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Head of University of Warwick Department of Economics
Director of the Warwick Economics Research Institute
Abhinay Muthoo
a.muthoo@warwick.ac.uk

The Bulletin’s editor
Karen Brandon
k.brandon@warwick.ac.uk

The Bulletin’s editorial consultant
Romesh Vaitilingam
romesh@vaitilingam.com

Warwick Economics Research Institute
Department of Economics
University of Warwick
Coventry CV4 7AL
United Kingdom

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UK GLOBAL COMPETITIVENESS

Creating the 21st-century equivalent of Lancashire's cotton industry will require new policy levers

By Nicholas Crafts

Agglomerations – clusters of economic activity, that is – are increasingly recognized as having important implications for productivity. In general, as cities get larger, productivity increases. A rule of thumb might be that doubling a city’s size raises productivity 5–10 per cent. The productivity benefits of agglomeration arise from technological spill-overs, the services of specialized suppliers, access to information flows, a deep labour pool and high-quality skills. This has long been recognized, and British economic history is replete with well-known examples, such as the cotton-industry agglomeration Lancashire in the 19th century, the motor-industry agglomeration in the West Midlands during the 20th century, and, of course, the financial-services agglomeration that has flourished in London for the last 200 years. In fact, perhaps contrary to popular perceptions, evidence suggests that agglomeration matters more in financial and business services than in manufacturing.

International trade has changed dramatically in the last 30 years as a result of what has been called the ‘second unbundling’ based on the use of ICT and the widespread move to trade liberalization. As a result, we see much more vertically disintegrated trade with many stages of production each taking place in different locations. In future, we can expect international trade to be based increasingly on competitive advantage in a stage of production rather than in the whole supply-chain of an industry. This has important implications for supply-side policies and the role of agglomerations in the UK.

The UK has international comparative advantage in sophisticated services that use high-skilled people. This potentially presents the UK with an opportunity: to fill positions in international value chains where much of the value added will be generated in future pre- and post-fabrication services that contribute to the consumer price of a ‘manufactured product’. The well-documented example of the breakdown of the price of a Nokia mobile phone, shown here, illustrates the idea. Obtaining the ‘intangibles’ from R&D, design, branding, etc., is where the money was, and it is likely to be where the money will continue to be.

The UK will be better able to take advantage of these opportunities if it facilitates the necessary agglomerations. This calls for an approach different from that of traditional industrial policy with its emphasis on subsidies to physical investment or promoting particular manufacturing industries. Instead, developing well-designed transport infrastructure and land-use planning policies will be key.

Unfortunately, these are areas in which British policies leave a lot to be desired. The symptoms of these policy failures are evident: Successful cities are constrained in their growth. They have sky-high land prices plus road systems that suffer from serious congestion. A planning system that imposes a regulatory tax on office space often approaching 300 per cent, and transport policies that persistently under-invest in roads are not conducive to UK competitive advantage. The British government would do well to follow the lead of the “The Netherlands of 2040,” a report by the Bureau for Economic Policy Analysis in that country that has emphasised investing in its cities and the skills of its people as essential ingredients of long-term economic success.

British economic history is replete with examples of successful economic clusters, from the cotton industry of Lancashire to the financial services of London.
Searching for the key ingredients needed to create successful economic clusters

By Jonathan Cave and Christopher Doyle

Last year, when Chicago Mayor Rahm Emanuel announced that he had assembled the ingredients for a cluster of companies specialising in electric vehicles and batteries, an article in *The Economist* magazine asked a pointed question: "Will Chicago's energy cluster thrive? The city's mayor has certainly assembled the necessary ingredients. But the problem with clusters is that they are often the result of historical accidents, rather than careful planning."

In the current economic malaise besetting most western economies, clusters – or 'geographic concentrations of interconnected companies' – as business economist Michael Porter defines them – hold strong appeal. But the nagging question for policymakers is whether policies can create them.

Policymakers would certainly love to replicate the success of 'Silicon Valley', the cradle of the IT sector in the US, where high-tech industries sprouted in proximity to Stanford University, giving the region a new identity and a new economy.

Santa Clara County, which for some 200 years was largely an agricultural region, is now one of the most affluent counties in the US. The success of Silicon Valley has led other universities and local authorities to consider its lessons, in particular by finding ways to exploit the growth potential of valuable university human capital. In the UK, clusters have grown around the ancient universities of Oxford (Biotechnology) and Cambridge (IT); other University-based clusters include the University of Warwick's Science Park and the Warwick Manufacturing Group, clustered around engineering and IT expertise particularly relevant to automotive fields.

Clusters have formed in other settings, often around specific sectors. For instance, a recent report for the UK charitable organisation Nesta maps the geography of clusters associated to parts of the 'creative sector' such as video game development. These are based around the availability of specific privately-provided infrastructures (such as server farms and high-speed communications), civic provision of framework conditions as local public goods (such as the Barcelona and Berlin game development clusters) and competitively-allocated regional initiatives (competitions for biotech and nanotech clusters). They may be specialised or based on the provision of a local microcosm of an extended value chain (from R&D and venture capital to post-production). However they share certain attributes, including the ability of enterprises and individuals in close proximity to one another to engage in fluid, productive and highly adaptive forms of partnership, and to share ideas and efforts on an informal as well as contractual basis. This produces a different balance of trust and competition than is typically found in larger markets, where connections between participants are sparser and less rich, and can therefore produce new and different business and market models beyond big cities.

Warwick research shows that many instruments of policy can affect the creation and success of clustered economic activity. No single policy holds the key; instead, a 'policy portfolio' of many interacting policy instruments provides effective catalysis. In the most successful cases, policy instruments combine to create new connections among different levels of government, policy areas and economic sectors (policy networks) leading to a dynamic coevolution of policy and the development of the local economy – though not always cooperatively.

High value-added clusters such as those based on advanced technologies are typically located in close proximity to university research centres. The role played by universities is two-fold: they act as incubators for pioneering ideas and provide a flow of high-skilled labour. But universities alone are insufficient. An entrepreneurial environment and flexible administrative arrangements within the university are also key components, as a 2004 'Practical Guide to Cluster Development' for the former UK Department of Trade and Industry shows.

In recent years a greater emphasis has been placed on the role of communications technologies in affecting clustered economic development. Increasingly, high-speed internet access is regarded as an essential business enabler. Ironically, however, the ubiquity of high-speed internet communication services should, if anything, diminish benefits at the margin from geographic clustering. Cisco coined the term 'digital communities' to describe clustering that relies on technology rather than geography. This risk of diminished benefits from local interaction can be seen in relation to "Smart Cities" initiatives at Community and National level.

While communications infrastructures can be justified as local public goods, they facilitate remote access to suppliers and customers, which can weaken mutual dependence for those aspects of economic activity that are generally mediated through markets and contracts.

Nevertheless, face-to-face interaction remains extremely valuable. The incubation of ideas seems to require close proximity in person, hence the remarkable durability found in Silicon Valley and other high-tech clusters. Informal exchanges, long-term, highly-incomplete or unenforceable contracts and the creation and exploitation of societal capital are still provided efficiently at the creation and success of economic clusters need not rely solely upon luck.
local level. They offer specific efficiency advantages (e.g., collaborative innovation) and may be reinforced by the need of local economies not only to reach out into remote markets but also to respond to entry into local markets by remote (and often much larger) competitors. Warwick research shows that the use of communications technologies does not always result in the death of distance. Some ICT-based services, such as cloud services, benefit from local provision of large-scale data centre infrastructures and the services they require. In addition, many ‘crossover’ applications, such as eHealth, eLearning and Smart transport require local and initially unstructured contacts to bridge the gaps between the ICT and the health, education, and business cultures. Moreover, the embedding of clustered activity in local economies creates a combination of economic strength and political will that can enable cluster initiatives to avoid the fate of many initially-attractive ICT-fuelled prospects, which prove unsustainable as a result of subsequent security or privacy threats or high and uncontrollable levels of financial risk. The key findings emerging from studies of such disparate areas as cloud computing, the Internet of Things, gaming and eHealth are that geographic clustering can serve as an anchor or platform for the formation of technical, economic and societal networks that are more resilient in the face of global competition and more generative of innovation than traditional mass-market models.

Not all areas necessarily possess the endowments needed to facilitate clustered economic activity. Evidence suggests that areas with the best potential for successful, high-value clusters are those in and around universities with sufficient land (physical infrastructure) to accommodate developments such as science parks in close proximity to markets, with access to reliable transport and modern, high-speed internet communications. A highly-skilled labour force, often associated with universities, is also essential. In addition, it helps to have sufficient venture capital funding from both private and public sources.

More specifically:
- Infrastructure costs are easier to share in clusters.
- Diversity within a cluster leads to better infrastructure capacity utilisation and resilience.
- Labour skill endowments are more sustainable if people can migrate to other jobs in the same sector without moving.
- Unlocking skilled labour from specific employers leads to better knowledge flow among the firms.
- Informal and fluid contacts (brain circulation as opposed to brain drain) leads to a less-rigid and more innovation-friendly financial environment.

But most importantly, cluster success requires not only endeavours, finance and planning, but good fortune and an environment within which the entrepreneurial spirit can flourish.

Earlier this year the European Commission recognised the importance of entrepreneurship and communicated its views as part of the wider 2020 Action Plan aimed at overcoming the current economic crisis in Europe. The Commission has argued that Europe needs more entrepreneurs in order to bring back growth and higher levels of employment. As the Commission has stated, ‘To thrive, entrepreneurs and [small- and medium-sized businesses] need specific, customised expertise that can help them develop competitive advantages and benefit from global value chains and shared management of human resources. Clusters, business networks and other types of association of enterprises can provide such supportive environments as they bring together the relevant actors from business, education, research and the public sector.’

Coming together in person or through digital communities is likely to play a central role in stimulating growth in Europe. Initiatives aimed at fostering clusters of economic activity will often appear local or regional in character, but in aggregate will form a much needed backbone to support a sustainable recovery. Our work suggests clusters exhibiting vibrant entrepreneurial spirit are likely to be a much needed ingredient to promote economic growth in the future, just as they have in the past.

A ‘policy portfolio’ – not one single policy – provides the catalyst.

The Authors

Jonathan Cave is senior tutor in the Department of Economics at the University of Warwick and a senior research fellow at RAND Europe. Chris Doyle is a principal teaching fellow in the Department of Economics at the University of Warwick.

Publication details

This article draws on a series of forthcoming and published research by Jonathan Cave about policy interactions that can create and sustain efficient economic clusters, with a particular emphasis on information and communications technology. Published items include:


Rates of property theft and violent crime in the UK have fallen substantially, according to a recent global analysis by the Institute for Economics and Peace. The statistics tell a consistent story: crime has declined as measured both by official police records and by the ‘crimes committed’ reported by individuals in the British Crime Survey. In particular, property crime fell by roughly half between the late 1990s and late 2000s. And, though recording changes make pinning down long-run trends in violent crime a challenge, very clear falls emerged in the late 2000s as well.

This is at odds with public perception of crime rates and discussion of crime in the popular media. A series of studies on UK crime patterns shed light on this transformation – what BBC home editor Mark Easton has labelled the country’s ‘riddle of peacefulness’.

No single factor can be isolated as the main cause of falling crime rates. The research shows that increased spending on police resources reduces certain types of crime, especially when linked to the introduction of new police practices. Crime reduction is also helped by policies that improve the education and labour market position of the unskilled, including the introduction of the national minimum wage and increases in the school leaving age.

Increases in police numbers, combined with new policing strategies such as the Street Crime Initiative, have reduced crimes. While it is intuitively obvious that more police should lead to lower crime the size of this effect is hard to determine. Empirical researchers face the challenge of distinguishing causation from correlation. In most data there is a strong positive relationship between police and crime. This is because policymakers allocate more police to high crime areas.

My research for the Centre for Economic Performance with Steve Machin (CEP and University College London) and Robert Witt (University of Surrey) used the ‘natural experiment’ of police deployments in the wake of the July 2005 London bombings to estimate the causal effect of police on crime.

Given that overall police resources increased in the past 15-20 years we can expect that this had a major effect in lowering crime rates. While it is hard to account for the effectiveness of every dollar spent and every programme implemented, our research shows strong effects due to some common and representative policy tools wielded by the police.

In the mid-1990s, Tony Blair repositioned the Labour party crime policy by declaring his government would be ‘tough on crime and tough on the causes of crime’. This was a powerful idea for crime policy, and I would argue that it is a forgotten part of the debate on crime that should have more focus. Government policies aimed at improving education and ‘making work pay’ have indirect effects on crime reduction, and, while the size of the effects is hard to judge, the available evidence suggests that this could be an important factor in answering the peacefulness riddle.

A crucial research insight suggests that wage levels may matter more than unemployment when it comes to crime. Wages serve as a proxy of the state of the labour market and of the ‘outside opportunities’ for people who might decide to commit a crime. The state of the low-wage labour market matters, as research by Steve Machin and Costas Meghir (2004) shows. Low-wage workers – earning rates that put them at the top band of the lowest quarter of all workers, or right at the 25th percentile – offer a particularly significant barometer of the importance of pay. Crime rates were lower...where wages were higher than average at that point, previous research has shown. Hence, policies such as the minimum wage are well-positioned to have a positive impact on crime rates as well as living standards.

A similar story applies for education. Improving young people's education opportunities works in two ways: first, by increasing people's potential future income; and second, by reducing crime participation while individuals stay involved in the education system. Further work by Steve Machin, Oliver Marie and Sunčica Vujić (2011) found that a 1 per cent fall in the proportion of men with no qualifications was associated with a fall in crime of...
between 0.85 per cent and 1 per cent.

The state of the evidence shows that there is no definitive answer to the ‘riddle of peacefulness’. I have focused on two factors here: police resources and the socio-economic structure. These two factors are very important for contemporary debates. High income inequality and low education opportunities have emerged as critical for explaining the causes of crime. Certain policies introduced over the past 15 years to tackle those causes appear to have had an indirect beneficial effect of reducing crime rates. In turn, as the economy struggles to emerge from recession and inequality worsens we can expect crime rates to level out and potentially rise. Similarly, as the big increases in police resources of the 1990s and 2000s are scaled back it is inevitable that ‘something will give’ on crime rates.

It is therefore important to consider the short- and long-term impact on criminality when considering cutting funding educational and socio-economic programmes. These are not the kinds of programmes that immediately come to mind when one thinks of ‘fighting crime’, but they could be the indirect vehicles to relieve pressures on the public purse to keep the peace.

The Author

Mirko Draca is a lecturer in the Department of Economics at Warwick University and a Research Associate at the Centre for Economic Performance at the London School of Economics.

Publication details


OFFSHORE VS. ONSHORE

Examining why certain jobs go abroad and others stay at home

By Sascha O. Becker

Highly trained radiologists are needed to interpret computer-tomography images and X-rays; but some of those skill-intensive tasks are performed offshore today, by US- or EU-trained doctors living in South Asia or Australia. A janitor’s or doorman’s work, on the other hand, need not require an advanced degree but the work cannot relocate offshore because proximity to the maintained facility is indispensable.

As these examples suggest, the standard view that globalisation shifts labour demand towards skilled workers and contributes to an increased skill premium in developed countries fails to capture the full picture. The dynamics underlying offshoring are far more complicated, as my recent research with Karolina Ekholm (Stockholm University and Riksbanken, Sweden’s central bank) and Marc Muendler (University of California San Diego) shows.

Our work examines the growing practice of offshoring by looking closely at the nature of the skills and tasks that define the jobs most likely to go abroad – or remain at home. Our research relies on data regarding workforce skills and occupations at the plant level from German Multinational Enterprises (MNEs) during a period of rapid expanding foreign operations, 1998-2001. During this period, overall offshore employment at German multinationals increased by 3.9 per cent in manufacturing and 9 per cent in services.

Our analysis of offshoring examined its effects on the workforce by looking at the underlying tasks of jobs. We sort these tasks into distinct categories: interactive vs. non-interactive, and routine vs. non-routine. We then compute the wage bill share, to show how much money the company invests in the people needed to accomplish the tasks in these paths.

We find that firms employing more workers abroad over time shift their domestic labour demand towards interactive and non-routine tasks. Non-routine tasks often require a high degree of problem-solving skills.

We usually think of these kinds of tasks and skills as going hand-in-hand with jobs that require high levels of education, but they also could encompass the work of a personal assistant with lower education levels who must quickly respond to the non-routine requests of a busy manager.

Offshoring seems to account for some, but not all, of the changes in the workforce composition at home. We find that offshoring is most strongly associated with a shift towards non-routine tasks in manufacturing, accounting for 14 per cent of the total change, and a shift towards interactive tasks in services, accounting for 17 per cent of the total change.

Offshoring matters for the composition of skills too, but considerably less. It explains about 10 per cent of the increase in the wage-bill share of workers with at least upper-secondary education in manufacturing as well as services and about 11 per cent of the increase in the wage-bill share of white-collar workers in manufacturing. Offshoring to low-income countries — with the exception of Central and Eastern European countries — is associated with stronger onshore responses.

Our examination of the tasks involved at work does not completely explain the reason that MNEs with offshore operations invest more on highly educated workers at home. In other words, although looking at relevant tasks opens up a new dimension for understanding offshoring, our findings also underscore the importance of good old education.

Technology is certainly a force in these shifts. Some jobs that are going overseas rely on tasks that can be done remotely thanks to technological advances that could not have been foreseen years ago. It is impossible to predict what new technologies will make the conditions ripe for offshoring, and which domestic workers’ jobs will be lost. The findings suggest that policymakers should strive to create educational systems that are flexible enough to adjust to changing workplace needs, and to set up conditions that create opportunities for life-long learning. In this way, when international competition leads to more offshoring to take advantage of lower labour costs, employment effects can be mitigated through education investments and vocational training.
Policymakers should strive to create educational systems that create opportunities for life-long learning.
In 1998, University of Warwick Economics Professor Mark Stewart began looking at what was then an enormously controversial political issue: whether a minimum wage would help or harm workers. Advocates insisted that a bottom floor for wages would protect low-skilled labourers from even lower incomes. Opponents insisted that businesses forced to pay a minimum wage would hire fewer people – ultimately leading to fewer jobs for the least-skilled workers. Since then, the National Minimum Wage became a standard feature of UK policy, and the battle of beliefs essentially ended – largely in the face of evidence from Stewart’s research, which showed unequivocal benefits.

This example is worth recalling now, as policymakers in the UK and around the globe seek more and better evidence to craft policies that will stimulate growth, reduce inequalities and maximise wellbeing and prosperity. The challenges are immense. As European elections of late underscore, elected leaders who cannot find effective policy tools are seldom in office long enough to correct their errors.

In medicine the concept of evidence-based practise is well established. Since 1999, the UK’s National Institute of Clinical Excellence (NICE) has produced evidence-based guidance for health and social care practitioners. Internationally, the Cochrane Collaboration has been promoting the use of systematic reviews of controlled trials in health interventions for more than 40 years. Anyone wondering about the level of public support for such methodology need only recall the signature moment of 1960, when the US Federal Drug Administration’s Frances Kelsey refused to authorise the drug thalidomide without further testing – a decision tragically vindicated when mothers in Europe who took the drug for morning sickness during pregnancy gave birth to infants with deformed or missing limbs.

In other policy areas, such as education, welfare and criminal justice the use of similar evidence-based approaches is still relatively new. All too often, policymaking stems from a battle over whose political ideology will reign rather than what the weight of the evidence shows. Citizens are likely to have more trust in government and less cynicism about the political process when they are assured that policies affecting their lives stem from facts.

The desire to base policy decisions on evidence is receiving new attention through the Coalition Government’s launch of several initiatives aimed at improving the policy making process, including the establishment of new “What Works centres” to generate evidence of the effectiveness of existing policies. Earlier this year, in the Civil Service Reform
Plan, ministers and senior officials recognised that more still needs to be done in this area stating that, "...policy makers must have the skills and tools they need to do their jobs. And they should have a clear understanding of what works based on robust evidence."

Many governments have tried – but never entirely succeeded – to give evidence more prominence in a world that is unavoidably dominated by political pressure to make a quick impact and deliver popular results during a relatively short electoral period.

The challenges facing the movement toward evidence-based policymaking will be to take action on what the evidence shows – regardless of whether it supports a right, left or centre political agenda.

Yet, as Mark Stewart's example shows, the most powerful evidence has the capacity to transcend political philosophies. In our information age, universities have the potential to play a crucial role in the creation of that evidence. The insights from thorough research represent a tremendous resource for any policymaker seeking to create policies informed by evidence. The interests of academic researchers and practical policymakers can align in ways that will significantly help governments, economies and societies.

Academic economic research has an important role to play – whether in synthesising and analysing existing evidence, producing cost-benefit analyses of policy options or evaluating policy implementation. Warwick's Economics Department wants to play a role in helping to inform policies that can improve economies and enhance the lives of people working within them. That is why we are working within our department to put even more emphasis on research that advances not only academic understanding but also offers practical support to policy-making arenas.

To signal our commitment to this kind of research, our department is establishing a new policy lab, one that will bring together the brightest minds from academia, in the UK and abroad, with experts and users from the public sector and private sector. We have established a new position, a Director of Policy and Strategy, to help lead in this area. Taking on this important and challenging role is Siobhan Benita, a University of Warwick alumna, who brings extensive experience in the UK Civil Service and the Cabinet Office. Siobhan worked for 10 years as a policy adviser on transport, local government and environment issues, and then worked in the Cabinet Office to improve civil service governance, strategy and communications, and later with the UK Department of Health as head of corporate management, a position she left to run as an independent candidate for Mayor of London in 2012. The breadth of her experience makes her the ideal person to serve as a bridge between academics-oriented and policy-directed economics. We look forward to seeing where this new partnership takes us.

Citizens are likely to have more trust in government and less cynicism about the political process if they see that policies are crafted from evidence rather than ideology.