

# advantage

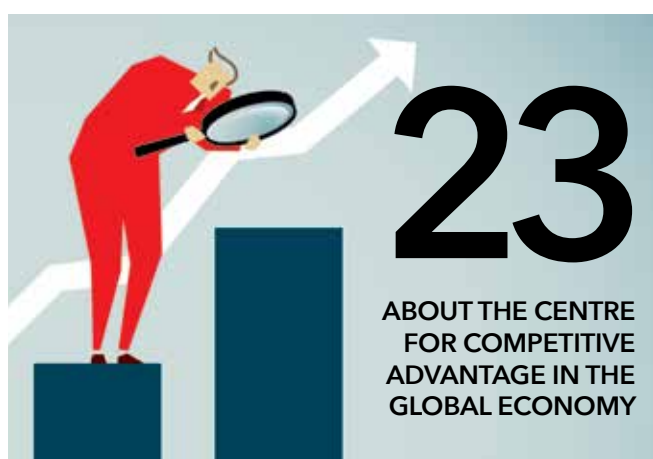
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# Welcome from the Centre for Competitive Advantage in the Global Economy

"WE CREATED CAGE six years ago to undertake research that would lead to better insights about how and why different countries achieve economic success in a world that is more and more globally connected. Our research, which is funded by the Economic and Social Research Council (ESRC), addresses issues related to improving living standards, raising productivity, maintaining international competitiveness and facilitating economic wellbeing. Our analysis is firmly grounded in economics but interacts with research from other social-science traditions and we are often able to bring a distinctive approach using historical perspective to understand current issues.



A crucial part of our remit is to bring the results of our research to a wider audience beyond academia including both policymakers and the general public. We do this by organizing conferences and seminars, writing press releases, producing policy briefing papers and occasional policy reports. To complement this activity we introduce *Advantage* as a medium to provide highlights from our work and perhaps entice readers to delve further into the details of our research.

This first issue provides a wide range of articles which reflect both the breadth and depth of the research undertaken by CAGE. These include a discussion of the question of the conditions in which liberal democracies can survive, a review of the nature of the threat which 'secular stagnation' poses to the UK economy, a discussion of how serious is the health threat from antimicrobial resistance (AMR), an analysis of the role that the KGB played in regulating the Soviet economy, and an introduction to some important findings from research into subjective wellbeing ('happiness'). In each case, the article provides a self-contained summary but also an entry point into the underlying research. I hope that readers will find *Advantage* not only a good read but also a stimulus to discovering CAGE's work."

Professor Nicholas Crafts  
Director of CAGE



Editor: Tracy Evans  
t.a.evans@warwick.ac.uk

Design: Mustard Design  
mustardhot.com

Print: W&G Baird Ltd

CAGE Director:  
Nicholas Crafts

CAGE Research Director:  
Sascha Becker

CAGE Director for Impact:  
Mark Harrison

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**Centre for Competitive Advantage in the Global Economy**

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



# The political economy of liberal democracy

By Sharun Mukand  
and Dani Rodrik





*In the past decade, for the first time in history, we have more democracies in the world than non-democracies.*

The surprise is not that few democracies are liberal, but that liberal democracies exist at all. But liberal democracies do exist, and the question is how they can ever be sustained in equilibrium.

IN THE PAST decade, for the first time in history, we have more democracies in the world than non-democracies. Yet very few of those are what we would call liberal democracies – regimes which go beyond electoral competition and protect the rights of minorities, the rule of law, and free speech and practise non-discrimination in the provision of public goods. Hungary, Ecuador, Mexico, Turkey, and Pakistan, for example, are all classified as electoral democracies by the Freedom House, a US-based, non-partisan organisation dedicated to promoting free institutions worldwide. But in these and many other countries, harassment of political opponents, censorship or self-censorship in the media, and discrimination against minority ethnic/religious groups run rampant. Indeed, in the wake of 9/11 and more recent terrorist incidents in Europe, there has been a fear of erosion of ‘liberal’ protections for minorities even in the minority of countries deemed liberal democracies.

In our paper “The Political Economy of Liberal Democracy” we take a first step towards distinguishing between electoral and liberal democracies. We take the main

distinctive feature of a liberal regime to be the restraints placed on those in power to prevent discrimination against minorities and ensure equal treatment. The restraints can be legal or administrative; they can be maintained by constitutional strictures or self-enforcing agreements. What matters is that these checks, which we associate with “civil rights” for short, are effective in practice. Our focus is squarely on these missing restraints – the relative weakness of civil rights – in illiberal electoral democracies.

We distinguish specifically between three sets of rights: property rights, political rights, and civil rights. We define these as follows:

- Property rights protect asset holders and investors against expropriation by the state or other groups.
- Political rights guarantee free and fair electoral contests and allow the winners of such contests to determine policy subject to the constraints established by other rights (when provided).
- Civil rights ensure equality before the law – i.e. non-discrimination in the provision of public goods such as justice, security, education and health. ►

We classify political regimes according to which combination of these rights is provided. Electoral democracies, which constitute the majority of present-day democracies, protect property and political rights, but not civil rights. Liberal democracies protect all three sets of rights. Each one of these rights has a clear, identifiable beneficiary. Property rights benefit primarily the wealthy, propertied elite. Political rights benefit the majority – the organized masses and popular forces. And civil rights benefit those who are normally excluded from the spoils of privilege or power – ethnic, religious, geographic, or ideological minorities.

When the propertied elite can rule on their own they establish an autocracy that protects their property rights and little else. This has been the usual outcome throughout the long arc of history. Mass democracy, on the other hand, requires the emergence of organized popular groups that can challenge the power of the elites. In the 19th and 20th centuries, processes such as industrialization, world wars, and decolonization led to the mobilization of such groups. Democracy, when it arose, was typically the result of a deal between the elites and the mobilized masses. The elites acceded to the masses' demands that the franchise be extended, usually to all males regardless of property qualifications. In return, the newly enfranchised groups accepted limits on their ability to expropriate property holders. In short, electoral rights were exchanged for property rights.

The defining characteristic of this political settlement is that it excludes the main beneficiary of civil rights – the dispossessed minorities – from any settlement. These minorities have neither resources (like the elite) nor numbers (like the majority) behind them. So they do not have something to bring to the table, and cannot make any credible threats.

The political logic of democratization dictates the provision of property and political rights, but not civil rights. The provision of civil rights is costly to the majority and largely unnecessary for the elite, who can pay for their own collective goods by extracting a surplus from the masses. Therefore the political settlement is one that favours electoral democracy over liberal democracy.

By distinguishing explicitly among three groups and three associated sets of rights, our framework helps explain why liberal democracy is such

majority from the minority and the elite from the non-elite may be in close alignment. In such a case, for example South Africa in 1994, the elite will seek both property and civil rights as part of the political settlement with the majority. Third, the majority may be slender and need the support of the minority to mount a serious challenge to the elite. Or there may be no clear-cut majority, with a multiplicity of overlapping cleavages as in India. In all these cases, each group can realize a long-run gain by recognising the rights

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*By distinguishing explicitly among three groups and three associated sets of rights, our framework helps explain why liberal democracy is such a rare beast.*

a rare beast. The failure to protect minority rights is a readily understood consequence of the political logic behind the emergence of democracy. What requires explanation is not the relative paucity of liberal democracy, but its existence – rare as it may be. The surprise is not that few democracies are liberal, but that liberal democracies exist at all.

But liberal democracies do exist, and the question is how they can ever be sustained in equilibrium. To answer this question, we discuss circumstances that can offset the bias against civil rights in democracies. First, there may not be a clear, identifiable cleavage – ethnic, religious, or otherwise – that divides the majority from the minority. In highly homogenous societies, such as Japan, South Korea or early 20th century Sweden, the “majority” derives few benefits from excluding the “minority” from public goods and suffers few costs from providing equal access. Second, the two cleavages that distinguish the

of other groups, in return for its own rights being protected by the others.

As these examples make clear, two societal cleavages play a crucial role in our story. First, there is the divide between the propertied elite and the poor masses. This is largely an economic divide and is determined by the division of land, capital and other assets in society, as well as access to the opportunities for accumulating those assets. Standard class-based accounts of the dynamics of political regimes emphasize primarily this cleavage. Second, there is a cleavage between what we call a majority and a minority. This particular divide may be identity based, deriving from ethnic, religious, linguistic, or regional affiliations. Or it may be ideological – as with secular modernizers versus religious conservatives in Turkey, and Western-oriented liberals versus traditionalists in Russia. We will call this second cleavage an “identity” cleavage for short, but it should be kept in mind that the relevant majority-minority



*In the West, the transition to democracy occurred as a consequence of industrialization at a time when the major division in society was the one between capitalists and workers.*

cleavage will run often on ideological lines. These two cleavages may align, as they did in South Africa, but more often than not, they will not.

Why did liberal democracy originate and prosper in Western Europe, not elsewhere? We believe this is related to the nature of dominant cleavages at the time of the social mobilization that ushered in democracy. In the West, the transition to democracy occurred as a consequence of industrialization at a time when the major division in society was the one between capitalists and workers. In most developing nations, on the other hand, mass politics was the product of decolonization and wars of national liberation, with identity cleavages as the main fault line. Our framework suggests that the second kind of transition is particularly inimical to liberal democracy. ◀

#### The Researchers

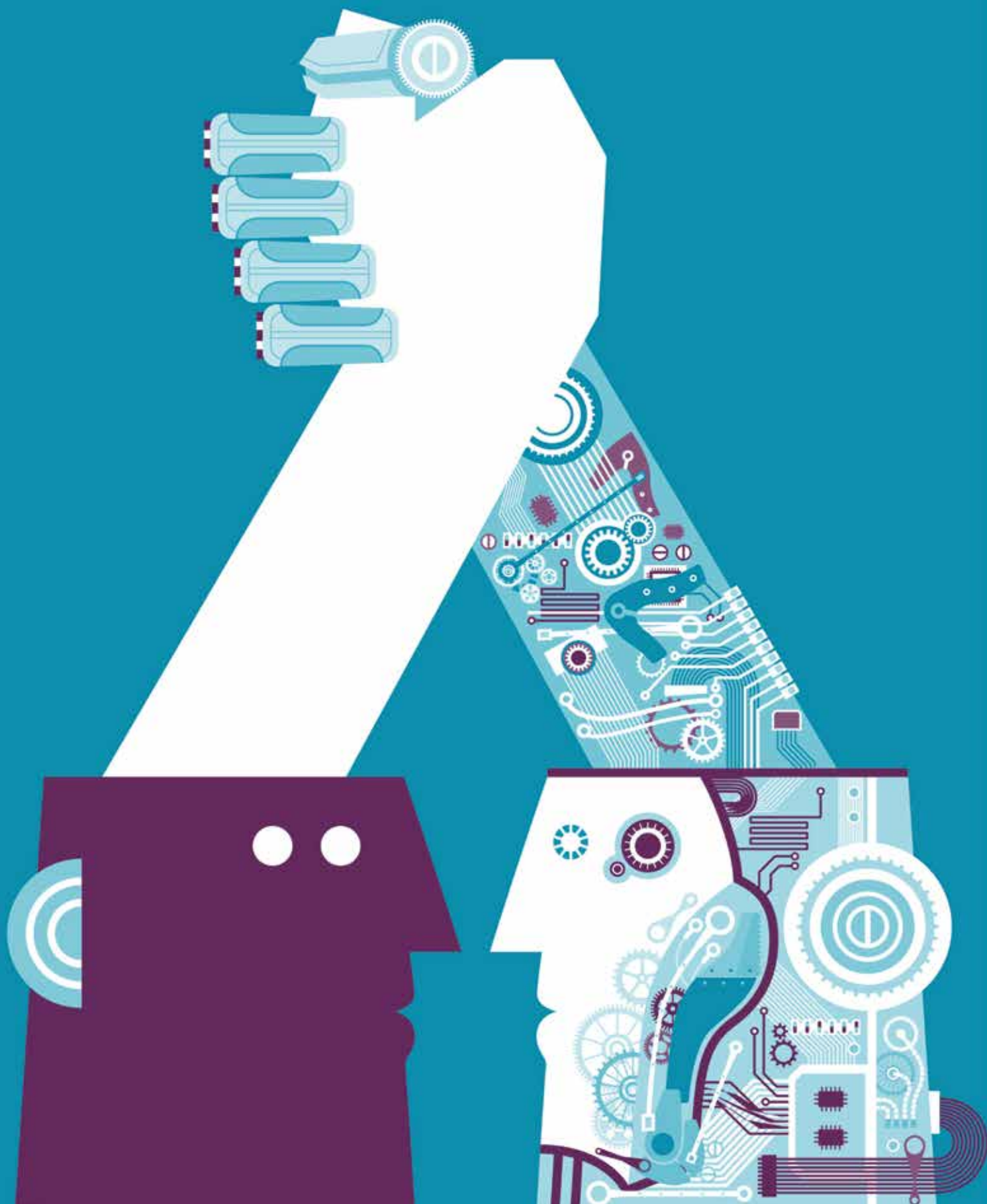
**Sharun W. Mukand** is Professor of Economics at the University of Warwick and Research Theme Leader at the Centre for Competitive Advantage in the Global Economy.

**Dani Rodrik** is Professor of International Political Economy at the John F. Kennedy School of Government at Harvard University.

#### Publication Details

This article summarizes a working paper, "The Political Economy of Liberal Democracy". The paper is available at: [http://www2.warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/240-2015\\_mukand.pdf](http://www2.warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/240-2015_mukand.pdf)







# Secular stagnation:

## Scare story or policy problem?

By Nicholas Crafts

The popular perception is that “secular stagnation” is a scenario of persistently low economic growth. Actually, the real worry is a future of rapid productivity advance with persistently high unemployment.

**F**EARS OF SECULAR stagnation have returned in the aftermath of the financial crisis and with good reason at least in Europe. The idea originated in the 1930s and was made famous by Alvin Hansen, at the time a well-known Harvard economist. Hansen’s vision of secular stagnation was that advanced capitalist economies might be exposed to a future of high, persistent and increasing unemployment. In fact, there were two variants of his argument. In the first, a slowing of technological progress and adverse demography, resulting in slow trend growth in the medium to long term, would undermine investment and create

a demand shortfall in the short term. In the second, there would be strong technological progress but this would eliminate jobs and lead to unemployment because the labour market would be unable to absorb the displaced workers. Of course, Hansen’s fears proved totally unfounded as the United States enjoyed a golden age of rapid technological progress and low unemployment in the decades after World War II.

Today, however, medium term projections for European growth are much less optimistic. In fact, the slow growth of recent years has led econometricians to conclude that trend growth is now much lower than

in the pre-crisis period (see Table 1) and Europe has struggled to escape from recession in an environment of weak investment and demand growth. Such exercises are inherently backward looking, however, while future growth depends heavily on technological progress which drives TFP growth in Table 1 but by its nature is not necessarily predictable by looking at the past. A forward-looking approach may be more appropriate but forecasting future technological progress is, of course, difficult.

Nevertheless, there are good reasons to believe that robotics will have a very significant economic impact in the next 20 years. Indeed, a recent careful study of the American economy which looked in detail at 702 categories of jobs concluded that 47 per cent of 2010 employment had at least a 70 per cent chance of being computerized in that time (see Table 2). A key aspect of this is that robots will replace many low-wage jobs in the service sector. This would give a substantial boost to future productivity growth but with a ‘skill-bias’ of the new technology which is very different from 20th century ►

*... a recent careful study of the American economy which looked in detail at 702 categories of jobs concluded that 47 per cent of 2010 employment had at least a 70 per cent chance of being computerized in that time.*

experience and which would require major adjustments in the labour market.

As a Keynesian convert, Hansen's solution to unemployment was to increase government borrowing to create employment through extra government expenditure. Generating substantial increases in demand through fiscal stimulus is difficult for today's fiscally challenged European economies but, in any case, effectively addressing the implications of these job losses would not be amenable to a Keynesian approach but primarily depends on good management of the labour market.

This would be a significant challenge for many European countries whose labour markets have high levels of employment protection and unemployment benefits, together with relatively large proportions of workers with low educational attainment, and which lack the flexibility to cope. Although fiscal stimulus to support demand could be helpful to underpin the labour market where public debt levels allow some fiscal space, supply-side policies will be the key if Europeans are to navigate the robotics era well. These will include active labour market policies that improve the human capital of the labour force as well as reforms of welfare and regulation that improve the functioning of the labour market.

As Alvin Hansen found out, forecasting secular stagnation is a risky business. But if I am right that the real 'secular-stagnation risk' in the immediate future is of unemployment resulting from rapid technological progress rather than of very slow growth, there are three important implications of this analysis for the UK. First, the recent weakness of productivity growth (the so-called 'productivity puzzle') may be short-lived so that growth prospects are better than recent economic history might seem to suggest. Second, the flexibility of the labour market which has been realised over the last 30

years or so through well-designed policies (and which differentiates the UK from most other European countries) will be increasingly valuable and should continue to be a high priority for policymakers. Third, there is even more reason to make

serious efforts to raise educational standards generally while also providing pathways to prepare for the jobs that robots will not be able to replace, for example, in activities that require emotional intelligence. ◀

**Table 1. Projections of Potential Output Growth and Its Sources (% per year)**

	Real GDP	Hours Worked	GDP/Hour Hour Worked	Total Factor Productivity (TFP)
<b>1995-2007</b>				
▶ EA12	2.0	0.6	1.4	0.8
▶ EU15	2.2	0.6	1.6	1.0
▶ USA	3.0	0.8	2.2	1.4
<b>2014-2023</b>				
▶ EA 12	1.1	0.3	0.8	0.5
▶ EU15	1.1	0.3	0.8	0.5
▶ USA	2.4	0.9	1.5	1.0

Source: derived from Havik et al. (2014)

**Table 2. Estimates of Computerization Probabilities by 2035 (% 2010 Employment in USA)**

≤ 0.3	33%
>0.3 but < 0.7	19%
≥ 0.7	47%

Source: Frey and Osborne (2013)

**References:** Frey, C. B. and Osborne, M. A. (2013), "The Future of Employment: How Susceptible are Jobs to Computerisation?", mimeo, Oxford Martin School. Havik, K., McMorro, K., Orlandi, F., Planas, C., Raciborski, R., Röger, W., Rossi, A., Thum-Thysen, A. and Vandermeulen, V. (2014), "The Production Function Methodology for Calculating Potential Growth Rates and Output Gaps", European Economy Economic Papers No. 535.

### The Author

**Nick Crafts** is the Director of the Centre on Competitive Advantage in the Global Economy and professor of Economics at the University of Warwick. Professor Crafts is widely recognised for his scholarly work in economic history, which provides insights that inform current policy debates. In 2014 he was awarded a CBE for his services to economic policy. Professor Crafts is also a Fellow of the British Academy, an honour recognising scholarly distinction in the social sciences.

### Publication Details

This article is based on research presented in the following paper: Nicholas Crafts, "The Threat of Secular Stagnation in Europe: an Historical Perspective", in Oesterreichische National Bank, Long-Term Perspectives for Economic Growth (Vienna, 2015), pp. 128-145.



# Antimicrobial resistance:

Not all gloom and doom

By Cormac Ó Gráda



Antimicrobial resistance is unlikely to signal a return to the “dark ages of medicine”.

TODAY PEOPLE IN high-income countries can expect to live nearly twice as long as their forebears a century ago. This huge increase in life expectancy is due mainly to the eradication or near-eradication of a whole range of potentially fatal infectious diseases. Low-income countries, where infectious diseases still account for nearly half of all deaths, still have a long way to go, but even in the poorest of them people live longer than anywhere before the revolutions in public health and medicine linked to the findings of Louis Pasteur and Robert Koch. ►

In demographic terms, these gains are unprecedented. One measure of their impact on human wellbeing is the Human Development Index (HDI), estimated as the geometric mean of measures of income, education, and health relative to a maximum. Table 1 compares estimates of HDI and real GDP per capita in Britain in 1870, 1913, 1950, and 2013. While GDP per capita grew more than six-fold between 1870 and 2013, HDI moved proportionally much closer to its “maximum” value of 1. Note that the contribution of health, as proxied by life expectancy, to the rise in HDI dwarfed that of literacy and income between 1870 and 1950, while GDP per capita contributed most thereafter. Note too that Britain’s HDI value in 1870 would place it well behind, say, Ghana or Zambia today. (See table 1).

### What History Says

Today several key antimicrobial drugs are losing their effectiveness. Are we in danger of losing the gains just described due to increasing antimicrobial resistance (AMR)? Here

this for deaths for tuberculosis.

Second, the gains before antibiotics outweighed those after them. Therefore the sudden loss of several antibiotics would not hurl us back into the medical dark ages nor, indeed, would it force us all the way back to the mid-twentieth century, when the age of antibiotics began. That is because factors which helped reduce infectious disease before antibiotics – medical, institutional, and economic – are likely to be much more powerful now.

This is not to deny the huge dependence of many modern medical technologies on antibiotics. Before them surgery was downright dangerous; today surgical interventions against heart disease and cancers depend on them and without them, hip and knee joint replacements would become much riskier, forcing many sufferers to live with the pain. Hence the particular focus on Methicillin-resistant *Staphylococcus aureus* (MRSA), which thrives in unhygienic and crowded hospital settings. What are the implications of AMR for

discoveries have already been made and partly from a conviction that the pharmaceutical sector lacks the necessary incentives.

A closer look at supply suggests that although the lack of new effective antibiotics is worrisome, technology is not at a standstill. As of March 2015, the U.S. Food and Drugs Administration’s register listed 36 new antibiotic drugs under development. If only a few succeed, they would go some way towards allaying fears of some forms of AMR for a while:

First, although MRSA presents less of a threat than it did a decade ago, the approval of three new drugs targeting *Staph. aureus* by the FDA in 2014 is good news. The race between those drugs is now on. In addition, Teixobactin, hailed as ‘the first new class of antibiotics to be discovered in 30 years’, offers added hope against *Staph. aureus*.

Second, while deaths from malaria worldwide have been declining dramatically, emerging parasite resistance in parts of Southeast Asia to the main antimicrobial treatment, artemisinin, is causing concern. In mitigation, the development of new anti-malarial drugs and vaccines are all at an advanced stage.

Third, the outlook for MDR-TB is also mildly encouraging with the FDA in granting conditional approval to the first TB drug to gain approval since the 1960s. Research now focuses on reducing that drug’s toxicity.

Although MRSA has hogged the headlines, the spread of carbapenem-resistant Enterobacteriaceae (CRE) is the greatest worry now. Few therapeutic options exist against CRE.

### Demand Also Matters

The very large variation in antimicrobials usage between and within countries suggests a role for public health policy in reducing demand. For instance, reducing European consumption to the Dutch level would cut consumption on the continent by almost half.

## *A closer look at supply suggests that although the lack of new effective antibiotics is worrisome, technology is not at a standstill.*

history makes two key points:

First, most of the gains in life expectancy due to the eradication of infectious diseases preceded the antibiotic revolution. This process began in Britain with the disappearance of plague in the seventeenth century and of smallpox in the eighteenth and nineteenth, but the eradication of several other infectious diseases – such as cholera, typhoid fever, measles, diphtheria, and tuberculosis – all due to a combination of public action, better living conditions, and preventive medicine – also preceded antibiotics (Davenport 2015). Figure 1 illustrates

economic wellbeing? In an adjoining contribution Kerry Hickson invokes economic analysis to spell out a range of counterfactual scenarios generated by economic analysis in the event of one kind of antibiotic – anti-tuberculosis drugs – becoming ineffective.

### Supply: the Pipeline

Multiple drug resistance (MDR) becomes an issue when the antimicrobial artillery is not consistently updated. The sense that we are falling behind, pervasive today, stems partly from technopessimism that all the ‘easy’



There is evidence that measures to encourage and curb over-use and over-prescription work, with the caveat that their impact is not lasting. Other prospects for reducing demand include technologies to inhibit the spread of multidrug resistant organisms (Dortet et al. 2014); personalized medicine; 'smart' combination therapies; and the treatment of *C. diff.* infections with faecal transplants or 'crapsules'.

### Finally

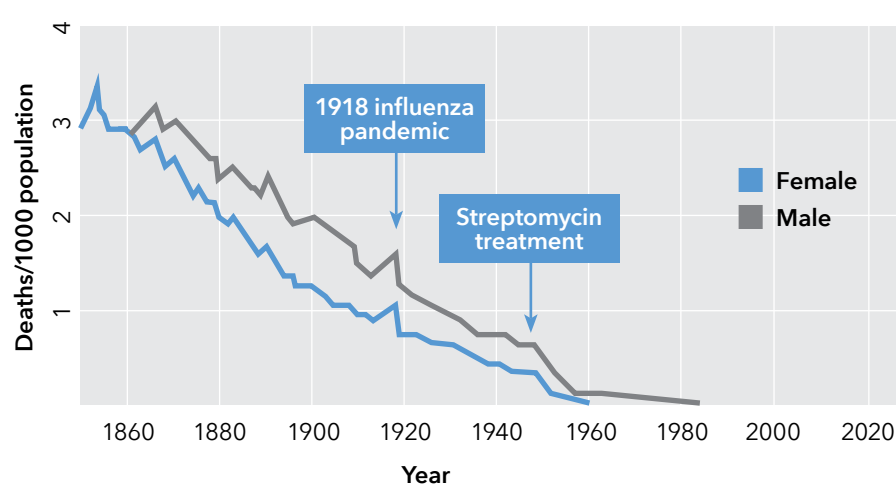
The war against microbes is a war against Darwinian evolution: the point is not to win but to stay ahead. In that regard, the threat is no more serious now than a decade ago. In the interim there have been hugely impressive reductions in deaths attributable to *Staph. aureus* and *C. diff.* And the new drugs pipeline is now beginning to show more signs of activity than at any point since the 1960s. Growing worries about CRE point to the need for a narrower policy focus on where the threat is greatest (as with Ebola), rather than on the drugs pipeline generally. The situation is challenging but by no means hopeless. ◀

**Table 1. HDI and GDP per capita in Britain, 1870-2013**

Year	[1] HDI	[2] GDP per head	Period	Relative Contribution (% of total improvement)		
				Income	Health	Schooling
▶ 1870	0.476	3,190				
▶ 1913	0.628	4,921	1870-1913	14.2	54.1	31.7
▶ 1950	0.762	6,939	1913-1950	14.6	63.3	22.1
▶ 2013	0.923	23,500	1950-2013	44.0	39.5	16.5

Source: Ó Gráda 2015b

**Figure 1. Tuberculosis mortality in England and Wales, age-standardised to the U.K. population in 2000**



# Antimicrobial Resistance and Tuberculosis

By Kerry Hickson

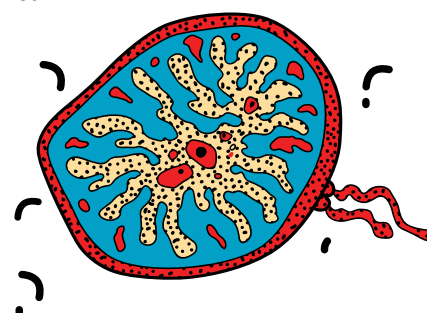
Preventative medicine and public health measures played a major role in the decline of tuberculosis.

The development of resistance by organisms to antimicrobials is a natural phenomenon. In fact, there is evidence of resistance to most antimicrobials within years of their discovery. The problem in the twenty-first century is that this resistance is coinciding with the reduction in new therapies to replace ineffective ones. Antimicrobials are used widely across the healthcare service: from treating specific infections to surgery,

radiotherapy, and chemotherapy. As a result, some maintain that many modern advances in medicine could be lost if antimicrobial resistance continues to increase.

Current levels of antimicrobial resistance are small so much of the concern pertains to future predictions and the greater scope for managing antimicrobial resistance now. In this sense antimicrobial resistance is similar to global warming. There is widespread agreement about the potentially disastrous consequences of both, but because those

consequences are not immediate, little is done about them. With this in mind, a better historical appreciation of what health gains are now in danger of being lost and what alternative solutions could be resurrected is needed. Although antimicrobial resistance is extremely unlikely to undo all the gains achieved in eradicating and reducing the prevalence of infectious disease in the developed world, analysis of previously significant causes of death can provide insight into the likely effects of antimicrobial resistance. ▶



One of the most significant illnesses in the developed world during the twentieth century was tuberculosis. Tuberculosis is still a leading cause of death in the developing world today. From my research I estimate that the number of additional life years generated by the reduced death rate, prevalence, and quality of life burden of tuberculosis between 1901 and 2000 in England and Wales to be worth at least \$127 billion, and \$35 billion between 1950 and 2000. Both of these figures are in 1990 international dollars. Hence, there is a high potential cost if tuberculosis were to re-emerge as a result of antimicrobial resistance; this is referred to as multi-drug (MDR-TB) and total-drug resistant tuberculosis (TDR-TB).

The historical account of tuberculosis presented here generates more sanguine conclusions about future health associated with antimicrobial resistance. Although the timing and magnitude of resistance is

difficult to predict, historical evidence associated with tuberculosis shows that there are numerous coping strategies such as: surveillance, screening, and prevention. In fact, in developed economies significant falls in mortality from tuberculosis had already occurred before antibiotics were invented. Numerous other factors – public health measures to limit the spread, personal hygiene and better nutrition to improve resistance, and later vaccination programmes – were responsible for these earlier declines. Therefore, some of the more extreme apocalyptic antimicrobial resistance scenarios being aired in media are unlikely. Partly because, as in the past, preventive medicine (including vaccination) and public health measures can play a major role; partly because the threat should result in the reduced use of antimicrobials; and partly because of the potential role for government to intervene with sound public health policies. ◀

### The Researchers

**Cormac Ó Gráda** is Professor of Economics at University College Dublin and a Research Associate at the Centre on Competitive Advantage in the Global Economy.

**Kerry Hickson** is a Teaching Fellow at the London School of Economics and a Research Associate at the Centre on Competitive Advantage in the Global Economy.

**Romola Davenport** is Senior Research Associate in the Department of Geography at the University of Cambridge. She is also a Research Associate at the Centre on Competitive Advantage in the Global Economy.

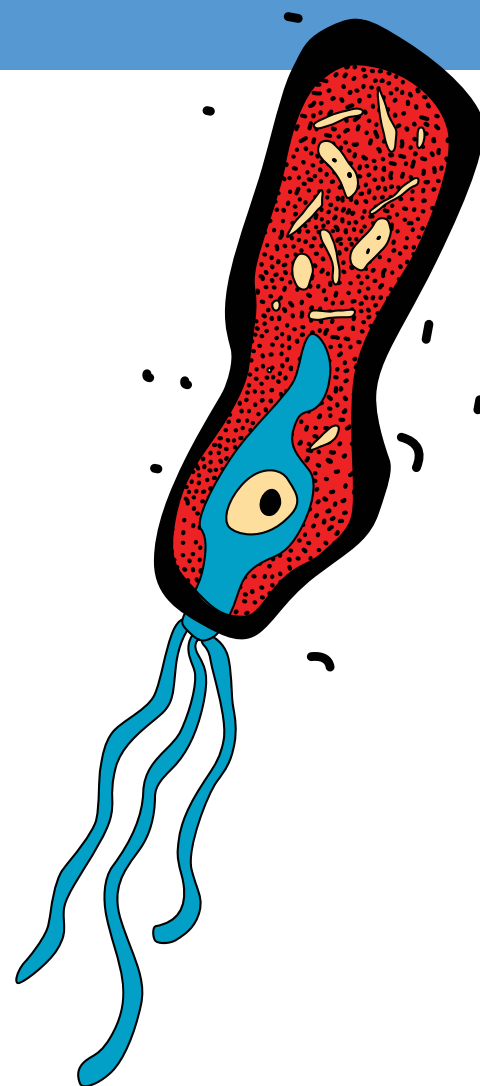
### Publication Details

This article draws on a number of research papers:

Davenport, Romola J. 2015. 'The first stages of the mortality transition in England: a perspective from evolutionary biology' CAGE Working Paper No. 242. [http://www2.warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/242-2015\\_davenport.pdf](http://www2.warwick.ac.uk/fac/soc/economics/research/centres/cage/manage/publications/242-2015_davenport.pdf)

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# Spying on the economy under communism

By Mark Harrison

Conventionally, market regulators are there to enforce competition, transparency, and fairness. Mark Harrison's research exposes the role of a hitherto hidden regulator of the Soviet command economy, the secret police, responsible for secrecy, labour-market discrimination, and the party's monopoly of power.

When we think of secret policemen under communism, the popular images that may spring to mind are of shadowy figures engaged in eavesdropping and petty harassment of non-conformists. While this was an important aspect of secret police work, it is far from the full story. The secret police also played an important role in regulating the economy. ►

The Soviet-type command economy had a bevy of regulators such as planners, statisticians, auditors, and arbitrators. These are already described fairly fully in the economic literature. On the regulatory role of the secret police, however, the same sources are completely unrevealing. Unlike economists, historians have many tales to tell about particular secret police actions and interventions in the economy that led to mass arrests, mass deportations, and the widespread operation of labour camps. But these tales come mainly from the formative period of the Soviet economy under Stalin's dictatorship. They do not have anything to tell us about the organization and purposes of the secret-police in the mature Soviet economy.

While secret police archives in Russia and most other former Soviet states have remained secret, an opportunity to fill this gap is presented by the Soviet secret police documents that are now accessible in the Soviet Union's former Baltic provinces, many

and could extend to any activity that deviated from party directives or government plans. In the economy, forestalling disruption required the continuous screening of events and profiling of employees to ensure that hostile influences were neutralized or removed.

We focus on the 1960s; at this time the political order and economic system had moved away from Stalinist mass mobilization and terror and the question, as yet unanswered, was how far post-Stalin reforms would go. We describe the resources that the KGB deployed to support its mission. At this time the size of the KGB establishment in Soviet Lithuania was stable at around 1,200 personnel. The KGB informant network was much larger and grew rapidly, reaching more than 10,000 at the end of the decade. Combining these numbers, we find that there were around eight officers and informers per thousand employees in Lithuania's economy around 1970. This figure is intermediate between the lower levels found in Poland at about the same

especially in the countryside, was left unsupervised by the KGB. There, supervision was left to the party, for every party member was expected to spy on neighbours and colleagues and report suspicious behaviour to superiors.

The KGB was embedded in the economy through officers and informers of the industrial ("third") department of its counter-intelligence ("second") administration. The industrial department's responsibilities began with the security of more than 100 offices and factories regarded as strategically important. These were key government agencies, science-based facilities (including defence subcontractors), agencies that mapped and controlled territory and borders, the network utilities, and a few heavy industry plants. There the KGB enforced secrecy, which covered virtually all aspects of economic management; engaged in positive vetting of all candidates for promotion to the management positions that would give them access to secret paperwork; and kept a continuous watch on employees and events that aroused any kind of suspicion.

While the KGB kept the workforce continually under surveillance, most people were careful to avoid behaving in ways that would attract the attention of KGB informants. Just as important as informers in allowing the KGB to grade employees on political reliability were the historical records at its disposal. One of the first actions of the Soviet state when it acquired new territories, such as the Baltic in 1940, was to seize all public and private archives in order to exploit their evidence of the past political and social activities of the population. It was harder for people to conceal their past activities than their present inclinations. KGB lists of persons who were refused promotion at work or permission to travel abroad suggest that most refusals were based on circumstantial or historical evidence rather than evidence of current inclinations. This tends to support the ideas of Ronald Wintrobe and Timur Kuran—when people are afraid, they

## *The KGB was embedded in the economy through officers and informers of the industrial ("third") department of its counter-intelligence ("second") administration.*

of them also held on microfilm by the Hoover Institution in California. My co-author Inga Zakauskienė, a Lecturer in History at the University of Vilnius, and I have used records from Lithuania to study the role of the KGB (Soviet secret police) in economic regulation.

Economic regulation fell under the counter-intelligence function of the KGB. A basic goal of KGB counterintelligence was to forestall disruption by people acting consciously or unconsciously on behalf of the "main adversary" – the United States with its European allies. The concept of disruption was very broad

time, and much higher levels in East Germany a few years later.

The KGB was a relatively small organization with a thin informer network. Informers were a scarce resource, so one expects to find them concentrated where they would be of most value. Compiling the evidence available, we find that the density of informers was highest in the settings where bright young people were most likely to be found: in scientific research and production, much of it defence-related, and in colleges and schools. The concentration was such that, by implication, much of the economy,



hide their true preferences, with the result that the secret police must struggle to classify people by using noisy signals of true loyalty.

The economist naturally asks whether KGB regulation imposed significant burdens on the economy. The direct costs of KGB regulation were small, because the resources required to run the KGB were trivial relative to the whole economy. Indirect costs could have been much larger. Today it is impossible to imagine a modern knowledge-based economy wholly shrouded in secrecy and largely sealed off from the outside world. In the labour market, specifically, keeping politically unreliable people out of management must have raised the costs of doing business, because some of those unreliable people would have been talented, and their talents were lost to the economy. Moreover, it is plausible that some talents, such as free-thinking inventiveness, were positively correlated with political unreliability.

It is important to recall, however, that the Soviet Union did not have a modern knowledge-based economy. The Soviet economy was designed for the mass production and centralized

distribution of things. In this setting, the typical manager did not require a lot of imagination or unconventional ideas. As long as the Soviet economy could continue on its traditional lines, such talents were not particularly valuable.

As a market regulator, the KGB presents an interesting contrast to the role of market regulation in open societies. In modern economics, the goals that a market regulator is supposed to pursue usually include market transparency, competition, and fair treatment of consumers and employees. KGB regulation aimed at the exact opposite: to enforce the ruling communist party's monopoly of power, the secrecy of government business, and political discrimination in the labour market.

Years ago, economists and economic historians used to study the Soviet economy primarily as a mechanism for producing civilian economic development. A considerable body of research now shows that this outlook profoundly underestimated military power as a goal of the Soviet economy. Our paper shows that the goal of political security was also embedded in Soviet economic institutions. ◀

### The Researchers

**Mark Harrison** is a Professor in the Department of Economics at the University of Warwick and Director for Impact at the Centre for Competitive Advantage in the Global Economy. He is also a research fellow at the Hoover Institution, Stanford University.

**Inga Zaksauskienė** is a Lecturer in History at the University of Vilnius.

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*One of the first actions of the Soviet state when it acquired new territories, such as the Baltic in 1940, was to seize all public and private archives in order to exploit their evidence of the past political and social activities of the population.*



In early 1969 a local KGB officer reports on the causes and outcomes of a work stoppage.

# Subjective wellbeing: What does it all mean?

By Eugenio Proto

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Economists have traditionally regarded self-reported measures of subjective wellbeing (“happiness” or “life satisfaction” for short) as unreliable. However, growing scientific evidence suggests that they are not unreliable at all: when people say how happy they are, their answers are robustly correlated with objective measures of personal wellbeing (examples include hypertension and the presence of cortisol in the blood), even if there is always some random variation.

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**P**ERHAPS FOR THESE reasons, economists have given increasing attention to subjective wellbeing. An example is the commission on measuring economic performance and social progress under France’s Sarkozy administration, which included CAGE associate Andrew Oswald, a pioneer in the field (Stiglitz 2009). British governments have also shown interest in developing subjective wellbeing measures as an instrument for policy in recent years.

CAGE researchers have led the way in happiness research, developing it in several directions. Here are some of our findings.

## **Does economic growth promote life satisfaction?**

There is a long standing debate on the link between income (or GDP) and Life satisfaction. This began from the work of Richard Easterlin, who famously reported that he could identify no significant relationship between average happiness and average incomes in the United States over time. This is a puzzle. People work, save, and invest in the belief that these things will make them better off. Yet they seem to become no happier as a result.

Puzzlingly, there is a clear pattern across countries. Research by Ronald Inglehart, Angus Deaton (this year’s Nobel prize winner), Betsey Stevenson and ►

money Fame  
pets health Family  
romance power  
career  
love religion





Justin Wolfers has shown that average life satisfaction does increase with average income across nations at a point in time. This finding is called the Easterlin Paradox.

In a recent paper (Proto and Rustichini 2013), my co-author and I look at the relationship between incomes and happiness in a new way. Our data are individual observations in many countries and many periods. We control for differences among countries that we can't observe, like cultural factors that would bias the expression of personal feelings.

Figure 1 shows our main finding. Life satisfaction does depend on GDP – up to a point. Most of the effect is felt in poorer countries with per capita GDP below \$10,000 (using constant purchasing power of a dollar). In poorer countries, higher incomes definitely tend to raise personal wellbeing. For example, people in countries with GDP per head below \$6,700 were 12 per cent less likely to report the highest level of life satisfaction than people in countries with GDP per head around \$20,000.

However, once countries reach around GDP per head of \$20,000, the increase in happiness that higher wealth brings is less marked. Between this level and the very highest GDP per capita level (\$54,000), the probability of reporting the highest level of life satisfaction increases further by no more than two per cent. In fact, there is a peak at around \$33,000. This seems to confirm the Easterlin Paradox: higher GDP increases life satisfaction in poorer countries, but stops doing so when a country is already rich.

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*It seems that life satisfaction increases with personal income at a decreasing rate, or up to a point.*

#### **Does personality affect life satisfaction?**

It seems that life satisfaction increases with personal income at a decreasing rate, or up to a point. At the same time, much research suggests that the link is complicated by personal factors, such as where a person stands relative to others, and how a person adapts aspirations to changing realities.

In another paper (Rustichini and Proto 2012) we ask what happens if people have different levels of aspiration. For example, a person with higher aspirations may work harder and achieve a higher income. But the higher a person aims, the more effort it may cost to achieve success, and the probability of achieving success may also be smaller. In that case, the average person with higher aspirations will have a higher income – and also be more frustrated and so less happy.

We use personality traits to test this idea. We start from measures of neuroticism, a person's sensitivity to threat and punishment. A person who is more neurotic should appreciate extra income a lot if they start poor, and appreciate it very little if they are already rich. Figure 2 shows that this prediction is confirmed empirically.

#### **How does happiness affect voting?**

There is a large literature in political science and economics on the idea that people vote for or against politicians, based on whether or not their wellbeing has improved under the incumbent politician's watch. A good question is whether this prediction holds for happiness data.

In a further paper (Liberini, Redoano and Proto 2013), we show that citizens who report relatively high subjective wellbeing are also more likely to cast their vote in favour of the ruling party. For example, those who declare themselves to be highly satisfied are 1.7% more likely to support the prime minister's party in the next election. This is on top of being 1.5% more likely to be pro-incumbent following a perceived improvement of their financial situation.

We also analyze the effect of subjective wellbeing on incumbent party support among floating voters, those voters who do not hold strong partisan allegiance. The effect of subjective wellbeing on incumbent party support turns out to be stronger among floating voters than across the full sample. For example, being satisfied with one's life increases the probability of a floating voter supporting the ruling party by 1.9%, as opposed to 1.7% across all voters.

#### **How does happiness affect productivity**

Does happiness make people more productive in a paid task? A last paper (Oswald, Proto and Sgroi 2015) looks at this question using a controlled lab experiment. We show that the answer is "Yes." We also show how it works: more happiness does not change the quality of the work done (in our case, precision), but it increases effort, and with it the amount of work.

A controlled experiment was useful to us because we had to rule out the possibility that some people were happier because they were more productive. This required us to be able to make some subjects randomly happier than others. In experiment 1, we achieved this by exposing some of them, randomly selected, to a 10-minute comedy clip. (This might sound strange, but psychologists do this all the time.) Then, we asked subjects to do sums. For each sum, they had to add five two-digit numbers. They had to do as many sums as they could in 10 minutes. Thus, the number of sums attempted measured the quantity of effort, and the proportion of correct answers measured its quality (or precision). Figure 3 shows that subjects who were made to be happier were more than 10 percent more productive.






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*There is a large literature in political science and economics on the idea that people vote for or against politicians, based on whether or not their wellbeing has improved under the incumbent politician's watch.*

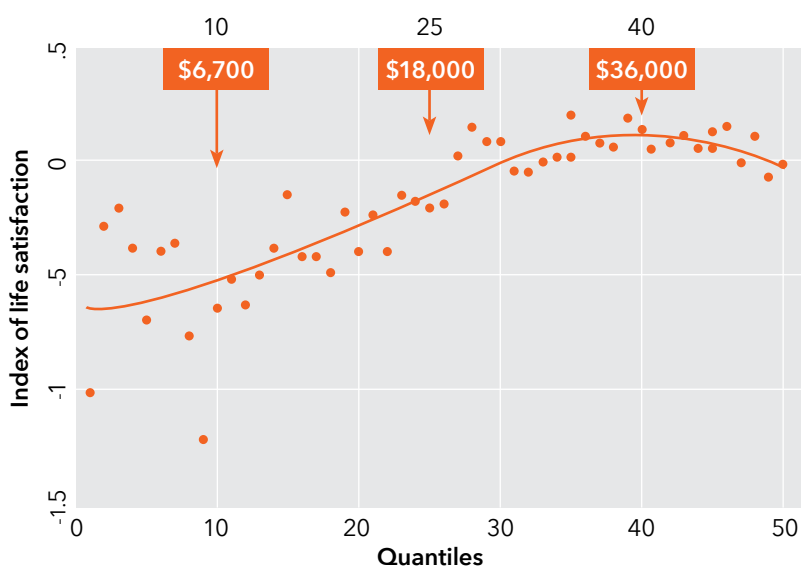
Of course, the happiness effect that we exploited here was very short-run and artificial. In Experiment 2 we made use of the natural life events that some of our subjects had experienced. These included recent family bereavements and long-term health problems.

Here, again, we found not only that happier subjects performed better, but also that those who had experienced illness or bereavement were significantly less happy. The pattern was consistent with Experiment 1. It was also consistent with the psychological notion of hedonic adaptation: the effect of most such life events tends to diminish over time as we get used to them.

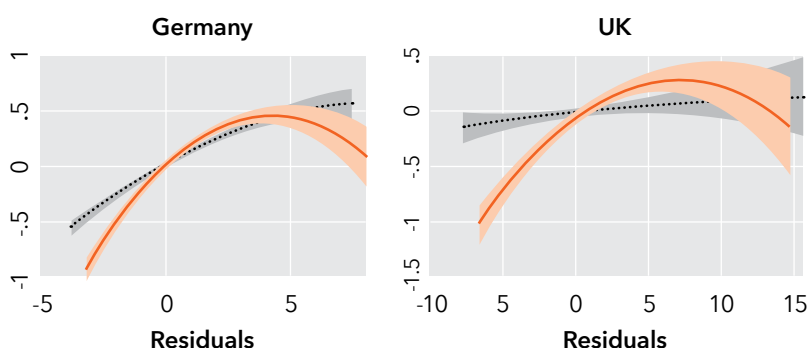
Thus, the productivity damage done by a bad life event was strong if it was less than a year ago, and tended to disappear after approximately two years.

To conclude, should we pay attention to indices of Subjective Wellbeing? Our answer is "Yes." Economists can gain insight into how income affects wellbeing. Managers can learn that a cheerful atmosphere can improve the prospects of the firm. Policymakers can design macroeconomic policies with wellbeing in mind. And politicians can improve their chances of keeping their jobs. ◀

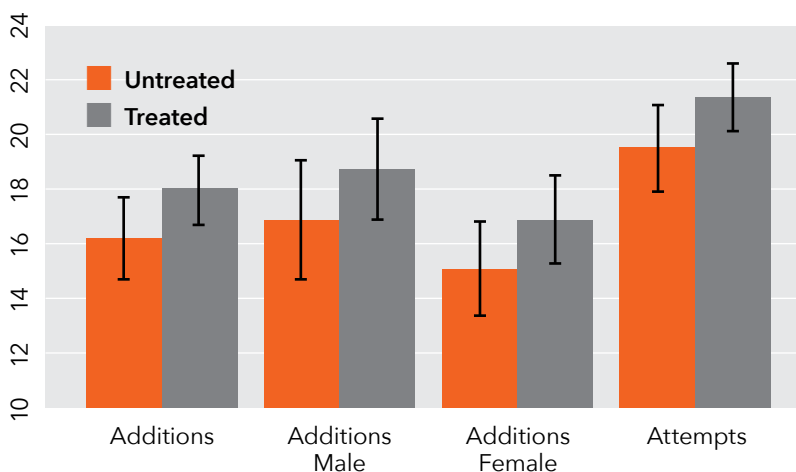
**Figure 1: How life satisfaction varies with incomes across people in many countries and years. See the original paper for more detail.**



**Figure 2: Life Satisfaction, Income and Personality Traits in the UK and Germany. Bold line: Individuals in the top 5 percentiles by neuroticism score. Dashed line: Individuals in the bottom 5 percentiles by neuroticism score. See the original paper for more detail.**



**Figure 3: Those treated to a comedy clip before performing a task have higher productivity. See the original paper for more detail.**



### The Researcher

**Eugenio Proto** is associate professor in the Department of Economics at the University of Warwick and a research fellow in the Centre on Competitive Advantage in the Global Economy.

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# About CAGE

Established in January 2010, the Centre for Competitive Advantage in the Global Economy (CAGE) is a research centre in the Department of Economics at the University of Warwick.

FUNDED BY THE Economic and Social Research Council (ESRC), CAGE is carrying out a 10 year programme of innovative research.

Research at CAGE examines how and why different countries achieve economic success. CAGE defines success in terms of personal well-being as well as productivity and competitiveness. We consider the reasons for economic outcomes in developed economies like the UK and also in the emerging economies of Africa and Asia. We aim to develop a better understanding of how to promote institutions and policies which are conducive to successful economic performance and we endeavour to draw lessons for policymakers from economic history as well as the contemporary world.

*Research at CAGE examines how and why different countries achieve economic success.*



CAGE research uses economic analysis to address real-world policy issues. Our economic analysis considers the experience of countries at many different stages of economic development; it draws on insights from many disciplines, especially history, as well as economic theory. In the coming years, CAGE's research will be organised under four themes:

- What explains comparative long-run growth performance?
- How do culture and institutions help to explain development and divergence in a globalising world?
- How do we improve the measurement of well-being and what are the implications for policy?
- What are the implications of globalisation and global crises for policymaking and for economic and political outcomes in western democracies? ◀

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Centre for Competitive Advantage in the Global Economy  
Department of Economics  
University of Warwick  
Coventry CV4 7AL  
United Kingdom



[warwick.ac.uk/cage](http://warwick.ac.uk/cage)



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[cage.centre@warwick.ac.uk](mailto:cage.centre@warwick.ac.uk)

