started studying the subject and worked, like economists of his day and Adam Smith a generation earlier, totally assuming perfect competition – firms are small, they take prices as given, they're basically all the same.

In the 1980s we had new, exciting theories. Paul Krugman, among others, who won the Nobel Prize last year, was the first to develop the idea that firms were still small but nonetheless different from each other, producing different goods and thereby satisfying consumers' needs in a different way.

That's two theories. I'm arguing – as others have done, too – that there's a need for a third way of looking at things: rather than thinking of firms as tiny, unable to influence their environment, to allow firms to be large – the theory of oligopoly in trade.

DB: Isn't one theory enough? Why do we need more? Two-and-a-Half Theories also suggests something yet to be finished. What is missing?

PN: If only it were like physics. In physics, I think, it's realistic to have a goal of achieving a single unified theory. They haven't got there yet, but they're hopeful.

In economics – again, as Paul Krugman has said – it's much harder. We're not studying mindless particles, no matter how complicated. We're studying individuals who know they're being studied and who – some of them – have read the theories.

We're also studying large agents, like firms, which are internally very complex and which interact in complicated ways. There's a lot that needs to be worked out.

DB: But isn't it obvious that large firms are important for trade?

PN: I think it's an obvious, stylised fact, and increasingly we have more data. The data are showing that large firms are the ones that generate the bulk of exports; they're the ones

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that are most involved in foreign direct investment; they're the ones that are most involved in research and development; they're the ones where the action is.

Our existing theories tell us a lot about trade. They work very well for many problems. But they don't focus on the key essential differences of large firms.

DB: So you're saying big firms aren't just scaled-up clones of small ones?

PN: Scaled-up clones, scaled-up models – exactly right. They're something else. They have different characteristics. So even within, say, exporting firms we have lots and lots of small firms that export to one country or export one product. Increasingly evidence is showing that the dominant firms in exporting are exporting to many countries, sometimes dozens or even a hundred. They're involved in foreign direct investment, they're both importing and exporting, they're outsourcing abroad, they're offshoring. Life's a lot more complicated than it was in international trade in the day of David Ricardo.

DB: So you're saying large firms are the drivers of most exports and foreign direct investment. But surely firms have to start small?

PN: I think that's the challenge. The challenge is to have an approach to thinking about international trade that doesn't just assume that firms are large – or, indeed, doesn't just start by assuming they're small – but in some way tries to explain the ways in which firms grow, the ways in which they can become large, the nature of the special features of firms, like research and development, individual branding, supply networks, supply chains that are global in scale… All those sorts of things need to be understood so that we can have an explanation of the evolution of firms and how that interacts with trade.

DB: Right now the world economy is in crisis and world trade is collapsing. What does your work have to say about these issues?

PN: The bad news is, indeed, the world is in crisis. Trade is in crisis. Recent work by my former colleague in Dublin Kevin O'Rourke and Barry Eichengreen from California pointed out that right now the trends in GNP and world output are alarmingly like the trends in the last Great Depression in 1929. The trends in world trade are dropping alarmingly, just like they did in the 1930s. That's the bad news.

The good news is the policy response. At the macro level central banks are pumping money into the system and desperately trying to find ways of cleaning up the banking system and finding methods of improving credit for consumers and firms.

At the trade level we haven't seen what we saw in the 1930s. Economists have been very concerned about this and rather relieved that there hasn't been the outbreak of protectionism, imposing tariffs and imposing barriers to trade.

Now, I think that's where my interest in large firms comes in, because firms themselves are much bigger now on average than in the 1930s – and, more to the point, they're more integrated.

We don't have exporting firms; we don't have importing firms so much. The firms that matter, the large firms, are involved in both. They export some things; they import others. They're involved in outsourcing and supply chains all around the world, as I've said. I think that makes them much more favourably disposed towards trade. From their point of view, they're interested in persuading governments not to get involved in making trade harder than it is already. <

"Our existing theories tell us a lot about trade. They work very well for many problems. But they don't focus on the key essential differences of large firms."

Peter Neary is Professor of Economics at the University of Oxford and a Professorial Fellow of Merton College. He is also an Associate Member of Nuffield College Oxford and retains an association with University College Dublin, where he was Professor of Political Economy from 1980 to 2006.

His main field of research is international trade theory, where he has worked on the implications of large firms in global markets (formally, the theory of oligopoly in general equilibrium).

He has also written on industrial organisation (including the economics of research and development), consumer theory (including rationing and index numbers) and macroeconomics (including international macro theory and Irish economics policy).

He has published a book, Measuring the Restrictiveness of International Trade Policy (MIT Press, 2005), and has also edited three other books and published more than a hundred professional papers.

http://www.economics.ox.ac.uk/Members/peter.neary/neary.htm

GEP economists capture headlines

GEP academics have been making headlines in the UK and beyond after offering their insights into some of the most critical challenges facing the global economy. Research and comment from the Centre's economists have appeared in the likes of The Independent, the Daily Mail and the Chinese edition of the Financial Times.

Claims by GEP's leading Chinese economist that China was embarrassed by June's collapse of the proposed deal between Chinalco and Rio Tinto were published around the world.

In the UK alone Professor Shujie Yao's thoughts featured in The Independent, whose report on the saga was based around his comments, and the FT, which invited him to write two articles on the subject.

Professor Yao, co-ordinator of GEP's China and the World Economy programme, spoke out after Chinalco, China's state-owned aluminium firm, failed in its controversial bid to form a "strategic partnership" with Rio Tinto amid shareholder anger and political pressure.

Had it succeeded, the $19.5bn deal with the Anglo-Australian mining giant would have represented the largest-ever overseas investment by China.

Instead the outcome proved "painful" when negotiations came to nothing, said Professor Yao.

Writing in the Financial Times' prestigious Comment section, he described the breakdown of the proposed tie-up as a "serious blow to China's self-esteem".

He said: "China will learn a bitter lesson from this. The dragon has woken and learnt it needs to be brutal. The failure to press home an advantage is unlikely to be repeated."

Professor Yao also wrote a 1,500-word piece in Chinese for the FTChinese.com website, which carried his article as its lead story.

In addition, his opinions featured widely in the Chinese and Australian press and in the influential House Magazine, the publication for MPs and Lords.

Professor Yao's insights into the Rio Tinto episode came just weeks after he wrote a comment piece in The Daily Telegraph urging investors to reassess the respective roles of China and Japan.

That article was extensively republished in the Chinese media, where it was read by an estimated 100-million people.

Meanwhile, GEP Research Fellow Dr Richard Upward featured in the Daily Mail after revealing thousands of British workers left jobless by the credit crisis could be condemned to half a decade on lower pay.

Dr Upward used information from the Office of National Statistics' Business Data Lab to study a random sample of 1% of employees who were part of the PAYE scheme.

According to the research, it usually takes an employee five years to get back to a wage matching the level he enjoyed before he lost his job.

• Shujie Yao

Dr Upward told the Mail: "The brutal truth is many of these workers will struggle to earn as much again. For the average middle-aged labourer it will be potentially disastrous."

A full report on Dr Upward's research can be found on page 8.

A full report of Professor Yao's assessment of the Rio Tinto debacle can be found on page 9. <

Examples of GEP's recent press coverage can be found by logging on to the following links:

http://www.ft.com/cms/s/0/6334ed04-538e-11de-be08-00144feabdc0.html

http://www.ftchinese.com/story.php?storyid=001026853

http://www.independent.co.uk/news/business/news/rio-risks-a-china-crisis-1698209.html

http://www.telegraph.co.uk/finance/personalfinance/investing/5357795/Investment-think-China-not-Japan..html

http://www.dailymail.co.uk/news/article-1193127/Average-Briton-redundant-wait-years-salary-reaches-level-again.html

Sixth-Form Conference highlights growing interest in economics

GEP's annual Sixth-Form Conference has proved a success ever since its launch in 2006. This year's event, held amid growing interest in economics as a result of the global financial crisis, proved the most popular yet as students were given a valuable insight into the economic earthquake that shook the world.

The booming interest in economics in light of the global financial crisis was amply demonstrated when GEP hosted its annual Sixth-Form Conference.

The event was first staged in 2006 and quickly became so popular that last year it had to be doubled in size to accommodate the number of students wanting to take part.

Record numbers of budding economists again attended this year's back-to-back one-day conferences, which were held on June 22 and June 23.

As ever, the idea was to give sixth-formers interested in studying economics a genuine idea of what is involved, courtesy of GEP's world-renowned team of academics and a series of real-life applications of economic concepts.

The event undoubtedly came at a time when, thanks to the global credit crunch and financial meltdown, the subject of economics is attracting more attention than ever before.

GEP's Professor Alan Duncan, Head of the Nottingham School of Economics, said the stereotypical image of a deadly-dull academic manipulating complex equations had been blown apart by the all-enveloping drama of the crisis.

The School, which houses GEP, has seen a significant increase in undergraduate applications from the UK, and there has also been a notable rise in applications from overseas as students clamour to learn the ins and outs of the global financial system – and where it all went wrong.

Professor Duncan said: "Our Sixth-Form Conferences have repeatedly shown the strength of interest in economics among students.

"But the level of curiosity has recently become quite extraordinary – and for that we can thank the credit crunch for raising the subject's profile sky-high.

"Prior to the downturn, economics stories were buried inside the business sections of newspapers. However, current events have promoted the discipline of economics to the front page.

"More and more people are realising economics can be exciting and that the stakes are sometimes incredibly high. There's nothing boring about trying to save the world from meltdown."

GEP founder and long-time Director Professor David Greenaway – now Vice-Chancellor of the University of Nottingham – spearheaded the idea of the Sixth-Form Conference.

The inaugural event was so successful that the conference was enlarged in 2007. When even this produced a reserve list, two one-day conferences were introduced in 2008.

"The level of curiosity has recently become quite extraordinary. More and more people are realising economics can be exciting and that the stakes can sometimes be incredibly high. There's nothing boring about trying to save the world from meltdown."

Each year a series of lectures and practical exercises gives students valuable insights into themes including globalisation, offshoring, trade and the environment, outsourcing and migration.

Professor Duncan said: "There's no doubt that the conference is already firmly established as one of GEP's core events, and we're extremely proud of the role it plays.

"It's also worth remembering that an economics degree can open up a range of careers, so even students who ultimately don't go on to economist jobs will benefit."

The following were among a wide range of interesting and informative lectures given by GEP's team of prominent academics during the event.

- Professor Chris Milner's lecture, which addressed the arguments for

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and against protectionism in dealing with the problems of a global recession, was especially relevant in the current climate.

Professor Milner explained how countries around the world are facing pro-protectionism pressure from – among others – producer and consumer groups, unions and labour-intensive sectors.

At the same time, protectionism is limited by the negative experiences of the likes of the Great Depression; by international institutions such as the WTO and the EU, which contribute to expanding international trade; and by improving functions of the labour market.

• Dr John Gathergood provided students with a good understanding of the root causes of the credit crunch and the severity of the sub-prime lending market that preceded it.

By way of illustrating how the sub-prime market failed due to risky borrowers, house-price rises and naive investors who wrongly evaluated risk, he detailed the scenario of an American family who in 2006 had a poor credit score and no savings when they took out a 100% mortgage.

Thanks to falling house-prices, they soon found themselves paying a mortgage that was higher than the value of their home. Eventually, amid the additional problem of rising unemployment, they defaulted and had their house repossessed.

Because of the depreciation in prices, the bank itself made a loss. This scenario was repeated for multiple households and multiple banks, which duly stopped lending to each other in the face of huge losses. The ultimate result: the credit crisis.

• Professor Daniel Bernhofen's lecture addressed the fundamental arguments in favour of free trade. These included the enhancement of opportunities, particularly in having access to goods and technologies an economy could not produce on its own; increased competition, which leads to innovation, a key driver of economic growth; and the drive for peace.

To illustrate the latter point he cited the example of how, in the hope of maintaining peace, Europe created a union that integrated Germany after both World Wars.

Professor Bernhofen went on to talk about the financial crisis, which has led to a lack of trade finance. He suggested the global recovery would take even longer if steps to prevent protectionism are not taken.

• Dr Zhihong Yu's talk on whether China can become the next economic superpower introduced students to a highly important issue that is debated by economists around the world.

Having shown evidence of China's rise and integration into the world economy, Dr Yu explained the key drivers behind the country's economic miracle, including its successful transition from a planned to a market economy and its opening up to the world in the new era of globalisation.

He went on to address the severe pitfalls China has to avoid before it can truly become an economic superpower. Low GDP per capita, growing inequality, heavy state intervention and lack of rule of law were all cited. China's political reform, concluded Dr Yu, is lagging behind its economic reform.

• On both days students spent the afternoon enjoying the "hands-on" experience of playing the International Trade Game, as organised by Dr Wyn Morgan.

• Daniel Bernhofen

• Zhihong Yu

Students were divided into five teams, each of which acted as a separate country classed as "rich", "middle-income" or "poor" – so determining the endowments of capital and raw materials with which they started the game.

Teams then had an hour to produce and sell various commodities, encouraging rivals to barter and negotiate with other countries for capital and raw materials.

As might be expected, "rich" countries triumphed in most games. However, members of every team were required to employ a variety of key economic concepts, including the division of labour, the law of comparative advantage and how prices act as signals and incentives. <

GEP plays host to major UK labour conference

Supported by the Department of Work and Pensions, the prestigious WPEG Conference represents the biggest annual gathering of UK economists. This year GEP had the honour of hosting the event at the University of Nottingham, attracting keynote speakers and other delegates from around the country and beyond.

GEP was delighted to host the annual UK Work, Pensions and Labour Economics (WPEG) Conference from July 13 to 15. The Conference is supported by the Department of Work and Pensions and is the largest annual gathering of UK labour economists.

Around 100 delegates attended to present and listen to more than 50 papers on topics including unemployment, low pay, working hours, education, pension reform, migration, language and international trade.

Professors David Bell (University of Stirling), Ian Walker (Lancaster University) and Andrea Ichino (University of Bologna) presented three fascinating plenary sessions. Professor Bell highlighted the recent dramatic rise in unemployment across the OECD; Professor Walker summarised his work on identifying the causal effect of education on earnings; and Professor Ichino showed how the scheduling of work tasks can have significant effects on workers' productivity.

Several of the session had themes relevant to the work of GEP. For example, in a session on globalisation and trade, Mirko Draca (UCL), in joint work with John Van Reenen and Nicholas Bloom, presented important evidence on the relationship between trade and technology.

The importance of Chinese exports

This research showed how import competition from China has played an important role in forcing European companies to innovate and to invest in new technology.

Firms that were more exposed to Chinese imports also faced a greater risk of job-loss and closure, according to the study, but the effects on job-loss and survival were greatest for the least technologically advanced firms.

Some truths about offshoring

Richard Upward (University of Nottingham) presented work by four GEP Research Fellows (Upward, Alexander Hijzen, Mauro Pisu and Peter Wright) on the effects of offshoring on the labour market.

A popular perception of offshoring is that firms lay off domestic workers and instead buy in services from abroad, but this work, using data on individual firms, shows firms that start to buy service inputs from abroad actually grow faster than similar firms that do not.

Migration and language

Migration was a recurring theme in several sessions. Sarah Lemos (University of Leicester) presented the most detailed evidence so far on the effects of the enormous increase in migration into the UK after the EU enlargement of 2004.

Lemos claimed this represented one of the largest migration inflows in UK history. However, despite anecdotal evidence, she and her co-authors could find no proof that such large inflows have caused falls in wages or increases in unemployment for British workers.

Their results were supported by Coarrado Giuletti (University of Southampton), who showed migrants did not displace native workers. Instead, he said, there is evidence that new and existing migrants – especially those with low or no qualifications – compete for jobs.

Another session considered the role of languages in the labour market and for international trade. Jan Fidrmuc (Brunel University) showed widespread knowledge of languages is an important determinant for foreign trade, with English playing an especially important role. <

> "A popular perception of offshoring is that firms lay off domestic workers and instead buy in services from abroad, but this work shows firms that start to buy service inputs from abroad actually grow faster than similar firms that do not."

News, events and appointments

GEP recently staged one highly successful international conference and is now already preparing to host yet another – this time at its branch at the University of Nottingham, Ningbo, China. Meanwhile, the Centre is delighted to welcome two new Research Fellows.

GEP welcomed a number of distinguished delegates when it hosted its Trade Costs Conference at the University of Nottingham in June.

The two-day event addressed issues including the driving forces behind the trade booms and busts of the past century, the effects of trade costs on international trade and the impact of preferential trade agreements.

Jointly convened by GEP and the University of Munich, the conference attracted the likes of Jeff Bergstrand, Professor of Finance at the University of Notre Dame, and Peter Neary, Professor of Economics at Oxford University.

As reported elsewhere in this Newsletter, Professor Neary used his visit to deliver GEP's prestigious The World Economy Annual Lecture.

GEP is now preparing for its next major international conference, to be staged at its branch at the University of Nottingham, Ningbo, China.

The event, entitled The Global Financial Crisis, will be the Centre's second in China, following last November's China and the World Economy conference, which officially launched GEP in China.

Delegates will address questions including:

- Why is this crisis different from those of the past?
- What are the consequences for particular economies (e.g. China, Japan, the US, Europe and the rest of the world)?
- What are the implications for international trade and investment?
- What are the implications for China and other developing countries?

• Participants at GEP's Trade Costs Conference, which was held at the University of Nottingham in June

The conference will take place on November 10 and 11, with confirmed speakers so far including Dr Guanghua Wan, of the Asian Development Bank; Robert Anderton, of the European Central Bank; Professor Qiren Zhou, of Beijing University; and GEP's own Professor Shujie Yao.

Professor Yao, co-convenor of the event, said: "With the worldwide financial crisis presenting challenges to every country, it is vital to understand fully the causes and consequences of the global meltdown and to design swift and affirmative policies to tackle it." <

GEP is delighted Alejandro Riaño and Andreas Hoefele will shortly be joining the Centre as Post-Doctoral Research Fellows.

Alejandro has just been awarded a PhD at Penn State University, while Andreas is completing a PhD at Strathclyde University. They will join GEP on September 17 and October 5 respectively.

Meanwhile, three current GEP Post-Docs have come to the end of their time with us.

Agelos Delis has gained a Lectureship at the University of Cyprus, Liza Jabbour a Lectureship at the University of Manchester and Xufei (Florence) Zhang a Lectureship ay Middlesex University.

We wish all three well in their future careers. <

• Alejandro Riaño

• Andreas Hoefele

Crunch could mean five years on lower wages for workers

With the effects of the credit crunch potentially threatening thousands of jobs, what hope do workers made redundant during the crisis have of regaining their previous wages levels? Research by GEP has shown that on average they could face half a decade on lower pay.

UK workers made redundant during the recession might never get jobs that pay them as much as they earned previously, a GEP study has discovered.

Research found that on average an employee who falls victim to the economic slump could be condemned to five years on a lower wage.

GEP's Dr Richard Upward discussed the wide-ranging ramifications of the study shortly after 800 staff lost their jobs at Birmingham van-maker LDV.

The axe fell at the Russian-owned firm when it went into administration following the failure of last-minute efforts to secure £60m of government aid.

Dr Upward said: "Redundancy is a blow to anyone, but in the car industry it can be particularly serious. These are highly skilled workers – but their skill is making vehicles.

"Those skills are not easily transferable, and the brutal truth is many of these workers will struggle to earn as much again. For the average middle-aged labourer it will be potentially disastrous."

Dr Upward used information from the Office of National Statistics' Business Data Lab to study a random sample of 1% of employees who were part of the PAYE scheme.

The sample was linked to a large panel of UK businesses from 1994 to 2003, producing just over 150,000 observations of workers' wages for each year in that period.

The study found the closure of a firm leads to the average worker suffering a drop in income of around 50% in the first year, 15% in the second and 10% in the third. It usually takes him five years to get back to a wage matching the level he enjoyed before he lost his job.

But Dr Upward warned the effects of redundancy were likely to be even more severe for workers in the car industry.

He said: "Our research found that losses were greater for men, for older workers and for workers in the manufacturing sector."

Last year a study revealed most of the employees laid off by the collapse of MG Rover in 2005 had to take "significant" pay cuts.

It found 90% of the 6,300 staff made redundant through the closure of Birmingham's historic Longbridge plant managed to find new jobs within three years.

But two thirds of employees were hit by a fall in wages, with an average loss of £5,640 a year – and those who were out of work the longest suffered the largest drops.

• Richard Upward

Dr Upward, an Associate Professor of Economics, said: "Less than a third of the Longbridge workers stayed within the manufacturing sector and earned similar amounts.

"And, because the global recession has been so savage as far as the car industry is concerned, it's likely far fewer workers will find such jobs this time around.

"Most manufacturers are laying people off rather than looking to recruit, which is why the losses suffered at LDV could prove so devastating."

As the economic crisis has worsened, there has been growing controversy over whether the government should step in and bail out various struggling industries and firms.

Having refused requests to help save LDV, ministers should now at least look at ways of retraining staff affected by the closure, said Dr Upward.

He added: "The only way many of these workers will recover their current standard of living is by retraining, and any measure that can be introduced to re-skill them has to be considered." <

China will learn from Rio Tinto debacle, says Yao

China's "massively interventionalist" industrial strategy suffered an embarrassing setback when the proposed tie-up between Chinalco and Rio Tinto failed in June. But the dragon will return stronger than ever, says Professor Shujie Yao, co-ordinator of GEP's China and the World Economy programme.

China suffered a "painful lesson" from the failure of the ill-fated tie-up bid between Chinalco and Rio Tinto, according to GEP's leading Chinese economist.

"The dragon has woken up – and, despite what has happened with Rio Tinto, the West still needs to face tough challenges."

The state-owned aluminium company's controversial attempt to invest in the Anglo-Australian mining giant collapsed in June amid shareholder anger and political pressure.

Had it succeeded, the $19.5bn deal would have represented the largest-ever overseas investment by China.

Instead Chinese esteem has been damaged by the eleventh-hour breakdown of negotiations, according to Professor Shujie Yao, co-ordinator of GEP's China and the World Economy programme.

Commenting on the Rio Tinto debacle, he said: "I think the Chinalco board has shown naivety and a lack of international business experience here.

"A western suitor with Chinalco's cash would have been more ruthless earlier on and not given Rio Tinto time to recover. It's a painful lesson for Chinese business."

Chinalco spent $14bn buying a 9% stake in Rio Tinto, the world's second-largest mining company, in February 2008, at almost the peak of the market.

A year later, when it offered a "strategic partnership", Chinalco had lost more than 70% of its first investment.

The deal was in part intended to recoup those earlier losses, but protests from shareholders and apparent political pressure from the Australian government persuaded Rio Tinto to scrap it.

Professor Yao said: "This unilateral action by Rio Tinto is like putting salt on the wound Chinalco suffered as a result of its investment in 2008. Rio Tinto may have come out as a big winner, but it has totally lost its reputation in China.

"Let us hope that it will not run into trouble again and need another bailout by the Chinese. If it does, the conditions imposed would be very different."

Professor Yao – regarded as one of the world's leading experts on China's role in the global economy – suggested Rio Tinto had used Chinalco during the long-drawn-out saga and admitted: "This will be a blow for Chinese esteem.

"Rio Tinto has been courting two lovers at the same time – one openly and one under the table.

"It was the Chinese who stepped in to bail the business out four months ago when it was in desperate trouble, but the recovery since has given Rio Tinto the chance to work up a covert deal to block further influence from Chinalco."

However, Professor Yao said Chinalco's efforts still signalled China's wider determination to pursue a "massively interventionalist" industrial strategy.

The aim, he said, is to create powerful multinational corporations that will act as "global champions" to maintain China's market share and its position in the international economic order.

He said: "The financial crisis has trapped many large western firms in heavy debts, but China has many billions of dollars to invest in them through state banks and big businesses.

"If Chinalco were a private company no western banks would lend it money, because it is making losses and would not be able to pay back any debt in the short term.

"But four of the biggest state-owned Chinese banks lined up to lend the company more than it required for its second round of investment in Rio Tinto.

"This kind of lending activity is possible only in China, where the state-owned banks and state-owned businesses are treated as the left and right arms of the state to achieve its national long-term development objectives.

"The dragon has woken up – and, despite what has happened with Rio Tinto, the West still needs to face tough challenges."

Professor Yao presented his findings in Strategic Partnership of Chinalco and Rio Tinto: the Long March of Big Chinese Business Overseas, published as a discussion paper for policymakers both in China and the UK. <

Gravity redux: estimating the effects of trade costs on international trade

Gravity equation is perhaps one of the most widely used tools in international economics to yield quantitative estimations of the impacts of trade costs on trade flows. Here Jeff Bergstrand (University of Notre Dame) reveals some new findings, as presented at GEP's recent Trade Costs Conference.

Despite the apparent notion that the world is getting – as Thomas Friedman claims – "flatter", international trade costs are large and still matter considerably to consumers, firms and government policymakers. James E Anderson and Eric van Wincoop (2004) show evidence of trade costs' pervasiveness and size, providing one estimate that the average add-on from shipping a typical good internationally is in the order of 170%!

Trade costs typically include both "natural" costs, such as those associated with physical distances between regions, and "unnatural" (or man-made) costs, such as those associated with policy-based barriers to trade. Since governments have discretion over their trade policies, it is important for policymakers to have a quantitative sense of the impact of changes in trade costs – such as tariffs, non-tariff barriers and the like – on trade flows.

One of the main tools of international economics for analysing the impact of trade costs on trade flows is referred to as the "gravity equation", which has increasingly found usage in policy-making circles. In international trade the gravity equation postulates that the trade flow from one country (say, I) to another country (say, J) should be related positively to the product of the two countries' economic sizes (typically measured by Gross Domestic Products) and negatively to the distance between them. The name derives from association with Newton's Law of Gravity, whereby the force between two objects should be related positively to the product of their masses and negatively to their distance.

In international trade the gravity equation has been shown for nearly 50 years to explain statistically very well the variation in bilateral trade flows among pairs of countries cross-sectionally or in panel, with explanatory power often ranging between 80 and 90%. However, rigorous theoretical foundations in international trade for the gravity equation lagged considerably behind its applications, not developing until the late 1970s.

The combination now of the gravity equation's strong empirical explanatory power alongside formal theoretical underpinnings has made the equation an important tool in the toolkit of policymaking economists for analysing the effects of trade costs on trade flows.

In a seminal paper, Anderson and van Wincoop (2003) – henceforth AvW – noted two fundamental shortcomings about usage of the gravity equation for policy analysis. Firstly, theoretical underpinnings were not as rigorous as previously thought, owing to the lack of systematic accounting for all prices in each of two countries (say, I and J), not just the bilateral price between I and J, for explaining trade flows from I to J. A key result in AvW's endowment economy was that the trade flow from exporter I to importer J is a function of both countries' GDPs, their bilateral trade costs and exporter I's and importer J's multilateral price indexes (which themselves are functions of each other's multilateral price index), as well as an error term (E_{IJ}).

"Our approach yields plausible economic welfare effects of the complete elimination of the world's remaining tariffs, of which 58% are bilaterally asymmetric."

Essentially, each country's exporter (importer) multilateral price index can be interpreted economically as an average of its barriers to (from) all foreign markets. Under bilaterally asymmetric trade costs, trade flows are determined by N(N-1) gravity equations, each with two nonlinear multilateral price terms as explanatory variables (in a world with N countries). However, gravity equation parameters can be easily estimated by using country-specific fixed effects to account for the nonlinear multilateral price terms in estimation.

The second shortcoming raised in AvW was that, even if one could account for these "multilateral price" terms in estimation using country-specific fixed effects, researchers discussing gravity-equation empirical results have ignored the general-equilibrium impacts of changes in bilateral trade costs on trade flows, which generally dampen the direct (or partial-equilibrium) impacts – and such dampening effects can be large.

General-equilibrium comparative static effects of trade-cost changes consequently require a non-linear solver applied to the 2N multilateral price terms. In order to implement the procedure, AvW "achieve a useful simplification" by assuming the trade costs between each pair of countries are perfectly symmetric bilaterally; as a result, the general-equilibrium comparative-static effects of trade-cost changes only required N nonlinear multilateral price terms.

In reality, of course, many trade costs are bilaterally asymmetric. For instance, while physical distance between the capitals of two cities are identical, more than half of all tariff rates between countries in the

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world are asymmetric, and national treatments of foreign goods vary bilaterally. Recent research with Peter Egger and Mario Larch provided an economic foundation for gravity equations that allows trade costs to be bilaterally asymmetric but need only N – rather than 2N – nonlinear terms for comparative statics. While the difference may seem trivial, we show that this results in a reduction in average (absolute) biases of comparative-static estimates by 99%!

The key intuitive notion is that – in contrast to the assumption of an endowment economy in AvW – we assume an explicit production side, using the workhorse Helpman-Krugman monopolistic competition model with economies of scale in production and the numbers of varieties of goods produced in each exporter related to its economic size. The approach can also be applied potentially to the Eaton-Kortum Ricardian model.

The explicit production structure in our model allows us to "pin down" the spatial distribution of N input prices, which yields – as in AvW – N(N-1) gravity equations but with only N nonlinear terms (which reflect N multilateral trade balance conditions). Due to error term E_{IJ} in the gravity equation, comparative-static estimates have much less variance in a system with N – rather than 2N – nonlinear equations. We also show how our approach can be used to estimate with precision the model's elasticity of substitution in consumption.

The study then compares our approach to the AvW approach for estimating general-equilibrium comparative-static effects under bilaterally symmetric or asymmetric trade costs.

Firstly, using a Monte Carlo simulation, we show that our approach and the AvW approach yield identical comparative statics (of trade-cost changes) when trade costs are bilaterally symmetric. However, when trade costs are bilaterally asymmetric our approach yields consistently identical estimates; the average absolute biases of comparative statics using the AvW approach are 100 times those using our approach.

Secondly, we show empirically in the context of the well-known McCallum "border puzzle" that our approach yields smaller economic welfare effects from the elimination of the Canadian-US border due to the larger estimated elasticity of substitution (in consumption) in our method compared to the assumed elasticity of substitution using the AvW approach. Moreover, our approach yields more plausible economic welfare effects when the effects of national borders are allowed to be bilaterally asymmetric.

Finally, we show in the typical empirical context for the gravity equation – the analysis of world trade flows – that our approach yields plausible economic welfare effects of the complete elimination of the world's remaining tariffs, of which 58% are bilaterally asymmetric. <

This article is based on Gravity Redux: Structural Estimation of Gravity Equations, Elasticities of Substitution and Economic Welfare Under Asymmetrical Bilateral Trade Costs, a recent study co-authored by Bergstrand, Peter Egger (University of Munich) and Mario Larch (University of Munich).

• Jeff Bergstrand

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New GEP conference and lecture announcements

Conferences and public lectures have always been a crucial element of GEP's wider outreach strategy. One of the most important purposes these events serve is to offer our students the chance of genuine interaction with some of the most important figures in the sphere of economics.

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November 26 2009

Professor Alan Winters
Chief Economist, Department for International Development
January 27 2010

Martin Wolf
Associate Editor and Chief Economics Commentator, Financial Times
March 10 2010

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Trade booms, trade busts and trade costs

What are the driving forces behind the booms and busts in international trade over the past century? In this article, presented during GEP's recent Trade Costs Conference, Dennis Novy (University of Warwick) offers an explanation by focusing on the role of changing trade costs.

The world has witnessed major trade booms and trade busts over the past 130 years. Global trade increased at a remarkable pace in the decades prior to World War I and after World War II; by contrast, it came to a grinding halt during the interwar period.

To examine the underlying driving forces of these booms and busts we studied new data on bilateral trade flows for a consistent set of 130 country pairs over the period from 1870 to 2000, covering on average around 70% of global trade and output.

Three eras of globalisation were studied: the pre-World War I Belle Époque (1870-1913), the fractious interwar period (1921-1939) and the resurgence of global trade after World War II (1950-2000). The result was the first complete quantitative assessment of developments in global trade from 1870 all the way to 2000.

Gravity and trade costs

Trade costs were a key concept in this study. Broadly defined, they are all the costs of transaction and transport associated with the exchange of goods across national borders.

We derived a micro-founded measure of aggregate bilateral trade costs by backing out the trade cost wedge implied by the gravity equation. This approach captures the combined magnitude of tariffs, transport costs and all other macroeconomic frictions that impede international market integration but which are inherently difficult to observe.

The trade cost measure has a strong theoretical foundation, as it can be derived from a wide range of leading trade theories – including the consumption-based trade model by Anderson and van Wincoop (2003), the Ricardian model by Eaton and Kortum (2003) and the heterogeneous firms models by Chaney (2008) and Melitz and Ottaviano (2008).

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"The collapse of the gold standard, the precipitous rise in tariffs in the aftermath of the Great Depression and the lack of commercial credit at the time all contributed to the collapse of international trade."

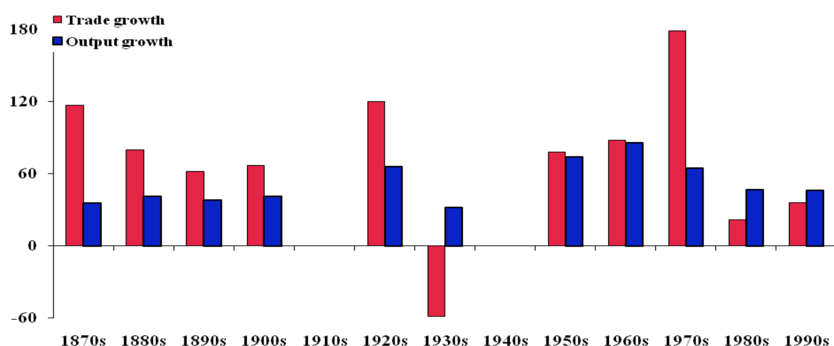

Figure 1: Trade growth vs output growth in %

This indirect approach of backing out implied trade costs holds clear advantages for applied research. A direct accounting approach is made impossible by the constraints on enumerating and collecting data on every individual trade cost element over a long period of time.

The evolution of international trade costs since 1870

Our results showed international trade costs dropped much faster during the first trade boom before World War I than during the second boom after World War II. The average level of trade costs for the countries in our sample fell by 33% in the 40 years before World War I, whereas from 1950 to 2000 the average fell by only 16%.

For the same countries we found the average level of trade costs increased by 13% in the 20 years from the end of World War I to the beginning of World War II.

What are the factors underlying these trade costs? Our evidence suggests the determinants that matter most are standard factors like geographic distance (which is a rough proxy for information and transportation costs); trade policy and tariffs; adherence to fixed exchange rate regimes; and membership of the British Empire or Commonwealth. In particular, the spread of railroads and the steamship in the course of the 19th century is associated with increased international trade, as is the spread of container shipping from the 1960s.

Similar trade booms, different driving forces

On the surface, the percentage growth in trade volumes is roughly comparable during the trade booms before World War I and after World War II (at 486% and 484% respectively). However, since trade costs dropped faster during the first boom, they are also more important in explaining the growth of trade in that period.

Falling trade costs account for more than half of the growth in international trade from 1870 to 1913, while the rest is explained by secular increases in output. However, falling trade costs account for only a third of trade growth from 1950 to 2000.

Figure 1 plots trade and output growth for each decade. Prior to World War I trade growth clearly outstripped output growth, but – with the exception of the 1970s – trade growth was either on a par with or weaker than output growth in the decades after World War II. Compared to output growth, trade growth was particularly weak during the 1980s and 1990s, suggesting a minor role for trade cost declines over that time.

The role of trade costs is dominant in explaining the trade bust of the 1930s. Based on output growth alone, we would have expected world trade volumes to increase by nearly 90%. The fact that trade growth was zero during the interwar period highlights a difficult macroeconomic environment and the dangers of protectionism.

The collapse of the gold standard, the precipitous rise in tariffs in the aftermath of the Great Depression and the lack of commercial credit at the time all contributed to the collapse of international trade. <

This article is based on Trade Booms, Trade Busts and Trade Costs, a recent study co-authored by Novy, David S Jacks (Simon Fraser University and NBER) and Christopher M Meissner (UC Davis and NBER).

• Dennis Novy

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2009/17

Artjoms Ivlevs and Roswitha M King
Kosovo – Winning Its Independence But Losing Its People? Recent Evidence on Emigration Intentions

Based on a post-independence survey on emigration intentions, this paper explores characteristics of expected future out-migration flows from Kosovo.

2009/16

Sugata Marjit
International Trade and Local Organisation of Production – Two Elementary Propositions

This paper shows that with trade liberalisation the export sector in a labour-abundant country is likely to outsource locally more than the import competing sector.

2009/15

Toshihiro Atsumi
Silk, Regional Rivalry and the Impact of the Port Openings in Nineteenth-Century Japan

Economic activities within Japan started shifting towards the east in the mid-nineteenth century. This paper examines the link between the shift and port openings.

2009/14

Robert Anderton and Paul Hiebert
The Impact of Globalisation on the Euro-Area Macroeconomy

This paper looks at the impacts of globalisation on the euro-area macroeconomy by first assessing trade performance, export specialisation and import prices and then investigating euro-area domestic adjustment to globalisation, analysing the impacts on productivity, labour markets and prices.

2009/13

Roger Bandick and Holger Görg
Foreign Acquisitions, Plant Survival and Employment Growth

Using data on Swedish manufacturing plants, this paper analyses the effect of foreign acquisition on the survival probability and employment growth of a target plant. The results suggest acquisition by foreign owners increases the lifetime of the acquired plants only if the plant was an exporter.

2009/12

Jun Du and Sourafel Girma
Finance and Firm Start-Up Size: Quantile Regression Evidence from China

Using a unique dataset that provides information on the financial structure of start-up companies in the Chinese manufacturing industry, this paper documents robust evidence that access to formal financing channels has beneficial effects on firm size, these effects being more marked as we move up the entry size distribution. By contrast, we find negative relationships between informal finance and entry size across all size quantiles.

2009/11

Kevin Amess, Jun Du and Sourafel Girma
Full and Partial Privatisation in China: the Labour Consequences

This paper suggests partial privatisation creates a "win-win" scenario for firms in China. Market discipline and incentives are driving labour productivity improvements, while a government "helping hand" simultaneously protects labour welfare via job creation and higher wages.

2009/10

Sayema H Bidisha
Intergenerational Earnings Mobility of Immigrants and Ethnic Minorities in the UK

This paper analyses the intergenerational earnings mobility of immigrants and ethnic minorities in the UK by using a two-sample instrumental variable technique and a British Household Panel Survey for estimating mobility coefficiency.

International trade, unemployment and wages with endogenous firm scope

What are the effects of trade openness on firms and workers when firms can choose their product scope? In this article Nicholas Sly (University of Oregon) shows theoretically why endogenous firm scope matters for the impacts of trade under imperfect labour market conditions.

Casual observation is almost all that is necessary to be convinced that most businesses offer a variety of products. More rigorous investigations confirm the importance of multi-product firms in total production and in total export activity.

• Nicholas Sly

Moreover, managers seem quite concerned with the specific portfolio of goods and services they provide. With self-selection into exporting activities based on productivity and endogenous choice of firm scope, an analysis of trade adjustment must consider both within and across firm reallocations of production.

Work by other authors has begun to examine the responses of firms along their intensive and extensive margins. However, the impact that trade has on the behaviour of workers is usually omitted from the analysis.

I explore two aspects of worker supply responses to changes in trading opportunities. Firstly, labourers make labour/leisure choices in the form of whether to shirk, given wages and the possibility of unemployment. Secondly, skilled workers decide whether to pursue jobs that use their skill set with greater intensity or to seek jobs that guarantee export opportunities.

Firms use labour and managerial skill to manufacture a variety of goods. All firms face diminishing returns to scope. Fringe product lines require more efficiency units of labour to produce than the firm's core competency.

One of the managers is assigned the task of reducing the exposure of the firm to diminishing returns to scope. Each separate product line experiences a degree of increasing returns to scale. The second manager is assigned the task of increasing productivity in the assembly of each unit of output.

The productivity of the firm is determined by the skill of the two managers in performing their respective tasks. Given the skill of the management team, the firm chooses output and product scope.

Labourers have an incentive to shirk their duties because of imperfect monitoring. As trade brings new low-priced goods into the market, the incentive to shirk is mitigated. Firms can expand hiring without fear of workers remaining idle. The increases in hiring reduce unemployment and raise (nominal) labour wages.

This labour market mechanism is important to consider, because higher wages act as a catalyst for trade adjustment. Higher wages force low-productivity firms out of the industry, induce firms to shed marginal product lines and reallocate production towards the most efficient firms.

I present a model of managerial team formation through voluntary matching. Managers cooperate in producing all firm varieties but are assigned to specific tasks (either helping to extend the scope or scale of the firm) that use their skill with differing intensity.

Reductions in trade barriers change the matching behaviour of skilled workers, because exporting jobs become relatively more lucrative. Shifts in the equilibrium of the matching market change the way firms initially organise. One key result is that, even though trade induces all firms to specialise and reduce product scope, some firms take advantage of better management and further diversify.

Non-exporting firms may also be able to attract better management teams. The exit of low-productivity firms forces some managers to choose between unemployment and accepting a job less suited for their particular skill set. Hence firms confronted with import competition may be able to grow, as relatively high-skilled workers accept less skill-intensive job types.

All firms experience adjustments in management as the global economy further integrates. The aggregate consequence is that the underlying distribution of firm productivity changes shape.

Modelling worker behaviour can be challenging technically, but the implications of trade exposure for firms and workers may run opposite. Traditionally, trade is thought to cause agents to lean down and become more competitive. For firms this may mean paring down the scope of activities that take place with their boundaries; for workers this means dropping low-ability partners, leading to better-performing teams. The partial incentive of firms to specialise may be eclipsed by improvements in team formation. <

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