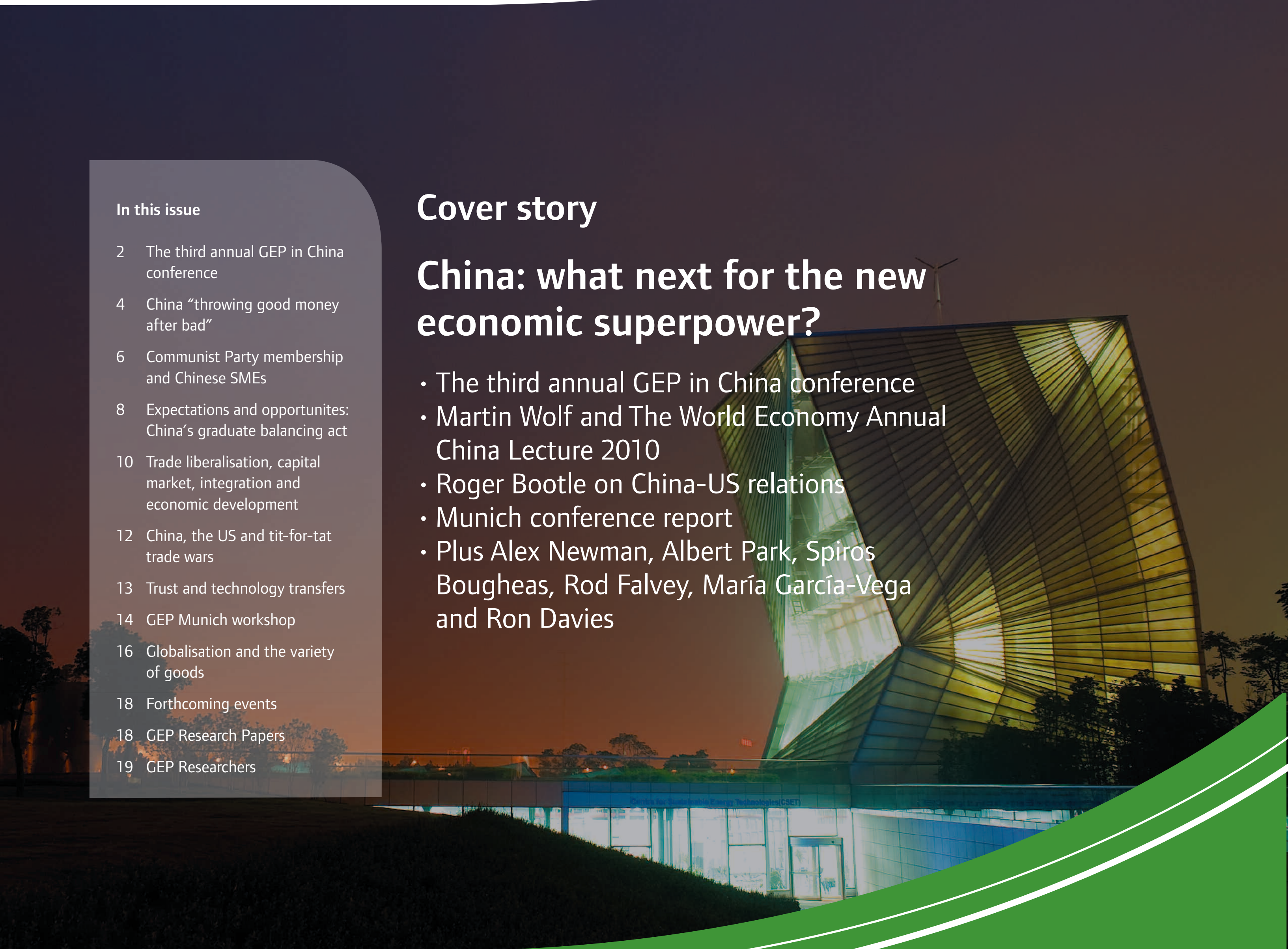
Leverhulme Centre
for Research on Globalisation and Economic Policy

Newsletter

Issue 33, **Winter 2010** **www.gep.org.uk**



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The University of Nottingham

The World Economy Annual China Lecture 2010

Even in the wake of the global financial crisis, China's extraordinary economic ascent continues apace. As GEP in China's third annual conference heard, however, major challenges may yet lie ahead for the world's newest economic superpower.

China is "almost certain" to experience a financial crisis in the next 25 years, delegates at GEP in China's prestigious third annual international conference were told.

Martin Wolf, Associate Editor and Chief Economics Commentator of the Financial Times, made the prediction as he delivered the 2010 The World Economy Annual China Lecture.

His address was the centrepiece of Enterprise and Labour Market Adjustment in China's Transition, a two-day event held at the University of Nottingham, Ningbo, on 9 and 10 November.

Attracting leading economists and academics from around the world, the conference marked two years since GEP underlined its commitment to studying China by opening a branch at Ningbo.

The country's role at the heart of the global economy has been reinforced by the worldwide financial crisis, with China now widely regarded as the "engine-room" of economic recovery.

Yet Wolf warned no nation has ever managed to sustain a half-century of very rapid economic growth – and said China is unlikely to become the first.

Instead, he suggested, its economy must prepare to face up to a series of issues that threaten its development.

He said: "I don't know any significant country that has gone through development and opened up its financial sector to the world which has not had at least one world-class financial crisis."

Wolf described the growth model pursued by China in the 10 years leading up to the global economic crisis as "fundamentally unsustainable".

The government's next five-year plan, he said, would be built around a recognition among officials that the model has "clearly reached its end".

Wolf identified managing an inevitable decline in investment rates, protecting its financial sector, securing natural resources at workable prices and the difficulty in raising productivity levels as some of the most crucial challenges that lie ahead for China.

He told the conference: "My view is that, however remarkable the success China has had in the last three decades, the next two decades will be ineluctably more difficult than what has already been achieved."

Wolf said Chinese economic growth would become dependent on rising productivity to avoid falling into a "middle-income trap" that would leave the country no longer able to compete globally in terms of low wages or technological capability.

"The danger of falling into the trap is quite small, but if that's going to be avoided the aim for China over the next two or three decades is going to have to be very, very rapid increases in fundamental productivity and innovation," he said.

He added that another major challenge for China would be to manage the consequences of its "simply staggering"

Student volunteers at Ningbo prepare to welcome delegates

investment ratio – another "significant vulnerability".

"Astonishingly and quite uniquely in history, China has emerged as both the largest investor relative to gross domestic product in the world and the largest exporter of capital in absolute terms," he said.

Wolf also suggested a decline in China's growth rate, from 10 per cent to five per cent, is "certain" in the next two decades.

He said: "This would reduce the investment rate that China needs by 20 percentage points of GDP, from 45 per cent to 25 per cent of GDP. If this happens abruptly, like it did to Japan in the past, there will be a collapse in demand.

"This is not an imminent risk, but a sharp adjustment is likely to happen at some point in the next 25 years – and when that happens China will have to shrink its savings dramatically or increase its current account surplus to something like 20 or 25 per cent of GDP if it is to balance its economy."

Japan failed to rise to the challenge and has never fully recovered, said Wolf, adding: "China is going to have to manage a decline in investment rate without losing its dynamism."

Wolf also cautioned that large losses to China's banking sector are "quite plausible" as marginal returns on capital fall and bubbles become more frequent.

He said: "Higher interest rates, which will be necessary to support household incomes and improve efficiency in the use of capital, would further squeeze the margins of the banking sector, which are currently very large.

"Any move to open up the capital account – which is again quite possible, perhaps to support the internationalisation of the RMB as a global currency – will make the financial sector extremely vulnerable to crisis. This transition for China is going to be extremely difficult."

Emphasising the scale of the resources the country will require to fuel its growth, Wolf pointed out that if China were to have as many vehicles per head as Japan its total vehicle fleet would increase 50 times and world consumption of oil would have to double.

"Levels would have to go to about 160 million barrels a day, which is just not going to happen," he said.

"As the Chinese economy continues to double in size every six years, the pressure China will put on the world's resources will be extraordinary. Managing the consequences of China's resource use as its economy expands in this way over the next 20 or 30 years is going to be an enormous challenge."

Wolf said a reduction in inequality, a significant rise in wages and a shift in income from capital to labour would also be necessary for China to maintain its economic rise.

"In some ways this is the most capitalist society ever, in the sense that the profit share of GDP is at a level I have never seen before," he said.

"The current Chinese mode... has to be changed in quite fundamental ways towards a domestic, demand-led model, which can only happen if consumption takes off. A fundamental strategic shift will be required."

Martin Wolf after his lecture

I don't know any significant country that has gone through development and opened up its financial sector to the world which has not had at least one world-class financial crisis.

China "throwing good money after bad"

Many believe the prospect of a currency war between China and the US is becoming increasingly likely. Delivering the 2010 The World Economy Annual China Lecture, Financial Times Chief Economics Commentator **Martin Wolf** questioned the long-term wisdom of China's policies.

The second round of quantitative easing announced by the Federal Reserve is just "petty cash", GEP in China's third annual conference heard.

Martin Wolf, the Financial Times' Chief Economics Commentator, insisted the move – effectively to print $600bn – would not make a significant difference to challenges already facing China's Central Bank.

Delivering the 2010 The World Economy Annual China Lecture, Wolf said: "I know $600bn sounds a lot. People get completely hysterical about it. But it's neither here nor there – it's petty cash.

"This is four per cent of US GDP and only a quarter of China's reserves – and only a very small proportion is going to end up in China."

China has got to the point where its investment in foreign exchange reserves is so large that it can't bear the losses that follow from currency appreciation.

Although China has led the protests against America's decision to go ahead with "QEII", Wolf said the Federal Reserve would continue to expand the money supply until demand offsets the drag of the external balance.

"Some of that will filter into the world in various ways, and some will end up in China. So it means almost for sure that the People's Bank of China will have to buy dollars and accumulate reserves," he said.

"But on its present policy that is going to happen anyway. The important point for China is not to emphasise the impact of QEII. I think this is a relatively marginal event."

Wolf suggested a change in stance would not be forthcoming from the US, adding: "The QE policy is just one element of the problem the Chinese authorities have got themselves into as a result of China's exchange-rate policy.

"China has got to the point where its investment in foreign exchange reserves is so large that it can't bear the losses that follow from currency appreciation.

"It is stuck, so it throws good money after bad. When they started off they had $100m dollars of reserves. They never thought they would end up with $2.6trn.

"It was beyond anyone's imagination. Four or five years ago people would have said a trillion is enough. On the present path it is going to be five trillion for sure."

Wolf told the conference it would be "impossible" for China to prevent inflation as long as it pursues its current policy regarding exchange rates.

He added that he had been "astonished" by how the Chinese authorities had succeeded in suppressing inflation in recent years.

"The most fundamental theory in international monetary economics is that you cannot control the real exchange rate in the long run," he said.

I know $600bn sounds a lot. People get completely hysterical about it. But it's neither here nor there – it's petty cash.

"The truth is that the Chinese authorities have been able to control the real exchange rate in the short run in the last 10 years much better than most of us ever imagined.

"But I would be very surprised if inflation were not to become a structural feature of the economy – and this is made worse by the fact that China is shifting the terms of trade against itself.

"China is far and away the most dynamic source of world demand for commodities and the single most important reason for a massive rise in commodity prices.

"This filters through to everything that is consumed and produced in China, because China is now a staggeringly open economy, highly dependent on world imports.

"That is another way China's growth drives domestic inflation, given that the Chinese government has made the serious mistake of not allowing the exchange rate to appreciate faster."

Martin Wolf speaks to students after his lecture

Communist Party membership no longer enough for SMEs

Membership of the Communist Party once opened many doors in the world of Chinese business. According to research presented at GEP in China's third annual conference by **Alex Newman** (GEP China), small and medium-sized firms now need to establish different links if they are to prosper.

Alex Newman

The business clout that once came with Communist Party membership is fast diminishing for China's new wave of entrepreneurs, research has found.

The most successful private enterprises instead now find themselves under growing pressure to establish political contacts at the highest level to survive, GEP in China's third annual conference was told.

According to a study presented at the event, pouring investment into hiring senior executives who are active members of high-level policymaking bodies such as the Chinese People's Congress is more likely to secure preferential treatment from government.

Such a situation does not augur well for new small and medium-sized enterprises and emphasises the challenges China faces in its attempted transition from a labour-intensive to an innovative economy, said the research's authors.

Zhao Chen, a Professor of Economics at the China Centre for Economic Studies at Fudan University, Shanghai, said: "Our findings are not good news for newly established SMEs, which are typically less likely to have political resources.

"The time and energy required to develop political resources might distract them from concentrating on their core competencies and negatively impact on their capacity to innovate."
However, the research suggests that if such firms choose not to cultivate strong political connections – or guanxi – they risk damaging their business.

Zhao said: "To run a successful business in China enterprise owners should consider hiring senior executives with political connections and active membership in the Chinese People's Congress and the Chinese People's Political Consultative Committee – or who act as government advisers – in order to develop the political resources of the firm.

"Without such resources SMEs face greater difficulty in accessing preferential treatment from government, which could impact on their ability to prosper and ultimately survive."

A decade ago membership of the Communist Party was regarded by heads of private SMEs as an effective way to open business doors usually shut to those lacking political guanxi.

SMEs began entering the political arena in 2001, and the SME sector in China now accounts for more than 75% of all employment and more than 50% of GDP.

SMEs, especially those that are privately-owned, tend to be discriminated against in favour of larger state-owned firms, which continue to receive preferential treatment from government authorities.

Indicative figures from previous research suggest 30% to 40% of all entrepreneurs in China are members of the CCP.

But this latest research indicates there are "limited benefits" to entrepreneurs from being a member of the Communist Party alone.

Study co-author and GEP Research Fellow Alex Newman said: "Entrepreneurs should be aware that Communist Party membership does not confer significant political influence on the member to the same extent it might have done in the past, especially in areas of the country with good political governance.

"This may be due to the fact that lower-level Party committees have gradually lost most of their political and economic decision-making functions over the course of the last two decades."

The research also claims the value of Communist Party membership has been severely reduced during the process of economic reform, during which the central government began gradually to encourage more open and transparent political participation.

Newman, a Lecturer in International Business at Nottingham University Business School, Ningbo, said: "In the present system only senior officials and higher-level legislative bodies continue to exert significant influence over resource allocation in the Chinese economy."

Zhao added that the Chinese government should consider a number of key policy decisions to facilitate the upgrading of the economy.

"To spur innovation in the SME sector it should encourage more marketisation and loosen its control over resource allocation. This should ensure Chinese SMEs are more competitive globally," he said.

Zhao and Newman co-authored the study with Wei Xu, of the Changzhou Institute of Technology, and Yongzhi Sun, also of Fudan University.

The research, conducted from July to December 2009, was based on a survey of 150 SMEs in Changzhou, a city in the Yangtze Delta region of China.

Located in Jiangsu Province, close to the provincial capital of Nanjing in the West and not far from Shanghai, Changzhou was recently ranked by KPMG's China City Competitiveness Annual as one of the most competitive cities for private investment.

In the present system only senior officials and higher-level legislative bodies continue to exert significant influence over resource allocation in the Chinese economy.

Forbidden fruits: Communist Party membership no longer opens as many doors as in the past

Expectations and opportunities: China's graduate balancing act

The transition from a labour-intensive economy to an innovative society is one of the key challenges facing China in the coming years. According to experts at GEP in China's third annual conference, including **Albert Park** (University of Oxford), the country is equipped to make the shift in the long term – but compromise may be required first.

Albert Park

China has to hope young people are flexible enough to adapt to a more technical sector. Taiwan did this successfully and managed to move up the supply chain.

The Chinese economy has the capacity to provide skilled jobs to the country's glut of unemployed college graduates, a leading expert predicted at GEP in China's third annual conference.

While China grapples with the issue of labour scarcity among its low-skilled workforce, the creation of higher-skilled employment is a priority and will work in the favour of its millions of graduates, said Professor Albert Park.

Many will be forced to lower their salary expectations in the short term as the country strives to make a meaningful shift from a labour-intensive economy to an innovative society, he said.

But graduate unemployment should not prove a problem in the long term, said Park, a Professor of the Economy of China at the University of Oxford.

He said: "The Chinese economy will be able to absorb the rising number of university graduates. The rate of economic return to college education is actually very high.

"It has increased over time – and there are no signs of it coming down yet, because there is still a scarcity of college graduates relative to the total labour force."

According to Park's research, the rate of return of college education – measured as the percentage difference in wages for college graduates compared with high school graduates – increased from less than 12% in 1988 to nearly 40% by the early 2000s.

He said: "The ratio of college graduates to the total urban labour force is below 10%, so there is still plenty of room for growth – especially when compared to South Korea, where about 90% of the labour force is college educated.

"The problem is that for the moment college graduates are being produced too quickly and the current labour market cannot absorb them fast enough."

The number of graduates from Chinese higher education institutions leapt from 9.5 million in 2000 to 37.8 million in 2006.

Many have been prepared to wait to land the right job, but, according to Park, that could be about to change.

"College graduates in China have high expectations. They are reluctant to accept low-paid jobs and are quite patient. However, it is a case of matching expectations with opportunities," he said.

Eventually they may have to accept low-level roles in small companies and work to improve their positions as the firms themselves move up the technological chain, said Park.

He added: "People in China do not change jobs as much as the workforce in the US. But there will be increasing opportunities for mobility in China, which will benefit the overall economy.

"There is also a growing emphasis on vocational training in Chinese universities, which will contribute to students being able to develop skills that make them more employable."

Professor Park has long argued the jobless rate in China has declined markedly since the beginning of the decade and that the biggest challenge facing the Chinese economy is labour scarcity, which will result in considerable rises in wages for the low-skilled labour force.

He also believes the size of the potential labour pool in China's rural areas has been exaggerated in considering how to address the labour shortage.

Park said: "Many renowned economists refer to a figure of 60% of people being primarily involved in agriculture. But this does not necessarily mean they are farming. They are doing other things, like setting up small-scale businesses and diversifying.

"The young people are the ones who are migrating. If people are staying in rural areas it is because they want to stay there. If they want to migrate then they migrate.

"They have reliable information on wages in the cities, and the barriers to migration are very low. Chinese companies will have to raise wages to attract people to urban areas."

He added: "Labour supply will start to decline around 2015. We are now right at the tipping point where the dependency ratio has increased significantly due to a rapidly ageing population caused by the one-child policy."

Park dismissed the notion that rising labour costs will force a large chunk of China's manufacturing sector to shut down.

He said: "Labour costs in relation to productivity are relatively low. There are many other factors to consider, like appreciation of the RMB.

"Chinese firms will be able to raise productivity by retraining employees to use more advanced machinery. Chinese workers are hardworking and disciplined.

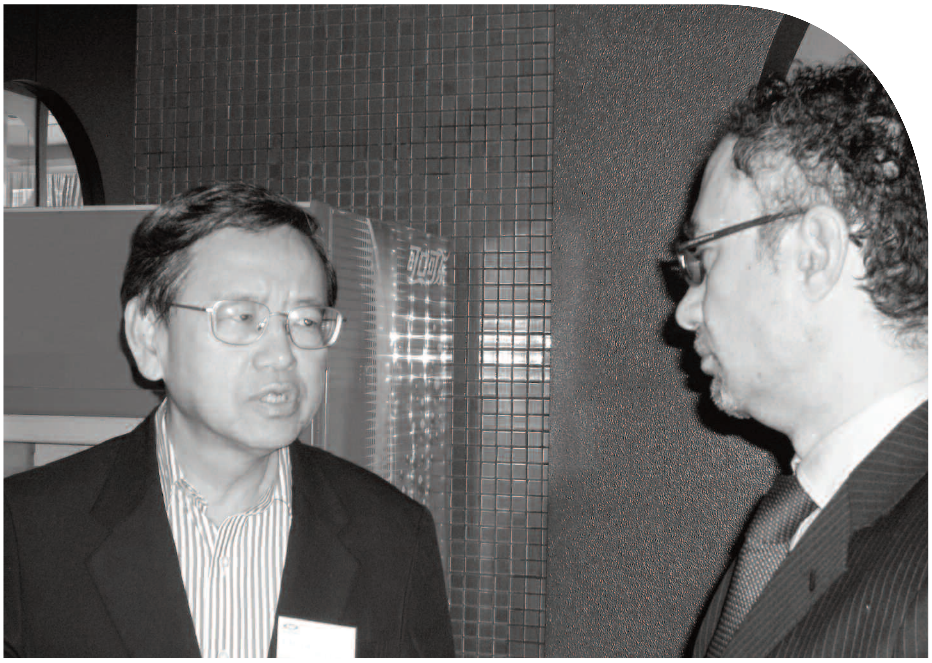
"China has to hope young people are flexible enough to adapt to a more technical sector. Taiwan did this successfully – although on a smaller scale – and managed to move up the supply chain."

Eden Yu, Associate Dean and Professor of Economics at City University in Hong Kong, also emphasised the need for China to accelerate its innovation drive.

Delivering research findings at the conference, he said: "The capability of the Chinese economy to absorb about one million graduates a year lies in the Chinese campaign to transform its economic development pattern."

Yu argued that Chinese companies would need to raise wages to a much higher level in the near future if private household income is to be boosted, thereby stimulating domestic consumption.

He said: "Although China's annual inflation rate is not as high as the recent 10% hikes in workers' wages, Chinese inflation does not take into account property prices. If property prices are taken into consideration then recent wage increases actually lag behind consumer price inflation."



Eden Yu (left) with Michele Geraci, of Zhejiang University

Trade liberalisation, capital market integration and economic development

Evidence to support the theory that the quality of a country's financial and legal institutions is a key determinant of capital market integration's potential benefits has traditionally been weak. **Spiros Bougheas** (GEP, University of Nottingham) and **Rod Falvey** (Bond University, Australia, and GEP) add to the understanding of this issue in new research.

Spiros Bougheas

A series of financial episodes over the past couple of decades, including the ongoing global banking crisis, has been responsible for the resurgence of interest in the impact of financial market integration on both emerging and developing economies.

It has been argued that, while there might be some short-run side-effects, in the long run financial integration by encouraging financial development can provide a boost to the economy. It is suggested that financial integration can stimulate financial development either by mitigating the effects of financial repression or by alleviating the effects of agency costs and risk on interest rates.

These theoretical arguments suggest the quality of a country's financial and legal institutions can be an important determinant of the potential benefits of capital market integration. However, the empirical evidence for this assertion is weak.

For example, it has been found that overall financial openness is only weakly related to financial market and economic development. The evidence shows such a relationship is strong only for OECD countries, suggesting the quality of institutions might be an important prerequisite for a successful integration. Other researchers have suggested financial openness promotes the development of financial markets only if the country has reached a reasonable level of institutional and legal development, which, as the evidence also indicates, is more prevalent among emerging market economies than developing ones.

In a recent paper Bougheas and Falvey (2009) argue that our understanding of how the quality of institutions affects the implications of financial integration for financial deepening and economic development can be improved by including in our analysis the patterns of comparative advantage. There is a strong correlation between a country's financial development and the degree to which its exports are biased towards goods and services produced by financially dependent sectors, and the causation seems to run in both directions. These results seem to suggest that the implications of financial integration for financial market development might depend on a country's comparative advantage. Irrespective of the quality of financial and legal institutions, financial openness might not promote financial development for countries that have a comparative advantage in sectors that are not financially dependent.

In order to address these issues Bougheas and Falvey introduce financial frictions in a small two-sector open economy where both goods and capital are allowed to move across international borders.

The allocation of capital will be efficient when investors and borrowers have complete information about project returns and financial contracts are costless to enforce, but in markets with frictions there will be financially constrained agents that own profitable projects yet are unable to finance them. At the economy level the implications of these constraints can be too important to be ignored. They can potentially influence comparative advantage and therefore the patters of trade; but they can also influence the volume and direction of capital flows. Traditionally, capital mobility in economies with financial frictions has been examined within one-sector macro dynamic models; in contrast, traditional trade models until very recently considered only the case of perfect capital mobility.

Theoretical arguments suggest the quality of a country's financial and legal institutions can be an important determinant of the potential benefits of capital market integration.

Given that the authors are particularly interested in the impact of trade and capital market liberalisation on the relationship between financial deepening and economic development, their model captures the following two aspects of developing economies. First, trade is motivated by comparative advantage; second, there is a mix of household and market production. Under household production the same agent (household) produces both goods, whereas under market production agents specialise in the production of manufacturing products. Depending on the return to capital, there is either a partial specialisation equilibrium, where both technologies are used and thus only a fraction of agents specialise, or a complete specialisation equilibrium, where all agents produce only one good. Agents are free to choose their sector of employment – a decision that ultimately depends on their initial endowments of physical assets, which is the only source of heterogeneity in our model.

Beginning with the analysis of the closed economy equilibrium, the authors find changes in agency costs, a measure of the quality of financial institutions, affect both the relative price between the two goods and the interest rate. More specifically, they find an improvement in the quality of financial institutions relaxes financial constraints, thus boosting the demand for funds and the interest rate. An immediate implication of this effect is that economies with better-quality institutions have a higher degree of specialisation – that is, they are less dependent of household production. Since comparative advantage and optimal investment choices depend on the differences between these prices and the corresponding world prices, changes in the efficiency of financial markets affect not only the volume of trade and capital flows but a country's patterns of trade and international indebtedness.

In subsequent sections the authors allow for free movement across international borders of both goods and capital. Two key findings are that (a) trade liberalisation can affect a country's direction of capital flows and (b) capital market integration can affect a country's patterns of trade. At a minimum level such changes will certainly change the magnitude of flows, even if they do not affect their direction. Among countries that differ only in the quality of their financial institutions, those with better-functioning financial markets are more advanced, with a higher level of financial development; these are also countries that export goods produced by financially dependent sectors and attract foreign capital.

Finally, the authors also explore the implications of wealth inequality for economic and financial development. Given that wealthier agents have more access to external funds, the majority of people in poor countries with a low degree of income inequality would not be able to access external funds. An increase in inequality would push some agents above the financial threshold, so encouraging entrepreneurship and economic growth. Then, as long as they have an effect on inequality, trade and financial openness also have an effect on financial development.

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China urged to become 'spender of first resort'

Protectionism, import quotas and a tit-for-tat trade war were all scenarios raised by Daily Telegraph columnist **Roger Bootle** when he visited GEP to discuss China-US relations. As he explained, however, China could still pursue a course that might benefit all.

China and the US are on the brink of a trade war that could see protectionism return to 1930s levels, one of the UK's leading economics commentators told an audience at GEP.

Daily Telegraph columnist Roger Bootle warned America could be only months away from imposing tariffs on Chinese goods, with import quotas a likely further step.

He revealed his predictions during a Leverhulme Globalisation Lecture, The Trouble With Markets – Saving Capitalism From Itself, at the University of Nottingham in October.

Mr Bootle, Managing Director of research consultancy Capital Economics, questioned China's determination to maintain a huge export surplus and limit the renminbi's appreciation.

He told a packed audience: "The truth is that the share of the Chinese national income going to wages has been falling.

"I assure you that if the Chinese government wanted to do something to boost domestic demand they could do it – by dispersing their surpluses.

"But a substantial element associates China's surpluses with power. They really do believe wealth is about exports and export services.

"The default position for the Chinese economy is to do nothing, because the policy they've got has been tried and tested and has delivered success.

"One possible approach for the West would be to take the goods and run – goods for paper is a pretty good exchange. But you can't carry on like that forever."

Mr Bootle, who said traditional fiscal policies have "shot their bolt", claimed China is effectively "stealing American jobs" as a result of the continuing imbalance.

US efforts to persuade Beijing to "change course" would carry on struggling in the face of apparently increasing Chinese resolve to maintain the status quo, he said.

Similarly, American attempts to lower exchange rates through quantitative easing would not necessarily succeed if other nations were to pursue identical policies.

That would leave tariffs, import quotas and, if China should choose to respond in kind, the possibility of a "tit-for-tat trade war", said Mr Bootle.

"China, which has the surplus, would be the big loser. But there would be a very adverse effect for the world economy as a whole," he said.

Mr Bootle argued much of the economic history of the past 40 years could be traced to "the China shock" – the linking of the global economy to more than a third of the world's population.

The first effect of the phenomenon was to lower production costs, he said, while the second was the growth of enormous trade imbalances.

He added: "I hope the third stage will be the emergence of China as what I call 'the spender of first resort' – in other words, a massive consumer of goods.

"If that happens we're on the brink of a new phase of globalisation, with a huge rise in living standards in both East and West. If it doesn't then I'm afraid we're back to the 1930s."

Mr Bootle was a Lecturer in Economics at St Anne's College, Oxford, before leaving academia to work in the financial services industry.

He held positions including chief economist for the HSBC group before founding Capital Economics in 1999.

Roger Bootle (right) with University of Nottingham Chief Financial Officer Chris Thompson

Trust and technology transfers

Does trust enhance technology transfers? **María García-Vega** (GEP, University of Nottingham) and Elena Huergo (Universidad Complutense de Madrid) shed light on whether trust in a host economy affects the R&D relationship between multinationals and their foreign affiliates.

María García-Vega

In order to investigate empirically whether trust in a host economy influences imports of R&D from European multinationals to their foreign affiliates, we study the effect of trust on two types of R&D imports: (i) within their business group,as a measure of pecuniary technology transfers; and (ii) through market channels, as a measure of external technological transactions.

We use a unique dataset on European firms operating in Spain. It provides exhaustive information on firms' R&D imports by provider. As a measure of trust we use the Eurobarometer survey.

Technology is not completely excludable: it can be imitated, leaked or misused. Positive expectations of the quality of a country's law enforcement, its business morale or the quality of its institutions may influence the beliefs upon which trust is based (Guiso et alia, 2009). This can induce a positive relationship between trust and technology transfers.

However, Williamson (1971, 1985, 1993) argues transfers within organisations can indicate companies want to control and oversee their affiliates' activities. This lack of confidence might be influenced by a belief about the typical trustworthiness of the country where the affiliate operates. Lack of trust in this case can increase technology transfers within companies.

Our main contribution is to investigate the role of trust in the host country for technology transfers from multinationals to their foreign affiliates. We use a panel of 970 European companies with affiliates operating in Spain for the period from 2004 to 2008. Our measures of technology transfers and external technology acquired in foreign markets are, respectively, R&D imports within the business group and R&D imports from external providers. To our knowledge, these data provide the most detailed firm-level information on R&D transactions by suppliers worldwide.

We combine these with measures of trust in Spanish citizens by European citizens, as elicited in the Eurobarometer survey (Guiso et alia, 2009). European companies operating in Spain provide a good testing case for our research question, as Spain has been one of the main receivers of FDI in the European Union (Eurostat, 2008) and the country risk during the analysed period was very small. In addition, countries belonging to the EU share common institutions and intellectual property rights, which allows us to differentiate the influence of trust on technology transfers from other effects.

Our results, after controlling for firm and country of origin characteristics, show trust affects technology transfers. We find companies from countries that on average do not trust Spaniards tend to acquire technology through their business group; by contrast, firms from countries with high trust in Spain import R&D through market channels. These results are in line with Williamson's idea that vertical integration is important in low-trust environments (Williamson, 1971). Our findings also suggest companies operating in countries that trust Spaniards have more autonomy and require less control from the parent company.

One implication of our results is that the relationship between trust and technological imports is not straightforward. An increase in trust might not modify the total amount of technology transferred within countries, but it may significantly change the channels through which knowledge flows. Our results suggest small increases in trust can decrease technology transfers because there can be a reduction of technological group transactions, which might not be compensated by R&D imports through market channels.

This article is based on Trust and Technology Transfers, co-authored by María García-Vega (University of Nottingham) and Elena Huergo (Universidad Complutense de Madrid).

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Globalisation and firm behaviour

Products, Markets and Export Dynamics, a joint conference organised with the Ifo Institute, took place in Munich in October. GEP Research Fellow **Alejandro Riaño** rounds up some of the key contributions to the two-day event.

Trade economists have become increasingly interested in understanding how globalisation affects firms across different margins. With the availability of new and better data, researchers can now examine not just how firms alter their product mix in response to changes in globalisation but how they respond to these changes over time. Held on 21 and 22 October and co-organised by GEP and Munich's Ifo Institute, which hosted the event, Products, Markets and Export Dynamics sought to bring together these theoretical and empirical aspects to address the various issues arising from them.

Stephen Yeaple (Penn State University) opened the conference with a theoretical model of multi-product firms featuring a trade-off between scope and productivity: the more products a firm chooses to manage, the less well it manages each of them. Firms with better managerial capabilities choose to produce a greater range of products, so, although intrinsically quite efficient, they end up having high marginal costs. Globalisation causes large firms to divest products that are acquired by smaller firms, thus resulting in a merger wave. Since the marginal costs of production are endogenous and depend on the number of products a firm chooses to produce, changes in globalisation result in productivity changes at both industry and firm levels, as documented in several empirical studies.

Using a unique dataset of Mexican manufacturing plants, **Peter Neary** (University of Oxford) provided empirical support for a "flexible manufacturing" view of multi-product firms. In this framework firms are assumed to have a core competence product and produce goods less efficiently the farther away they are from the core competence. One implication of the model is that firms sell fewer products abroad in the domestic market, although sales of the core product may be larger abroad than at home if the foreign market is big enough. For Mexican producers it is shown that exports of core products expanded faster than those of peripheral ones following NAFTA's trade reforms.

Zheng Wang (GEP, University of Nottingham) presented a paper providing empirical evidence on how trade policy affects firms. Investigating the response of multi-product firms to changes in import quotas, the study looks at how Chinese firms altered the price of their exports in light of the phasing out in January 2005 of the Multi-Fibre Agreement (MFA) quota restrictions. The paper finds the MFA quota removal led to an average reduction in price of 30% and induced firms to enter the export market with new, low-price products.

Harald Fadinger (University of Vienna) presented a model in which exporting requires a firm to find a local partner in the foreign market – for instance, a distributor to market the good or a firm that needs the imported good as an input in its production process. With complete contracts unavailable, exporting firms must learn over time how reliable their foreign counterparts are. Because of the search process involved in finding a partner abroad, the model can produce state-dependent export behaviour without the need for sunk costs to enter the export market – a prominent feature of models of trade with heterogeneous firms. The model predicts export values are small for young relationships and grow fast if the relationship survives; it also suggests better institutions increase trade flows conditional on age.

Zhihong Yu (with Fabrice Defever, both GEP, University of Nottingham) presented a paper that seeks to study how firm-level exports respond to the changes in the contracting environment of foreign markets. In this model exporting firms face the risk of payment default by foreign importers. The model predicts improvements in an importer country's contract enforcement will have a greater positive impact on firm-level exports and that this effect will increase alongside the complexity of the products involved. This prediction is empirically tested and confirmed using a large transaction-level dataset for Chinese firms.

With Benedikt Heid and Mario Larch (both University of Bayreuth), **Fabrice Defever** (GEP, University of Nottingham) presented a paper showing how firms tend to choose new export destinations that are geographically close and culturally related to their prior export destinations. In order to rationalise this empirical regularity the study proposes a model in which new export destination choice is driven by information the exporter acquires through prior export destinations. Based on Chinese export transaction data, the empirical results support the model's prediction.

Kala Krishna (Penn State University) presented a model with two sources of firm heterogeneity: firm-specific productivity (as in traditional heterogeneous firm models) and firm-specific and market-specific demand shocks. The model is structurally estimated using firm-level data on Bangladesh garment producers exporting mainly to the EU and US markets. Counterfactual experiments show policies favouring market access for developing countries – e.g. trade preferences or other forms of trade facilitation – can have a strong effect on exports to all markets, as well as on output, exports and employment in the recipient developing country.

Alejandro Riaño (GEP, University of Nottingham) explored the hypothesis that exporting, through diversification across foreign markets, allows firms to hedge against downturns in their domestic markets. In order to do so he presented a dynamic model of the decision to export, calibrated to match export participation patterns of Colombian manufacturing firms. Using the calibrated model to conduct a counterfactual policy experiment in which firms are restricted to sell their output in the domestic market alone, the study finds the volatility of sales for firms that would have exported had the option been available is significantly lower than when they are allowed to export – thus exporting leads to higher firm sales volatility.

Delegates at Products, Markets and Export Dynamics, a two-day event co-hosted by GEP and Munich's Ifo Institute

Globalisation and the variety of goods

Ron Davies (University College Dublin) visited GEP in Nottingham in October to deliver a fascinating insight into the role variety plays in international trade – not to mention why there's generally more pleasure to be had in drinking certain fine beers in Ireland.

Ron Davies

It is increasingly recognised that one of the primary benefits of a growth in trade is that new varieties become available to consumers. The role variety plays in international trade was pioneered by Nobel Prize winner Paul Krugman; more recently it has been expanded on by Marc Melitz's work, which introduces heterogeneous production costs to the module.

As an example of why variety matters, consider a product like food. Although we can certainly survive by eating a very narrow set of items, variety is the spice of life. When we open ourselves to international trade we gain access to new flavours and styles of cooking, increasing the pleasure of dining. These new foreign-made varieties increase competition in our country, and some home-made ones are driven out of business as a result; nevertheless, there is a net gain in the number of varieties, because the increase in foreign varieties outstrips the decline in local ones.

So, while an English ale may cease to be available because it is replaced by two German lagers, there is still a net gain for the consumer. Thus varieties increase – and consumers gain – as trade barriers come down.

This approach, however, assumes individuals value each variety equally, regardless of where it is made. This is not always a good assumption, since part of the pleasure of travelling overseas is being exposed to new experiences not available at home. Seeing a McDonald's in Red Square or H&M in Paris detracts from your holiday experience, as their presence means there are fewer unusual indigenous varieties available.

This is the root of a common criticism of globalisation – namely, that trade homogenises varieties across borders. Why does this lower welfare? Consider again the food example. While Boddingtons might be fine at home in the UK, when in Ireland greater pleasure is derived from drinking a Guinness (an Irish variety available at home) and perhaps greater pleasure still from enjoying a Galway Hooker (an Irish beer that can be found only in Ireland). As trade barriers come down these local, indigenous, unusual and therefore highly valued varieties are driven out of business. So as trade barriers fall total varieties available while on holiday go up; but this is due to a shift from non-traded indigenous varieties to traded ones, causing a potential welfare loss.

Nevertheless, it can be shown that any such potential losses are outweighed by the gains highlighted by Krugman and Melitz. This is because when deciding whether or not to export a firm takes into account the change in value to consumers. In essence, when deciding whether to export, the firm factors in the loss in cachet that comes from being available everywhere. Since it chooses to do so only if it is profitable, which depends on how much people value it, its choice to do so ensures consumer welfare will rise as a result. Thus the loss in unusual foreign varieties and potential declines in the "foreignness" of holiday travel are outweighed by the benefits of more varieties at home.

This does not imply, however, that there cannot be a loss to welfare from increased trade costs. In particular, consider the so-called "existence value", a measure of indirect consumption where consumers get value out of knowing a variety exists even if they don't directly consume it. Such value might come from travel shows, food and wine magazines and the like. Put simply, people enjoy learning about places they will likely never go to. So, while it is great fun to watch him struggle through a crowded Chinese market, it would be far less fun to watch Michael Palin stroll the aisles of a Shanghai Sainsbury's that replaced the traditional market as a result of globalisation. Similarly, reading about a Japanese restaurant that will feed you sashimi served on the still-living fish is more fun that reading about them serving fish and chips (and reading about it is probably more fun than eating the fish, too!). So there is an undeniable benefit to be found simply by knowing that a variety exists, even if you never consume it.

Thus as trade barriers come down the decline in total varieties across the globe means a loss in the existence value. Whether this is enough to outweigh the gains from direct consumption of the new varieties depends on what one assumes. Nevertheless, it does indicate that the homogenisation of the world resulting from increased trade can potentially lower welfare – but not through the direct consumption channels anti-trade activists point to.

From here other situations can certainly be considered. For example, consider the opposite story from that above – i.e. while on holiday consumers prefer their home goods. This is certainly plausible. Many of us can relate to feeling a bit homesick after being on the road for a long time, and there's nothing like a proper English breakfast to put you back to right. Alternatively, even the most adventurous eaters can find themselves missing more familiar foods after spending more time on the toilet than sightseeing. This only reinforces the result, since falling trade barriers bring in more familiar varieties.

Alternatively, one might think that, while foreign varieties are most prized while in the foreign country, you can also think that they might be more valued at homeas well. There is no denying the cachet of serving an Italian cheese instead of a Cheddar or a French wine rather than an English one (yes, English-produced wines do exist). This, too, reinforces the benefits from reducing trade barriers, because it brings in additional foreign goods.

While falling trade barriers do clearly reduce the number of varieties across the globe, then, this need not reduce welfare. Even when it tends to be a bad thing, this must be weighed against the other variety benefits of trade. Therefore, while it is worth being cognisant of the potential losses arising from trade-driven homogenisation, it is by no means clear that this concern should be used as a rationale for maintaining barriers to trade.

This article is based on Royale with Cheese: the Effect of Globalisation on the Variety of Goods, co-authored by Ron Davies and Matthew T Cole (both University College Dublin).

There is an undeniable benefit to be found simply by knowing that a variety exists, even if you never consume it.

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