National Institute Economic Review No. 250 November 2019

BEYOND BREXIT: A PROGRAMME FOR UK REFORM

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PREFACE
BEYOND BREXIT: A PROGRAMME FOR UK REFORM

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"The major fluctuations in the rate of growth of demand and output in the years after 1952 were thus chiefly due to government policy. This was not the intended effect; in each phase, it must be supposed, policy went further than intended, as in turn did the correction of those effects. As far as internal conditions are concerned then, budgetary and monetary policy failed to be stabilising, and must on the contrary be regarded as having been positively destabilising."

J. C. R. Dow (1964)

We not only live in interesting times but also dangerous ones. The weaknesses of the post-war consensus on macroeconomic control was laid bare by Dow's (1964) magisterial analysis and the subsequent implosion of demand management in the 1970s (see Blackaby, 1978; and Britton, 1991). It is becoming clear that we have now also lived through a near break-down of the liberal rules-based consensus that has dominated the subsequent period of policy making.

Rules for countercyclical monetary and fiscal policy have not been sufficient to lay the foundations for a sustained growth in living standards or a perception that such a return to growth is around the corner (see Chadha *et al*., 2016). Growth in other and distant parts of the world has not only imparted a disruptive shock to advanced economies such as the UK but also changed fundamentally the relative importance of the UK in the matrix of world power (see Chadha, 2017).

The effects of the 2007–8 financial crisis, at which the UK found itself at the epicentre, have been controlled but much of the scarring remains. Whilst jobs have been created and standards of living have been stabilised, the lack of investment has left the country in need of social and enabling capital and has meant that the economy has not been projected onto a particularly dynamic trajectory. Economic performance has continued to be moribund and lacking in any great dynamism. The failures have built up resentment towards both expert and political classes and perhaps quite rightly.

Put simply, the correction of short-term macroeconomic policy did not translate into the correction of long-term economic problems. And so against this background the Institute asked Llewellyn Consulting and Gatehouse Advisory Partners to commission a special collection of papers on the problems faced by Britain that go beyond Brexit *per se* for our 250th issue. The papers under the auspices of the newly established Policy Reform Group provide an agenda for the reform of the British political, economic and administrative landscape that will help secure a more robust future for the peoples of these islands.

REFERENCES

Blackaby, F.T. (1978), *British Economic Policy, 1960–74*, Cambridge: Cambridge University Press.
Britton, A. (1991), *Macroeconomic Policy In Britain, 1974–87*, Cambridge: Cambridge University Press.
Chadha, J.S. (2017), 'The economic landscape of the UK', *National Institute Economic Review*, 240, F4–13. [Also available as a Gresham Lecture, 1 June 2017, https://www.gresham.ac.uk/lectures-and-events/the-policy-responses.]
Chadha, J.S., Chrystal, A., Pearlman, J., Smith, P. and Wright, S. (eds) (2016), *The UK Economy in the Long Expansion and its Aftermath*, Cambridge: Cambridge University Press.
Dow, J.C.R. (1964), *The Management of the British Economy, 1945–1960*, Cambridge: Cambridge University Press.

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INTRODUCTION

John Llewellyn, Jeremy Greenstock, Russell Jones, Andrew Gowers, Preston Llewellyn, Nick Greenstock, Gerald Holtham, Terry Scuoler and Rhys Bidder*

Regardless of the particular form that Brexit ultimately takes, the UK faces an unprecedented set of political, economic, and social challenges. While the causes are many and complex, they amount to a crisis of confidence and popular trust that has overturned the normal logic of political practice and policymaking. The national interest demands a strategy for the decades ahead, capable of putting the country back on its feet.

This collection of essays aims to launch a serious debate about what such a strategy should look like. It seeks to establish coherent priorities for government – of whichever political stripe – in addressing challenges ranging from low productivity and ageing infrastructure to economic and regional inequalities and the UK's post-Brexit role in the world. It proposes measures to shore up the Union and improve governance. It seeks to challenge established thinking on such topics as industrial policy and the roles of fiscal and monetary policy, on the grounds that unprecedented challenges demand fresh ideas.

Above all, it amounts to a plea for rational, evidence-based policymaking and a warning against populist approaches. The authors, all acknowledged experts in their field, reflect no political alignments or party affiliations. They are, however, united in the view that restoring national cohesion and confidence requires sustained initiatives, both domestic and *vis-à-vis* the rest of the world, that are well targeted, feasible, efficient, affordable, collectively coherent, and mutually reinforcing. Most share the conviction that public spending and the way the UK uses its resources will have to change if the needs of an ageing society, continual technological change, and a constantly changing world are to be met, while working within prudent public and private financial constraints. The inescapable conclusion is that the nation's economic and social policies, together with supporting public investments and actions, will have to be overhauled on the basis of established facts and realities.

These papers, with their policy proposals, are presented in four basic sections:

- Maximising the output from available resources.
- Outward-facing policies: foreign policy, and defence and security.
- Addressing market failures: industrial policy, climate, housing, infrastructure.
- Enhancing the capacity of government to deliver.

Maximising the output from available resources

Fiscal and monetary policy. Maximising the output from the available labour force and capital stock will present new challenges for policy. Monetary policy, hitherto the principal tool for output stabilisation, will likely prove inadequate in the next slowdown, or an extended period of weak growth and low inflation. Policymakers may find themselves obliged to use the tools at their disposal differently from how they have in the past.

At a minimum it would be wise to re-orientate and strengthen the automatic fiscal stabilisers. But even then they are likely to prove inadequate. An effective response

*This work represents the formation of the Policy Reform Group (PRG). Disclaimer: The views, judgements and policy proposals expressed in this chapter are those of the authors, but not necessarily those of Gatehouse Advisory Partners, Llewellyn Consulting, the Federal Reserve Bank of San Francisco or the National Institute of Economic and Social Research.

will probably require discretionary fiscal initiatives, perhaps the setting aside of some fiscal rules, and closer coordination with monetary policy. The latter should not be done lightly, nor be politically motivated. Ideally an independent body – the Office for Budget Responsibility for preference – should determine, in concert with the government and the Bank of England, just when the requisite conditions have been met.

It may become necessary even to embrace central bank financing of public expenditure or tax cuts. The government would be well advised to consider, in advance, under what circumstances, and subject to what constraints, it might be wise to entertain such departures; and prepare the institutional framework for their deployment. Again, it could make sense for the OBR to determine when the requisite conditions have been met.

Adjusting efficiently to structural change. Brexit, however ultimately configured, will impel significant structural change. Whenever economies are subjected to such shocks from the supply side, there is for a time an inevitable loss of output as people and investment move from one activity or region to another.

The structure of the economy will ultimately adjust: economies always do. But it will take time – perhaps ten years or more. There is therefore much to be gained from policies that facilitate and assist the adjustment process, so as to keep the associated output and employment losses to a minimum.

Key initiatives include the enhancement of active labour market policies, especially for 16–24 year-olds and low-educated/low-skilled job seekers, closer to best practice in OECD countries. They should be buttressed by substantial investment in lifelong learning, with a focus on upskilling workers; and improving general mobility – not least housing.

Rapid structural change is bound to meet political resistance that could push policy in the wrong direction – towards protectionism, subsidies, and other false palliatives. It is therefore important to ensure that both the costs and the benefits of change are shared – and seen to be shared – reasonably equitably.

Developing trade. The quantity of resources available to a country is augmented through international trade, as countries specialise in areas in which they are particularly efficient. Access to major markets, particularly those nearby, is central to prosperity.

The EU Single Market is the world's largest free trade area, and the UK's closest. Staying closely integrated with it is the most important measure that the UK can take to ensure that trade continues to be a positive force for its living standards.

There are new and rapidly growing markets beyond Europe, but most are small. And the UK already has, by virtue of agreements concluded on its behalf by the EU, access to all but 17 per cent of the global economy. Meanwhile, international trade is at growing risk from protectionism and attacks on the international institutions.

Public debate on trade policy has lacked the detailed analysis of these issues. Britain would benefit considerably from a policy review institution like the Australian Productivity Commission, to examine and report upon future policies in the UK's interests.

Trade in services is quantitatively much more important to the UK than is trade in goods. And it is a difficult area because it is so complex.

The constraints on exports of services to markets abroad are seldom tariffs, but rather regulatory rights of access. It will be in the UK's interests to keep the majority of its services-related regulations close to those of the EU.

Beyond the EU, the UK will have to put in a tremendous effort to negotiate entry into services markets that are less well developed and more protected than those of the EU, and with which it is initially far less well aligned.

Outward-facing policies: foreign policy, and defence and security

Foreign policy needs to play a considerable part in helping to raise the UK's economic performance, not least by aiding in the construction of beneficial trade arrangements. It should devote equal weight to constructing good relationships with its two major trading partners: Europe and the US.

In the European context, the UK should clearly establish itself as a contributor to the remedying of regional problems; but under a careful and consistent set of principles.

Internationally, the UK's interests stand to be served by working with other capable middle-ranking powers to encourage the biggest powers, notably the US, the EU, and China, to promote a rules-based international order.

Part and parcel would be the promotion of observance of international values and human rights.

The UK has a reputation as an experienced collective problem-solver in international arenas, and this should be promoted. Particular attention should be paid in the relevant international fora to the issues of climate change, migration, and technological innovation.

All this will require a strong central department, under a very senior Minister, to coordinate the full panoply of foreign, international development, and international trade policies.

Security and defence policy. Feasible ambitions for defence and security policy have to be in proportion to the size of the UK's available resources. A comprehensive post-Brexit review to put policies on an agreed footing will need to reflect that reality.

The UK needs to remain fully committed to NATO. At the same time it will need to raise the pressure on allies to meet their 2 per cent of GDP spending target.

As regards the projection of force, this will have to be focussed essentially on the European sphere, the Mediterranean, and the Gulf, rather than globally.

Within the European sphere the UK should liaise closely with the EU in their development of a capable defence policy, while insisting that it be compatible with NATO's. On the security side, the UK should develop coordination with the European security agencies; seek to connect France to the Five-Eyes intelligence community; and engage in signature projects with France and Germany. At home it should review immigration policy and methods of border control as a security, and not just an economic and social, objective.

Internationally, the UK can further its interests by: working to preserve the Non-Proliferation Treaty, but avoiding unilateral nuclear disarmament; raising the UK's contribution to the UN's peacekeeping efforts; and helping to develop an alliance on cyber security strategy.

It is doubtful, however, that even these ambitions can be accomplished with present resources. There would seem to be no alternative but to halt, and in time reverse, the decline in UK troop numbers. And to achieve this and the other essential objectives will almost certainly require an increase in UK defence spending to 2.2 per cent of GDP.

Addressing market failures: industrial policy, climate, housing, infrastructure

Industrial policy. The persistent structural shortcomings of the UK economy, and not least its extended productivity shortfall, mean that there is a strong case for a new, more activist, industrial strategy. This is particularly the case in the context of climate change.

However, this strategy must be properly focussed, and congruent with the underlying structure of the UK corporate sector. This means that it must reflect the dominant role of services rather than manufacturing, as well as the importance to economic dynamism of new, fast growing, firms.

It is also important that the strategy be placed at the very heart of economic policy, closely aligned with export promotion, and that the structure and machinery of government evolve rapidly in such a way as to give it the best possibility of success. The historical record suggests that the Treasury should not be the strategy's home. Indeed, whichever public sector entity is ultimately given responsibility for it should enjoy an independent mandate akin to that of the Bank of England.

At the same time, however, greater activism should not be a substitute for a competitive market structure, let alone descend into protectionism. Interventions should be targeted at clear market failures, be time-constrained, and transparently assessed.

Climate change. The mass of scientific evidence is that the world is warming; that this is resulting in climate change everywhere; that this will benefit some regions but damage others; and, that the cost will be high.

One way or another, the world is going to decarbonise: the only question is whether that results from global warming destroying food supplies, drying up water supplies, flooding major cities, and killing populations, or whether decarbonisation is led by mankind.

The UK is too small a polluter (only 1–2 per cent of the global total) to do much directly to slow global warming. But it has had success using its soft power to accelerate change elsewhere. And by directing its own policies to decarbonisation, it can create an economy structured to produce carbon-reducing goods and services that will be demanded not only at home but also abroad.

The UK should integrate its industrial strategy with its clean growth strategy, so as to develop strong domestic supply chains that can support the full spectrum of decarbonisation activities. To that end, it should develop research priorities designed to retain comparative advantage in markets of the future.

Financial support for decarbonisation is not necessary indefinitely; once a certain scale is reached and prices fall, reinforcing network effects lead to a tipping point, whereupon support can be reduced or even withdrawn.

Infrastructure investment is unique. It can act both as a macroeconomic stabiliser on the demand side and contribute importantly to the economy's supply side. Yet, notwithstanding important improvements in the way that infrastructure is assessed and planned over the past decade, the UK's infrastructure is poorly perceived, and beset by significant areas of congestion.

The UK economy is operating largely with 20th, sometimes 19th, century infrastructure. Significant parts of its energy, water, transport, and communications networks are in urgent need of renewal or replacement. National productivity and competitiveness are suffering as a result, and the nation is poorly equipped to meet future challenges.

The requirement is for a bolder approach, setting out more ambitious programmes for energy and information and communications technology projects, regional spending, capital recycling, and increased involvement of private sector investors. Infrastructure strategy also needs to dovetail with other key areas of policy, including addressing decarbonisation and various forms of inequalities.

These should all be part of a strategy to raise total (public plus private) infrastructure outlays to the 3.5 per cent of GDP per year that the OECD regards as the norm for developed economies. The role and powers of the National Infrastructure Commission should be enhanced: it could even evolve into a National Investment Bank that would offer project guarantees; recommend user fees; lend to projects with the proceeds of National Investment Bonds; and rationalise planning.

Housing policy is a complex matter with wide ramifications. It needs to address, at a minimum, social housing, stress in the private rented sector, benefits, subsidies, and taxation of home ownership. Solving it involves much more than simply building houses – though the country does need to add around 100,000 social homes to the stock in England every year for a decade.

In addition, a sophisticated approach to planning home-building is needed, both for assessing overall numbers and their regional distribution, and in financing the supporting infrastructure, which in some cases can be even more important than income, narrowly defined. It could be appropriate to develop, alongside industrial strategy policies, the idea of 'Universal Basic Infrastructure'.

Help to Buy should be replaced by a better alternative – endowing all young people with a capital sum. This need not necessarily be used for house purchase, and could be used for second-hand homes as well as new build.

Reform of the rental sector too is needed. There is a keen requirement for varied cultural provision and well-designed urban centres in troubled localities. Valuation experts could be used to challenge private sector rentals where housing benefit is paid, and to enforce standards of decent housing stock.

Most fundamentally, taxation is in urgent need of reform, not least as part of a drive to reduce various forms of inequalities, in particular the way the tax benefits of owner-occupation incentivises overconsumption of housing, leading to a widening wealth gap between renters and home owners, and between owners in different parts of the country. Alternative ways should be found for raising a levy on development values that is more sensitive to the final sales value of the development.

Inequalities. Arguably it is the backlash against various inequalities, together with a burgeoning sense of unfairness and unfilled aspirations, that lie at the heart of the UK's political malaise. Confronting disparities has to be a priority if faith in government is to be re-established, and social stability maintained.

There are many disparities: between income and wealth groups, regions, generations. Equally, if not more serious, are disparities of opportunities, seen by those denied them as fundamentally unfair. Concern over disparities is not just a matter of political colour: if they remain unaddressed, the very future of British democracy could be at stake.

The range of statistics on inequalities is markedly narrower than the full breadth of the issue. Nevertheless, those that are available indicate that the UK has become much more unequal over recent decades. At a minimum it should be a primary goal of policy to reverse that trend, perhaps targeting the average level of inequality in the OECD economies, and reducing the number of people living below the poverty line by, say, one-half. The government should also continue with the policy of progressively raising the minimum wage, at least until such time as it is seen to be undermining employment.

Measures to combat perceived unfairness should cast their net wide, extending for example to closer scrutiny of competition in high-yielding sectors such as technology, and incentives for the appointment of worker representatives to company boards.

Much can be achieved in easing disquiet by keeping the economy close to full employment. However, a government intent on fundamentally tackling inequalities will have no alternative but to raise public spending, and the taxation of both income and capital from their currently historically low levels. In particular, spending on education and active labour market policies should be increased significantly.

The Union. One of the most significant impacts of Brexit may be on the UK's internal constitutional arrangements. It is essential that the ideas of identity and local control, so clearly expressed in the Brexit discussions, be brought into the heart of the debate.

If the UK is to continue to have a Union, then democratic principle requires that governments of its constituent parts need to be responsive to local needs. But there is too much distance between them and policymakers, in London and Westminster in particular.

There are many implications. The regions should have the right both to target expenditure, and to raise taxes locally. In the case of Scotland, more taxes should be devolved to Scottish local authorities; its capital borrowing should not be capped; the Joint Ministerial Committee should be put on a statutory basis; and 'English Votes for English Laws' (EVEL) should be discontinued.

There is perhaps also a case for the Bank of England's Monetary Policy Committee having regional representatives, in the manner of the US Federal reserve System, and getting rid of EVEL.

Governance. A prerequisite for virtually all of the policies advocated in the various chapters is high-quality governance. This requires a structure that is both appropriate for today's circumstances and able to be seen by the public as both trustworthy and efficient. Extending the current role of the National Audit Office into an Office of Government Efficiency could be helpful.

The present civil service system, whereby politically neutral officials serve whatever government comes to power, is under challenge – from the public and politicians alike – who seem to wish to move to a more politicised civil service.

A national debate needs to be held, with politicians playing a prominent part, to decide whether or not to recommit to the present system.

To the extent that the wish is for a more politicised civil service, many consequential changes would be needed, including: reforming Number 10 as the Prime Minister's Department, with its own Parliamentary scrutiny committee and annual reporting system, separate from the Cabinet Office; replacing the title of Adviser within the Number 10 system with something that more accurately reflects the executive power that now goes with these appointments; and making instructions given by Number 10 to departments available to Parliament. All this can be done consistent with the usual national security constraints on the provision of sensitive information.

There is also a powerful case, not least in addressing various forms of inequality, for reducing the strong centralising grip of central government on the rest of the country. Measures that would help include: legally entrenching structures to confirm that devolved powers cannot simply be overridden by the Westminster Parliament in the event of a dispute; and guaranteeing a level of fiscal autonomy in local government.

MAINTAINING STABLE MACROECONOMIC CONDITIONS

Russell Jones* and John Llewellyn*

Executive Summary

The UK economy faces more than usually uncertain times. Outside the European Union, and in an increasingly challenging global environment characterised by ageing populations, climate change, populism, protectionism, and more, the country needs to chart a new course. This may well require policymakers to consider unconventional approaches to monetary and fiscal policy and, at the very least argues for important modifications of the current policy regime, including the autonomous mandate of the Bank of England.

At some point, there will be a major slowdown in economic activity. Yet the Bank of England has very little leeway to respond by cutting interest rates, and it has already adopted an armoury of unorthodox tools that may be decreasing in effectiveness. More radical monetary approaches would be likely to be politically controversial; and are not without risks. In these circumstances it would be a mistake to rely solely, or even largely, on monetary policy to maintain demand. It would be better to conduct monetary and fiscal policy in tandem, and for discretionary fiscal policy to be required to play a much more active role in demand management than hitherto. This would, for example, imply major extension of the automatic stabilisers and efforts better to calibrate discretionary initiatives with the business cycle.

But given the long-term pressures on the public finances, more fundamental changes in the structure of spending and taxation are needed, along with a redrawing of fiscal rules and targets, under independent budgetary oversight. The current, historically low, share in GDP of public spending is itself unsustainable in light of the demand for services of an ageing population; plans should be made to raise it closer to the European average. In the most extreme circumstances it might become necessary to waive the fiscal rules entirely and for the Bank of England directly to underwrite fiscal stimulus in order to sustain aggregate demand. It would be wise for the authorities to consider the options in detail now, while the environment is still relatively stable.

Introduction

Macroeconomic policy has three basic goals:

- *Maintaining stable macroeconomic and financial conditions* – keeping output and employment near their maximum potential levels, subject to maintaining reasonable price stability[1] and avoiding growing imbalances, particularly the excessive build-up of risk, or private or public debt;
- *Supporting dynamic economic adjustment* – the constructive evolution of the economy's structure in response to changing patterns of demand; and
- *Facilitating strong sustained growth* – encouraging a growing volume of resources for continual improvement in living standards, including public services.

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UK governments, against a background of 150 years of relative economic decline and intermittent crises, have often acted as if there exists some single, over-arching, policy panacea for achieving its economic goals. However, views have changed over time about what such a panacea might be, with policymakers often unwarrantedly influenced by the latest academic fad; the temporary supremacy of a particular political philosophy; or the success of a policy regime employed by a competitor country, even if the latter exhibited a quite different social, cultural, political, and institutional history.

Over time, UK administrations have variously become fixated on the Gold Standard; the Bretton Woods fixed but adjustable exchange rate system; fiscal fine-tuning; price and income policies; monetary targeting; the exchange rate mechanism of the European Monetary System; and, most recently, formal inflation-targeting by an independent central bank. It could also be argued that Brexit itself falls into the category of this unrelenting search for an economic cure-all.

Unfortunately, even if they have appeared to enjoy some initial success, none of these regimes has proved sufficiently robust to endure. Unsustainable imbalances continued to accumulate; intermittent crises remained a feature of the economic landscape; the displacement of declining industries and sectors by dynamic new ones remained characterised by inertia and dislocation; and Britain's long-term relative decline continued.

Since the global financial crisis, the UK's productivity performance has been especially lacklustre. Indeed, labour productivity is today some 20 per cent below where it would be had it continued along its pre-2008 trend. This is double the previous worst productivity shortfall ten years after the start of a downturn, and is unprecedented in the past 250 years (Crafts and Mills, 2019).

The reality is that there is no single, magic, policy bullet, not least because goals overlap and interact, and their importance changes according to what issues are most pressing at the time.

This paper focuses on the first of the three main aims of macroeconomic and financial policy – maintaining output and employment near their maximum potential levels – and the role that monetary and fiscal policy play in this. Policies to ensure that economic adjustment is as dynamic and constructive as possible, are considered in the following paper. Policies to achieve sustained growth have many dimensions, and are presented in subsequent papers.

Challenging times

The contemporary risks to stability are considerable, such that macroeconomic and financial policy is likely to be confronted by a particularly challenging set of circumstances: and this at a time when the over-riding perception is that there is a shortage of conventional ammunition.

The global threats could well extend to widespread financial instability, the fragmentation or indeed comprehensive breakdown of the global trading system, a new cold war, war in the Middle East, and even a new world war.

Domestically, beyond Brexit, which has the potential to act as a disruptive force far into the future, dangers include a house price crash (which could trigger a deep recession), the break-up of the union, and political and constitutional chaos.

Monetary policy

It is possible that the Bank of England (BOE) may, as it did prior to the early 1990s, once again have to lean heavily against inflation, should it threaten to become resurgent. But at present, notwithstanding the risk that a further sharp Brexit-induced decline in sterling temporarily pushes import prices up significantly, that looks unlikely. Globally, inflation, and inflation expectations, remain remarkably quiescent.

While there is nothing sacrosanct or necessarily optimal about the 2 per cent inflation rate that the BOE currently targets, it would seem sensible, both for consistency and the management of expectations, for the target to be retained for now as a 'principal guiding light' for monetary policy.

Policy proposal

- *Maintain the operational independence of the Bank of England in respect of inflation control and the current 2 per cent target.*

Monetary policy responses for the future

That said, the Bank's degree of autonomy, and its prescribed mandate, may in due course have to evolve. After all, following the 2008 crisis, with many governments unable or unwilling to respond adequately, central banks found their responsibilities extending to saving the financial system and, in the case of the European Central Bank (ECB), to preserving the single currency. Such could happen again.

At some point, policy will be confronted by a major slowdown in economic activity: the present world recovery is already long in the tooth and, as highlighted above, the risks to it are various. Equally, it could be that demographic and other structural factors, such as sluggish productivity, perpetuate the post-2008 crisis environment of soft growth, near-zero inflation, and low interest rates.

There is currently a mere ¾ ppt of orthodox interest rate policy leeway. Small changes in policy rates can have only the most limited of effects, almost certainly insufficient to address anything but the most modest of decelerations. Hence, if the responsibility for supporting aggregate demand and prices is once again laid predominantly at the door of monetary policy, at the very least the unorthodoxies of recent years will once again have to be employed, if not reinforced. Indeed, they may become the new orthodoxy.

These extend to:

- Large-scale asset purchase programmes (LSAPs);
- Forward policy guidance; and
- Targeted commercial bank lending schemes underwritten by the BOE.

Yet these might not suffice. The unconventional initiatives to date seem to have become less effective over time. Future downturns or periods of unacceptably low growth or inflation may necessitate still greater unorthodoxies. These could include:

- Extension of LSAPs to a wide variety of private sector, and even perhaps foreign, assets; and
- New targets to depress real interest rates, such as a temporary commitment to overshooting the existing inflation target, or a price level objective.

Employment of additional unconventional weaponry would not be complication-free, however. Even 'pure' interest rate policy has real and financial side-effects, not least on resource allocation, asset prices, risk tolerance, and the distribution of income and wealth. Such effects would likely become more substantial still, were monetary policy to break new ground – and particularly should the recent US-led trend towards protectionism and bilateralism intensify.

Such complications could multiply yet further if, in order to push real interest rates down to a level commensurate with recovery, it thereby became necessary to eradicate the zero-interest rate bound.

Three routes could be pursued;[2] but they are radical and likely, at least at this juncture, to be unacceptable to many:

Abolish currency and embrace e-money. This could be achieved by giving every legal UK resident an account with the BOE, made operational through a cheque account held at private credit institutions guaranteed by the central bank. The BOE would set the interest rate on them at whatever positive or negative level it deemed appropriate.[3]

Tax or subsidise currency. The anonymity and bearer nature of currency complicates this process. A way around such problems could be to stamp currency to demonstrate that any tax or subsidy has been paid. A time-date strip could be embedded into notes to record when the currency enters, and is withdrawn, from circulation, or currency could be taxed through a random demonetisation of a proportion of the outstanding stock. However, there would probably be an associated requirement for random inspections of cash holdings and penalties for failing to play by the rules.

A negative interest rate. Alternatively, a negative interest rate (say –10 per cent per year) could be imposed on bank deposits with the BOE, while the interest rate on currency would remain zero. The BOE would effectively be setting the one-year forward exchange rate of deposit currency and cash currency 10 per cent below the spot exchange rate, resulting in a 10 per cent appreciation of deposit currency over that period. After a year of the –10 per cent deposit rate, an individual would hold 90 per cent of every currency unit kept on deposit, or one full currency unit held in cash. This currency unit would be worth 90 per cent of a deposit unit.

To work, the deposit currency would need to be the numeraire for wage and price contracts. Only the deposit currency would be legal tender; all government contracts would have to be invoiced and denominated in, and paid with, deposit currency, as would taxes and benefits: private deposits would have to be denominated in deposit currency only.[4]

Major issues would arise from such departures. These include the forfeiture of government seigniorage revenues (the profit made by a government by issuing currency),[5] although this could be overcome by taxing commercial bank reserves and other deposits held at the central bank; the loss of currency anonymity, which could be construed as emblematic of an increasingly intrusive and predatory state; pressure on already stressed defined-benefit pension schemes and financial institutions that guarantee nominal returns on their liabilities, such that regulatory change would be required; and a need to enhance macroprudential policy tools to moderate the inflation of asset bubbles, excessive risk taking, and generally preserve financial stability.

On the other hand, restrictions on the use of cash would help to address tax avoidance, money laundering, and terrorist financing, while also restricting the black economy and crime.

Policy proposals

- *Study and evaluate the implications and feasibility of policies that would be necessary should it become necessary to address a major downturn, or an extended period of weak growth and low inflation.*
- *Prepare policy thinking for what would be implied should the zero bound to nominal interest rates have to be overcome.*

The policies outlined are the sort that would logically be implied were policymakers to decide that, in order to support aggregate demand in the event of a major downturn, most of the 'heavy lifting' was to be undertaken by monetary policy.

In our judgement, relying solely, or even largely, on monetary policy would be a mistake. More appropriate would be to recognise that monetary policy and fiscal policy settings perforce have to be determined in tandem.

Fiscal policy

With the scope for monetary orthodoxy so limited, and the potential complexities and side-effects of more unconventional initiatives likely significant and unacceptable to many, it would make sense for fiscal policy to play a much more active role in demand management than hitherto. Indeed there could well be little option.

Automatic stabilisers

The most timely, predictable, and effective fiscal response to moderate shocks is generally delivered by 'automatic stabilisers' – the variations in taxes, subsidies, and transfers that occur automatically in response to changes in output and employment.

To stabilise aggregate demand satisfactorily, the automatic stabilisers need to be substantial, and function well. If allowed to operate symmetrically over the cycle, they should prove broadly fiscally neutral.

The amount of support that automatic fiscal stabilisation offers depends upon the makeup of the country's tax and benefit systems; its income level; its openness to trade; the size of its government sector; and the nature of the shock with which it is confronted – in particular, how much unemployment that shock generates.

The UK's automatic stabilisers are estimated to have offset roughly 40 per cent of the effects of the global financial crisis. This is much more than was the case in the UK's two previous downturns, significantly more than was the case in the US, but somewhat less than in some other EU economies (Dolls *et al.*, 2009).

Today's automatic stabilisers have grown out of social programmes, rather than being designed explicitly as a tool to stabilise aggregate demand. They could usefully be improved in terms of both timeliness and effect by re-orientating them to some degree.

Policy proposal

- *Widen and re-orient the automatic stabilisers towards cyclical variation of investment tax deductions, property taxes, VAT, transfers to local governments, and the substitution of estimated current-year-based income tax collection for previous-year-based income tax collection. This would require the establishment of free-specified 'triggers' for when these initiatives kick in.*

Discretionary stabilisers

Useful and effective though they are, there is a limit to the efficacy of the automatic stabilisers. If a shock is particularly large, or sector-specific, or risks leading to a protracted shortfall in aggregate demand, the automatic stabilisers are likely to prove inadequate. Discretionary fiscal policy may then have to play a greater role.

The use of discretionary fiscal policy following the 2008 financial and economic crisis was historically impressive, and it almost certainly prevented the aftermath from being anything like as bad as it would have been otherwise. However, discretionary fiscal initiatives invariably face two challenges: first, they risk unsettling investors if deemed inappropriate or excessive; second, they are difficult to calibrate with precision to the business cycle. Large tax reductions and expenditure increases involve significant information, decision, and implementation lags. Moreover, they are also potentially open to malign political influence.

The first of these anxieties is most likely to be allayed by joining in an internationally-coordinated relaxation of fiscal policy. They could also be dispelled somewhat by emphasising more the asset side of the public sector balance sheet. In past periods of fiscal contraction, short-termism has dominated. Public investment projects have tended to be slashed, and assets sold off, thereby harming the prospects of future generations (who of course cannot vote). To the extent that future borrowing is directed to the financing of investment, public sector net worth and inter-generational fairness will be promoted.

Public infrastructure investment spending, and the public sector capital stock, underpin growth potential. Infrastructure rich in path-breaking technology tends to be especially potent over the longer term. There is also going to have to be greater emphasis on projects that address climate change issues in the years ahead. (This subject is further addressed in the paper on *Improving infrastructure*).

Policy proposal

- *Over the course of the business cycle, keep the share of net public investment in GDP at a level consistent with the maintenance of, if not an increase in, the economy's growth potential and therefore in the future tax take.*

The OECD has suggested that the advanced economies invest a sum equivalent to some 3.5 per cent a year in infrastructure (public plus private) to avoid detrimental implications for living standards, quality of life, and competitiveness. The UK currently falls more than a percentage point short of this target.

The second issue, the difficulty of timing, could be addressed to some degree by government always having available a pre-vetted, 'shovel-ready' buffer-stock of investment projects that could be activated at short notice, and which is part of the government's publicly-stated infrastructure plans. These need not be grandiose. For example, the multiplier effects of investment spending that addresses even relatively small transport bottlenecks can, when taking into account also its supply-side effects, run into double digits.

The feasibility of doing this could be enhanced by having a national investment bank that could undertake well in advance all the investigative, legal and other preparation for investment projects that could thereby be undertaken at short notice.

Policy proposal

- *Establish an operationally independent, state-capitalised, National Infrastructure Bank (NIB) to supersede the existing essentially advisory National Infrastructure Commission (NIC) procedures.*

(This policy is considered in greater detail in the paper on *Improving infrastructure*.)

Again, as with the enhanced automatic stabilisers, discretionary stimulus would, ideally, be undertaken only on the basis of predetermined 'cyclical triggers'.

Policy proposal

- *Government to specify the conditions under which discretionary fiscal expansion would be implemented; and the OBR to determine when these conditions have been met.*

Universal basic income

There have been suggestions that the automatic stabilisers as currently configured should be superseded by universal basic income (UBI), or wholesale job guarantee schemes, that could also act significantly to diminish inequality and poverty, and reduce job insecurity at a time of rapid technological change.

However, such untargeted, blanket initiatives are extortionately expensive. Initial estimates have suggested that they could result in increases in the proportion of national income taken up by taxation of anything up to 20 per cent.

Either the UBI would have to be unrealistically low, or the tax rate to finance it unacceptably high.

(This subject is addressed in further detail in the paper on *Reducing inequalities*.)

Fiscal sustainability

All these issues of how to stabilise macroeconomic and financial conditions arise at a time when the longer-term pressures on the public finances are immense. Following the global financial crisis, the UK's net government debt ratio has swelled to a level (some 76 per cent of GDP) last seen in the late 1960s. At the same time, demographic change will have important implications not just for spending on health, pensions, and social care, but *inter alia* for skills, housing, transport, and policing. And, as emphasised above, climate change also stands to exert a massive, and expensive, impact on government policy over the decades ahead.

The UK tax system was designed for a younger and largely economically-active population. The old do not just consume more public services than do the young; they also pay rather less tax. Public spending per head for the average 80-year old is around four times that for the average 40-year old. For tax, it is a similar story – only in reverse (Johnson, 2018). Moreover, the tax system under-taxes capital income and capital gains relative to earnings; the system of pension taxation is likely only to deepen generational inequality; and the system of local taxation – the council tax – bears disproportionately heavily on lower-value properties.

Thus, the potentially greater need for fiscal initiatives in macro stabilisation policy will come at a time when not only has the UK's indebtedness risen sharply, and the potential burdens on the public purse increased, but there is also a growing need for important changes in the structure of spending and taxation. This raises the fundamental issue of the sustainability of the country's fiscal situation.

Fiscal rules

The best way to minimise the risk of loss of confidence in a country's fiscal situation is to commit, credibly, to a tried and tested fiscal rule. To be effective, this has to be flexible enough to cope with genuine emergencies, yet firm enough to minimise any deficit bias – the tendency of public sector debt to rise over time because governments habitually tend to want to spend more and tax less.

Fiscal rules should not be unduly complex, rigid, or difficult to enforce. They also benefit when they receive cross-party support and public acceptance. The UK has adopted many such guidelines in past years in an effort to ensure that the public finances do not approach a point of unsustainability. But none has endured. Different governments have had different public-finance priorities, or events have rendered them inappropriate or unattainable.

However, the credibility of fiscal policy can be enhanced by oversight by an independent fiscal authority mandated to encourage transparency, stability, responsibility, fairness, and efficiency, and this role is currently performed well by the Office of Budget Responsibility (OBR).

Policy proposal

- *Maintain the Office for Budget Responsibility, which should continue to provide its regular, detailed, assessments of fiscal policy, including reporting regularly on the progress made towards prescribed goals, and highlighting the risks and shortcomings of government fiscal initiatives.*

To some extent, judgements, particularly by international capital markets, on the sustainability of public debt are made in relation to the situation in other economies. The basic principles of UK fiscal policy should usefully, in our judgement, include a longer-term target for the broadly defined budget balance that is not out of line with its competitors, and which takes into account the burden of debt at the beginning of the period, especially if high in a relative or historical sense.

Targeting the headline balance over a period broadly equivalent to the typical business cycle would avoid having to resort to the imprecise, and easily politically anipulated, art of cyclical adjustment.

Policy proposal

- *Set a five-year rolling target for the public sector balance, as a percentage of GDP, with a particular focus on balancing the budget on the current account.*

It would also make sense for the government to commit to preventing the state from becoming responsible for such a proportion of national income that incentives and economic dynamism are harmed.

That said, after an extended period of fiscal austerity focussed on public sector pay restraint and severe cuts in non-prioritised spending areas, such as defence, housing, and public order, the share of public spending in UK GDP is historically low, at around 38 per cent. The quality of public services in general has declined, and there is little evidence of improved public sector efficiency. The demand for public services is likely to rise increasingly sharply to meet the needs of an ageing population. Further, the two broad expenditure items that increase most as real incomes increase are health and education; and most advanced societies other than the US wish these to be provided largely as merit goods through taxation or compulsory insurance.

Maintaining the share of public spending in GDP around historically low current levels would seem neither sensible nor practicable at a time when the population is aging, and the public are strongly in favour of transfer payments such as pensions.

Policy proposals

- *Plan on a ceiling for the share of government spending in GDP that is closer to the European average of around 47 per cent of GDP.*
- *It would also be wise to retain the leeway in specific circumstances of acute deflation and embedded zero or negative interest rates, when fiscal constraints are lifted, for the fiscal rules to be suspended or modified in such a way as to afford the authorities maximum flexibility to support aggregate demand.*
- *The OBR should determine, in concert with the government and the Bank of England, when interest rate conditions are such that the fiscal rules can temporarily be waved.*

Direct monetary financing

Monetary policy and fiscal policy are often considered, discussed, and analysed as if they were conceptually and practically not only different, but also separate, instruments of policy.

Considering and operating them separately, however, can result in limiting their joint efficacy and effectiveness, particularly in the case of major shocks. It could be – and not necessarily in a particularly far-distant future – that there will be a significant economic downturn, or deflationary episode, such that monetary and fiscal policy will explicitly have to be employed together.

In the most exigent circumstances, it could become appropriate for the BOE directly to underwrite fiscal stimulus to sustain aggregate demand – the so-called 'helicopter money' option. This could take the form of: central-bank-funded public investment spending; or cash transfers to households and/or companies.

Alternatively, the government could undertake a debt swap with the BOE, exchanging a portion (or all) of the Bank's bond holdings for a zero-coupon irredeemable security. This effective cancellation of government debt would achieve two things: it would significantly ease the government's budget constraint (the Bank currently holds gilts in amounts equivalent to some 20 per cent of GDP), while rendering the increase in the monetary base generated by the Bank's bond purchases permanent which, in theory at least, would add to their anti-deflationary heft.

These options would generate significant concerns. They would raise the spectre of loss of budgetary discipline, central bank insolvency, currency collapse, runaway inflation, perhaps even general economic breakdown.

The risks with such monetary finance may well have been exaggerated, however. For example, a central bank's balance sheet is a very different animal from that of a commercial bank (Jones, 2015). But nevertheless, given the moral hazard involved, and the need not to frighten markets unduly, any such departure would have to be rigorously ring-fenced and, in the case of central-bank-financed spending and cash transfers, time-limited. It might be wise therefore to create a special emergency fund for this purpose. This would be particularly the case should Britain be the first advanced economy to go down this road.

It is never advisable to have to devise policy responses in a hurry; and the more so if they are perceived, or likely to be perceived, as radical. But neither should policymakers sit mute, waiting until a crisis – such as a marked weakening of aggregate demand – before considering their broad options.

It therefore would, in our judgement, behove the authorities to consider, while the environment is currently comparatively stable, what actions they would wish to see taken both on the fiscal and the monetary fronts in the event of a major downturn in demand and output. It would make sense for there to be a pre-specified set of circumstances under which such joint fiscal/monetary action should be taken. In turn it would then be for the Bank and/or the OBR, rather than the government alone, to take the ultimate decision about monetary finance's deployment, albeit after suitable consultation. Any investment component could be also structured in such a way that the completed projects could ultimately be sold off to the private sector.

Policy proposal

- *Prepare the institutional framework for the direct central bank financing of fiscal stimulus, including the creation of a designated fund for this purpose.*

Exchange rate policy

The UK's floating exchange rate regime is one of the few areas where it is hard to see clear room for improvement.

With the exception of two relatively brief but unhappy periods of participation in efforts to stabilise European exchange rates – the 'Snake' from April to June 1972, and the Exchange Rate Mechanism (ERM) of the European Monetary System from October 1990 to September 1992, and a period of informal shadowing of the deutschemark in 1987 and 1988 – sterling has essentially been allowed to float freely against other currencies since the final break-up of the Bretton Woods monetary system in 1973.

Especially since inflation expectations have been reasonably well-anchored around the BOE's inflation target, this flexible exchange rate regime has proved effective in enabling the economy to adjust to shocks, and there would appear to be little to be gained from losing that element of automatic flexibility.

Policy proposal

- *Avoid any temptation to use exchange rate intervention for any purpose other than to smooth adjustments; and avoid larger-scale interventions such as exchange control except in extreme situations.*

NOTES

1 The term 'price stability' is generally interpreted somewhat loosely. It is seldom taken to mean zero inflation: more commonly it is taken to refer to a moderate rate of inflation, such as the 2 per cent rate targeted, explicitly or implicitly, by many central banks in recent years.

2 See Jones (2016). This article draws heavily on various papers published over the past 15 years by Willem Buiter, Mitsuhiro Fukao, Gregory Mankiw, Marvin Goodfriend, Charles Goodhart, and Miles Kimball. The ideas also owe a good deal to the work of Silvio Gesell and Robert Eister before and during the Great Depression.

3 Every account would have a debit card and a cash-on-a-chip card. Payments through these accounts would be legal tender, but would not carry overdraft facilities.

4 It might also be necessary to declare as legally unenforceable contracts other than spot purchases and sales of real goods and services invoiced or denominated in cash currency.

5 Strictly, seigniorage is the return on the additional assets, real or financial, that a country receives as a result of external holdings of its currency, less the interest paid on the assets in which the foreigners invest their holdings.

REFERENCES

Crafts. N. and Mills. C. (2019), 'Is the UK productivity slowdown unprecedented?', Universities of Warwick and Loughborough. July.

Dolls, M., Fuest, C. and Peichl, A. (2009), 'Automatic stabilisers and economic crisis: US vs. Europe', IZA Discussion Paper no. 4310, July.

Johnson, P. (2018), 'Britain's tax system is an inefficient mess', *Financial Times*, 13 August.

Jones, R. (2015), 'Nothing to fear but fear itself?', Llewellyn Consulting Comment, 26 February.

—(2016), 'Over the boundary', Llewellyn Consulting Comment, 28 June.

SUPPORTING DYNAMIC ECONOMIC ADJUSTMENT

John Martin*

Executive Summary

Economic policymaking in the UK has historically focussed more on the demand side than on the supply side of the economy. Yet it is on the supply side – the way in which an economy adapts to change while growing productive capacity on a sustainable basis – that medium- to long-term economic performance largely depends. There is an urgent need now to rebalance policy by focussing, in particular, on measures to enhance labour-force productivity, including radically enhanced support for training and skills development.

This does not involve wholesale structural reform of the economic framework. The UK benefits from having one of the most flexible economies in the OECD, with competitive product markets, relatively low labour costs and historically high employment levels, accompanied by a so-far-successful adoption of an escalating minimum wage. We suggest that in the post-Brexit era politicians would do well to avoid changes in the regulatory regime that would create undue misalignments with EU standards. Nevertheless, the concomitants of the UK's form of flexibility are a dismal performance on productivity and stagnating living standards. Productivity is now actually falling quarter on quarter ten years after the last economic downturn – a position unprecedented in the past 250 years. This problem must be addressed if the UK is to progress towards fulfilling its economic potential.

Central to this are both so-called Active Labour Market Policies (ALMPs) to provide people who have become unemployed with new skills that help them remain in the workforce, and investments in effective upskilling of mid-career and older workers. ALMPs can help raise average per capita income over time, yet UK spending on this area is well under half the OECD average and a fraction of the sums spent in the more successful Nordic economies, Germany, Austria, Switzerland, and Australia. The UK's many attempts to develop new training and apprenticeship schemes in recent decades have been dogged by poor quality and a lack of support from employers and labour unions. This needs to change: we propose a concerted effort to raise UK spending on ALMPs to the OECD average, especially for 16–24 year-olds. Improving labour-force mobility – for example by radically improving availability of affordable housing – is also critical. Structural reforms of this kind will require sustained political effort and support.

Introduction

Economic performance over the medium to long term – a period of say five to ten years – is determined largely by developments on the supply side.

That is not to dismiss the importance of (aggregate) demand (considered in the previous chapter). To the extent that aggregate demand can be maintained at, or at least close to, the economy's potential, the greater is the likelihood that businesses feel confident, not only about the present, but also about the future, and are thereby emboldened to engage in capacity-expanding investment. This both helps create and meet growing future demand, as well as generating strong employment.

UK policymaking, perhaps reflecting its intellectual heritage in this area, has been unduly impressed by the importance of the demand side, and has historically

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placed rather less emphasis on the supply side of the economy than have other countries, such as Germany or France. And when supply-side policy has been afforded a high degree of importance, as in the 1960s and 70s, it has veered between the merely indicative and the excessively interventionist.

Conceptually, there are two separate elements in securing good supply-side performance: first, adjusting constructively to economic shocks; and second, achieving a brisk and sustainable growth of productive capacity. In practice, however, the two issues, and hence the policies to promote them, are intrinsically inseparable.

Structural adjustment policies

Economies have to adjust continually to forces that emanate variously from home and abroad. These positive or negative forces can be gradual and persistent; or they can be sudden and dramatic. They can also operate on the supply side – such as oil or other commodity price shocks, or technological advances and demographic change; or they can hit the economy on the demand side – for example through a crisis in a close trading partner, the emergence of new competitors, or from the elaboration of supply chains.

The basic purpose of structural adjustment policy is to ensure that the range of government policies, enacted for whatever motive, at least do not hinder, and preferably actually facilitate, the adjustment of the economy to these different shocks, and that resources flow readily from low productivity to high productivity activities, and from declining sectors into growing sectors.
The weight of evidence, from the UK and other advanced economies, is that good structural policies, provided they are sustained, can do much to support constructive change, and thereby enhance economic performance.

At the same time, structural change is disruptive – socially, sectorally, and hence often politically. In extreme cases it can arouse widespread antagonism and opposition. Hence, to be accepted, structural adjustment policies have to be buttressed by other initiatives to ensure that the benefits of constructive change are shared fairly across society, and that the social costs of adjustment are as low as reasonably possible. Some of the policies for ameliorating the consequences of structural change are presented later in this paper, and in the subsequent paper on *Inequality.*

The broad lines for structural adjustment policies are presented below. Many areas of policy inter-relate. Hence to achieve the maximum impact, structural policies need to be mutually reinforcing; and to achieve that they have to be coherent and consistent. Hence, while government initiatives are often presented individually or in batches, ultimately they have to be taken and evaluated as a whole.

To the extent possible we avoid advocating more expenditure by government as the answer. While government expenditure may not be quite as constrained by deficit and debt levels as was the case a few years ago, and the latest government seems effectively to have abandoned serious efforts at austerity, the scope for running persistent deficits is nevertheless limited. Furthermore, generally, an element of trade-off is involved in any policy that requires expenditure: more spending and tax incentives in one area generally imply less somewhere else. 'Throwing money at the problem' is often not a panacea.

The ability to engage in structural reform is also often constrained by electoral cycles being shorter than the time it takes for reform to bear fruit. It is an inconvenient fact that the costs of reforms are often immediate and narrowly focussed on powerful vested interests, but the benefits by contrast tend to be thinly spread and cumulate over time, perhaps failing to become fully manifest for a decade.

Activation policies

It is essential that people are able to move smoothly between jobs and tasks. For this, effective policies to promote upskilling in line with changing skill demands are essential. Policies that facilitate structural adjustment can target key labour market institutions and wage setting or seek to activate job seekers.

Policies targeting labour market institutions, wage setting, and the benefit system

The United Kingdom exhibits a high degree of labour market flexibility and dynamism, on a par with the two other major high-flexibility OECD countries, the US and Canada. However, the concomitant is weak employment protection.

It is striking that since the mid-1980s, the unemployment rate has been on a declining trend across a number of business cycles. A particular case in point is the resilience of employment after the 2008 global financial crisis, notwithstanding the deepest post-war recession and a relatively shallow recovery. The aggregate employment rate never fell below 70 per cent of the workforce, and is now historically high at some 76 per cent.

While the result has been – by definition – slow productivity growth, that is in many respects preferable to the joblessness that would have occurred otherwise: a low-paid job is typically a better platform from which to transition to a well-paid job than is being unemployed. That said, the economy would have grown faster had investment been stronger; and this in turn would have enabled productivity to grow faster.

At least part of the UK's labour market flexibility can be attributed to a relatively successful 'activation regime' – most notably the way that the benefit system has maintained work incentives.

The cost of UK labour is also well under the OECD average, notwithstanding the progressive scaling up of the minimum wage over recent years. Introduced in 1999 at just over 45 per cent of median hourly earnings for those aged over 25, the UK minimum wage now stands at around 58 per cent of median hourly earnings. Coverage of workers has doubled since its introduction, and its effects have rippled up the pay distribution.

The minimum wage has increased faster than both average earnings and inflation, with hourly pay growing more rapidly for the lowest paid than any other group, and the oldest, youngest, and female workers benefitting the most. In real terms, the UK minimum wage is now in the group of high minimum-wage OECD countries.

On the other hand, UK coverage of collective bargaining agreements and trade union density rates are below the OECD mean. Initial net replacement rates[1] and tax wedges[2] are low, although the marginal tax wedge for those earning well above the average is an exception to this rule.

Although a longstanding cheerleader for the narrowing of gender gaps in earnings and employment rates, and a critic of labour market dualism, and the poor integration of immigrants and ethnic minorities into employment, the OECD offers few specific policy recommendations on these issues where the UK is concerned. The same is generally also true where matters such as social benefits, labour taxation, severance pay, the minimum wage, or the wage bargaining system are concerned, although it is possible to make a strong argument in favour of changing the law to make it easier and less costly for workers to contest unfair dismissals.

Policy proposal

- *Leave well alone*

Active policies

So-called Active Labour Market Policies (ALMPs) represent an important secondary strand of activation strategies. ALMPs provide people who have become unemployed with new skills that help them remain in the workforce, and find alternative employment. They also serve to support work incentives for the unemployed.[3] The evidence is that they contribute importantly to higher average per capita income in the longer term; but they are expensive in the near term.

ALMPs are a particular feature of the Nordic countries, where they are judged to have been particularly successful; whereas in the US, such programmes are not generally regarded as an appropriate activity for the state. The UK's approach is closer to the US than the Nordics. In significant part this is the result of deliberate political choice.

UK government spending on ALMPs is only 5 per cent of GDP per capita, which is well under half the OECD average, and a fraction of that spent in the Nordic economies, Germany, Austria, Switzerland, and Australia. The evaluation literature suggests that a judicious increase in public spending on ALMPs that work could yield significant private and social gains.

The UK can be criticised particularly for the low quality of its training policies. For one thing, it has not proved possible to generate the degree of employer-union commitment to apprenticeships that so characterises the successful systems developed in Germany, Austria, Switzerland, the Netherlands, and Australia.

Many unsuccessful attempts have been made to implement a modern apprenticeship system in the UK, and yet another relaunch is currently underway including an apprenticeship levy. It remains to be seen whether it will do any better than previous attempts. The omens are not encouraging. The number of apprenticeship starts has dropped sharply since the relaunch, and fewer than one-third of employers who paid the levy increased spending on apprentices. Employers complain that the levy is too rigid and not well adapted to their skill needs, which is a pity given that it is a step in the right direction.

Furthermore, the UK has always tried to do apprenticeships on the cheap – the influence of the Treasury may be important here. The successful countries all spend (proportionately) much more on apprenticeships than does the UK. Australia is an obvious apprenticeship success story, yet it is revealing that in 2008–9 the public purse contributed the equivalent of GBP 18,500 for an average 4-year apprenticeship.

This is several multiples larger than the equivalent public subsidy in the UK.

It is also essential, in an economy subject to continual change, that workers, and not least mid-career and older workers, are equipped with the requisite skills and competences they need to remain in work, often in new activities. The UK faces a major challenge in this respect. It does not have a good track record, and there is a strong case for developing more effective incentives for both employers and workers to invest in upskilling. This could include individual training accounts for workers, which would be portable between employers: several OECD countries have innovated with some success in this area. There is a particular problem with ensuring greater access to upskilling opportunities for low-educated/low-skilled workers.

This point was emphasised in the recent report by the LSE Growth Commission (2017). The Nordics certainly do much better than the UK on this front. But once again, these countries spend much more, and have a strong social commitment to lifelong learning via their collective bargaining systems.

Policy proposals

- *Move progressively to the OECD average on ALMPs, especially for 16–24-year olds and low-educated/low-skilled job seekers.*
- *Remedy the weaknesses with the apprenticeship levy.*
- *Invest more in lifelong learning initiatives, with a special focus on upskilling needs for low-skilled workers.*

Another area where the UK could do better is in regard to general labour mobility. There is a high implicit tax rate for second earners returning to work, and child-care costs are also elevated. Labour mobility is, of course, further constrained by the high cost of housing, which has been exacerbated by a lack of social housing supply, and overbearing planning and construction regulations, in particular around Green Belts. This matter is taken up in the chapter on housing.

Policy proposal

- *Improve general mobility – especially housing.*

A related question is whether minimum wage legislation, and collective bargaining should be strengthened in an effort to address income inequality. The government reviews the National Minimum Wage annually, and retains plans for further increases. It currently stands at £8.21 an hour, and is due to rise to £8.60 an hour or 60 per cent of median income in 2020. The government has also commissioned a study to be conducted by US academic Arin Dube to look into whether yet further increases should be employed as a means 'to end low pay' and in-work poverty. One proposal under discussion is to push it up to 66 per cent of median earnings, which would mean as many as a quarter of the workforce would have their wages dictated by the minimum wage. The Labour Party has announced similar plans.

So far, increases in the minimum wage have been popular, attracting both cross-party support and the backing of both employer and worker representatives. Contrary to the fears of many, and notwithstanding increasing employers' wage bills, it has had surprisingly little impact on employment growth, as firms have responded by reducing profits, increasing prices, cuts to non-wage costs, the restructuring of workforces and pay structures, and increased output through productivity increases. However, the Office for Budget Responsibility has warned that setting the minimum wage at 66 per cent of median income could cost 140,000 jobs.

It remains to be seen whether the overwhelmingly positive judgement on the minimum wage will endure through further increases and the next downturn but, assuming that it does, it should in our judgement remain, as representing a good balance between labour market and redistributive policy. That said, while the minimum wage is an effective instrument to tackle earnings inequality and in-work poverty, it is much less effective as an instrument in cutting overall poverty rates since many minimum-wage earners live in multiple-earner households. To tackle poverty effectively it is necessary to consider the minimum wage strategy together with the entire redistributive impact of the tax-transfer system – see the paper on *Inequalities*.

Turning to collective bargaining, less than a third of all employees in the UK are today covered by collective bargaining. In the private sector, coverage is lower at around one-sixth and the key bargaining level is the company or the workplace. In the public sector, where almost two-thirds of employees are covered, industry level bargaining is more important.

In its latest Jobs Strategy, published at the end of 2018, the OECD concluded that: collective bargaining could be an effective means to reduce inequality, raise productivity, manage industrial change, and raise employment, and generally improve labour market resilience.

In this context, it could be argued that some rebalancing of the worker-employer relationship in the UK would be appropriate, and in particular that a broadening of the coverage of collective bargaining should be encouraged.

That said, Britain does not want to return to excessive, and destructive, trade union power of the 1960s and 70s, which was characterised by the 'closed shop', an absence of pre-strike ballots, unofficial and secondary industrial action, mass picketing, immunity from actions in tort, and politically-motivated strikes.

Policy proposal

- *Maintain something like the present policy settings as a good and workable balance between labour market and redistributive policy.*

Product market and competition policies

These are judged by the OECD to be the most important element of structural policy after those relating to the labour market. Competition raises product awareness, keeps prices down, raises real incomes, encourages differentiation, encourages the more efficient use of resources, and increases consumer satisfaction. There is also for the most part a strong positive correlation between competition and productivity, and especially for firms either far from, or close to, the technological frontier.

The UK is one of the most lightly regulated economies in the world, scoring well below average in almost all of the analytical categories established by the OECD. This applies in the energy, transport, and e-communications sectors, and in retail and especially professional services. Public ownership is strictly limited, there are generally few distortions to the private sector induced by state involvement, and barriers to domestic and foreign entry into UK industry and entrepreneurship are low.

The only areas where the UK scores below the OECD average are: the complexity of some regulatory procedures (although this has declined significantly over the past decade); and the governance of the residual state-owned enterprises. Even then, the UK performs significantly better than those at the bottom end of the OECD scale.

Of course, low regulation does not necessarily mean good regulation, but it is noteworthy that, notwithstanding its poor recent productivity performance, the OECD's structural policy recommendations for the UK are confined to areas other than the product markets.

Meanwhile, however, there is mounting evidence across the globe of growing industrial concentration, not least as a result of the activities of the so-called FANGS, which are cash-rich, avoid taxation, and whose business strategy is to buy up serious competitors. The fear is that this could lead to oligopoly, or even monopoly, which over time would slow investment spending, and productivity. Hence, the UK badly needs to sustain a serious, toothsome, competition policy. But if it acts alone too aggressively, it risks the distributive consequences of untrammelled market forces.

This is a rapidly changing area, and it is important to follow and be aligned with best practice. Hence the UK should in general act in concert, in international fora (principally the OECD) with other countries. The implication is that the UK policymakers should: prioritise the preservation of its existing regulatory advantages; and resist infractions to the existing structure, unless there is a strong national security, or distributional rationale for doing so.

This may be easier said than done, however. The disruptive implications of Brexit, climate change and technological progress, together with the threats posed by protectionism and bilateralism, suggest that there will be strong pressures for greater levels of intervention.

Policy proposal

- *Align with the policies of the EU, except where the UK wishes for a (generally stronger) alternative.*

The political-economy challenge of policy reform

There should be no illusion about how hard it is to effect structural change.

Nor is change easy to effect. Experience of policy reform (de Serres *et al*., 2011) in advanced countries offers a number of pointers that, properly taken into account, can contribute importantly to the success of such reform efforts.

Evidence based. Policymaking needs wherever possible to be evidence-based. Starting with a blank sheet of paper can be dangerous – it is almost impossible to foresee all the likely consequences. Often it is appropriate to learn from best practice in other countries.

A number of lessons can be drawn from experience in OECD economies:

- *Good policy or good economics involving reform is not necessarily bad politics*. While there have been important exceptions, many governments that successfully adopted and implemented reforms for which they had prior electoral mandates subsequently went on to win re-election.[4]

- *More haste can lead to less speed*. While governments need to be prepared to exploit political windows of opportunity for reform, those that are embarked on hastily can prove difficult to sustain. Making use of political diversions to mask or hide controversial reform is also less effective for a long-term gradualist reform. Successful reforms often have relatively long gestation periods, involving considerable study and consultation.

- *Positive momentum needs to be sustained*. In today's circumstances, a gradual approach is unlikely to succeed. While there can often in theory be an optimal sequence for a range of reforms, in the real world this is often impractical.[5] The sense of national crisis over Brexit needs to be turned to good account.

- *Creating 'early winners' can help to change expectations* and build interest in pressing for completion, thereby generating momentum for reform. That said, 'low-hanging-fruit' strategies can also pose problems of their own. Actions that start with certain sectors, and are seen as a harbinger of deeper reforms, may lead opponents to adopt an intransigent position to stall the process, even over relatively minor measures.

- *Policy needs the broad support of the people*. While policy has to have at least tacit acceptance by a majority of the people, in some cases it needs to be driven by the public will. The classic historical example is the development of the UK welfare state during and after the Second World War. At that time, popular support for a concerted effort to slay the 'five giants' of squalor, ignorance, want, idleness, and disease was sufficient to overcome government misgivings about cost and broader feasibility.

- *There has to be a broad political constituency for reform*: in addition to popular support, political support has to be broad-based (preferably cross-party) and from the top of government down. Disunity can lead to incoherence of the measures proposed: compromises adopted to appease various stakeholders complicate reform.

- *Social media can complicate the process of garnering public support*. It is noteworthy how in France the '*gilets jaunes*' used social media to whip up opposition to government reforms. That said, President Macron, in response, launched a national dialogue on the reform process, and participated actively in debates at the local level. He listened and this process helped to buy off much of the *gilet jaunes* movement. This provides an interesting example of how a political leader can lead the process of reform.

- *Strong institutions are needed to support reform*: the ability, credibility, cohesion, and firmness of purpose of the political structure has to be emulated throughout the country's institutions (legislative, operational, and informational). Political systems and institutions that allow the fostering of opposing powers to go unchallenged, and that cannot effect change quickly enough, often damage reform processes.

- *Strong leadership*: policy has to be led by a well-trained, respected, committed, and cohesive team which includes technocrats and 'technopols'.[6]

- *Agents of change at all levels*: it helps considerably if there are agents of change –'points of light' – throughout society, ranging from business people to journalists to NGOs. These people provide vocal, local, and credible support, which aids the communications process.

- *Policies have to be both concrete and feasible*. The agenda has to be easily understandable to the general public. While institutions can be changed, when designing policy due account has to be taken of a country's history: the issue of 'how to get from here to there' is real.

- *Ability to assess and credibly demonstrate progress* – both quantitatively and qualitatively. Maintaining policy momentum is aided considerably if the public can see progress being made. Making this visible, credibly, may require institutional change – including perhaps creation of independent bodies with power of oversight.

- *Policies inter-relate:* hence it is often counterproductive to consider them individually, in isolation from one another. Generally, all major areas of policy have to be considered together.

NOTES

1 Defined as the proportion of expected earnings after tax which is replaced by benefit payments.
2 Defined as the ratio of the amount of tax paid by an individual worker, and the total labour cost to the employer of that worker.
3 Part of the role of ALMPs is to serve as a 'threat effect' to maintain work incentives among the unemployed. This occurs as continued receipt of unemployment benefits is conditional on participation in an ALMP if a slot is offered.
4 See for example de Serres *et al.* (2011), *op. cit.* and the references contained therein.
5 OECD and IMF econometric evidence supports the view that the most promising time for reform is immediately after a recession or election. In reality, however, there is rarely a good time to implement reform, and economies often have to live with the consequences that emerge from sub-optimal policy sequencing.
6 See for example de Serres *et al.* (2011), *op. cit.* and the references contained therein.

REFERENCES

de Serres, A., Llewellyn, J. and Llewellyn, P. (2011), 'The political economy of climate change mitigation policies: how to build a constituency to address global warming?', OECD Economics Department Working Papers, No. 887, OECD Publishing, Paris, https://doi.org/10.1787/5kg5d5nhcnkb-en.

LSE (2017), *Growth Commission Report*, February, http://www.lse.ac.uk/researchAndExpertise/units/growthCommission/home.aspx .

DEVELOPING TRADE

David Vines,* Paul Gretton** and Anne Williamson***

Executive Summary

The UK faces no easy options in determining how to develop its approach to international trade post-Brexit. If it finally decides to leave the European Customs Union and Single Market, it faces the possibility either of simply crashing out of the EU without a deal; trying to form market-access agreements and Free Trade Areas (FTAs) with the EU and other countries; or unilaterally reducing tariffs and liberalising trade with all countries. Each course raises significant practical difficulties, and entails major disadvantages compared with staying in the Customs Union and Single Market.

The economic costs of a 'no-deal' approach stand to be very large, including inevitable tariffs, obstruction of UK access to EU markets, physical disruption at borders, a damping of investment and the much-discussed problem of the Irish border. Assuming 'no-deal' does not happen, negotiating FTAs with other countries would be possible only after a lengthy transition period, as in the Withdrawal Agreement voted down in Parliament, and would depend on the shape of the ultimate post-Brexit trading relationship between the EU and the UK. The process would be difficult, costly, and protracted; would likely be concluded on disadvantageous terms; would be even harder to apply to trade in services; and would yield extremely small gains given the volume of UK non-EU trade that is already covered by FTAs. Finally, unilateral liberalisation, while ameliorating some of the drawbacks of the first two options, faces the same problems of loss of access to European markets and disruption to trade; and would entail severe economic pain with only very gradual gains.

The UK needs to conduct a much more profound and considered debate on these issues before deciding to set aside the large benefits of membership of the Customs Union and Single Market for the significant difficulties and tenuous gains offered by the alternatives. Public debate on the economic effects of trade policy has so far lacked the detailed but necessary analysis of these questions. It seems essential to establish a national policy review institution, modelled on the Australian Productivity Commission, in order to stimulate such a debate.

Introduction

Remain supporters argue that the UK should stay in the European Customs Union and Single Market. But if the UK does not do this, it will be faced with a stark choice between just three possibilities:

1. *The UK can merely withdraw into a more protectionist environment*, simply crashing out of the European Customs Union and Single Market. This is the 'No Deal' Brexit option.
2. *The UK can withdraw into a protectionist environment in which it leaves the Single Market and Customs Union*, but at the same time it can attempt to form free-trade areas (FTAs) and wider economic partnership agreements both with the EU and with other countries outside Europe. This was the policy of Theresa May's government.

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3. *The UK can leave the Customs Union and Single Market but attempt to do this in a way that is not protectionist*: instead of attempting to form independent FTAs, it could aim to reduce its own tariffs and liberalise its own borders with all countries, in an attempt to open up its trade with the rest of the world. This possibility – 'unilateral trade liberalisation' – has been advocated by some Brexit supporters, including Patrick Minford.

This paper discusses the merits and demerits of each of these three possibilities.

The costs of a No-Deal outcome

The economic costs to the UK of withdrawing from the Customs Union and Single Market without a deal stand to be very large: 44 per cent of the UK's exports went to the EU in 2017, and 53 per cent of the UK's imports came from the EU. There are three issues.

First, no deal would necessarily lead, immediately, to tariffs being imposed on UK trade with Europe. The EU would have to impose tariffs on imports to Europe from the UK which are the same as the tariffs which the EU imposes on imports from all other countries that belong to the World Trade Organization (WTO); the EU will not choose to reduce those general tariff rates just for the sake of the UK. Similarly, the UK would impose tariffs on imports from Europe at the same general rates as it imposes on all other countries.

It is true that EU and UK tariffs are now small, apart from those on textiles and clothing (for example a tariff rate of 12 per cent on trousers), on heavy industry goods (including motor vehicles on which the tariff rate is 10 per cent), on agricultural goods, and on certain processed agricultural products.

Nevertheless, these tariffs would impede exports of goods and services from the UK to the EU, and *vice versa*, raising costs to UK consumers and industry. By raising business costs, the tariffs would interrupt international supply chains of which UK firms are part. The effects would be much larger than it seems at first sight because tariffs would be levied at each point in the supply chain, both in the EU and the UK. The result would be lower UK living standards. This is what 'leaving the EU on WTO terms' actually means.

Despite what has been claimed by no-deal supporters, the UK would not be able to escape this problem by choosing to apply zero tariffs only on its imports from the EU: the WTO's Most Favoured Nation (MFN) rule prevents this. That rule prohibits countries from discriminating between different WTO members in the tariffs which they levy; all imports must face the same tariff, except where countries are part of an FTA. As discussed below, in order to moderate the economic and social costs of transition, the UK would not wish to set zero tariffs on *all* imports from everywhere in the world on the day that it leaves the EU without a deal; nor would the EU be likely to do this in order to let in imports from the UK.

It might seem that Article XXIV of the General Agreement on Tariffs and Trade (GATT) would allow tariffs to be removed only on trade between the UK and the EU. But it would do so only *after* an agreement had been reached by the UK and the EU to form an FTA. It has also been suggested by no-deal supporters that the WTO might allow this even if the UK and the EU had merely signed an 'interim agreement', before actually signing an FTA. But such interim agreements are nevertheless agreement between two parties, and the EU shows no enthusiasm at all for signing one. Furthermore, they are permitted by the WTO only if an interim agreement for an FTA has already been adopted, which would not have happened in the case of a 'no deal'.

Second, withdrawing from the EU's Single Market without an agreement would mean that the UK would immediately withdraw from Europe-wide regulatory processes. As a result, UK exporters to Europe would require certification that they satisfy European standards. This would be true in many European markets, including – but going way beyond – agriculture, aerospace, air transport, automobiles, telecommunications, and pharmaceuticals. Furthermore, the UK would lose its access to the EU financial market, and to markets for other services. Contingency plans for the necessary cross-country flow of data in all of these markets are seriously lacking, partly because these flows are managed by the corresponding regulatory agencies.

Third, a 'No deal' would cause massive physical disruption at borders, the result both of the imposition of tariffs and of the need to comply with standards. At present, there are no good estimates of how large these effects stand to be. But it is clear that small effects would ramify: logistics linking UK and EU markets would be at risk; delays at borders would damage retailing in the UK; delays in the entry of parts would impede the production of finished cars and other manufactures. Interruptions in the importation of radioactive isotopes would put cancer and other medical treatments at risk. Many more activities would be disrupted.

All these effects would depress investment in the UK – in particular investment by British firms and multinationals aiming to serve the European market by exporting from the UK. Productive potential would sag and UK competitiveness in global markets would decline, while consumers would be worse off. Substantial long-term negative effects on GDP and national income can be expected. These would damage tax receipts and limit the ability of government to provide all manner of public services, including health. Such national protectionism would greatly damage the UK's future.

Fourth, there is the issue of the Irish border. Because Ireland is a member of the Single Market and Customs Union, the EU will require a hard border between the Irish Republic and Northern Ireland, as and when the UK leaves the EU, just as the EU requires a hard border with any other country. Such a border would put at risk the Good Friday peace agreement of 1998. Partly as a consequence, last December, the UK gave an undertaking that it would maintain an open border between Northern Ireland and the Irish Republic. Resolving this contradiction requires a technological solution that is agreeable to the EU. So far neither technological solution nor European agreement are on the horizon, imposing a serious barrier to the negotiation of a mutually acceptable Brexit deal. The uncertainty created by the prospect of a hard border is already harming investment and economic activity in both Northern Ireland and the Irish Republic.

How much could be gained by agreeing FTA deals with the EU and other countries?

The aim of the previous UK government was to achieve Option (2): not simply to leave the Single Market and the Customs Union, but first to negotiate the UK's own new agreement with Europe, and at the same time to negotiate agreements with other countries. This will take time, and so – to avoid the problems of a hard Brexit – necessitates a transition period.

The agreements that might be reached with Europe spread across a wide range of possibilities. The closer the alignment on tariffs and standards which the UK retains with Europe, the easier it will be to avoid the loss of foreign firms which have used investment in the UK as a platform from which to serve the European market (for example in the car industry). But the more this happens, the less the room for the UK to reach independent agreements with other countries. And, conversely, the larger the number of agreements on tariffs and standards that are reached with other countries, but which differ from those in Europe, the more checks there will need to be at borders between Northern Ireland and the Irish Republic and, more generally, between the UK and the rest of Europe.

During any transition period, the UK would need to maintain a common rulebook with the EU on a range of goods, including food, so as to provide for frictionless trade at borders with the EU. And a customs union agreement would need to remove the need for tariffs, checks on country of origin, and checks on compliance with rules and standards. These would be rules and standards over which the UK has no jurisdiction. These features were incorporated in the Withdrawal Agreement negotiated by Theresa May.

Any transition agreement also has to deal with services. In Theresa May's Withdrawal Agreement, the UK would not have aligned with EU financial regulation at the time of its departure from the EU, possibly in order for the UK to avoid losing control of the regulation of its very large financial sector. But this meant that the UK would have immediately lost current levels of access to European financial markets. Whatever happens, the UK will need to seek some kind of mutual recognition of standards in financial services, and of professional qualifications and standards in other service industries. It will take time to put such arrangements in place; much disruption would be inevitable during transition and the outcome is likely to fall short of current levels of access.

In any new agreement to follow on from transition, the UK might hope to attain the right to participate in relevant EU working groups and technical committees so that it might play a role in designing and implementing rules, even if it had no voting rights. But, in due course, any trade agreements which the UK reaches with countries outside Europe would – of necessity – mean that border checks between the EU and the UK on tariffs, on country of origin, and on compliance with standards would need to be introduced. This would – of course – trigger the Irish-border problem.

Even ignoring these European constraints, the gains likely to be obtained from negotiating FTAs with other countries are likely to be extremely small, for four key reasons:

- First, the cost of actually negotiating agreements is high, and the negotiations are time-consuming.

- Second, 'gravity' analysis suggests that, even if the UK were to achieve deep, significant, FTAs with non-EU economies, the distance of trading partners matters, as does size in terms of population and income. The EU is large, wealthy, and on the UK's doorstep; other countries are mostly further away, small, or poorer. Although regions outside of Europe may be achieving higher economic growth, raising mutual trading opportunities, the ensuing economic benefits for the UK may be slow to be realised at a nationally meaningful scale. Even rapid growth from a low base still produces a small number.

- Third, such agreements inevitably include regulations designed to enforce preferential rules of origin. These rules mean that the take-up of negotiated market-access preferences would be only partial, as is the case with all FTAs; they also sap productivity because they can lead firms to replace imported inputs with higher-cost domestic substitutes.

- Fourth, discussions over standards are always difficult. The UK might need to concede lower standards in such negotiations – the 'chlorinated chicken' problem – thereby driving a wedge between standards in the UK and those in the EU. The UK might not wish to do this, which would make negotiation more difficult and time consuming.

Further difficulties would arise for the UK because, when it leaves the EU, it will drop out of FTAs which the EU already has with countries receiving another 17 per cent of the UK's exports of goods, including Korea, Canada, Singapore, and the countries in EFTA. The UK is seeking to roll over these agreements, and has now done so with countries making up about half of the relevant trade. But these rollover agreements cannot reproduce current conditions, because the EU will not allow UK output to count as local content in satisfying the EU's rules of origin (even if the UK agrees to allow EU output to count as local content in satisfying the UK's rules of origin). These agreements can also not allow the mutual recognition of standards to be carried forward, because these countries' agreements with the EU tie them to EU standards, from which the UK may well diverge in the future.

What is more, some countries, including Canada, have recently become less, rather than more, reluctant to renew their FTAs with the UK. This is mainly because the UK is of smaller size than the EU. But it is also because, as discussed below, the UK has said that, if there is a 'No Deal' Brexit, it will lower many of its tariff rates, reducing the preferential benefits which such countries might aspire to receive by renewing their agreements with the UK.

Related difficulties would arise for the UK in that it will not be included in the FTAs which the EU is currently negotiating with countries that receive a further 19 per cent of the UK's exports. To make up for this gap, the UK would need to negotiate its own separate agreements with these countries over time. The outcomes of such negotiations might be much worse for the UK than for the EU, because the UK will have much less to offer in these negotiations than does the EU.

Some have suggested that the European Free Trade Area, or EFTA, might help to provide some kind of desirable outcome for the UK. This is an already existing agreement between four European states: Iceland, Liechtenstein, Norway and Switzerland, one which is flexible, in that it leaves members free to negotiate free trade deals bilaterally. But the four EFTA states are tiny and so do not provide good examples for the UK. Even Switzerland has a population of only 8.5 million. What Switzerland, and the others, do well is concentrated in very few specialised sectors about which particular arrangements have been made. This would not carry over to the UK. Furthermore, it does not solve the Irish border problem. Nor does it deal with any of the regulatory problems that leaving the EU would cause for the UK.

Over the past 20 years there has been a global shift towards services trade, with the UK at the forefront. Services trade today contributes around half of the value of UK total exports of goods and services: the export surplus of services from the UK supports its deficit in the import of goods. The trade in services by the UK with the EU has multiplied by some 350 per cent since 1992, whereas trade in goods has only increased by 60 per cent over the same period. Financial services make up a particularly large part of this growth.

However, most existing trade agreements only scratch the surface when it comes to services, partly because standards-setting and behind-the-border measures are so important in service industries. New FTAs are therefore unlikely to provide early gains to make up for any gap left by the UK's exit from the EU or add much to underlying growth in UK services provision through diversion of services trade from other centres. (The complexity of services trade agreements is brought out clearly in the following paper, *Developing Trade in Services*.)

With the UK contributing only about 3 per cent of world gross product, it is unclear how powerful the UK would be in any negotiations for either goods or services. Any negotiation partners are unlikely to want to take the UK as a standard setter. Any hub and spoke system, with the UK at its centre, is extremely unlikely, even in services. In all likelihood, the UK would need to choose between European standards, over which it will have little control, or foreign standards, over which it would also have little or no control.

It thus appears that attempts to form new high-yielding FTAs would likely be problematic, due to the uncertainty, regulatory costs, and negotiation challenges that will be entailed, and to the distance of potential partners. Such attempts could not mitigate the potential losses of Brexit in any notable way, unless, that is, the UK is unusually successful at negotiating trade agreements in services.

Some insights from history are important here. During World War II, the UK was compelled by the United States to dismember its Empire. This was the price extracted by the US for helping the UK – and its Empire – win the War. Article 7 of the famous Lend Lease Treaties required that the UK promise to terminate its existing preferential trading arrangements which then took the form of the Imperial Preference. This rebalancing took much time. And when the UK joined the Common Market in 1973, Commonwealth countries such as Australia, New Zealand, and Canada found new markets in Asia, the US, and beyond; or adjusted out of producing the commodities which they had sold to the UK.

Nearly fifty years later, these Commonwealth countries will not necessarily revert to trading with the UK along historic patterns, even if the UK forms FTAs with these countries, especially now that the EU has an FTA with Canada and is negotiating one with Australia. And the UK would be quite wrong to expect special treatment from President Trump's America: remember those Lend Lease Treaties.

How much could be gained through the pursuit of unilateral trade liberalisation?

Might unilateral liberalisation (Option 3) combined with domestic reform efforts, be an alternative way of mitigating the negative effects of leaving the Customs Union and Single Market? The previous government announced plans on 13 March that, if the economy were to leave the EU without a deal, tariff rates would be cut to zero on imports from all countries for a wide range of goods. But, nevertheless, it also announced that this would not be done for many of the goods that currently have high degrees of protection, including agricultural products, footwear, clothing and cars. It is not yet clear how far the new government would plan to go in this direction, if there were to be a 'No Deal' Brexit on 31 October.

According to the 'No-deal' supporters, the aim of the UK would be to open its external borders, on a Most Favoured Nation (MFN) basis, to trade with both Europe and elsewhere. The UK would seek to increase its trade with the most rapidly growing parts of the world, including especially the Asia-Pacific Region. Clearly, an FTA with Europe would not be a core part of such a plan.

There may appear to be advantages in such an approach. The Asian region has more than half the world's population, with around two thirds of global growth up to 2030 likely to be in Asia. Looking forward ten or twenty years towards countries growing much more rapidly than Europe, it might seem appropriate to face outwards towards those regions; coupling this with domestic reform efforts; and orienting regulatory standards more to those regions where appropriate. UK markets would be opened to imports from the rest of the world, and domestic policies would be adopted to facilitate even more export oriented activities – both to the rest of the world and to Europe – and encourage UK firms to specialise at what they are best at, according to the country's endowments and commercial advantages. However, there are both domestic and foreign reasons why this is also not an ideal strategy.

Domestic difficulties will be of two kinds. First, the key problems associated with 'No-deal' remain in place – loss of preferential access to European markets, disruption of trade with Europe, the loss of integration into European standards-setting processes and the need to set new standards, either in agreement with Europe or with new regions. It is these very reasons that propel the pursuit of Option (2).

Second, the compensating benefits of not pursuing Option (2), and instead acting independently to liberalise the UKs own trade, would come only gradually. This is because the immediate removal of all tariffs on imports would be highly disruptive, particularly in activities and regions currently favoured by relatively high assistance. Structural responses to policy changes such as this take time: withdrawing support from sensitive industries without a long transition period would be economically and socially disruptive.

In addition, such changes would need to be coupled with currency depreciation – which in the short run causes inflation and depresses living standards – in order to encourage the exports and import replacement needed to replace the activities that have been displaced. The experience of unilateral trade liberalisation elsewhere – such as in Australia – suggests that while substantial longer-run economic gains are achievable, long lead times are necessary and adjustment is less disruptive if undertaken gradually. Both before and during the transition period, widespread public discussion is necessary in order for a shared public commitment to greater trade openness to be achieved, and policies need to be coupled with extensive support for those who are likely to be disadvantaged. This is the opposite of the austerity environment that would necessarily accompany Brexit.

The kind of adjustment difficulties that would emerge are already apparent. Expansion of trade with low-wage economies has affected production and labour market outcomes in the UK. Over the past 20 years, goods imports from the world to the UK have doubled; from China they have risen fivefold, and from Eastern Europe they have increased sixfold, particularly in the computing, electrical, apparel, and automobile industries. Very significant adjustment would be required if the UK were to further liberalise its trade with the rest of the world, admitting additional imports at the expense of its most vulnerable trade-exposed sectors, and seeking additional exports in current and new exporting activities. This is a huge political-economy task. It would require a shared political commitment to a new regime, across geographical regions and political groupings – one that does not seem possible to achieve in the UK at present.

Some history is helpful here too, this time from Australia. That country provides an example of how to carry out a policy of effective unilateral MFN liberalisation of trade; it shows that there are certain misconceptions to avoid.

First, unilateral reductions in tariffs do not necessarily imply immediate removal of all tariff protection across all sectors. In Australia's experience, changes were gradual and part of a carefully considered process, extending over more than 20 years, in which Australia moved from being one of the most protected economies in the world to being one of the most open.

Second, Australia did not seek simply to reduce tariffs and border protection, and open up to foreign competition. Rather, those reforms were led by the Labour Party and accompanied by broader economic reforms for the benefit of all Australians, including those supporters of the Labour Party, and members of trade unions, who stood to be badly affected by trade reforms. This gave the proposed changes more political weight, and eased the adjustment pressures. (The contrast with the 'big bang', anti-trade union approach of the Thatcher reforms in the UK is striking.)

Third, Australia did not begin from a position within a widely integrated international market such as afforded by the EU. Its unilateral liberalisation did not start by sacrificing an already existing liberal trading relationship.

Foreign difficulties for this plan are apparent in the Asian region itself. This part of the world has seen a huge growth of markets and opening up to imports. Until recently, this has been characterised by 'open regionalism', with countries opening up on an MFN basis under the auspices of the WTO, APEC, and ASEAN. But achieving greater access to Asian markets may now be harder than it seems, and not just for reasons of gravity. The region is now turning towards its own regional preferential trading arrangements, and these will be difficult to join. The Regional Comprehensive Economic Partnership, or RCEP, an ASEAN+6 initiative, is coming to fruition. In addition, a Trans-Pacific Partnership Agreement has now been achieved, TPP – 11, one that has been established without the US but which keeps arrangements open for the US to join.

These policy developments in Asia show that Asian countries are no longer opening their markets on an MFN basis in a way that would be particularly useful to the UK. Gaining access to Asian markets would involve not just stimulating the UK's own export competitiveness but also negotiating access to regional trading agreements to achieve an equal footing to trading partners in the region. Again, this takes time, and it is already being done by the EU, which may in turn put pressure on the UK because – as discussed above – the UK will have less to offer in these negotiations than does the EU.

It is particularly important to consider the challenges that China, Asia's largest economy, presents to the UK. If the UK wishes to prepare for what is coming after Brexit by linking with China, it needs to build a closer relationship with China, and to plan accordingly. In particular, it appears unlikely that the financial sector in China will be opened up in the near term, given that it is still largely government-controlled, and full access on commercial grounds may be difficult. More generally, China's outlook remains protectionist. For China, 'globalisation' means market access for Chinese goods: in contrast, the UK will be seeking market access for its exports of goods and services.

It is also important to consider the challenge that China presents to the global trading system. Dealing with this will not be easy, as the US retreats from its role as global hegemon. In Asia, a number of countries, including Japan, India, Indonesia and Australia, are joining together in an attempt to manage China's Belt and Road Initiative (BRI), and thereby prevent Chinese domination of trade in the region. Asia's Regional Comprehensive Economic Partnership is a plan for regional cooperation that many hope will help manage BRI. The aim is to ensure that BRI remains multilateral in outlook, something that the Marshall Plan achieved in Europe after World War II. The UK will need to engage with this global challenge as it opens its trade with China. Further, as the Chinese economy matures and comes closer to the global technological frontier, the nature of the UK's trading relationship with China will need to mature, as China moves from being an exporter of manufactures to being a global leader in some areas of technology and in the production of many kinds of services.

Conclusions: What strategy for the UK?

Three alternatives to remaining in the Single Market and the Customs Union have been considered here. None gives grounds for immediate optimism. Four general conclusions emerge.

First, it will be important for the UK to avoid an elementary mistake. It would be very odd were the UK to set aside membership of the Customs Union and Single Market in order to pursue partial liberalisations of trade via regional trading arrangements with a small number of other trading partners outside Europe. And the unilateral opening up of the UK's trade with the rest of the world would be unlikely to square this circle easily in the foreseeable future.

Policy proposal

- *Pursue continued membership of Customs Union and Single Market*

Second, the Irish border issue is critical. If the UK carries out the government's preferred option (2), or if option (3) is pursued, a hard border will need to be established between Northern Ireland and the Republic of Ireland, just as in Option (1). It is hard to see how this can be avoided without the UK remaining a member not just of the European Customs Union but also of the Single European Market.

Policy proposal

- *Make sure that a hard border between Northern Ireland and the Republic of Ireland is avoided.*

Third, these decisions on Brexit and trade policy are connected with the big political-economy choices now facing the UK. There appears to be a need for a national policy review institution in which reforms, of both domestic policy and trade policy, can be analysed, according to their implications for the UK's national interest. At present the UK does not have an institution in which these issues can be clearly considered – they go way beyond the issues examined by, for example, the Competition and Markets Authority. Partly as a result of this, public debate, including that in Parliament, has so far lacked any detailed analysis of the economic impacts of potential trade arrangements. Instead, it has proceeded in a largely polemical manner. This subject is too important for such treatment.

A possible model is provided by the Productivity Commission in Australia, an institution with a history of considering the connections between trade policy and domestic economic policy. The Productivity Commission gave public advice on the liberalisation of trade which happened in Australia in the 1980s and 1990s, considering implications for particular industries and regions, investigating the associated changes that were required in education and in training, and later examining policies for wider national economic reform, for labour market reform, and for immigration, amongst other things.

The questions now facing the UK include examining the connection between Brexit and the Northern Powerhouse. How might trade policy sustain and promote the growth of Northern England? Beyond this, what trade policy would best suit Scotland, Northern Ireland, and Wales? And what policies should the country adopt to support a growth of exports to Europe and beyond? Such conversations will be important in re-establishing a sense of national solidarity amongst the different groups in the UK who are now pitted against each other. A UK Productivity Commission would be an important place in which such conversations could begin, and it could grow naturally from the trade and wider national policy issues being confronted in the Brexit debate. Importantly, such a domestic organisation would provide independent advice to government, based on a public inquiry process, to inform decision making by Government. It will be the effectiveness of domestic institutions and policies that will determine how well the

UK adapts to the rapid changes in technology which are now happening in the global economy.

Policy proposal

- *Establish a national policy review institution to discuss future policies in the UK's best interest.*

Finally, decisions made on Brexit and trade policy will influence the UK's place in the world, and the UK is now in danger of being in a much lonelier place than in modern times. Immediately after World War II, the US, the UK, countries of Western Europe, and many other nations cooperated to establish global institutions to manage global economics and security: the UN, the IMF, the World Bank, the GATT (which later became the WTO) and the OECD. These institutions, and adoption by their members of the principles on which they are based, helped the world achieve unparalleled prosperity in the past 75 years. But the world is now changing. The framework is now being challenged by changes in the global economic architecture making it harder to safeguard the integrity of the global trading system. To meet these challenges, coalitions of like-minded countries that favour the principle of non-discrimination in international trade and a commercially-oriented, rules-based, trading system are essential. The UK, and the other members of the EU, are natural partners in the defence of this global system. Conversely, going it alone will be precarious for the UK and harmful for the world.

Policy proposal

- *Join with coalitions of like-minded countries to promote liberalisation of international trade and commerce.*

DEVELOPING TRADE IN SERVICES

Alexis P. Lautenberg*

Executive Summary

Services are simultaneously the most important sector of the UK economy and the sector facing the biggest challenge as a result of Brexit. The prospective departure from the European Single Market reduces the UK to the status of '3rd country' in respect of services. Accessing the internal market will depend on both subjective and objective conditions that differ from sector to sector, requiring detailed and highly specific arrangements for such industries as aviation and financial services.

In practice, the EU can be expected to use these circumstances to discourage the UK from significantly diverging from European regulatory norms, as a matter of policy. In view of the weakness of, and uncertainty surrounding, international moves to oversee, let alone to further liberalise, trade in services, Brexit will thus leave the UK's services sector – and especially financial services – uniquely isolated and exposed. The government will hence need to consider carefully the costs of decisions to diverge from EU regulatory standards, and should be giving great priority to establishing clear objectives for close cooperation between the UK and the EU policy makers and regulators.

Introduction

The economic consequences of the UK's exiting the EU will be determined in major part by the specifics of the arrangements ultimately agreed to. At issue will be not only its departure from the Single Market (SM) and Customs Union (CU), but also which elements of the Withdrawal Agreement (WA) will survive – for ultimately it is these that will shape the EU's post-Brexit propensity to cooperate with the UK.

The UK government's narrative about the SM and CU has more often than not presented the two concepts as largely inseparable. As far as goods are concerned, there is indeed considerable overlap, although even here it is not complete. Turkey is virtually part of the CU, but not of the SM. The other three EFTA members of the EEA – Iceland, Liechtenstein, and Norway, together with Switzerland – never joined the CU; and Switzerland is part of neither but has a specific agreement on goods standards.

In theory, at least, the UK has significant room for manoeuvre in respect of manufactured goods and agricultural produce by virtue of its willingness to engage in 'unilateral trade liberalisation'. But the case of services is fundamentally different.

'Services' is an integral part of the EU's so-called 'Four Freedoms' – the free movement of goods, capital, services, and labour – which are underpinned by (full) regulatory harmonisation. Hence any country that is not a member of the SM – any '3rd country', whether European or otherwise – is ultimately confronted by a difficult trade-off between harmonisation and discrimination.

The single most sensitive services-related issue is the level of regulation at its departure from the EU and thereafter. At that moment, UK's services regulations are completely aligned with those of the SM. But Brussels will watch extremely closely any move by the UK to diverge from the EU template. The EU can be expected actively to discourage the UK from regulatory divergence, as a matter of policy.

The EU approach

By defining freedom of movement as a principal red line in its strategy, the UK Government thereby

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excluded institutionalised participation in the SM. Given that services production in the UK is far greater in value than goods production, as well as being its most regulated sector, exiting the SM would represent a fundamental structural change.

To minimise the immediate consequences of this, a key element of the Withdrawal Agreement (WA) negotiated by the May government was the conversion of directly-applicable law into UK law, and preservation of domestic law related to the implementation of EU directives.

In the event of a no-deal exit, however, this agreement would – with the possible exception of a limited transition period – presumably be lost.

Given the growing erosion of the global institutional framework (more below), losing its SM affiliation would place the UK in the vulnerable position of having only '3rd country' status. This said, such a position would not differ greatly irrespective of the type of relation with the EU.

Because of its regulatory specificities, the SM's external dimension is characterised by the following features:

- Protecting the (often as yet only partially achieved) internal regulatory harmonisation, the extent depending on the sector;
- Ensuring that the '3rd country' jurisdiction offers a satisfactory level of market access (reciprocity);
- Assuring a measure of comparative regulation including the 3rd party's readiness to guarantee its authority in terms of implementation and oversight; and
- Promoting the EU's specific regulatory system at global level.

The complexity of arrangements, and the likely difficulties in reaching acceptable '3rd country' agreements can be appreciated simply by considering a number of the quantitatively more important areas.

Air transport

Air transport services are of considerable economic importance in themselves and a central plank of a number of policy pillars of the SM, including state aid and competition. They are also an interesting exemplar of the EU's outreach. They represent a contractual undertaking with the US, the 'Open Sky' agreement, which is a compromise in terms of market access for market structures that differ considerably on the two sides of the Atlantic. Furthermore, the two 'Open Sky' partners have agreed basically to go for mutual recognition of their respective regulatory systems, in particular in the area of safety.

While the EU has concluded a series of agreements with various overseas jurisdictions, Brussels has been adamant about its intention to create a European regulatory space, the European Common Aviation Area (ECAA). This includes the hard core of countries that have taken over the EU legislative 'acquis' in the area, as well as partners that have accepted European regulation as their benchmark. In some cases, the cooperation also extends to Eurocontrol, the organisation mandated to achieve safe and seamless air traffic management across Europe.

Thus, whereas in the US case the EU has settled for mutual recognition (regulatory cooperation), at the regional level, depending on the geographic location and the economic overlap of the partner, EU standards (regulatory convergence) are the norm.

This complex and challenging backdrop explains why in the case of the UK the EU devised, for the very short term, a unilateral, reciprocal, and time-limited contingency regime so as to preserve basic trade connectivity while excluding an extension of the SM level of market access. Hence, in the best of cases, the UK would either have to accept the principle of the 'acquis' (with everything that goes with it), or it would have to settle for a massive reduction of access to key 'air freedoms'.

The case of financial services (FS)

From the outset of the Brexit debate it was evident that, because of a number of near-unique characteristics, FS would be one of the hardest nuts to crack. In particular:

- There is a high level of post-2008 crisis financial regulation that reflects European socio-economic preferences, which seek to safeguard systemic stability, put in place an effective prudential framework, and protect consumers;
- However, while the 'package' is considered to be broadly achieved, the regulatory landscape remains incomplete; most conspicuously, where Capital Markets Union (CMU) is concerned. From a structural point of view markets remain disturbingly fragmented.
- The pivotal role of the UK's capital market has contributed to the centralisation of key market functions in London, to the advantage of the whole area. With the UK exiting the SM, the EU is set to impose harsher conditions on cross-border activities,

while adapting its regulatory regime to allow some of those functions to be carried out within the EU.

In moving to '3rd country' status, the UK's interaction with the EU in the area of FS stands to undergo a paradigmatic change. Because the EU's FS market access rules are fundamentally binary, there is virtually no room for 'bespoke' forms of cooperation. Of the entirety of the FS body of legislation enacted over the last ten years, only about half contain a '3rd country' provision. It is for those – and for those only – that the equivalence determination procedure applies, which means in practice approximately 40 areas.

Equivalence determination is carried out under the authority of the European Commission, in close cooperation with the competent supervisory authority, particularly as regards the technical assessment of the 3rd party's set-up and the contacts with the supervisors of the latter. In some cases, the interaction between the EU and the 3rd party regulator can take the form of a quasi-negotiation. But it is the Commission that selects the jurisdiction(s) that take part in the process, and ultimately decides, in the shape of implementing acts, on the determination as well as on possible conditions, time limitations, reviews and revocations. Thus, the equivalence procedure is both unilateral and discretionary in nature, to which the Commission adds the criteria of proportionality and risk sensitiveness.

In a recent communication,[1] the Commission has updated and fine-tuned its approach on equivalence in view of its forthcoming dealings with the UK. Basically, the adapted scheme stands to impact Brexit at two levels:

- On the political plane, precisely because FS represent such a central plank in the bilateral scheme of things, the EU can be expected to interpret its conditions broadly, which explains why the above text speaks of taking into account EU policy priorities at large. In other words, Brussels is definitively freeing its hands in order to set even unrelated conditions to 3rd parties.

- At the material level, the Commission stands to handle its assessments so as to ensure that London's propensity to move its FS regulation away from the EU standard is kept in check. This means that the UK Government would have to choose between a rock (its ability to utilise the advantage of having control over its level of regulation in the sector at large – including taxation) and a hard place (maximising its market access opportunities, i.e. its equivalence profile).

The evolving global context

After having grown into a quasi-global regulatory reference system in the wake of the financial crisis, driven principally by the Central Banks, the G20/ Financial Stability Board (FSB)'s disciplining role has steadily eroded. This is the result not only of a growing fragmentation and introversion at the top table, but also of a loss of functionality of (existing) multilateral bodies, that themselves are more and more inhibited by the political and economic realities at national and regional level.

Hence, the fading leadership of the traditional powers and the forceful advent of newcomers – with a different trade policy DNA – is progressively undermining the longstanding commitments underpinning multi-lateralism. (This trend has recently been defined as the new G minus 2 or G-2). Lacking a broader consensus, the potential for sectoral bodies, such as the Bank for International Settlements (BIS) and International Organization of Securities Commissions (IOSCO), to operate 'under the radar' is limited. The deeper implications of these changes obliges industry not only to navigate diverging – and more often than not conflicting – regulatory systems, but also to cope with a growing number of conflicting and extraterritorial measures (sanctions). Jurisdictions that are not part of a larger aggregation, would seem likely to move closer to, rather than further away from, the larger, integrated areas.

If the UK leaves the SM then, even in the event of a bilateral trade agreement with Brussels, trade in services will become a major issue, although this is unlikely to result in significantly improved market access. For without a contractual coverage of activities, FS would, for all practical purposes, be based on WTO/ General Agreement on Trade in Services (GATS) rules and commitments. And the liberalisation mechanism that underpins WTO/GATT has in the past proved largely inadequate for services: while the GATS and the Understanding on Commitments in Financial Services proved useful in terms of disciplines, they never developed into a functioning driver of liberalisation.

Given that services constitute the largest part of high-income economies, the bodies that regulate them face massive challenges at the interface of jurisdictions. In a situation in which mutual recognition is losing traction because of the lack of agreed comparability criteria, the intricacies and depth of domestic regulation, reciprocity and conditionality are returning to the forefront of the debate, thereby giving rise to increasing unilateralism.

At the moment of leaving the EU and (re)joining WTO on its own, the UK would have to file its FS schedule, which presupposes a clear vision of its global offensive/defensive priorities. Combined with an uncertain future of the WTO dispute settlement system, all this would require a both inventive and robust vision.

Conclusions

First, overall international strategic and economic cooperation is under acute duress. Introversion, regionalisation, and fragmentation are modifying the *modus operandi* – and in certain cases the very vocation – of global institutions. Such a backdrop seems a suboptimal moment for a player, such as the UK, to leave the EU, an institution that may not be perfect, but which at least tries to combine an internal functionality and a relatively liberal outreach. Hence, a form of separation should be devised that will set the conditions for constructive cooperation with the EU, both in regional and in global fora.

Second, notwithstanding the great importance of services, both at national and cross-border level, there was a limited degree of institutional rule-setting even before the present deterioration of international cooperation. While the G20/FSB did play a key role in the aftermath of the financial crisis, that momentum was lost due to the difficulties of various institutions in implementing broader commitments agreed at the top. GATS, since its inception, tried to extend the GATT/WTO system to services, but never went beyond the setting of principles and rules. In other words, GATS never developed a dynamic mechanism of liberalisation. Consequently, an independent UK would have to be aware that its membership of GATS represented a weak regulatory replacement for the defence of its interests, all the more so given that the WTO's dispute settlement system faces an uncertain future.

Third, the EU's policy on market access for FS is fundamentally binary. Given that the UK has excluded free movement, it thereby has to accept '3rd country' status. This will remain basically the case whatever the UK's chosen trade policy option. In the FS field, after having tried to get Brussels to consider the principle of mutual regulatory recognition for months, the UK Government came to the hard reality that the equivalence process was the only regime on offer. Although the latter was initially a strictly unilateral and largely discretionary affair, the EU has recently broadened the determination criteria. This could mean that in the UK's case Brussels could easily make its readiness to consider assessing equivalence in a given area dependent on London's more general position vis-à-vis Brussels (i.e. on elements of the Withdrawal Agreement).

Fourth, and on the material level, Brussels will henceforth monitor, and in painstaking detail, the UK's post-departure regulatory trajectory. By recently adding the notions of proportionality and risk sensitivity, the EU is clearly signalling how it intends to measure regulatory divergence in practice. That said, the case of the UK is special, because its Financial Services body of regulation was identical up to its departure. Given the UK's 'genetic' regulatory baggage, it would make sense for London and Brussels to create a regulatory platform that would oversee their bilateral interaction, at least at the beginning. Consequently, the UK Government would have to evaluate carefully, at every step, the advantages and costs of regulatory divergence.

Finally, it would seem to be of the uttermost importance for the UK Government to plan the next stage of the Brexit process by agreeing on a hierarchy of objectives. Services in general, and financial services in particular, do not seem to have been accorded sufficient attention, given their systemic, economic, fiscal, and societal relevance. Furthermore, the rapidly changing global mechanisms of cooperation dominated by a limited number of grand players, combined with largely new 'horizontal' themes, should encourage the UK not to lose sight of its geo-strategic location.

Policy proposals

- *Establish an overall hierarchy of objectives that allows services in general, and financial services in particular, to have satisfactory and non-discriminatory access in what is an increasingly challenging global environment.*
- *Recognise the vital role of regulatory comparability as a necessary condition for accessing the Single Market when addressing the trade-off between control over the UK's own regulation and maximising its opportunities in the EU market.*
- *Undertake whatever is needed to achieve a sufficient level of bilateral interaction with EU regulatory bodies in the financial services field.*

NOTE

1 Communication of the Commission to The European Parliament, The Council, The European Central Bank, The European Economic and Social Committee, and the Committee of the Regions. Equivalence in the area of financial services. Brussels, 29.7.2019:COM (2019) 349 final.

REORIENTING FOREIGN POLICY

Jeremy Greenstock*

Executive Summary

After Brexit, the UK must show that it has a voice. It will need to re-earn international respect, and in particular establish the concept of a 'global Britain' on the basis of performance, not rhetoric. That means re-establishing a strong network of relationships around the world in support of its security and economic health, but also continuing to play a leading role in support of the international rules-based order. For example, it should make the most of its continuing status as a Permanent Member of the UN Security Council to act as a problem-solver and system-enhancer in the collective interest.

An early, first-order priority will be establishing a new, mutually beneficial partnership with the European Union, which continues to form our economic and political neighbourhood. Reconstructing a modern relationship with the United States is not secondary to that, but cannot substitute for it and must be undertaken in recognition of the differing interests and instincts of the two sides. A further challenge is building the right relationship with China based on mutual interest in trade, peace, and international respect and on confronting expansionist or opportunistic practices. With Russia, too, it is possible to design a predictable set of behaviours on either side, and with both countries good communication channels will need to be maintained.

Brexit gives the UK the scope to construct a more deliberate diplomatic approach to the rest of the English-speaking world than was explicitly possible as an EU member – notably in working with Canada, Australia and New Zealand to promote the international rules-based order. But this should be complemented by more effective outreach to non-English-speaking countries, notably in support of trade and investment opportunities with emerging nations. But with them as with all the UK's interlocutors, the need to earn its place, and to show that it realises that, will be vital.

In defence and security, the UK will continue in its commitment to the strength of NATO as its essential alliance under US leadership, while also liaising carefully with EU Member States as they seek to improve their own capacities to contribute to European security. But it cannot simply rely on old institutional structures. It needs to lead, for example by playing a stronger role in the control of non-military forms of aggression, such as cyber warfare, economic sanctions, rivalry in space, and commercial espionage.

A strategy for realising the UK's interests in the international arena will require the Prime Minister's constant attention, but also a specific mandate for a very senior minister to supervise the interlinked policy areas of foreign affairs, international development, and international trade within a single government department.

Introduction

The UK post-Brexit needs to inject energy and imagination into its foreign policy activity. Allies remain essential for the defence of its territory and interests, and its status as a trading nation lies at the heart of its economic health. Britain has to show itself a leader in creating a European and global environment of peace and cooperation, which will immensely enhance the national project. Reinventing the UK's international voice calls for leadership, resources, and dynamic execution.

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The world is changing fast, making the UK's reliance on familiar international institutions and relationships an insufficient basis for promoting national interests. The spread of nationalism, protectionism, competition, technological innovation, and climate change concern requires a radical reassessment of the country's overseas interactions.

With Brexit achieved, the UK will be starting its reshaped life in the international arena with inescapable questions about our direction, our national spirit, our effectiveness, and our impact. Whatever the spread of domestic debate about what we have done, the truth is that we shall have to re-earn respect internationally and establish the status of a 'global Britain' on the basis of performance, not rhetoric.

Strengths and weaknesses

The UK has amassed huge global experience over recent centuries. Our strengths are greater in the English-speaking world than elsewhere, but up to now it has been natural for others to accept our global relevance, even while our relative power has declined. We have been sitting at virtually all the world's top tables. We have been respected internationally for our skills in the fields of defence, security and diplomacy, for our consistently constructive contribution to the solving of international problems, for our significant contribution to international development, for our commitment to open and efficient trading systems and for our pragmatism in shared policy-making. The UK is the only industrialised country to spend both 2 per cent of GDP on defence and 0.7 per cent on overseas aid. The soft power impact of our educational institutions, our broadcasting networks, the monarchy and our cultural assets is widely recognised. The English language is closer than any other to global coverage.

On the other side of the ledger, the UK's economic performance since the end of World War II has been patchy. We have needed the input of foreign investment, labour and management skills. We have struggled to improve productivity. We are often perceived as rooted in a world of Western advantage, partly achieved through past colonial activity. We have not always been good listeners, especially in the company of emerging nations. Essential as a good US-UK relationship is, we have shared in the unpopularity of the United States when its extraterritorial and interventionist strategies have appeared ill-judged or ineffective. Our global positioning has looked confused, and we are not regarded universally as deserving an indefinite permanent seat on the UN Security Council. Our defence forces, unquestionably of high quality, have begun to leak quantity. These things matter to the image, and indeed the substance, of power.

Aims

It will be necessary to refresh the UK's global network of relationships to serve the two core purposes of foreign policy: strengthening the national base in security and economic health; and serving a collective international system. These tasks are all the greater because of the polarising trends in geopolitics, the localisation of values and interests and the growth of identity politics as a response to disorganised globalisation. To be accepted as a global player, we have to show the capacity to promote and serve a fair as well as a rules-based international order.

Policy Proposal

- *Devote resources to serving a collective international system and promoting a rules-based international order.*

The ingredients of that capacity lie partly to hand in our historical legacy, in our educational strengths, in the quality of our public service, in the spread of our diplomatic representation, in our partnerships and alliances and in our solid investment in defence capability and international development. The UK economy now needs to achieve a level of performance that allows resources to be devoted to expanding that capacity. There is a cross-link between economic health and international reach, because trade, two-way investment, global order and collective problem-solving all improve the environment for the economy to grow. And a sound domestic base is always an essential foundation of any nation's foreign policy.

Policy Proposal

- *Give high priority in the foreign policy field to raising the UK's economic performance and constructing beneficial trade arrangements.*

The UK now finds itself in the upper levels of the medium power category. Capable middle-ranking powers need to plan together how to influence the biggest powers towards global peace and a rules-based order. That objective will underpin much of what we do in the politico-military sphere.

Policy Proposal

- *Work with other capable middle-ranking powers to encourage the biggest powers to promote global peace and a rules-based order.*

Essential relationships

An immediate priority will be the establishment of a partnership with the European Union that explicitly sets out to benefit both sides, particularly in security and economic dynamism. Europe will continue to form, inescapably, our geographical, trading, defence, and therefore political neighbourhood. Within Europe, forging an updated, close and operationally active partnership with France and Germany will be essential, and would benefit early on from establishing one or two eye-catching projects in the security or foreign policy field.

Reconstructing a modern relationship with the United States is not secondary to that, but cannot substitute for it. The US is a primary partner and ally, most especially in the field of defence and security, but with a different set of interests and instincts, and the UK must recognise and respect those differences as well as serving the wide range of our shared objectives.

Policy Proposal

- *Give equal weight to the construction of good relationships with both Europe and the US.*

Beyond that inner circle of natural allies, direct bilateral access to other large powers will need to be sustained. Japan, India and Brazil will continue to play leading roles in their continents and globally as the multi-polar nature of modern geopolitics evolves. China's potential to rival the United States as a second superpower places it in a special position. Because it will be hard for the UK to claim equal status with China, and because Chinese interests will be markedly different and often challenging, UK-China will require a special effort. It will take skill to place the relationship within a consistent spectrum of issues, not too broad and not too narrow, where mutual interest in trade, peace and international respect is promoted and Chinese expansionist or opportunistic practices are confronted. Likewise with Russia, whose potential as a military threat is more marked, it is possible to design a predictable and acceptable set of behaviours on either side and to counter anything that flies beyond that. With both countries, good communication channels have to be maintained. The EU gave us cover against retaliation when we criticised Russian or Chinese aberrations: the UK on its own will have to develop toughness and consistency in sticking to its principles in these relationships.

Just as China, India, Russia, the Commonwealth and other important emerging nations will expect us to bring something to their table to qualify as a major actor and interlocutor, so will the US and Europe. The need to earn our place and share in a two-way dialogue across different cultures will be present in every relationship. This can be achieved through skill in addressing shared problems, in preventing and remedying local conflicts, in smoothing trade and investment channels and in being present, with high quality diplomatic representation, at every international discussion relevant to our widespread interests. The UK must show it has a voice.

Policy Proposal

- *Make the UK's voice heard in constant communication with influential states of different cultures and values.*

Defence and security

The following paper addresses the UK's *Security and Defence Policy*. Foreign Policy is intimately connected with it, and the two together provide a basis for the country's global strategic approach. We will continue in our commitment to the strength of NATO as our essential alliance under US leadership, while also liaising carefully with EU Member States as they seek to improve their own capacities to contribute to European security.

The Commonwealth

Brexit gives the UK the scope to construct a more tailored diplomatic approach to the rest of the world than was explicitly possible as an EU member, and the Commonwealth should feature prominently in this. Canada, Australia and New Zealand are important partners here, not only in the 'Five Eyes' club of security and intelligence, but also in the promotion of a rules-based global order, the protection of open trading arrangements, the maintenance of human rights standards and the reinforcement of collective approaches to global problems. The Commonwealth on its own does not have the weight to solve our economic and trading challenges post-Brexit, but it extends the capacity of the English-speaking world to influence educational, legal and governance standards globally. As a grouping, it also acts as a deterrer of conflict and a promoter of higher economic and administrative performance in the less industrialised nations.

There is no need for the UK to be exclusive about language. We must be capable of addressing the Chinese, Japanese, Koreans, Indians, Brazilians etc. in their own idioms if Britain is to appear 'global'. As the population of Africa grows exponentially, the French-, Spanish-, Portuguese- and Arabic-speaking countries of the continent are as relevant to our interests as the English-speaking ones are to France. We have neglected Latin America for too long. The Diplomatic Service has already taken steps to enhance its foreign language capabilities: further focus and staff resources here would pay dividends. And we will need to be hard-headed in offering Commonwealth and other players what they want from the UK: investment, trade, aid, and frequently, visas.

Policy Proposal

- *Devote further resources to high Diplomatic Service skill in languages.*

Emerging nations

Later this century, the consumer power and middle-class habits of the growing populations of Asia and Africa will come to rival the commercial attractiveness of today's industrialised world. The UK must be single-minded about the trade and investment opportunities that these will generate. It will not be enough just to encourage our exporters and investment companies to be active; at government-to-government level there are relationships to deepen and channels to lubricate. Skilful outreach activity of this kind feeds into our international development and conflict prevention interests, because growing economies and expanding trade underpin stability and promote social cohesion.

This sounds like a no-brainer, but the UK will need to be fit enough to compete with other trading nations and canny enough to provide the private sector with the best environment for its work. It will mean convincing trading partners of many different kinds that the 'global Britain' we are presenting is one they can readily relate to, in terms of the positions we take on international issues, the contributions we make to resolving global problems and the tone we set in our dealings with them.

This will inevitably entail hard-headed choices when interacting with states whose principles differ from ours. Industrialised democracies can no longer, in an equal world, claim that their systems and values must be shared by others. The observance of human rights, for instance, needs to be encouraged for its practical and political advantages in promoting stability, not because the British approach is morally superior.

The openness of our own markets and the quality of our cultural and other soft power offerings become even more relevant to the pursuit of our economic and commercial interests in the post-Brexit era because of the reputational effects of the choices we have made and the need to demonstrate competence and relevance.

Policy Proposal

- *Promote observance of international values and human rights for its contribution to global stability.*

The international institutions

This immediately connects with the policies the UK pursues and the performance we exhibit in the multinational context. Our support for a rules-based international system cannot just be rhetorical. At the United Nations, and within the UN family of funds, agencies and programmes, we have to be active, innovative, open-minded and collective operators. Our position as a Permanent Member of the UN Security Council would have come under greater pressure long ago if we had not established a reasonably accurate reputation as problem-solvers and system-enhancers in the collective interest. On our best form, we can ease the workflow of the international bureaucracies and raise the quality of their output. This gets noticed. We should therefore exploit our continuing permanent membership of the Security Council through proactive involvement in collective diplomacy, developing as pragmatic a relationship with the French as with the Americans and disguising, not flaunting, our promotion of national interest.

Ministers cannot keep a constant eye on these areas of diplomacy. They depend on a high level of competence and professional training in the practitioners involved. Resources devoted to staffing and the other instruments of diplomacy will be repaid in the returns they deliver for national interests. There will no substance to any claim of global reach and involvement unless we are present at every significant table and capable of contributing positively to its agenda. As the habit of *ad hoc* diplomacy grows, with different actors in the room on different issues, we must be resilient and proactive in forming or joining contact groups in major policy areas.

The international community has to confront the fact that the passage of time erodes the impact of norms, conventions and charters drawn up many decades ago. The principles may remain the same, but the mechanisms to give them effect gradually lose relevance against the changing nature of societies and their interactions. Acknowledging this truth in itself risks accelerating the decline of respect for the UN and other institutions, whose value remains real in certain areas. But debate about where the gaps lie and concerted efforts to fill them through collective action are preferable to denial, which can lead in time to a sudden collapse of the foundations of a rules-based system. The biggest powers carry the greatest responsibility for the adaptation of the process for preserving peace. The UK should feature here not for its material strength, which is now second-order, but for its diplomatic inventiveness and organisational competence in the multilateral setting.

Policy Proposal

- *Promote the UK's reputation as a collective problem-solver in international arenas.*

Regional issues

Attempts to remedy regional conflicts have caused constant headaches since the end of the Cold War. Doctrines of humanitarian intervention, or extended national interest, or laissez-faire, have all proved both ineffective and domestically divisive in recent years. Even half-successful initiatives, as in Yugoslavia from 1991 onwards, Sierra Leone in 1999–2000 and especially Afghanistan from 2001 onwards, have done barely more than freeze the local situation until external forces leave. The public appetite for involvement has sunk to a low point, as the crises in Syria and Yemen have shown.

Yet, permanent membership of the Security Council obliges us to take some responsibility. The claim to a global reach requires a contribution here. Our choices should be guided by certain consistent principles:

- The framework for action, especially if armed force is to be used, must be agreed at the United Nations;
- The UK cannot be materially involved everywhere or nowhere: we should play a prominent role in territories where we have historical knowledge, channels of communication and demonstrable national or alliance interests;
- The UK must contribute to UN peacekeeping on the ground, though this can be focussed on force multipliers such as military planning, intelligence and logistics;
- We should constantly participate in and refine approaches to conflict prevention and responses to early warnings of trouble; and
- International development resources should be used at least partly to address economic deficiencies that might generate conflict in the near future.

As the expected population explosion in Africa develops, it will be essential to explore with allies and partners, and at the UN, a set of policies to minimise the risk of conflict resulting from the inevitable competition for land and resources. The UK and France have particular responsibilities here.

Policy Proposal

- *Establish the UK as a contributor to the remedying of regional problems, but under a careful and consistent set of principles.*

Global issues

Certain issues transcend regions and national interests, because they have a global effect and cannot be contained at the national level. These include environmental degradation, changing demography and the impact of new technology.

While the UK's response on carbon emissions remains the business of domestic departments, international action on climate change also involves diplomacy. The global debate on the use of fossil fuels is becoming shriller and more militant in tone, because policy changes appear to be coming too slowly to prevent unacceptable temperature rises. On issues like these, the UK has normally been able to place itself at the mean between inaction and panic. Our record in carbon emission reduction in this decade, built on coal-to-gas conversion in electricity generation, combined with offshore wind farms as our best renewable option, is a striking example of the good outperforming the best in practice. We need to be in the forefront of those advocating what is possible, not what is fanciful; that suggests effective measures to take out the worst polluting energy sources and practices without bringing economic growth to a halt.

Global population growth is inevitable, and it will be concentrated in the poorest countries. Meanwhile, the richer nations will suffer from rapidly ageing populations. The factors stimulating migration can only intensify. The implications of UK policy here for our international relationships will cross-link with trade, investment, security, development and other areas. Openness to foreign students feeds into international impact with the next generation. Having greater independent control post-Brexit of the country's population mix allows the government to calculate both the short- and the long-term interests involved. Economic performance, social cohesion and the UK's global footprint can all be served by policy-making with long-term objectives clearly reflected.

Technological innovation is being led principally by non-Europeans, notably the United States and China (in both public and private sectors). The UK has so far contributed in a few areas, largely software design, but has fallen behind the leaders. Massive new investment to catch up as innovators across the board will not be available. It would be sensible to focus on two main objectives: first, to choose the technological sectors where we can demonstrate state-of-the-art relevance; and second, to understand the social, economic and political impact of technological change, to lead in establishing frameworks for regulating it internationally and to guide the people of the UK in using it sensibly. Equipping our overseas representatives (from across Whitehall) with the capacity to engage on these issues will become an important element of our global reach.

Policy Proposal

- *Pay particular attention in the relevant international fora to the issues of climate change, migration and technological innovation.*

Resources and organisation

In the inevitable competition for budgetary resources as Brexit completes (probably a longer process than we are currently allowing for), the relatively modest amounts needed to run a full diplomatic operation have to be assessed for their multiplying potential. The UK's sole responsibility for itself and its policy execution post-Brexit requires a determined effort to forge and sustain fresh relationships abroad. These will be vital not just for trade connections and support for UK businesses, but for reinforcing the foundations of our national security for decades to come. A review of the balance of staff numbers between home and overseas may be needed as part of the reassessment of how the UK's objectives in foreign policy can be met.

A strategy for realising the UK's interests in the international arena will require the Prime Minister's constant attention, but also a specific mandate for a very senior minister, given charge of the interlinked policy areas of foreign affairs, overseas development and international trade and carrying responsibility for the difficult choices that balance security, prosperity, and values. These sectors have, over the years, been subdivided and rearranged several times, leading to the loss of a firm strategic grip. The departments concerned have been constantly plagued by low morale and unsatisfactory outputs. A single department, with responsible sub-sections as necessary, should drive these related activities. The aim should be set way beyond the promotion of a 'global Britain' and the serving of British public and private sector interests overseas. The fundamental requirements of national security and robust economic performance have to be achieved through a vigorous and consistent effort at sustaining relationships and addressing problems internationally.

Policy Proposal

- *Establish a strong central department, under a very senior Minister, for coordinating foreign, international development and international trade policies.*

UPDATING SECURITY AND DEFENCE POLICY

Mark Lyall Grant*

Executive Summary

Threats to the security of the UK are evolving with the changing nature of conflict and balance of power in the world. They are multiple and fragmented, and domestic and online as well as overseas in nature: principally state-based threats such as posed by Russian activity; terrorism; cyber-attacks; and serious organised crime. To respond, the United Kingdom will need flexible capabilities aimed at fostering infrastructural and societal resilience as much as conventional defence. Above all, the UK needs to focus on maintaining, promoting, and defending the international rules-based order, as represented by the UN and NATO among other institutions.

The UK possesses significant assets to these ends, including its continuing status as one of eight acknowledged nuclear powers – a status that it should not abandon unilaterally; permanent membership of the UN Security Council; membership of the 'Five Eyes' intelligence community; and its internationally respected armed forces.

But effort and resources are required to support these commitments, for example in helping to encourage other European states to spend more on defence; in contributing to UN peace-keeping operations or other collaborative overseas actions; and most of all in ensuring that army and navy manpower is rebuilt. Two per cent of GDP is no longer sufficient for the proper defence of the nation. Even allowing for the demands of other parts of government, the target for defence spending should be raised in the next review to 2.2 per cent.

The principal focus will need to be on efficiency and redeployment of resources as the current equipment-heavy procurement cycle comes to an end. In particular, investment needs to continue to be rebalanced towards new capabilities such as drone technology, offensive and defensive cyber and intelligence manpower.

But, to avoid any weakening of the country's security, priority should be given to negotiating a new agreement on security and intelligence cooperation with its European allies to replace the arrangements it had within the EU.

Introduction

The first duty of government is to protect its people. That means defending the homeland, British nationals at home and overseas, and the interests of the UK and its allies. Defence strategy, and the policies that feed it, should be determined by a careful analysis of the threats the UK faces, and involve a balance between self-sufficiency and mutual support of allies. But national security ultimately depends on economic security and vice versa. The UK's defence and security policy therefore cannot be divorced from wider economic policy, including when it comes to the allocation of resources. It is also closely connected with the overall strategy for a 'global' Britain. (This matter is addressed in the previous paper, Reorienting foreign policy.)

Thirty years after the end of the cold war, global stability depends primarily on the future relationship between the US and China. That relationship is in a transitional

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phase that could last many years; and its impact on the post-Second World War international order is not yet clear. It is in the UK's interests for that transition to be as orderly and peaceful as possible.

Against that background, the UK faces a wide range of security threats and challenges in a rapidly evolving environment made even more uncertain by Brexit. Building maximum flexibility and resilience will therefore be essential.

The threat environment

As the global balance of military and economic power shifts from the dominance of the US and the West to include China and the East, increasing both competition between states and the risk of conflict, so the threats to the security of the UK and its interests are changing character. While the traditional threat of direct foreign military attack on the UK mainland is at an historic low, the country is facing multiple fragmented threats. The line between war and peace has been blurred, as has the distinction between overseas, domestic, and on-line threats. To respond to this modern state of 'hot peace' or 'hybrid warfare', it will be important both to develop flexible capabilities and responses and to build infrastructural and societal resilience.

The main security threats facing the UK over the next decade will fall into one of four categories:

- ***State-based threats and the risk of instability.*** The threat from Russian activity and from state-driven cyber attacks is clear, but there will also be pressure for the UK to get involved alongside allies in regional conflicts and to prevent instability on Europe's borders, particularly in the Middle East and North Africa. The UK needs a robust defence posture, high technological capability, and an active stance alongside NATO allies to minimise these threats. The foreign policy component of overall strategy will require innovative and hard headed diplomacy.

- ***Terrorism and extremism.*** The primary threat comes from jihadist terrorists who, following the defeat of the so-called Islamic State caliphate in Iraq and Syria, now target both the UK mainland and UK nationals overseas. Preventing the radicalisation of British nationals in the UK, including in our prisons, has to be a top priority. But the threat from dissident Irish republicanism has not gone away, and right wing extremism is also on the increase.

- ***Cyber attacks and technology.*** The threat comes from both state (Russia, China, Iran, and North Korea) and non-state actors. Businesses and individuals are now more at risk than government systems, so policy needs to be geared to raising awareness of the threat and encouraging robust cyber security. The development of new technologies, including AI and robotics, will further increase the UK's vulnerability to cyber attack. This will become an arms race of growing significance.

- ***Serious organised crime***, including drugs and human trafficking. More British nationals are being killed by drugs (2,500 per year) than as a result of conflict, terrorism, and cyber put together. A holistic response is required, involving a complete review of domestic drugs policy, together with stronger enforcement at the national border and diplomatic/development action in production and transit countries.

Underlying these four threats is a wider strategic risk – the erosion of the Rules-Based International Order established after the Second World War. The combination of global institutions, such as the United Nations (UN), International Monetary Fund (IMF), World Trade Organisation (WTO), World Bank, and Organisation for Economic Cooperation and Development (OECD), together with treaties and norms, such as the Universal Declaration of Human Rights and Non Proliferation Treaty, now covers almost all international transactions. It has helped to keep the peace and promote prosperity over the past 75 years. It is a liberal order based on free trade, democracy, and human rights. For an open, democratic, trading nation like the UK, it is the sea in which we swim and its preservation is vital to our future security and prosperity.

Global support for this liberal order has been undermined in recent years by a number of factors, including unpopular western military interventions in e.g. Iraq and Libya, the 2008 financial crisis, which damaged faith in the ability of leaders to manage global capitalism, and geopolitical shifts linked to the rise of China. China's model of 'market authoritarianism' is now widely admired in the developing world, and occasionally imitated. Blatant violations of the rules-based order, such as Russian annexation of Crimea, Syrian use of chemical weapons, and Chinese militarisation of the South China Sea, are on the rise. So are populism and nationalism, fuelled by an increasing number of authoritarian regimes in all regions of the world.

Unfortunately, at this critical time, the traditional champion of the liberal international order, the President of the United States, does not himself believe in it; he has attacked the 'ideology of globalisation', and has taken various measures which actively undermine it, including withdrawing from the Trans-Pacific Partnership, the Intermediate Nuclear Forces Treaty, and the Iran nuclear deal. He has blocked the appointment of judges to the WTO, and imposed trade tariffs on both China and some of America's allies.

As a result of these developments, for the first time since the Second World War the ultimate success of economic liberalism and democracy must be placed in doubt. It is vital for the UK's long-term security that the UK actively engages in defence of the rules-based order. The UK cannot impose its liberal values on the rest of the world. But it can, and must, persuade by example and dialogue.

Strengths and weaknesses

The UK has significant strengths to help combat these different threats. It is one of only eight acknowledged nuclear powers. Renewal of the nuclear submarine fleet will guarantee that status for another 40–50 years. Although the UK's nuclear force is already at the lowest credible deterrence level, it remains an extremely expensive commitment and is politically divisive. But in an increasingly uncertain world, the UK's nuclear status remains a powerful ultimate deterrent against potential enemies and a statement of the UK's global power; to give it up would be widely seen as a sign of weakness and indicate that the UK planned a diminished role in world affairs. The UK should vigorously advocate for faster multilateral nuclear disarmament, work with its allies to preserve the Non-Proliferation Treaty, so preventing more countries from acquiring nuclear weapons, and strengthen its bilateral cooperation with France on nuclear issues. But it should not go down the route of unilateral nuclear disarmament.

Policy Proposal

- *Work to preserve the Non-Proliferation Treaty, but avoid the path of unilateral nuclear disarmament.*

NATO membership will remain the bedrock of the UK's territorial defence. It has proved a remarkably resilient military alliance, binding North America and Europe together in defence of each other's territory and values. But current geopolitical trends may widen the transatlantic gap, so it will be important both to encourage other European members of NATO to meet their commitment to spend at least 2 per cent of GDP on defence (which only five, including the UK, currently do) and to press ahead with reform of NATO's focus and capabilities. This is the most certain, perhaps only, way of keeping the US firmly committed to the defence of Europe.

Policy Proposal

- *Remain fully committed to NATO, but raise the pressure on allies to meet the spending target of 2 per cent of GDP.*

Deterrence against Russian and other hostile attack should remain the central core of NATO's purpose, but it needs also to expand its role in stabilising Europe's neighbourhood and in promoting cyber security for its members. In particular, it should play a role in developing a collective cyber security strategy.

Policy Proposal

- *Help develop an alliance cyber security strategy.*

At the same time, NATO, with the UK playing a leading role, needs to establish a cooperative relationship with the EU's emerging defence aspirations. Although these aspirations are born partly out of concern about the future of America's commitment to European defence, they should be encouraged rather than blocked. But the UK's aim should be to ensure that the EU's future defence policy focuses on enhancing military capabilities, rather than on new organisational structures; and that there is full transparency and interoperability between the EU's capabilities and NATO's.

Policy Proposal

- *Liaise closely with the EU in their development of a capable defence policy, but one compatible with NATO's.*

The UK benefits significantly from its position as one of five permanent members of the UN Security Council. This gives the UK a voice and a role on all international conflict and security issues. Whilst continuing to advocate expansion of the UNSC better to reflect current geopolitical realities, the UK should robustly defend its own right to a permanent seat – a right that is unaffected by Brexit. To enhance its global status further, the UK should be prepared to offer more British troops to UN Peacekeeping operations – its contribution is largely limited at present to peacekeeping missions in Cyprus and South Sudan. Greater UK participation in managing and resolving international conflict serves two other purposes: it helps preserve global stability and uninterrupted trade; and it gives UK officers and troops the opportunity to acquire valuable direct experience in conflict areas at a time when overseas training sites for the army are under pressure.

Policy Proposal

- *Raise the UK's contribution to the UN's peacekeeping and conflict management efforts.*

The UK is also respected internationally for its active engagement in promoting wider security objectives in areas such as conventional arms control, modern slavery, human trafficking, and enhancing the role of women in peace and security. It will be important for the UK to remain a leader in these fields, as well as being at the forefront of efforts to create an international framework to establish new norms for cyber warfare, internet use, drones, artificial intelligence, space activity, and other new technologies that will have a profound impact on global security over the next ten years.

The UK's armed forces, and particularly its special forces, are respected around the world. But numbers have dropped below the target of 82,000 set for the army in 2015; and the Navy is struggling to recruit and retain enough men and women to operate the two new aircraft carriers and frigates that are coming into service. Overall levels have fallen too low, and the nation will come to regret these cost-savings as the world grows more unpredictable and dangerous.

Urgent priority therefore needs to be given to improving the pay and conditions of key service personnel, especially at more junior and specialist levels, so that those minimum targets can first be met and then raised. At the same time, immediate action is required to increase the number of soldiers that can be deployed overseas at any one time – it is striking that, with a smaller budget and similarly sized Armed Forces, France is able to sustain a much higher number of troops overseas than the UK (though this may be at the cost of a lower logistical capability). The Joint Force 2025 project is designed to remedy this, by enabling the deployment of a tri-service force of up to 50,000, but this should be considered only the first stage of a more ambitious review of troop numbers and deployability.

Policy Proposal

- *Halt, and in time reverse, the decline in UK troop numbers.*

Another key enabler of UK security is membership of the 'Five Eyes' intelligence community, under which the UK, US, Australia, Canada, and New Zealand share intelligence reporting and analysis. The UK's three main intelligence services, MI5, MI6, and GCHQ, are highly respected within this group. The US will continue to provide the biggest intelligence input, but the UK's niche capabilities – particularly at GCHQ – and overseas defence facilities offer significant benefits to the US. Although there is likely to be resistance from the US, it is worth considering inviting France to join the 'Five Eyes' group, not least because they have better intelligence coverage in a number of areas, such as the Sahel.

Policy Proposal

- *Find a way to connect France to the 'Five Eyes' intelligence community.*

The new National Cyber Security Centre (NCSC) has become the main interface between Government and the private sector, acting as a resource for businesses to seek advice on strengthening their cyber defences. As it becomes more established, there is scope for the centre to become both an incubator of essential cyber skills in the UK and a vehicle for assisting allied countries to strengthen their own cyber security systems.

The UK is developing an autonomous offensive cyber capability. Though there will be times when this capability is used in conflict, e.g. against terrorist groups, one of its prime functions will be to deter cyber and other military attacks against UK interests. To make this deterrence credible, the UK will need to develop, and communicate to would-be enemies, an effective doctrine of deterrence, based partly on declaration and partly, perhaps, on demonstration of use. This needs to run in parallel with discussion of international norms and guidelines on offensive cyber.

Policy Proposal

- *Contribute to the development of an international cyber deterrence doctrine.*

While the UK remains a leader in defence research and innovation, including in chemical, biological and radiological weapons, the UK's industrial base has shrunk considerably, and it now relies significantly on the US and other allies to source much of its larger defence equipment. But it will be important to retain a strong domestic defence industry, capable of meeting at least some of its essential military needs, including for warships. This may mean offering greater protection to certain sensitive sectors and, in some cases, privileging procurement from British companies. At the same time, the UK should seek a way to continue collaboration with its European allies on military research and development, including through the European Defence Fund.

In order to sustain a viable defence industry, the UK will need to continue to export military equipment. This will inevitably require difficult choices, not least when it comes to its most important markets in the Middle East. But to compete effectively, the Government will need to offer industry its full support, except where such sales and their end use would clearly not be in the UK's wider national interest.

As an island, the UK benefits from greater natural border security than most other European countries. In addition to its primary function of control, the UK border needs to act as a facilitator of movement for people and goods and act as a first 'showcase' for the country. The UK should use technology, including electronic gates and facial recognition, as much as possible in order to achieve this necessary balance. Wider immigration policy might also be reviewed, putting the UK's economic wellbeing front and centre.

Policy Proposal

- *Devise a new immigration and border control policy that better balances the UK's security and economic interests.*

Resources

There is no doubt that increased resource leads to greater capability, and thereby to more security. There is therefore a legitimate debate to be had about the appropriate level of defence spending for a country with the size and ambition of the UK. But clearly the level of spending on defence will need to be considered alongside other pressing Government priorities.

Against this background, it is worth noting that the UK already devotes significant resources to defence. At 2 per cent of GDP, with in-built yearly increases, the UK has the fifth largest defence budget in the world, and the largest in Western Europe. Despite this, the defence budget is under constant strain, made worse in recent years by cost overruns on new equipment programmes and Brexit-induced devaluation of sterling against the dollar (and euro) – much new military equipment (F35 fighters, Apache helicopters, Maritime patrol aircraft, drones etc.) being priced in dollars. To help bridge the gap, the Ministry of Defence (MOD) should be held firmly to the cost savings elsewhere in the budget to which they committed in the 2015 Defence and Security Review.

As important, however, as the level of defence spending is the distribution of that expenditure. The UK is going through a particularly intense period of acquiring large and expensive new equipment, including nuclear submarines and two aircraft carriers. Having embarked on these projects, they should be followed through. At the same time, it is important that smaller, but vital, battlefield kit, such as body armour, assault rifles, troop carriers, and tactical communications equipment is not forgotten – they, together with pay and conditions, have a more direct impact on soldiers' effectiveness and morale than the big-ticket items.

It will also be important to follow through on the rebalancing of defence expenditure towards the Counter-Terrorism and Cyber areas that was agreed four years ago. This means continuing to invest more in drone technology, offensive and defensive cyber and manpower in the intelligence services and CT police.

Given the seriousness of the threat environment and the fact that the UK has chosen a more independent path for itself into the future, 2 per cent of GDP is no longer sufficient for the proper defence of the nation. Even allowing for the demands of other parts of government, the target for defence spending should be raised in the next review to 2.2 per cent.

Policy Proposal

- *Raise the target for UK defence spending to 2.2 per cent of GDP, with a view to enhancing the UK's capabilities in an increasingly uncertain global context.*

Impact of Brexit

On the face of it, Brexit should have less effect on the UK's defence and security than on many other areas of Government policy. Whilst it is true that the 2009 Lisbon Treaty agreed "the progressive framing of a common Union defence policy", individual member states have retained national responsibility for their external defence and security. For the UK, this means that membership of NATO and the 'Five Eyes' Intelligence community, as well as permanent membership of the UN Security Council and bilateral arrangements such as the Lancaster House treaty with

France, are all more important for its defence and security than membership of the EU.

Having said that, in combatting threats such as terrorism and serious organised crime, UK security cannot be divorced from European security. Hitherto, the UK has been able to access a range of EU-owned enablers and data bases, such as the European Arrest Warrant, EUROPOL, the Schengen information system and the 'Prum' database of DNA, vehicle registration and fingerprints. This automatic right of access will be lost after Brexit, and UK security will be weakened unless a replacement agreement is reached that ensures continued cooperation with European allies and allows the UK's intelligence and law enforcement agencies real time access to the information contained in the data bases. That should be a priority UK objective once negotiations on a future relationship begin.

Policy Proposal

- *Promote post-Brexit coordination with European security agencies.*

The UK will also need to decide whether to continue to participate in the EU's Common Defence and Security missions, such as Op Atalanta combatting piracy in the Red Sea, Op Sophia on illegal migration in the Mediterranean, and Op Althea promoting stability in Bosnia. These missions are open to non-EU member states, and the UK should be ready to participate when it is clearly in its security interests to do so, even if it no longer has such a direct say in establishing the missions' mandates.

Essential relationships

The US will remain the UK's foremost partner in security and defence. Close American cooperation on nuclear, intelligence, defence equipment and operational issues is indispensable for its security. That will remain the case, even when, as now, there are very significant policy differences between the two governments. The UK should not consider a major overseas military intervention without US support. Despite US appreciation of the contribution that the UK makes to American security (somewhat diminished as UK deployable numbers have dropped), it will inevitably remain an unbalanced relationship. The UK should do everything necessary to sustain it, even if that means having to compromise on some security-related policy issues.

After the US, France will remain the UK's closest security partner, including on the UN Security Council. The 2010 Lancaster House Treaties set out a range of areas for closer cooperation, including nuclear testing, missile technology, and unmanned future aircraft. The UK should look to expand the range of that cooperation further after Brexit. In particular, it should try to identify a longer-term 'iconic' project (on the scale of e.g. the Channel Tunnel, Concorde or Eurofighter) – not necessarily in the defence field – that would bind the UK to France and, if possible, Germany for the next two decades.

Such a project would constitute an important symbol of the UK's future commitment to the European continent.

Policy proposal

- *Identify and pursue at least one iconic infrastructure or procurement project with France and/or Germany*

Given the primary importance of these two defence and security relationships, the UK should actively encourage more use of the P3 format (UK, US, France), both for threat analysis and operational activity.

The new aircraft carriers and Force 2025 gives the UK the capacity for greater power projection, but it is too ambitious to believe that a truly global defence posture can be sustained. The proposed deployment of a British aircraft carrier in East Asian waters would carry no more than token importance (and some risk given the shortage of escorts); and the UK has struggled to protect its interests as tensions rise in the Gulf. The UK should focus its core strategic capabilities on the Atlantic, Europe, the Mediterranean, and the Gulf/Sea of Oman. To the extent that occasional deployments further east are necessary, Japan should remain the UK's principal security ally. It could also consider maintaining forces on a more permanent basis in Africa, as France does. In this context, the UK should be open to establishing wider defence agreements with countries, particularly in the Commonwealth, which look naturally to the UK for support.

Policy Proposal

- *Focus the UK's force projection capacity primarily on Europe, the Mediterranean shores, and the Gulf region.*

Organisation

Recent changes in security governance, such as establishment of the National Security Council and the post Iraq separation of Intelligence assessment and policy formulation, have significantly improved the process of policymaking in the defence and security field. The three intelligence agencies now operate under a single departmental plan, and cross-Whitehall funds, such as the conflict and stability fund, have fostered closer cooperation and purpose between the different government departments involved in national security.

A post-Brexit Defence Review is nevertheless advisable, given the changing nature both of the global environment and of the UK's international posture. It is only against the background of a full new assessment that the judgements in this chapter can be tested.

At home, the welcome trend of interdepartmental working should be encouraged further at more junior levels in the civil service, with greater scope for mutual secondments between departments, both to avoid isolation and to promote greater diversity of thinking. Greater effort should also be made to retain specialist skills, particularly technical and cyber skills, across government, including through additional allowances, similar to language allowances for diplomats. Overseas, given the increasing importance of defence engagement, the role of Defence Attaches should be accorded greater weight in MOD human resource planning, with such postings better integrated into a fast track military career.

Parliamentary oversight of defence and intelligence is crucial, and welcomed by both intelligence agencies and the MOD. But there will be times when the executive may need to take limited military action alongside the UK's allies at short notice. In such circumstances, parliamentary convention currently constrains UK Ministers much more than is the case for the country's closest allies. The balance of Parliamentary oversight and executive freedom might therefore usefully be reassessed as part of a wider defence review.

Policy Proposal

- *Carry out a comprehensive post-Brexit Security and Defence Review.*

FORMULATING INDUSTRIAL POLICY

Tim Besley* and Richard Davies**

Executive Summary

Alongside the challenge of maintaining economic competitiveness in the face of great uncertainty, Brexit brings an opportunity for the government to set out a new industrial strategy. The case for doing so rests on the need to address areas of persistent structural weakness in the UK economy, including low productivity. But it is important that any new industrial strategy be based on appropriately granular data reflecting the real structure of the UK corporate sector: the overwhelmingly preponderant role of services as opposed to manufacturing, for example; the importance of young, fast-growing firms as opposed to SMEs; the relatively high failure rate of companies in the UK; and the relative lack of successful mid-sized firms. Such a data-driven approach might spawn an industrial strategy quite different from the piecemeal programmes of recent years.

Internationally, the UK is a laggard in this area, and the recently-created Industrial Strategy Council does not look strong enough to change that position. To move forward, the government needs to make industrial strategy a central plank of economic policy, embedded at the heart of the administration with its own staff and funding, and operations based on a comprehensive review of the economic contribution and potential of various types of firm. Needless to say, it cannot be a substitute for a continuing commitment to competition and markets, or a stalking horse for protectionism: interventions should be justified by carefully-argued market failure arguments, be time-limited, and transparently evaluated.

The need for an industrial strategy

After a prolonged period of scepticism, Theresa May's government committed to a new industrial strategy and set up the Industrial Strategy Council to deliver it. These steps were fuelled by concerns that the UK has suffered from a period of real wage stagnation due to weak productivity growth. Moreover, the UK has historically had lower productivity compared with the US, Germany, and France. Just what an industrial strategy means in practice, and how it can be delivered effectively, is less than clear. The aim of this chapter is to review the issues and to reach some conclusions about needed changes of policy direction.

Leaving the European Union brings both challenges and opportunities. The main challenge is to remain a globally competitive economy in the face of uncertainty and elevated levels of protectionism. The opportunity comes from the repatriation of powers that will allow more activism if, for example, the European state aid rules are relaxed.

There are however a series of long-standing concerns about investment in the UK and the country's capacity to grapple with economic challenges. The commitment to net zero carbon by 2050 requires fundamental

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changes in outlook and transformations in many sectors of the economy. Whether the support structures are in place for government to assist in this transformation in a timely way is questionable. The UK's regional imbalances are fuelled by a pattern of economic growth concentrated in the south. There has been progress, but there is also doubt about the scale and scope of policy to date.

The world in which the UK lives today is one where major trading partners are not shy in developing activist policies to support their economies. Many in the UK have long admired the system of embedded support in Germany. The economic experiences of the economies of Japan, Singapore, and South Korea have long been held up as examples of a different style of engagement between business and the state. And now China is making a concerted effort to move up the value chain, supported by a wide range of government interventions. Even the US, which is often (misguidedly) held up as a model of unbridled free markets, has a range of strategic interventions in markets that support US businesses. Many frontier firms have their origins in government-supported research projects and military initiatives.

The UK is lagging in many areas, as evidenced by its low aggregative productivity performance. Here, we sketch a new approach.

Markets: success and failure

There are good and well-rehearsed reasons for putting markets at the core of successful economies, something that *all* architects of sustained periods of growth and high levels of prosperity have understood. Friedrich Hayek above all understood that the market system provided the basis for the management, creation, and dissemination of knowledge. For example, it was only when China embraced the market system that it was able to deliver the largest reductions in poverty ever witnessed. And the leaders of countries whose hubris allowed them to believe that they could satisfy their citizens' needs without a heavy reliance on the market have, more often than not, impoverished those that they have tried to help.

While markets will be the foundation of any well-functioning economy, it is important to recognise that markets can fail, and that there are many ways of making them work better. The classic accounts of market failure fall into five broad categories:

- First, markets fail to recognise externalities, and regulation is needed to make sure that pollution is kept under control, that systematic financial risks are avoided, and that health and safety standards for workers and consumers are adhered to. And, related to this, they may fail to provide public goods at optimal levels. For example, many technological innovations are also public goods in which the market may underinvest, even when robust systems of intellectual property rights protection are in place.

- Second, markets are not always competitive, and there is a tendency for the powerful to attempt to restrict competition.

- Third, markets can lead to inequalities, some of which undermine efforts to build cohesive societies. For example, agglomeration effects create excessive regional imbalances in prosperity.

- Fourth, a range of information asymmetries and transactions costs create distortions in the behaviour of consumers and firms. Capital markets may thereby fail to allocate capital to its most productive uses.

- Fifth, there is a range of biases in decision-making that affect how markets operate which have been explored by psychologists and can be reinforced by cultural norms. For example, managerial overconfidence can result in poor business judgements that harm consumers and workers.

The case for an industrial strategy stems in part from recognising these issues, and can be motivated by concerns about both efficiency and distribution. For example, lack of competition and agglomeration effects have been particularly important in recent years in fuelling concerns about economic inequality. Moreover, there is often a feeling that, in some areas, there is the possibility of a win-win strategy, where both equity and efficiency can be promoted simultaneously. This is particularly the case with policies that rejuvenate the lagging regions of the UK.

What can government do when designing an industrial strategy?

Governments influence the direction of their economies in many different ways. Even though it is not labelled as industrial strategy, procurement policy can have a major impact on the private sector. The performance of the digital economy, defence and cultural industries, regulated utilities, and health care are all influenced heavily by the state's procurement policies. Hence any government that has a sizeable public sector has an industrial strategy, regardless of whether or not it chooses to call it that.

Another aspect of industrial strategy are so-called 'horizontal' policies that support the economy across the board. Crucial among these are policies that support skills, innovation, infrastructure, planning for housing and industrial construction, access to finance, the legal system, and basic forms of regulation. On some of these dimensions, the UK is often held up as a paragon. But there are areas where UK policies are sub-standard, such as vocational training, planning, and some aspects of infrastructure, which are discussed in other papers.

The promotion of innovation is an important area for policymaking. This means support for businesses to identify the best practices and most suitable technologies. This can be supported by a vibrant industrial 'civil society' that creates networks where businesses can learn from each other. Such networks can support business in getting to the technology frontier, and are particularly important in the service sector, as well as construction. Government investment in research and development is also important, as is creating effective partnerships between private business and universities.

Regional policies are also part of industrial strategy. Firms choosing to locate typically have an array of considerations around access to markets, a suitable skills base, and infrastructure. Governments can also influence industrial location with tax policy. Regional policy is particularly important, because inequality in the UK has a significant spatial component. Many formerly industrial areas have lost their principal economic basis, in part through technological change and globalisation. And a sense of being left behind is widely thought to be responsible for the electorate in such places voting for Brexit.

Regional policy in the UK was largely outsourced to the European Union and its structural funds in the 1980s and 1990s but, after Brexit, the task of limiting regional inequalities and deprivation falls back on the UK government. Political considerations compel industrial policy to have a more clearly defined spatial dimension. And this means confronting the need for greater decentralisation and devolution of power and funds to the regions themselves where UK efforts, particularly in England, look half-hearted.

A data-driven industrial strategy

A new industrial strategy for 2020 and beyond should start with regular data-driven assessments of the 2.67m firms that make up British industry.[1] Detailed data on individual companies of all sizes has been available for some years in the UK yet, notwithstanding some notable exceptions, this granular information on British companies is an under-utilised resource.[2] Analysis of British industry has tended to be piecemeal and irregular, and has not led to a wider public understanding and debate over corporate conditions in the way that the Bank of England's *Inflation Report* has for inflation and monetary policy, or the publications of the IFS and the OBR have for the UK's deficit, debt, and fiscal policy.

A data-driven approach is vital in all areas of public policy, but is particularly important in the context of industrial strategy. 'Data-driven' means in part making data available to be processed in local and regional centres to form clear ideas about the needs and potentiality of those places. Local knowledge and input, and a degree of decentralisation of decision-making, will be essential if policies are to be both sensible and sensitive to place. Regional structures for policy development and implementation are currently inadequate in many areas, and need to be fostered.

The experience of the 1960s and 70s meant industrial strategy fell out of favour among academics and policymakers alike. Now revived, it is still common to see studies, debates, and policy interventions that are out of line with what British firms actually do, and with the latest research on the types of firm that public policy should support. The latest data and research suggest some areas of focus for state intervention:

- ***Industries: services vs. manufacturing***. An industrial strategy for the UK must avoid being too focused on the needs of manufacturing. Whether in terms of the number of companies, or the jobs they create, Britain has been a services economy for some time. Between 1997 and 2019 the share of employment in services sectors rose from 71 per cent to 80 per cent, while the share of jobs in manufacturing fell from 16 per cent to below 9 per cent. Service-sector firms have also become increasingly important in exporting. The remaining sectors – agriculture, mining and construction – are essentially stable in terms of their employment share, which is around 10 per cent.[3] Even though it continues to play an important role in exporting, and accounts for a large share of R&D, the share of businesses involved in manufacturing is now just 5 per cent of UK companies.

- ***Types of firm: small vs. young***. The UK, in line with other countries, offers tax breaks, subsidies, and other forms of assistance to SMEs.[4] A recent research agenda using micro data in the US has shown that the focus on small firms may be misplaced.[5] Most new jobs are created by young firms (which often happen to be small), while older small firms create relatively few new jobs. At the same time, because most young firms fail within their first five years, many young firms are also (ex-post) relatively unimportant. The vital cohort, in terms of contribution to output, productivity, and jobs is a small group of fast-growing start-ups and young firms, sometimes referred to as 'gazelles'.[6]

  The key consideration, of course, is potential, not age and, in areas where venture capital is scarce, unexploited potential may exist among firms that are not so young. Related research shows that policies – targeted loans, subsidies or assistance – that use a firm's size to pinpoint the assistance are poorly targeted.[7] A refreshed industrial strategy for 2020 would review the UK's current offering to SMEs in light of similar studies for the UK.

- ***Location: the north vs. the coast***. In recent years, regional industrial strategy in the UK has tended to focus on specific geographic locations, including Northern England and, more recently, the 'Golden Triangle' drawn between Oxford, Cambridge and London. From the standpoint of capturing positive externalities, focusing on these densely-populated and R&D intensive areas makes sense, innovation and agglomeration both being sources of important spillovers.[8] However, lifting Britain's aggregate productivity will require a strategy that lifts the least productive places: corporate conditions – both productivity and demographic variables such as firm births and survival rates are weakest in rural and coastal British towns.[9] These places have been largely outside the discussion to date.

This overview, while just a sketch, serves to show that *data matters,* as it can challenge the current conception of modern industry and the suite of policies currently in place to support it. Modern industrial policy should consider the young services firm based in Bournemouth just as much as it caters for the small manufacturing company located in Sheffield.

A second reason to build the new industrial strategy on a foundation of a bottom-up, micro-data approach is that it is a useful way to benchmark performance, allowing comparisons of the regions against the UK national average, and of national performance over time *vis-à-vis* international peers. Several simple metrics could be tracked and published regularly:

- ***Birth and deaths*** – a high turnover. Firm birth rates, defined as the number of new firms expressed as a proportion of existing firms, have increased since their post-crisis low, rising from 10 per cent in 2010 to 15 per cent by 2016. Relative to regional advanced country peers, the UK's business birth rate is high (birth rates in Germany, France, Italy, and Spain are all below 10 per cent). Within the UK there is considerable variability by region, with London having the highest birth rate, and Northern Ireland the lowest. Firm death rates are also relatively high in the UK: 10.5 per cent in 2016, compared with 7.7 per cent in Germany, and 4.7 per cent in France.[10] Overall, the picture is of a fluid corporate sector in which is it easy to start up a new firm; but a fruitful policy avenue could be to investigate why so many firms fail to thrive.

- ***Size*** – the UK's missing middle. Most UK businesses are very small: micro-sized firms (1–9 employees) account for fully 86 per cent of enterprises, followed by small firms (10–49 employees) which account for 11 per cent of firms. This broad pattern is seen across most advanced nations, and is even more pronounced in Italy. But the UK stands out relative to many OECD peers in terms of its mid-sized companies (50–249 employees), which account for just 2 per cent of firms. In the US, 3.8 per cent of firms are mid-sized.[11] In Germany Mittelstand firms are an important part of the national debate and policy framework.[12] The UK's 'missing middle' could be another focus of a strengthened industrial strategy body.

- ***Tracking cohorts*** – the echo of 2008. Given the importance of young firms in employment, productivity, and output, tracking cohorts of firms as they grow would be an interesting metric to put at the heart of a new industrial strategy. In the US, recent research has shown that lingering damage to the cohort of firms established between 2007 and

2010 may be important in accounting for the slow recovery from the 2008 crash (see Clementi and Palazzo, 2016). In line with US evidence, preliminary results for the UK show that the 'crisis' cohorts – firms born between 2007 and 2009 – grew more slowly, peaked more quickly, and faded more rapidly than did cohorts of firms born in more normal years. This kind of analysis could be used to track cohorts within industries or locations to assess the efficacy of the UK's industrial strategy.

These observations are a mere snapshot. But they show how a modern industrial strategy can move on from simply measuring corporate productivity, developing more sophisticated metrics of how conducive the UK business environment is for firms to set up, wind down, and grow, and to trace the development of the business sector in a granular way at local level.

Institutions and frameworks

The past three years have seen several developments in the UK's industrial strategy, with evolution of both policy and institutions. A number of calls were made for a new post-industrial strategy following the EU referendum of 2016.[13] In January 2017 BEIS published a White Paper setting out the government's priorities (BEIS, 2018a). The policy is built around five 'foundations' and four 'grand challenges'.[14] To meet these challenges, BEIS intends to adopt a 'mission orientated' approach, the idea being that the government should remain neutral over how challenges – ageing, for example – are approached and solved to allow a variety of ideas to be developed, and avoid bringing political bias or favouritism into policy.[15] Compared to recent UK history, this has been a period of activism.

However, compared to its G20 peers the UK has been a laggard. The period since the euro crisis eased has seen a flowering of interest in industrial strategy. China's 'Belt and Road' initiative is the most well-known and strongly funded: launched in 2013 it involves investment of around $900 billion.[16] Germany is developing a radical shift towards a more activist industrial strategy that would involve intervention in particular markets, a quantitative target for the share of industry in national GVA, and the pursuit of national champions.[17] There are signs that France may follow, including a Franco-German joint 'manifesto' on industrial strategy.[18]

Digging down to the specific challenges that BEIS has identified also shows how far behind the UK is: Japan adopted an industrial strategy devoted to robotics specifically designed to aid an elderly population five years ago (METI, 2015). Looking inward, the UK may seem radical – looking outward, developments remain sluggish.

The UK still lacks the kind of joined-up and determined approach that many of its competitor economies have in place. It does have an array of frameworks for promoting industrial development, many with a regional focus. Their latest incarnation is in the form of Local Enterprise Partnerships (LEPs). Whatever the merits and deficiencies of such arrangements, the UK's inability to commit to stable arrangements prevents the building of the kind of state capacity that is needed.

A further impediment to building a supportive state comes from the fragmented structure of accountability and authority, coupled with a failure to match the unit of governance to a sensible economic geography. Elected mayors in metropolitan areas may help in this, notwithstanding that they (mostly) lack resources and administrative structures.

We reserve judgement about whether the relatively new Industrial Strategy Council (ISC), which was set up in 2018, will provide the kind of independent oversight and guidance that is needed.[19] Its creation marks a potentially important development for the UK, which has not had such a body since the abolition of the National Economic Development Council (NEDC) in 1992.[20]

One way to assess the new ISC is by comparison to the other economic decision-making and advisory bodies that have been established over the past 25 years in the UK. These include independence for the Bank of England and the Competition Commission (now the CMA) in 1997, the Office for Budget Responsibility in 2010, and the National Infrastructure Commission in 2015. These bodies have differing degrees of independence, capacity – both locational, staff, and technical – clarity of mandate, operating framework and legal underpinning. When benchmarked against other independent or arms-length bodies, the ISC looks tame; it is a non-statutory advisory group, and its expert members command few resources and operate under a remit that explicitly prevents them from commenting on tax policy or making public policy recommendations to government.[21]

Conclusion: a plan of action

Policy proposal

- *The government should adopt a new industrial strategy for 2020. It should be:*

– *A central plank of economic policy.*

The UK needs to give greater prominence to industrial strategy in its public institutions and policy debate. Depending on the future relationship to the EU, this should be closely coordinated with trade policy, especially export promotion.

– *At the heart of government.*

HMT lacks the capacity to operate as an effective economic ministry, and BEIS has lacked the authority to play this role. Founding the ISC is a welcome development, but it is too timid. Whoever is responsible for industrial strategy needs a dedicated base of operation, permanent qualified staff, and a legal operating policy mandate similar to those underpinning the Bank of England and the CMA. The ISC should enjoy sufficient independence to provide critical advice to relevant government departments, and it should be embedded in regional governance, coordinating policies on skills, infrastructure, and housing.

– *Properly focused.*

Design of an ambitious strategy should begin with a review of the economic contribution of different types of firms and a consideration of re-focusing aid away from small firms towards young ones and those with potential for growth. Simple yet data-rich metrics on what British industries are lacking are needed to steer industrial strategy and assess its performance.

– *Market led, yet realistic.*

It is essential to maintain a commitment to competition and markets alongside the industrial strategy. Maintaining a commitment to competition is critical in a context of decentralised policy to avoid the risk of 'capture'. Interventions should be justified by carefully-argued market failure arguments, have clear time horizons (often with sunset clauses), and their impact should be evaluated properly using appropriate data collected for the purpose.

NOTES

1 This is the number of VAT and/or PAYE registered businesses. ONS (2018).
2 These databases, including the Business Structure Database, are anonymised taken from administrative databases including the IDBR.
3 Source: ONS, Table EMP13, All employment by industry, May 2019 release.
4 For example, BEIS has a dedicated 'Action Plan' for SMEs (see BEIS, 2019); R&D tax breaks for SMEs and a commitment to use procurement to direct government spending towards SME. Lobbyists also campaign for SMEs – for example the Advertisers Association has a tax break to allow SMEs a tax break on advertising.
5 These studies tend to use the Longitudinal Business Database (LBD) and the related Business Dynamic Statistics (BDS) which are maintained by the US Census Bureau. The UK has parallel databases, including the Business Structure Database (BSD).
6 See for example, Haltiwanger *et al.* (2013, 2017).
7 Brown *et al.* (2017) examine the US Small Business Administration loans and assistance program.
8 More formally, there are positive externalities associated with technological adoption and likely agglomeration effects in large cities.
9 On the disparities between coastal and inland towns in Britain see Bernick *et al.* (2017).
10 Data downloaded from stat.OECD.org, August 2019.
11 OECD data; caution, data are relatively old (2014) – see: http://www.oecd.org/sti/dynemp.htm.
12 Mittlestand firms include small and medium sized enterprises. They are able to access various R&D subsidies.
13 Industrial Strategy was discussed in CEP (2017), and by the Industrial Strategy Commission chaired by Dame Kate Barker.
14 The foundations are ideas, people, infrastructure, business environment, and places. The grand challenges are AI and data, the ageing society, clean growth, and the future of mobility.
15 On 'missions' in Industrial Strategy see Mazzucato (2017).
16 Also known as One Belt One Road or OBOR the initiative is made up (1) the 'Silk Road Economic Belt' and (2) the '21st Century Maritime Silk Road'.
17 See BMWI (2019) for the outline of Germany's strategy which involves support for named technologies (cell batteries) and the creation of a state-supported pan-European champion in AI. These interventionist steps are controversial in Germany, for a dissenting view see German Council of Economic Experts (2019).
18 The joint paper explicitly discusses relaxing competition laws in order to create pan-European companies better able to compete with Chinese firms.
19 The new ISC met for the first time on 1st November 2018 at Downing Street, see BEIS (2018b).
20 The NEDC was established by the Macmillan government. Supported by an 'office' (the NEDO) it operated from 1962 until 1992 when it was abolished by the Major government. For a short history on institutions over-seeing UK industrial strategy see Pemberton (2018).
21 The remit of the ISC is discussed Gov.uk (2018).

REFERENCES

Andrews, D., Criscuolo, C., Gal, P. and Menon, C. (2015), *Firm Dynamics and Public Policy: Evidence from OECD Countries*, Reserve Bank of Australia Conference Volume.

BEIS (2018a), 'Industrial strategy: building a Britain fit for the future', November 2017, updated June 2018. https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

—(2018b), 'Forging our future, the industrial strategy story so far', 6 December 2018.

—(2019), 'BEIS small and medium enterprises (SME) action plan', Policy paper.

Bernick, S., Davies, R. and Valero, A. (2017), 'Industry in Britain – an atlas', CEP Special Paper No. 34, September.

Brown, J. David, J., Earle, S. and Morgulis, Y. (2017), 'Job creation, small versus large versus young, and the SBA', in Haltiwanger, J., Hurst, E., Miranda, J. and Schoar, A. (eds), *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, pp. 371–410).

BMWI (2019), 'National Industrial Strategy 2030', Federal Ministry for Economics Affairs and Energy, February 2019.

Clementi, G.L. and Palazzo, B. (2016), 'Entry, exit, firm dynamics, and aggregate fluctuations', *American Economic Journal: Macroeconomics*, 8, 3, July, pp1–41.

Decker, R., Jarmin, R., Haltiwanger, J. and Miranda, J. (2019), 'Changing business dynamism and productivity: shocks vs. responsiveness', *American Economic Review* (*forthcoming*).

German Council of Economic Experts (2019), 'Setting the right course for economic policy', Annual Report 2018/19, Chapter 1.

Gov.UK (2018), 'New Industrial Strategy Council meets as membership announced', Press Release, 1 November 2018.

Haldane, A. (2017), 'Productivity puzzles', speech delivered at the LSE, March.

Haltiwanger, J., Jarmin, R.S. and Miranda, J. (2013), 'Who creates jobs? Small versus large versus young', *The Review of Economics and Statistics*, 95, 2, pp. 347–61.

Haltiwanger, J., Jarmin, R.S., Kulick, R. and Miranda, J. (2017), 'High growth young firms: contribution to job, output, and productivity growth', in Haltiwanger, J., Hurst, E., Miranda, J. and Schoar, A. (eds), *Measuring Entrepreneurial Businesses: Current Knowledge and Challenges*, pp. 11–62.

Hopenhayn, H. and Rogerson, R. (1993), 'Job turnover and policy evaluation: a general equilibrium analysis', *Journal of Political Economy*, 101 (October), pp. 915–38.

Industrial Strategy Commission (2017), *Final Report*, November 2017.

Mazzucato, M. (2017), 'Mission-oriented innovation policy: challenges and opportunities', RSA, September 2017.

METI (2015), *Japan's Robot Strategy*, January 2015.

Midrigan, V. and Yi Xu, D. (2014), 'Finance and misallocation: evidence from plant-level data', *The American Economic Review*, 104, 2 (February), pp. 422–58.

Norris, E. and Adam, R. (2017), 'All change: why Britain is so prone to policy reinvention, and what can be done about it', Institute for Government, March.

Pemberton, H. (2017), 'UK industrial strategy, redux: Reinvention or return to the 1970s?', IPPR, January: https://www.ippr.org/juncture/uk-industrial-strategy-redux-reinvention-or-return-to-the-1970s.

White, C. and Wilkinson, B. (2017), 'Creating, not picking, winners: how to develop an industrial strategy which works for everyone', Kings College London, November.

SECURING DECARBONISATION AND GROWTH

Dimitri Zenghelis*

Executive Summary

The need to decarbonise the economy in order to slow the pace of climate change is now recognised as one of the most pressing international policy challenges. While the UK cannot by itself materially affect global climate change, it has an opportunity to play an influential role, both by persuading others of the need for action but also by reshaping its domestic economy to benefit from a low-carbon transition.

Far from hampering competitiveness, adoption of a coordinated policy approach to climate change today would generate positive benefits for the UK economy, especially if it addresses the multiple market failures that promote pollution and places decarbonisation at the heart of structural economic policy.

Desirable strategies would include public support for research, development, and deployment of new technologies, and measures to foster an environment where innovation can rapidly shift the economy from dirty to clean production systems. Focusing UK industrial strategy on securing strong domestic supply chains for green products and services, for example, could help create an early mover advantage in rapidly growing global market sectors. Interventions could include the establishment of a National Infrastructure Bank to support decarbonisation in crucial sectors such as energy and transport, and would also need to encompass measures to assist structural adjustment in affected industries and their workforces.

The world is warming and the economy is changing

Global warming is serious. Human activities are causing the planet to warm at an unprecedented rate, with potentially catastrophic consequences for the environment, humans, and economies. At the same time, mankind's response to the problem, though slow, uneven, and insufficient to address key risks, is already radically transforming the global economic landscape, with far-reaching effects, not least on the UK economy.

The estimates of the likely probabilities and potential damages from climate change are so large they are hard to comprehend. The Intergovernmental Panel on Climate Change (IPCC), in its 'likely' climate sensitivity analysis, estimates the median temperature increase at different levels of atmospheric concentration of carbon dioxide equivalents (CO2e). It concludes that, even if governments keep their current promises, atmospheric greenhouse gas concentration will reach 700 ppm, resulting in a 10 per cent chance of the increase in global temperature exceeding 6oC. This has been described as "an indisputable global catastrophe" (Wagner and Weitzman, 2015).

Had global policymakers kept to their commitment to secure a 50:50 chance of temperature increase below 2 degrees – which is now almost impossible – this would have required stabilisation not far from current concentration of 450 ppm; and would have given a 0.3 per cent chance of exceeding a 6oC temperature increase (Wagner and Weitzman, *op.cit.*).

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To put such probabilities into perspective, there are currently around 37 million aircraft flights per year,[2] with one fatal accident every three million flights.[3] This gives a probability of a fatal accident of 0.0000324 per cent per flight. Putting it another way, a 0.3 per cent probability of a fatal accident would mean over 300 fatal accidents per day. Few would fly given such odds: yet such is the estimated order of magnitude of the risk that human societies are currently taking in respect of catastrophic climate change (Ekins and Zenghelis, *forthcoming*).

Even without the low, but growing, risk of catastrophe, climate change stands to be extremely disruptive on a number of levels, undermining livelihoods, forcing migration of people, and destroying assets, all of which will undermine the growth and development capacity of the global economy (Dietz and Stern, 2015).

The low-carbon transition is inevitable

Yet decarbonisation of the global economy is inevitable. The extent of global warming depends on the *stock* of greenhouse gases in the atmosphere – not the *rate* of emissions. Greenhouse gases (GHGs) stay in the atmosphere for years, decades, or centuries (depending on the gas), so the stock will keep growing for as long as the flow of GHG emissions exceeds the earth's capacity to absorb them. This means that to halt continual temperature increase requires transitioning to a net zero emissions world.

Mankind will either manage the transition to net zero carbon emissions proactively by transitioning the economy, or nature will do it for us, by depopulating and deindustrialising the planet. Put another way, the fastest and the slowest global economic growth paths will both be low-carbon. The growing realisation that the low-carbon transition is inevitable, and that it will be most effective if managed early rather than postponed, is changing the lens through which global climate policy is viewed.

The UK must manage its low-carbon transition

The UK cannot by itself materially affect global climate change: it is directly responsible for only 1 per cent of global emissions of greenhouse gases, and only 2 per cent even when indirect effects (arising from net imports of greenhouse-gas-intensive goods) are taken into account. However, there are likely returns to leadership and early action in effecting structural transition.

- First, the UK can help to change global attitudes: this has been demonstrated already by the diplomatic awareness-raising activities of the UK government from the analytical lead of Lord Stern to the diplomatic leadership of Margaret Beckett, John Ashton, and others at the Foreign and Commonwealth Office. The UK's influence will be lessened, to the extent that it is no longer speaking as a member of the EU, but nevertheless will continue to have influence.

Policy proposal

- *Renew the UK's diplomatic push. In sectors where the UK is not well placed to lead, there must be an understanding of the pace of change in the rest of the world and its likely domestic impact.*

- Second, given that the world is going to have to adapt and innovate, the UK can direct its industrial and other policy so that, in preparing itself, it promotes activities and develops industries that will be in demand not only domestically, but worldwide.

The UK is well placed not only to adjust to, but also to benefit from, a low-carbon transition. To realise the benefits, however, it will be essential that policy clearly and consistently supports appropriate innovation and investment. The evidence for this is set out in the Report of the Advisory Group on Costs and Benefits of Net Zero for the Committee on Climate Change (CCC).[4]

The report concluded that the costs of transitioning the UK economy to low-carbon forms of production are a function of the decisions taken by policymakers and investors today. The more coordinated the UK's response to managing a low-carbon transition, the more cost-effective it will be.[5]

Decarbonisation can yield immediate benefits

A number of authoritative studies have shown that, contrary to what is often asserted by some politicians, many or at least most of the policies required to decarbonise the global economy stand to boost economic growth, not reduce it.

Much of this boost stands to come from addressing multiple market failures – situations where a pure market outcome misallocates resources, for example because polluters escape paying for the damage they cause.

- Thus a recent World Bank study (Hallegatte *et al.*, 2012) found that, compared with business-as-usual, green growth would produce immediate positive effects on the economy, when taking proper account of co-benefits (e.g. reduced local pollution); growth in new 'green' sectors; and reduced energy price volatility via reduced dependence on fossil fuel imports.

- The Global Commission on the Economy and Climate (2014) found that more than half, and perhaps as much as 90 per cent, of the global emissions reductions required to meet an ambitious climate target could generate net benefits to the economy. These include health benefits from reductions in urban pollution; falls in traffic congestion; increases in efficiency; improvements in energy security and supply.

- The OECD (2017) argues similarly:
  "… bringing together the growth and climate agendas, rather than treating climate as a separate issue, could add 1 per cent to average economic output in G20 countries by 2021 and lift 2050 output by up to 2.8 per cent. If the economic benefits of avoiding climate change impacts such as coastal flooding or storm damage are factored in, the net increase to 2050 GDP would be nearly 5 per cent."

- In the UK, congested, polluted cities, with leaky buildings, using outmoded energy technologies, and ill-served by public transport, are inefficient and wasteful.

- Urban air pollution is a major cause of respiratory illness, cardiovascular disease, and early mortality. The Committee on the Medical Effects of Air Pollutants (COMEAP) estimates that, in the UK, premature deaths resulting from a single particulate pollutant, PM2.5, currently total around 29,000 per year.[6]

Decarbonisation can address dynamic market failures

Public support for research, development, and deployment of new technologies has already driven remarkable, and often unexpectedly large, cost reductions in renewable and other energy technologies.

Over the past decade, the cost of both solar photovoltaic generation, and battery storage necessary to address intermittency of supply, has fallen tenfold (Bloomberg, 2019). In many parts of the world, renewable energy is now cheaper than fossil fuel-based energy (Holder, 2019). Within the coming decade it will be cheaper almost everywhere. Regardless of whether policymakers care about carbon or not, the world will now have cheaper energy; and this is the result largely of policy initiatives to steer investment in renewables. The markets alone would not have delivered this.

Overcoming such dynamic market failures in this sort of way has the potential to change the world. This understanding, first outlined by the Nobel prize winning economist Romer and others when they postulated the theory of endogenous technological change (Romer, 1990), is central to the task of efficiently managing a low-carbon transition.

As costs have become increasingly competitive, investment in renewable generation, excluding nuclear and hydroelectricity, is already outstripping investment in coal, gas, and oil power the world over, with renewables now on track to power the bulk of global electricity in the second half of the century (Bloomberg, 2019). Transformative cost reductions are also occurring in other key technologies, such as fuel cells, electric vehicles, and even electric aviation.

Decarbonisation can spur innovation and accelerate network shifts

Innovation is thus essential in determining economies' ability to decouple growth and consumption from environmental degradation and resources use. Yet innovation does not just 'happen'. It relies on path dependencies of three kinds (Aghion *et al*., 2014):

- First, discovery and invention, with scientists working in areas that are well funded, where other good scientists work, leading to geographical clustering of research and knowledge production.

- Second, deployment, whereby innovations leverage existing infrastructure and ideas rather than risk investment in potential new sectors.[7]

- Third, incentives for technology adoption, whereby the net benefits of unilaterally switching to an alternative network rise with the number of others using it.

Without direct policy intervention, strong inertia and high switching costs often make it difficult at first to shift the innovation system from dirty to clean technologies.[8] But once they reach a tipping point, where expectations change rapidly, and technologies switch from one network to another, these effects frequently go the other way (Krugman, 1991). Positive and reinforcing feedbacks derived from reduced technology cost accelerate further deployment and investment in supporting networks, infrastructure, and institutions. Investments in enabling infrastructure spur technology tipping points through generating network externalities.[9]

It is easier for countries to become competitive in new green products that require similar production capabilities and know-how to existing sectors(Hidalgo *et al*., 2007; Mealey *et al*., 2017). As a result, green transitions are highly path-dependent: countries that successfully invest early in green capabilities have greater success in diversifying into future green product markets. A firm's choice whether to innovate 'clean' or 'dirty' is influenced by the practice of the countries where its researchers/inventors are located. Moreover, firms tend to direct innovation towards what they are already good at (Aghion *et al*., 2012).

This all suggests that, to the extent that the UK can shift its energy and production systems from one network to another, this will likely generate large spillovers across the economy.

Policy proposal

- *Extend and integrate the focus of the UK Industrial Strategy on securing strong domestic supply chains[10] so as to support the full spectrum of decarbonisation activities.*

There is mounting evidence that productivity-boosting knowledge spillovers from low-carbon innovation are substantially greater than those emanating from conventional technologies (Dechezlepetre *et al*., 2014). These findings suggest that low-carbon investment can 'crowd in' rather than 'crowd out' productive investment and generate growth.

A study of OECD patent data shows that both wind and solar technologies create knowledge spillovers at the national level. On the evidence of data on 1 million patents and 3 million citations, another study (Dechezlepetre *et al*., 2014) suggests that spillovers from low-carbon innovation are over 40 per cent greater than from conventional technologies (in the energy production and transportation sectors).

Even looking backwards, over the period when renewable and energy efficiency technologies were more expensive, there has been no appreciable difference in economic growth rates between those countries that adopted emissions-reducing technologies early and those that did not. Yet the early-adopter countries are in a stronger position to benefit in years to come from global transition to a net-zero-carbon economy.

Behaviours, norms and institutions are also changing

Additional feedbacks, beyond the technology sphere, are likely to accelerate the pace of transition. As better ways of consuming, producing, and living are found, complementary changes in behaviour, institutions, and social norms will evolve (Boyd *et al*., 2015). The presence of low-cost alternatives to emitting greenhouse gases has enabled anti-fossil-fuel campaigns to point to superior energy alternatives (Bradshaw, 2015; Collier and Venables, 2014).

Anti-fossil-fuel norms are already concentrating moral pressure on the largest culprits of climate change (Green, 2015). A spate of lawsuits have been filed against fossil fuel companies and governments for deceiving shareholders and citizens by knowingly undertaking or supporting unsustainable and damaging activities.[11]

These factors are driving global climate policies at an accelerating pace: more than 1,500 climate laws and policies worldwide; and 106 since the Paris Agreement was reached. At the same time, new business lobbies in fast-growing sectors are starting to challenge the influence of incumbents on policymakers (Lockwood, 2013).

Markets increasingly recognise the strong economic and commercial case for early mitigation action by divesting from risky, high-carbon sectors (Ralph, 2018). The growing risk that failing to keep up with changing technologies and policies will render assets ill-suited to the economy of the 21st century, thereby leading to a fall in their value and perhaps even their becoming stranded, is reflected in share prices for renewable goods and services outperforming those of carbon-intensive sectors (Lewis, 2019).

Changing expectations (Zenghelis, 2019a) accelerate the deployment of new technologies, which in turn accelerates cost reductions (Aghion *et al*., 2014) and policy support. Strategic complementarities occur as the payoff to investing in low-carbon technologies rises (and the costs fall) when others are expected to invest in low-carbon technologies. This contributes further to tipping points across key technologies, institutions and behaviours as agents shift rapidly to new networks.[12,13]

Recognising the opportunities from such innovation helps to overcome the classic 'free rider' problem.[14] One big innovation of the 2015 Paris Agreement was that it focused on opportunities rather than costs. This overturned the dominant climate mitigation narrative of 'burden-sharing', scarcity, and shared sacrifice, which bred distrust and ill will, replacing legally-binding commitments with voluntary nationally-determined contributions. This reflects the recognition that self-interest breeds cooperation (Averchenkova *et al.*, 2014).

UK policy must set, and keep up with, the pace of change

These endogenous technological dynamics suggest that decarbonisation can be rapid. But policy can influence both the direction and pace of change, and steer a comparative advantage in what is now one of the world's fastest-growing global markets (Fischer and Newell, 2008; Farmer and Lafond, 2016). The costs of delay mean there is no place for fatalism or complacency (Romer, 2018), for example by waiting for new technologies to emerge.

Central to keeping costs low is guiding expectations through credible policy, while securing institutional flexibility to respond to rapid technological change. This is the most effective way to generate investor confidence to accelerate the green innovation machine (Aghion *et al.*, 2009). By contrast, mixed and muddled signals delay action, and raise the policy risk premium attached to decarbonisation investments.

One influential study (Acemoglu *et al.*, 2012) makes a powerful case that policy to support clean innovation needs often be only temporary. Once the 'clean innovation machine' has been 'switched on and is running', it can be more innovative and productive than the conventional alternative, with a positive impact on GDP levels and growth. Once low carbon is the norm, policy pressure can be eased.

These studies have at times been criticised by some as optimistic, yet the pace of cost reductions in low-carbon technologies has surprised all commentators.

A medium-sized open economy such as the UK is likely to require a joint strategy of helping to drive a global transition where it can, while accepting that it will need to react to developments across the world.

Policymakers need to do their utmost to develop and deploy certain technologies, especially where public support is required to develop network infrastructure. For example, the UK has already had considerable success in directing policy support at two appropriate technologies, coal-to-gas transformation, and wind power. (Clean tech solutions that are likely to be crucial for the development of sustainable cities, transport and energy systems in the UK are also those most complementary with AI and digitisation.)

Policy proposals

- *Integrate the UK's industrial strategy with its clean growth strategy*[15]
- *Develop research priorities based on a range of metrics, including positive technology spillovers based on a forward-looking strategy to retain comparative advantage in future markets.*[16]

Investing in new networks and technologies is not risk-free. But there is a greater risk, when the rest of the world is decarbonising, in being a last rather than a first mover.

This requires government to work in partnership with business to develop growth strategies that harness the potential for discovery, innovation, and directed technical change (Acemoglu *et al.*, 2012). This will inevitably need to include a strong and comprehensive carbon price signal to guide consumer and producer behaviour in a transparent, non-discriminatory manner. However, prices alone will not achieve an efficient transition. Some non-price-sensitive sectors will require standards, regulations, and planning,[17] while others will require R&D and deployment support, as well as targeted sectoral innovation support.

The fact that much of the transition will occur in policy-driven, highly-regulated sectors such as transport and energy argues for institutions designed to relieve private investors of policy risk through risk guarantees or direct financing and investment support.

Policy proposal

- *Establish a National Infrastructure Bank, with an explicit sustainability mandate, to help leverage private finance at scale.*

(The proposal for a National Infrastructure bank is developed in the paper *Improving infrastructure*.)

Managing the process of change

Rapid transformative change, whether from decarbonisation or artificial intelligence, automation, and digitisation, needs to be managed carefully. The gains must be, and be seen to be, equitably distributed if the political economy is not to inhibit and retard progress. This requires:

- 'Enabling institutions' (Haldane, 2018) to reskill, retool, and compensate affected workers. (This matter is considered further in the paper *Supporting dynamic economic adjustment*).

- Policies designed to compensate those who lose out;[18] and

- Targeted 'place-based' employment transition policies in areas at high risk of disruption (Austin *et al*., 2018).

Adjustment costs are real, but manageable, and with the right policies can be minimised. Risks are often overstated, and realised costs are often much lower than predicted. Economic history shows that economies that embrace change, and do not inhibit the flow of resources from declining, low-productivity sectors to new, more productive sectors, are better able to manage structural adjustment (Zenghelis *et al*., 2018; Combes and Zenghelis, 2014).

The adjustment to a low-carbon economy in the UK and globally will inevitably be uncertain and complex, and there will be winners and losers. A strategic risk management and hedging strategy for policymakers and business is required to ensure that the UK is well positioned in this changing world.

There is no reason in principle why a decarbonised UK economy would not be cleaner, quieter, more efficient, innovative, and productive, in the face of changing global markets, than any alternative. A broad-based, coordinated, credible, and coherent set of policies is the surest way to secure a productive, competitive and inclusive UK economy in the low-carbon decades ahead.

NOTES

1 This would be in line with the IEA's projection for 2100.
2 https://www.quora.com/How-many-airplanes-fly-each-day-in-the-world.
3 https://edition.cnn.com/2019/01/02/health/plane-crash-deaths-intl/index.html.
4 Available at: https://www.theccc.org.uk/wp-content/uploads/2019/05/Advisory-Group-on-Costs-and-Benefits-of-Net-Zero.pdf.
5 For example, policy can generate cost reductions and new economic benefits by avoiding locking into high-carbon infrastructure, behaviours and institutions which will be expensive to subsequently retrofit or scrap, while at the same time, inducing resource-efficient innovation.
6 See: https://www.gov.uk/government/publications/comeap-mortality-effects-of-long-term-exposure-to-particulate-air-pollution-in-the-uk and also http://www.eea.europa.eu/media/newsreleases/many-europeans-still-exposed-to-air-pollution-2015/premature-deaths-attributable-to-air-pollution .
7 For example, conventional cars have historically been easier to sell than electric vehicles because the existing network of petrol stations is far larger than that of charging stations.
8 This is consistent with early slow progress in deployment of decarbonisation technologies.
9 For example, once electric vehicle infrastructure is rolled out, the incentives to conduct research and development on electric cars increase relative to combustion engine, or fuel cell, vehicles. Volvo will stop producing combustion engine cars from 2019 and start focusing its R&D on electric vehicles; others are sure to follow.
10 See https://www.gov.uk/government/topical-events/the-uks-industrial-strategy.
11 Cities and counties in California, New York, Colorado, Washington and Maine have filed civil lawsuits against oil and gas companies. The Grantham Research Institute's 'Global trends in climate change legislation and litigation' survey, (available at http://www.lse.ac.uk/GranthamInstitute/publication/global-trends-in-climate-change-legislation-and-litigation-2018-snapshot/) identifies 25 climate-related lawsuits brought against governments or their representatives.
12 The virtuous cycles described above explain why the likely speed of the transition and the opportunities from climate action have tended to be systematically underestimated (see Zenghelis, 2019b). Most conventional approaches to assessing the efficient decarbonation path at the national and global level presuppose the technologies, tastes, preferences, and behaviours that will dominate in the decades and centuries ahead, in order to give the model structure. But the structural assumptions imposed on these models are precisely the things users want to know in order to predict the costs of transitioning to low carbon networks, processes and behaviours. For more, see Zenghelis (2018). Marginal static analysis techniques, which assume the broader environment is unchanged by the intervention, are inappropriate where there are potential non-marginal effects or structural changes in underlying relationships – such as those inherent in systemic transitions.
13 Grubb points out that if technology substitution in a structural transformation is intrinsically dynamic and irreversible, with technologies '"striving" for dominance', new technological systems can rapidly scale-up and displace older ones in a way that cannot be determined from examining past data in that sector. See https://www.ineteconomics.org/perspectives/blog/growth-with-decarbonization-is-not-an-oxymoron.
14 The effects of mitigation are non-excludable and so individual countries can free-ride on others' actions, while those undertaking mitigation incur the whole cost but only a fraction of the benefits.
15 See https://www.gov.uk/government/publications/clean-growth-strategy
16 See the recommendations of the LSE Growth Commission Report, 2019, 'Sustainable growth in the UK: Seizing opportunities from technological change and the transition to a low-carbon economy', available at: http://www.lse.ac.uk/GranthamInstitute/publication/sustainablegrowth/
17 For example in buildings, land use and infrastructure networks.
18 Examples include proposals for the US Democratic Green New Deal to return carbon tax revenues to households, or former London Mayor Ken Livingstone's popular use of congestion charge revenues to fund extra capacity on London's bus networks.

REFERENCES

Acemoglu, D., Aghion, P., Bursztyn L. and Hémous, D. (2012), 'The environment and directed technical change', *American Economic Review*, 102, pp. 131–66.

Aghion, P., Dechezleprêtre, A., Hémous, D., Martin, R. and Van Reenen, J. (2012), 'Carbon taxes, path dependency and directed technical change: evidence from the auto industry', NBER Working Paper No. 18596, December.

Aghion, P., Hémous, D. and Veugelers, R. (2009), 'Kick-starting the green innovation machine', Bruegel: https://bruegel.org/2009/12/kick-starting-the-green-innovation-machine/.

Aghion, P., Hepburn, C., Teytelboym, A. and Zenghelis, D. (2014), 'Path dependence, innovation and the economics of climate change', Centre for Climate Change Economics and Policy/Grantham Research Institute on Climate Change and the Environment Policy Paper & Contributing paper to New Climate Economy.

Austin, B.A., Glaeser, E.L. and Summers L.H. (2018), 'Jobs for the heartland: place-based policies in 21st Century America', NBER Working Paper No. 24548, April: https://www.nber.org/papers/w24548.

Averchenkova, A., Stern, N. and Zenghelis, D. (2014), 'Taming the beasts of 'burden-sharing': an analysis of equitable 2030 mitigation pledges', Grantham Research Institute and Centre for Climate Change Economics and Policy, London School of Economics.

Bloomberg New Energy Finance (2019), *New Energy Outlook 2019*, available at: https://about.bnef.com/new-energy-outlook/.

Boyd, R., Green, F. and Stern N. (2015), 'The road to Paris and beyond', Centre for Climate Change Economics and Policy and Grantham Research Institute on Climate Change and the Environment.

Bradshaw, E.A. (2015), 'Blockadia rising: rowdy greens, direct action and the Keystone XL pipeline', *Critical Criminology*, 23, pp. 433–48: http://dx.doi.org/10.1007/s10612-015-9289-0.

Braun, F.G., Schmidt-Ehmcke, J. and Zloczysti, P. (2010), 'Innovative activity in wind and solar technology: empirical evidence on knowledge spillovers using patent data', CEPR Discussion Paper No. 7865.

Collier, P. and Venables, A.J. (2014), 'Closing coal: economic and moral incentives', Grantham Research Institute on Climate Change and the Environment Working Paper No. 157.

Combes B. and Zenghelis D. (2014), 'Tough love', MacroPlus Comment, Llewellyn Consulting: http://media.wix.com/ugd/264e4c_b24f1969bc844dc1840b7152e5ab0f04.pdf.

Dechezleprêtre, A., Martin, R. and Mohnen, M. (2014), 'Knowledge spillovers from clean and dirty technologies', Centre for Economic Performance, London School of Economics and Political Science.

Dietz, S. and Stern, N. (2015), 'Endogenous growth, convexity of damages and climate risk: how Nordhaus' framework supports deep cuts in carbon emissions', Centre for Climate Change, *Economic Journal*, 125, 583, March, pp. 574–620, https://doi.org/10.1111/ecoj.12188.

Ekins and Zenghelis, D. (*forthcoming*), 'The costs and benefits of environmental sustainability', *Sustainability Science*.

Farmer, J.D. and Lafond, F. (2016), 'How predictable is technological progress?', *Research Policy*, 45 (3), pp. 647–65.

Fischer, C. and Newell, R.G. (2008), 'Environmental and technology policies for climate mitigation', *Journal of Environmental Economics and Management*, 55 (2), pp. 142–62.

Global Commission on the Economy and Climate (2014), 'Better growth, better climate', *New Climate Economy*, www.newclimateeconomy.report/2014.

Green, F. (2018), 'Anti-fossil fuel norms', *Climatic Change*, 150 (1), pp. 103–16: https://doi.org/10.1007/s10584-017-2134-6., London School of Economics and Political Science.

Haldane, A. (2018), 'Ideas and institutions – a growth story', speech given at the Bank of England: https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/ideas-and-institutions-a-growth-story-speech-by-andy-haldane.

Hallegatte, S., Heal, G., Fay, M. and Treguer, D. (2012), 'From growth to green growth – a framework', http://www.nber.org/papers/w17841.

Hidalgo, C.A., Klinger, B., Barabasi, A.L. and Hausmann, R. (2007), 'The product space conditions the development of nations', *Science*, 317 (5837), pp. 482–87.

Holder, M. (2019), 'Cheaper than fossil fuels: global renewables costs hit record low': https://www.businessgreen.com/bg/news/3076511/cheaper-than-fossil-fuels-global-renewables-costs-hit-record-low.

Krugman, P. (1991), 'History versus expectations', *The Quarterly Journal of Economics*, 106, 2, May, pp. 651–67.

Lewis, M. (2019), 'Wells, wires, and wheels – EROCI and the tough road ahead for oil', BNP Paribas: https://investors-corner.bnpparibas-am.com/investment-themes/sri/petrol-eroci-petroleum-age/.

Lockwood, M. (2013), 'The political sustainability of climate policy: the case of the UK Climate Change Act', *Global Environmental Change*, 23(5), pp. 1339–48.

Mealy, P., Cameron J. and Hepburn, C.J. (2017), 'Transformational change: parallels for addressing climate and development goals', INET, Oxford, October, doi: 10.13140/RG.2.2.34840.44801.

OECD (2017), *Investing in Climate, Investing in Growth*, http://www.oecd.org/economy/taking-action-on-climate-change-will-boost-economic-growth.htm.

Ralph, O. (2018), 'Insurers go cold on coal industry', *Financial Times*, 8 January, available at: https://www.ft.com/content/7ec63f34-f20c-11e7-ac08-07c3086a2625.

Romer, P. (1990), 'Endogenous technological change', *Journal of Political Economy*, 98(5), pp. S71–S102.

—(2018), 'Conditional optimism': https://paulromer.net/conditional-optimism-technology-and-climate/.

Wagner, G. and Weitzman, M. (2015), *Climate Shock: the Economic Consequence of a Hotter Planet*, New Jersey: Princeton University Press.

Zenghelis, D. (2018), 'The role of modelling and scenario development in long-term strategies', World Resource Institute, Expert Perspectives: https://www.wri.org/climate/expert-perspective/role-modelling-and-scenario-development-long-term-strategies.

—(2019a), 'Mind over matter – how expectations generate wealth', Bennett Institute, Cambridge: https://www.bennettinstitute.cam.ac.uk/blog/mind-over-matter-how-expectations-generate-wealth/.

—(2019b), 'Nobel for Economics 2018 – a question of imbalance': http://www.lse.ac.uk/GranthamInstitute/news/nobel-for-economics-2018-a-question-of-imbalance/.

Zenghelis, D., Fouquet, R. and Hippe, R. (2018), 'Stranded assets: then and now', Routledge.

IMPROVING INFRASTRUCTURE

Russell Jones* and John Llewellyn*

Executive Summary

Infrastructure investment can substantially increase a nation's capital stock and thereby boost productive, or supply-side, potential. It can also be useful as a tool in macroeconomic stabilisation, while public spending on quality infrastructure projects has been shown to have significantly greater multiplier effects than tax cuts – so the case for an increasing spend is not undermined by a country's overall debt level.

These arguments are especially apposite for post-Brexit UK. Britain's investment performance in general has been especially poor since the 2016 EU referendum. Fixed capital formation as a proportion of GDP is low by international standards, while the government's share of fixed capital formation, at 2.5 per cent, is also below average. It would make sense to target an increase in public and private infrastructure spend to 3.5 per cent of GDP which is the OECD's recommended level.

While major infrastructure projects continue to generate controversy on grounds of cost overruns and other issues, UK policy-makers have recently taken a more constructive approach to infrastructure development, notably with the creation of an independent National Infrastructure Commission.

But the UK's infrastructure remains unsatisfactory, with significant parts of its energy, water, transport and communications networks in need of renewal or replacement, and infrastructure project delivery remains poor. In summary, much of Britain continues to operate well into the 21st century largely with 20th century, sometimes 19th century, infrastructure assets that are creating bottlenecks, crimping productivity, putting off potential foreign investors, undermining the economy's competitiveness, increasing inequality, and leaving the economy ill-equipped to face future challenges such as Brexit and climate change.

The government needs to be bolder, setting out a more ambitious set of priorities including energy projects, regional spending, and fostering capital recycling and private sector investment. A still more ambitious, but eminently feasible, proposal would be to establish a National Investment Bank to offer project guarantees, recommend user fees, lend to projects with the proceeds of National Investment Bonds and simplify planning among other tasks. In a serious downturn, with monetary policy exhausted, the NIB could also help to co-ordinate and finance a response.

Infrastructure's unique role

A country's infrastructure is central to the functioning of its economy, and to the welfare of its population. Broadly-defined infrastructure encompasses both tangible and non-tangible assets. It amounts to the structures that enable people, capital, commodities, manufactures, water, energy, information and more to move efficiently both within, and into and out of, a country. It therefore includes the assets that underpin the networks for

*Llewellyn Consulting. E-mails: russell.jones@llewellyn-consulting.com, john.llewellyn@llewelyn-consulting.com.This paper has benefited from significant and substantive comments from Tim Besley (LSE) and Terry Scuoler (Institute of Export and International Trade; Talent Retention Solutions: Llewellyn Consulting). Disclaimer: The views, judgements and policy proposals expressed in this chapter are those of the authors, but not necessarily those of the critical commentators, Gatehouse Advisory Partners, Llewellyn Consulting, the Federal Reserve Bank of San Francisco or the National Institute of transportation; power generation, distribution and storage; communications; waste management; and water distribution and treatment.

It is hard to imagine any productive process in any sector that would not benefit from decent infrastructure. Equally, infrastructure inadequacies are quickly felt. They cause congestion; restrict trade and innovation; raise transport costs; undermine the reliability of power supplies and telecommunications; increase pollution; leave workers less healthy and more poorly educated; and constrain firms' production capabilities. As a result, the debate around infrastructure can never escape the trade-offs it throws up. What should be prioritised? Where? And when?

Arguably, from a domestic macroeconomic perspective the most important elements of infrastructure networks are major roads, railways, airports, and seaports; power stations and power lines; the telephone system and the internet; household and business water supply, sewerage, and waste disposal; flood defences; and intellectual capital. Infrastructure also underpins the country's £1.2tn of annual trade.

There is in addition 'social infrastructure': namely housing; hospitals; schools; universities; the legal system; government research institutions; and more. Such assets are also central to maintaining a modern, dynamic, and fair society while, from an institutional investor's point of view, they are little different from the 'harder' varieties of infrastructure mentioned above.

The private sector can be involved at every level of infrastructure provision, and in the UK the private sector, especially via the utilities, plays a large role. But it is the government that typically dominates planning, organising, and financially sponsoring infrastructure projects, as well as defining and overseeing the regulatory environment within which they are operated and maintained.

Infrastructure investment is complex. To attract investors to projects requires that government puts in place a transparent and stable supervisory framework, and is seen to be publicly accountable for its decisions. Any threat of politically-motivated or abrupt and seemingly random changes to the rules and customs that impinge on the planning, delivery, and operation of infrastructure projects can scare potential investors off.

Infrastructure investment thus has the potential to increase, substantially, a nation's capital stock and thereby boost productive, or supply-side, potential. Infrastructure programmes can therefore be considered an element of structural policy, and should be co-ordinated with other elements of structural policy.

There is furthermore a conceptually separate, and potentially crucial, way in which publicly-sponsored infrastructure investment spending can be useful – as a quantitatively important element of macroeconomic stabilisation policy.

As the money allocated for infrastructure investment is disbursed, it cascades through the economy, feeding demand for materials and other manufacturing and service sector inputs, creating new jobs, and boosting incomes through its powerful 'multiplier effects'.

In due course, there may be further constructive effects, with more buoyant animal spirits 'crowding-in' other forms of investment, via the so-called 'accelerator' effect. And, at a time when the UK's productivity performance has been extremely disappointing, and when it is facing increased risks and uncertainties, it is doubly important that the economy remains flexible and dynamic.

The quality, nature, and timing of the investment undertaken all typically influence the size of the effect on the economy. If the selection and execution of infrastructure projects are poor, and only a fraction of the money spent is converted into productive capital stock, the longer-term output gains will be limited.

Public investment is often plagued by delays, cost overruns, and inadequate management and maintenance. Average inefficiencies in public investment processes are around 30 per cent in the major economies, so the benefits of addressing these shortcomings are substantial (IMF, 2015). In the UK over recent periods, skills shortages among the labour force have often been a primary source of inefficiency.

The impact of infrastructure spending will be greater when:

- The stance of monetary policy is easy, and when nominal interest rates are at, or around, zero;
- The private sector is unable or unwilling to borrow, as was the case following the 2008 global financial crisis;
- The economy is working well below full capacity and unemployment is high;
- An economy is relatively closed; and
- Other countries are also adopting an expansionary fiscal policy stance.

However, there is little or no evidence that the impact of public investment outlays on output is affected by a country's initial debt burden (IMF, 2014).

The IMF suggests that public investment multiplier effects in the advanced economies greatly exceed those of tax cuts, often a large proportion of which is saved. Although often hard to quantify precisely, infrastructure multipliers typically average about 0.4 over one year, but cumulate to 1.4 over four years. In countries with highly efficient public investment, the multipliers can be as high as 0.8 in year one, and 2.6 in year two. Where public investment is inefficient, they can drop to 0.2 in year one, and a mere 0.7 over the medium term.[1]

Clearly, therefore, it makes sense to focus on the *quality*, as much as the *quantity*, of infrastructure spending, and to avoid white elephant projects. This is particularly so because the greater the multiplier effect, the less the government debt burden will tend to rise in the wake of a round of fiscal stimulus. Indeed, the IMF and others have suggested that, in an environment of historically low interest rates, such are its effects on output that efficiently-employed public infrastructure spending will over time reduce the government debt ratio. This is of paramount importance, because it suggests that opposition to a major increase in public infrastructure outlays on the grounds that it is unaffordable is often misplaced.

Furthermore, even estimates of longer-term multiplier effects tend significantly to understate the ultimate influence of infrastructure spending, as they rarely capture the broader, more enduring, supply-side consequences for growth and development, and in particular infrastructure's role in:

- Reducing the costs of production and enhancing competition;
- Expanding trade, foreign direct investment (FDI), and encouraging economies of scale and the division of labour;
- Producing a more efficient allocation of activity across regions;
- Fostering the diffusion of new technologies;
- Encouraging better organisational practices in business and beyond; and
- Providing access to new raw material and other resources, including human capital.

Infrastructure that is rich in path-breaking technology tends to be especially potent over the longer-term. Countries that have invested the most in information and communication technology (ICT) have tended to experience the highest productivity growth (OECD, 2006). Of course, appropriately-delivered infrastructure can also help in a number of other areas, including the reduction of poverty and income inequalities, addressing the burgeoning challenges of climate change, and enhancing national prestige and the self-worth of the population.

Infrastructure and macrostabilisation today

Even if the underlying structural case for better infrastructure is currently as strong as ever, the *cyclical* case for fiscal stimulus has ebbed and flowed over recent years. The risks associated with Brexit, however, have brought it back to the top of the agenda, and the new government's appetite for austerity is clearly much less than its predecessors.

One thing is clear: a recession is certain to arrive at some stage. Furthermore, there is a growing fear that all the advanced economies, including the UK, are beginning to suffer from something akin to 'secular stagnation' – an enduring imbalance resulting from an increasing propensity to save, accompanied by a decreasing propensity to invest, with both exacerbated by a growing sense of uncertainty about the future. This excessive saving acts as a long-term constraint on aggregate demand, depressing growth and inflation, and pulling down real interest rates. These are circumstances for which policymakers would be wise to make contingency arrangements for boosting aggregate demand.

Monetary policy has been overloaded for some time, and is likely to remain so. Hence, it is only sensible that fiscal policy should take on a greater burden in managing the business cycle, and in addressing the next downturn.

Britain's investment shortcomings

Britain's investment performance has long left much to be desired, but it has been especially poor since the 2016 EU referendum, as uncertainty over the ultimate form of Brexit has resulted in lower FDI and the postponement or cancellation of many private sector projects.

At some 17 per cent of GDP, the proportion of gross fixed capital formation in GDP is low in an international context. The government's share of gross fixed capital formation, at some 2.5 per cent of GDP, is similarly below average. Public sector infrastructure outlays account for around half of this figure. Tentative estimates of total (public plus private) infrastructure investment over recent years amount to around 2½–¾ per cent of GDP, although there has been a declining trend over this period. This falls well short of the 3½ per cent of GDP that the OECD has suggested is necessary in advanced economies to avoid detrimental implications for living standards, quality of life, and competitiveness (OECD, 2007).

Policy proposal

- *Target a total (public plus private) infrastructure spend equivalent to 3½ per cent of GDP.*

Institutional reform

That said, over recent years the public debate in the UK surrounding major infrastructure projects such as the northern-link high-speed train HS2 (currently costed at some £65bn, or 12.6 per cent of current GDP), Northern Powerhouse Rail (currently costed at some £39bn, or 7.6 per cent of current GDP) the Hinkley Point C nuclear power plant (currently costed at some £20bn, or 3.9 per cent of current GDP), the high-capacity high-speed Crossrail 2 (currently costed at some £30bn, or 5.8 per cent of current GDP), and the extension of Heathrow Airport (currently costed at some £14bn, or 2.7 per cent of current GDP) has intensified. The debate has centred not just on their huge potential expense – even if this were to be spread out over several decades, but also on their potential to starve other areas of infrastructure of resources, and their associated environmental and other disruptive effects.

Meanwhile, policymakers' overall tone on the subject of infrastructure has become more constructive. Successive governments have launched important institutional initiatives in this area, including:

- The progressive consolidation of infrastructure expertise within the Treasury;

- A focus on better planning, consents, cost management, the prioritisation of nationally significant projects, and the attraction of private sector expertise and involvement. This has resulted in successive national infrastructure assessments and delivery plans, setting out a pipeline of proposed major projects, the prospective roles of the public and private sectors, and the potential burden on different sectors and the skilled labour force.

- The creation of the UK Guarantee Scheme (UKGS) in July 2012 to provide sovereign-backed financial guarantees for money lent to fund future infrastructure projects.[2]

- The establishment of an independent National Infrastructure Commission (NIC), latterly under the chairmanship of Sir John Armitt, formerly Chairman of the Olympic Delivery Authority, and President of the Institute of Civil Engineers. An executive agency of the Treasury, the NIC is mandated to support sustainable economic growth across all regions; improve competitiveness, and enhance quality of life. It is to provide regular unbiased analysis of the UK's long-term (30-year ahead) infrastructure needs, report annually on the progress being made towards meeting these needs, and undertake detailed sector specific and other appraisals of the UK's infrastructure network.

In July 2018, the NIC produced the first of a series of five-yearly National Infrastructure Assessments (NIAs). It set out fully costed recommendations for improving the country's infrastructure network out to 2050, within the context of a long-term funding guideline for public infrastructure investment of 1.2 per cent of GDP – that is to say, a figure broadly similar to the level of outlays over recent periods.

It focussed in particular on six key sectors: transport, energy, digital communications, water supplies, flood risk, and waste. The major recommendations extended to setting out ambitious targets for renewable energy; a national and visible charging network for electric vehicles; devolved funding for city transport; the rolling out of full fibre broadband; and substantial funding for major schemes such as Crossrail 2, and Northern Powerhouse Rail.[3]

Much criticism has been levelled at the NIC's terms of reference. In particular, it has no statutory powers, not least in the area of planning; it is not mandated to challenge the government's macroeconomic judgement; the NIC's role is confined to the earliest stages of Infrastructure projects; it is not responsible for any decision on airport capacity in South East England; the government will still take the final decision regarding large-scale infrastructure investments, so that this process will remain to a significant extent beholden to the political cycle; and it is unclear how, if at all, the NIC will sustain cross-party support. Finally, each new administration will, of course, have the option of changing the NIC's terms of reference, including the cost limits on its recommendations, and the breadth of its research.

Nationalisation

Another, more radical, departure that has been put forward to address the UK's enduring infrastructure shortcomings is the renationalisation of large parts of British industry, in effect returning to the industrial model of the 1960s and early to mid-1970s.

The historical record demonstrates, however, that the UK's nationalised industries' commercial and non-commercial, or social, goals were often in conflict. It was also hard to reach agreement on the appropriate measure(s) of profitability against which to judge individual NIs' performance. Boards were rarely left alone to manage; it was unclear who was really in charge. Governments distorted decisions on industrial location and the pace of adjustment to market conditions at a time when many of the sectors nationalised, such as iron and steel, coal, and autos, were in long-term structural decline.

Hence, investment decisions became increasingly divorced from commercial viability, and infected by technological nationalism. Rather than encouraging macro stability, policy towards the NIs was all too often hostage to Britain's tendency to macro instability. NIs' investment intermittently suffered as governments used tax cuts to curry electoral favour.

The paucity of domestic competition added to efforts to protect the NIs from external competition: there was little incentive to raise efficiency.[4]

Looking ahead

Despite the recent evolution of infrastructure policy and its institutional architecture, with private sector investment so lacklustre, there remains a sense that government's strategy is too timid, and that within the Treasury the prioritisation attached to public debt consolidation continues to hinder a more adventurous approach.

Notwithstanding the high profile and genuinely exciting nature of some of the prospective projects mentioned above, the UK's infrastructure is still unsatisfactory. The National Audit Office (NAO), which oversees the public sector accounts, continues to be highly critical of infrastructure project delivery.[5] The regulatory environment, not least in regard to water and ICT, attracts vociferous criticism. Significant parts of the country's energy, water, transport, and communications networks are in urgent need of renewal or replacement. Smaller, local roads and rail links have often been allowed to fall into disrepair, as larger, headline-grabbing, projects have been prioritised, and infrastructure spending is unduly skewed towards London, exacerbating regional productivity and income disparities. For example, some 30 per cent of transport investment spending was allocated to London in 2015/16.

There is, moreover, the fact that the recently announced target of zero net carbon emissions by 2050 is increasingly likely to define infrastructure in the coming years. If this goal is to be met, it will require all parts of government to work closely together in a manner that they have not done hitherto.

In summary, much of Britain continues to operate well into the 21st century largely with 20th century, sometimes 19th century, infrastructure assets that are creating bottlenecks, crimping productivity, putting off potential foreign investors, undermining the economy's competitiveness, increasing inequality, and leaving the economy ill-equipped to face future challenges such as Brexit and climate change. Nor will a target for public sector infrastructure investment of 1.2 per cent of GDP bring about substantive change. In the meantime, the quest for greater private sector financial involvement in the sector continues to frustrate.[6]

Conclusions

Since 2010, a number of important changes have been made to the institutional architecture of national infrastructure policy, and to encourage a greater private sector role in its delivery. These initiatives can claim some successes, and perhaps as a consequence of these changes further positive results will become manifest in due course.

That said, beyond targeting the OECD's 3.5 per cent of GDP benchmark for total infrastructure spending, considerably more remains to be done to raise the standard of UK infrastructure to a level where it could be viewed as a comparative advantage for the economy, and where the financial resources of an expansive and mature institutional investment community are efficiently employed to that end.

Some of the immediate priorities can be summarised as follows:

Policy proposals

- *Give precedence to the NIC's recommendations, especially energy (Jones and Llewellyn, 2018).*
- *Reduce the skew of infrastructure spending towards London (NAO, 2016).*

- *Allocate space in the infrastructure pipeline to projects that can be started, but then suspended until the business cycle warrants an acceleration of fiscal spending (OBR, 2019).*
- *Sell more public sector assets to facilitate new investments – so-called capital recycling.*[7]
- *Explore the reanimation of public private partnerships.*[8,9]
- *Increase efforts to achieve cross-party consistency on regulatory frameworks, so as to temper perceived political risk.*
- *Broaden the UKGS.*[10]
- *Improve the coordination and prioritisation of infrastructure investments across the economy, especially given the government's focus on greater devolution of decision-making to local governments.*[11]

A National Investment Bank

These proposed changes in the government's approach to infrastructure could be made in piecemeal fashion, and perhaps could be encouraged through some strengthening of the role of the NIC. But arguably a more radical approach is needed, and in particular that the NIC and other existing institutional arrangements should be superseded by a National Investment Bank (NIB), or broader national development bank.[12]

Like the NIC, a NIB would seek to identify and co-ordinate national and regional policy priorities and deliver long-term policy stability, while also ensuring that the supply of credit would dovetail with the pipeline of projects. In addition, a NIB could recommend user fees, especially where negative environmental externalities exist, such as in road transport; help to develop risk management and other expertise; be a repository of objective information and quality data; and aim at simplifying planning procedures.

While not directly distributing public money, a NIB could provide a partial or full guarantee to support the initial equity cost of project finance where the private sector is reluctant to invest, or a partial or full guarantee on the repayment of bonds issued directly by investment projects themselves. In this way, it would assume some or all of the risks of projects, especially in their most challenging early stages, and reduce funding costs.

For the most part, however, it would lend to finance investment projects and raise funds for lending from the capital markets by issuing 'National Investment Bonds', which could be expected to carry a modest premium over Gilt yields. These would be attractive investments for pension funds, both large and small, and offer a set of benchmark interest rates for infrastructure.

In a serious downturn, with monetary policy exhausted, these bonds could become the focus of Bank of England asset purchase programmes – that is to say a strategy of monetary financing of fiscal stimulus. The NIB could also help to co-ordinate and finance a response to a precipitous deterioration in environmental conditions. (This is addressed in greater detail in the paper *Maintaining stable macroeconomic conditions*.)

The establishment of a NIB would not be without risks. It would be inappropriate and unhelpful to create an unwieldy and inefficient quango, at risk of being captured by narrow political interests, or indeed ending up crowding out private sector financing, if not cannibalising the entire market for infrastructure. Equally, it should not be allowed to fall into irrelevancy, as the Green Investment Bank has done.

Stringent legal and regulatory safeguards would have to be put in place around it. A NIB would need to be operationally independent of government, perhaps in the manner of the Bank of England. Yet it would have to have close strategic links to government, set out in published mandates, not least in order for it to perform a countercyclical policy role, and especially if that countercyclical role extended to monetary financing.

- It would need a high credit rating, and therefore a quality loan portfolio, and be run on sound banking principles.
- The Chief Executive and other senior officials would need to be government appointed, accountable to parliament, and the organisation would have to be audited by the NAO.
- There would ideally be a conservative ratio of lending to funding, and no explicit government guarantee on loans. A NIB would also have to be prohibited from undertaking any current spending.

In short, a NIB's activities would have to be confined to the financing of investment in productive assets that generate a long-term return. Its initial capital could be raised either by government bonds bought by the market or the Bank of England, or perhaps from the sales of semi-nationalised financial institutions such as RBS. It could also usefully aim at making a small profit that could be used to accumulate reserves.

Policy proposal

- *Create a National Infrastructure Bank (NIB).*

Accountable to parliament, the NIB would identify project priorities, provide long-term policy stability, offer project guarantees, issue 'National Investment Bonds', recommend user fees, develop risk management and other tools, provide a repository of project information, and simplify planning.

NOTES

1 IMF (2014), *ibid*. A lot of the best work on multipliers focusses on defence spending, since the effects of programmes can be more easily isolated, but it is questionable whether such a concentration is appropriate.

2 It has since been extended to 2026, even though credit conditions have eased considerably since 2012. The scheme can provide up to £40 billion of guarantees.

3 The perception among investors, however, is that the government could better target the use of the UKGS by strengthening current incentives for private investors to support Greenfield projects. The government, after all, has considerable discretion about how a guarantee is structured.

4 In any case, too broad a guarantee tends to reduce the rate of return of projects. Guarantees should be for special cases. The NAO has warned that the scheme is being applied to projects that would have been funded anyway.

5 Greenfield finance could be further encouraged by better linkages between the national and local planning systems, in an effort to speed projects up, and by 'capital recycling'. This refers to the reinvestment of revenues from the privatisation of existing brownfield assets in concert with private sector funds into new projects.

6 For more detail on recent developments in infrastructure policy, see Jones (2016) and National Infrastructure Commission (2018, 2019).

7 Britain has become increasingly reliant on energy imports from Europe at a time when existing coal and nuclear reactors are being phased out. This begs the question of whether the rapidly falling cost of renewables means that there is no longer an economic case for nuclear power. It would also make sense to include more small-scale, less complex, local non-energy sector projects in the infrastructure pipeline. These would have risk profiles that appeal more to the private sector. Where these projects address particular bottlenecks, the rates of return can be especially high.

8 This would assist in easing regional imbalances in productivity, job creation, wage levels, and community cohesion. Prioritising HS2 and Northern Powerhouse Rail would be important statements in this regard.

This would be a way of ensuring that 'shovel ready' options are always available.

The establishment of a comprehensive national asset register, based on a consistent method and a common definition of depreciation, would help to facilitate this.

The most identifiable aspect of a Public Private Partnership (PPP) is the transfer of a phase, or phases, of an infrastructure project to a private partner for a period of time. The private sector can be involved not just in the construction phase, but also in the later operational stages of the project. The desire is to achieve efficiency gains through more widespread use of private sector expertise and capital, and to transfer some additional risk to the private sector. In principle there are thereby advantages to both sectors. The government can tap into additional financial resources, and ultimately deliver more effective services as private sector technology and innovation are employed. The private sector for its part can access public funding at the initial stage of a project and over time perhaps other subsidies.

That said, PPPs are dependent on the political and financial commitment of government or successive governments, and their efficiency may suffer because of a lack of transparency in the procurement procedure, as well as any subsequent delays in construction. Successful PPPs require strong legal, policy, appraisal, approval, and monitoring arrangements to negotiate the requisite contracts and ensure that the private partners deliver on their obligations.

The UK was a pioneer of PPPs in the 1990s, via the so-called Private Finance Initiative (PFI). As of March 2014, some 730 projects had been financed in this manner, with an aggregate capital value of in excess of £55bn. More than three-quarters of this figure, however, was accounted for by health, education, and housing investments. The yearly payment from government to private partners for non-social PPP infrastructure projects was about one-fifth of the total, and is set to fall sharply from the mid-2020s.

The PFI was criticised, not least by the NAO, for consistent optimism bias, a lack of transparency on the financial and operational performance of projects, and for offering poor value for money to taxpayers. The PFI also carried high levels of political risk, given that many deals had a lifespan greater than the UK's standard five-year electoral cycle. Certainly, PFI contracts signed by the last Labour Administration locked subsequent governments into making fixed payments for investments for which they had little sympathy. Over recent years, deal volumes have fallen collapsed.

Private Finance 2 (PF2) was launched in 2012 in an effort to address some of these issues. One of its main innovations was to involve the government as a minority public equity co-investor in new deals, so as to align better the incentives of the public and private partners, even though this increases taxpayer exposure to project failure. PF2 also provided stronger incentives for projects to be completed on time and on budget.

In October 2018, the May government wound up the PF2 scheme because of limited take up.

There is little doubt that PPPs, for all their shortcomings, can, if efficiently run, be an effective way to reduce construction risks to private sector investors, increase their willingness to participate in infrastructure projects, and reduce pressures on the public purse. The issue of risk sharing still remains to be adequately addressed, however. Moreover, further efforts are required to improve data transparency on considerations such as equity rates of return, costs and delays, and comparisons with alternative financing options, if they are to flourish once again.

9 The government could shoulder more equity risk in the early stages of projects, improve available data on project returns, and thereby demonstrate to the public that these projects can offer better value for money than in the past.

10 This would help to draw more private sector investors into large-scale Greenfield projects. Directing financial incentives to private sector involvement in infrastructure more at the

higher end of the risk and deal-size spectrum would help to avoid 'crowding out'. Giving greater impetus to institutional investment pooling, the provision of tax incentives for utility, project, and local government bond issues, and the creation of Infrastructure Individual Savings Accounts (IISAs) to raise the level of retail investment in infrastructure and utilities, could also help attract more private capital.

11 Importantly, this should also extend to the linking of infrastructure plans to the government's strategies for skills, housing, industrial policy and innovation.

12 Creating the latter would be easier to do once the UK is out of the EU and freed from its state aid rules.

REFERENCES

European Commission (2006), *Effects of ICT Capital on Economic Growth*.

IMF (2015), *Making Public Infrastructure More Efficient*, June.

—(2014), *World Economic Outlook*, October, Chapter 3, 'Is it time for an infrastructure push? The macroeconomic effects of public investment'.

Jones, R. (2016), *UK Infrastructure: Bridging the Gap*, July, Llewellyn Consulting.

Jones, R. and Llewellyn, J. (2018), *Renationalisation in the UK: a case of rose-tinted hindsight*, March, Llewellyn Consulting.

NAO (2016), 'Delivery of major projects in government: a briefing for the Committee of Public Accounts', January 2016.

National Infrastructure Commission (2018), *National Infrastructure Assessment*. February.

—(2019), *Annual Monitoring Report*, February.

OECD (2006), 'Infrastructure to 2030: telecoms, land transport, water and electricity', OECD Staff Papers. June.

—(2007), *Infrastructure to 2030*, *Volume II, Mapping Policy*, Paris: OECD.

Office for Budget Responsibility (2019), *Economic and Fiscal Outlook*, March.

REDESIGNING HOUSING POLICY

Kate Barker*

Executive Summary

Discussion of the UK's housing crisis is of long date, and tends to focus on a simple story about a mismatch in housing supply and demand and the consequent need to build more homes. Yet the reality is more complex with multiple sub-plots including social housing, stress in the private rented sector, benefits, subsidies and ultimately taxation of home ownership.

At the bottom of the market, the crisis is real and acute, as manifested in a sharp increase in homelessness and rough sleeping. The inescapable answer is to increase the depleted stock of social housing and widen eligibility criteria. An increase of 100,000 social units a year in England would help address this problem, as well as alleviate the financial squeeze on tenants of the private rented sector, whose number has grown sharply in the past 15 years in tandem with a steep rise in the housing benefit bill. Recent efforts to curb housing benefit have further increased distress, so it will be necessary to consider increasing benefits again alongside regulatory interventions with private landlords.

In the home ownership market, recent government intervention has taken the form of the much-criticised Help-to-Buy Equity Loan scheme. This market policy to support new-build homes should be wound down and replaced by a scheme to endow all young people with a capital sum that they could use for second-hand homes as well. More generally, a more sophisticated approach to planning home-building is needed, both for assessing overall numbers and their regional distribution and in financing the supporting infrastructure.

But none of these measures is a panacea for a housing crisis that is in large part a symptom of problems in the wider economy, such as low relative wages for young people, a lack of clarity about environmental issues, and failing places. A successful policy package to address the distorted structure of the housing market must also grasp the most difficult nettle of all – namely the way the tax benefits of owner-occupation incentivise overconsumption of housing and a widening wealth gap between renters and home owners, and between owners in different parts of the country. If we spend more to help those who struggle to afford decent housing, then it is only just to raise more taxation from those who benefit from restrictions on housing supply – whether through reform to council tax, a wider wealth tax or a limited form of Capital Gains Tax on principal residences.

Introduction: How to tackle the housing crisis

There is nothing new about criticism of 'urban sprawl' or proposals for new settlements. These two observations were made in 1945 and 1946:

> "Everybody is talking Dispersal, Satellite Towns, Green Belts…"

> "The suburbs have generally developed as an unplanned growth"[1]

Nor is the issue of housing affordability new, as this observation from 1973 demonstrates:

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> "The high level of house prices means that the proportion of the population who can afford to buy out of income a house … is probably as low as at any time in Britain's history" (Hall, 1973).

But what would a successful housing outcome look like?

- What is a household? Does it matter that more young people live with their parents?
- What is financial strain – how much post-housing income should households have?
- Is labour mobility good or bad – does it represent better job opportunities or the drain of skilled people from failing communities?

A perfectly-functioning housing system is unattainable. Housing is complex – a long-lived and spatially fixed product whose price is driven in part by price expectations. But nevertheless it is important to tackle the obvious failures:

- ***Lack of stock at the bottom of the market.*** There are now over 5,000 rough sleepers in England, compared with fewer than 2,000 in 2010. The charity Crisis puts the number rough sleeping, or in cars, much higher, at 24,000. In London an estimated 1.6 per cent of households are in temporary accommodation – many of these including children.
- ***Financial squeeze for renters.*** A recent estimate suggests that up to half a million households in Great Britain are living in rented accommodation, which puts their post-housing income below 60 per cent of median income, a standard definition of poverty (Bramley, 2018).
- ***Lack of access to home ownership*** by young households unable to save for a deposit.

There is a simple narrative about the housing problem. It runs as follows: the house price/income (HP/I) ratio has risen sharply (from around 5x in 2002 to 7.8x in 2018 for median homes and incomes in England and Wales), making home-ownership unaffordable. Greater housing supply would reduce prices. So all that has to be done is to build more, especially in fast-growing areas and their surrounding Green Belt, and all will be well.

The review of housing supply that I led for Government in the early 2000s contributed to this narrative to an uncomfortable extent. Politicians prefer it to difficult debates about housing taxation – and it provides a strong justification for resisting any local reluctance to accept new housing. And it is true that some of the suggestions below would make sense only in the context of a much greater supply of new homes – for example making housing benefit levels more generous. The housing crisis will not be resolved without rising to the supply challenge.

That said, it will not be a sufficient answer. First, the fall in long-term real interest rates has been a major driver of the increase in all asset prices, including housing, and seems unlikely to be reversed to any great extent over the coming decade. Pushing up new supply is not going to offset this price rise enough to make it easy for would-be first-time buyers to save for the deposits now needed. Second, housing problems manifest themselves very differently across the United Kingdom. The focus is often on home ownership in the South-East, but in the North-East it is unaffordable rent that is the key issue.

In the discussion of housing below, much of it refers only to England, as some policy is devolved. (The analysis also draws heavily on recent work by Glen Bramley for the NHF, and various publications from the excellent UK Collaborative Centre for Housing Evidence.)[2]

Homelessness and social rent

In 1981, the stock of social housing in England was just over 5.5 million units, and the population of England was just under 47 million. By 1991 the social housing stock had fallen to just over 4.5 million, while the population had risen by around 2 million. The loss of stock under the Thatcher government was due mainly to the 'right to buy' policy – which helped those who bought, but removed the dwelling from re-cycling into the social housing stock.

Since then, the social housing stock has declined slowly, to around 4 million, a level at which it has recently more or less stabilised, but population growth has speeded up, with about 7.8 million more people. Only 41 per cent of social housing households are in employment, and 28 per cent of tenants are over 65 – social housing has tended to be available only to the most needy.

The cost of housing, relative to low incomes, has changed little since the 1980s, and there is evidence of unmet need both in the estimate from Bramley (*ibid.*) of 330,000 UK households effectively homeless (this includes temporary accommodation, squatting and those in unsuitable buildings), and in the rising numbers of those receiving housing benefit.

It is extremely hard to see a solution other than increasing the social housing stock and widening the scope of eligibility. Over the past decade, the social stock has grown by a mere 120,000. This sounds expensive – another million social homes may be needed over ten years – at a cost of perhaps £20 billion per year. However, some units may be built by housing associations using cross-subsidy from market housing development, and some units could come from a more aggressive use of S106 agreements. In addition, the housing benefit bill should fall.

Policy proposal

- *Add 100,000 social homes to the stock in England every year for a decade.*

The private rented sector (PRS)

In 2018, 4.8 million households in England, almost 20 per cent of the total, lived in the private rented sector (in the early 2000s the share was just under 10 per cent). Under the proposal above, some of the poorer households in this tenure could be expected to flow into the newly-enlarged social housing stock.

The housing benefit bill has doubled since the early 2000s, and is now £22 bn annually. During the 2000s, expenditure on housing benefit rose rapidly, due to a rising number of claimants, especially in the private rented sector (PRS). Since 2010, the government has prevented the housing benefit bill from continuing to increase by limiting the rents that it is prepared to underwrite. In the social rent sector, the pressure of this rent control falls mainly on the housing providers – but in the PRS where there are around 1.2 million housing benefit claimants (and where over £9bn of housing benefit is paid out), it is unclear how the outcome has been divided between lower rent for landlords and more stress for less well-off tenants.

A generally accepted view is that if a household is paying more than around 33 per cent of its income in housing costs, it is in housing stress. A recent estimate (Affordable Housing Commission, 2019) suggests that two million households in the PRS are in housing stress, and in particular that 40 per cent of those with below-median incomes are paying over 40 per cent of their income in housing costs, leaving often inadequate residual income. Rents on average have risen little in real terms since the 2000s, but they are up sharply relative to income for the lowest two income deciles, and also in London and other housing 'hotspots'.

Policy proposals

- *Reconsider levels of housing benefit, with the aim of taking households out of housing stress.*
- *Use valuation experts to challenge private sector rentals where housing benefit is paid, and to enforce standards of decent housing stock.*

Would-be first-time buyers (FTBs)

The 'affordability problem' is often shorthand for the inability of the young to access home ownership (HO). In many locations this is now related less to the increase in the HP/I ratio and more to inability to raise a deposit. This has resulted from the combination of the fall in real interest rates, which has pushed up all asset prices, and restrictions on lending at high loan-to-value ratios in the interests of financial stability. Government policy has sought to address this largely through the much-criticised Help-to-Buy (HtB) Equity Loan, whereby the government lends part of the deposit on new-build homes, in return for a proportionate share in the change in value of the property.

Positive outcomes of this policy, which since 2013 has supported over 200,000 households into home-ownership, are: it has boosted new build supply; and it has enabled couples to move early into 3-bedroom houses, avoiding the need for the subsequent cost of the move as they stepped up from 2 bedrooms. (In 2006–7, 50 per cent of new build homes had 3 bedrooms or more: by 2017–18 the figure was 72 per cent).

However the policy is also open to four criticisms: it has enabled an increase in the new-build premium (though a recent NAO report found little evidence of this); it cannot discriminate against young people who might otherwise have benefited from family support; the government share may make it harder for households wishing to move further up the housing ladder; and it exposes the government to financial risk in the event of a housing market downturn (at a time when the public finances are likely to be under pressure).

It is expected that HtB will be phased out by 2023, with regional price caps introduced in 2021. It is already restricted to FTBs. However, the problem of couples who could afford to pay a mortgage but struggle to save for a deposit, unaided, in less than five years will not have been solved, even should house prices by then have fallen back a little relative to earnings.

Apart from family, the other players who might step in to support deposits instead – government, mortgage lenders, or developers – are themselves already vulnerable to a market downturn. A more radical solution, broadly supported by the Resolution Foundation, would be to endow all young people with a capital sum.

Policy proposal

- *End Help-to-Buy, but endow all young people with a capital sum – this need not be used for house purchase and could be used for second-hand homes as well as new build.*

The housing supply numbers game

The question 'How many new homes should we build a year' cannot be answered in isolation from consideration of what the goals of policy are, and where the homes are built. It is also affected by many factors, including economic trends and migration flows.

The traditional approach to this question is based on the official household projections, which are not forecasts, but rather projections from previous trends. Actual annual household formation has been running well below these projections for at least the past twenty years – not least because weak housing supply means nowhere for households to form. (Household size was expected to decline, but has been compelled to stabilise.) In the 2004 housing supply review, I sought to shift the debate from these projections towards a more economic measure – how many houses would be needed in a region to achieve a desired HP/I ratio. As discussed above, I now think this over-simplistic.

More recently, the Ministry of Housing, Communities and Local Government (MHCLG) has sought to combine the household projections with a measure of how far the workplace-based HP/I is above 4x as a standard method of producing a target number for future new supply by local authority area. This proposal has many flaws, and was undermined in September 2018 when the Office for National Statistics (ONS) produced updated projections for household formation in England of 159,000 per year, down from 210,000 in the previous projection.

Use of this standard method then produced some odd results: for example, a big downward revision for Cambridge, due partly to the treatment of migration. Since then MHCLG have asked local authorities to continue to use the previous set of household projections as a short-term fix. And in principle this does have the merit of introducing an element of responding to demand for housing (rather than talking about 'need').

The simple use of household projections is unsatisfactory for a number of reasons (Barker, 2015) and, while the standard method aims to prevent long pointless debate about precise numbers, it can only ever be a starting point in any local authority. Given the evidence of previous undersupply, a different approach, adopted by Glen Bramley (2018), is to estimate the number of households in housing need due to present financial stress, including the problem of saving for a deposit. On this basis, and aiming to 'solve' the housing problems over 10–15 years, Bramley estimates that England should be building 340,000 new dwellings each year (380,000 UK-wide), rather above the present government target of 300,000 in England. (The latest actual is 222,000 in 2017–18.)

Bramley's estimate allows for an increase in both vacancies and demolitions, anathema to some, but an important part of housing market adjustment. However, the estimate might be thought high given that it is based on a higher set of population estimates than the latest ONS projections. Adjusting for this, a 300,000 figure seems a reasonable broad aim, if the premise is accepted that housing financial stress should be reduced significantly.

Some argue that environmental factors are a reason to constrain this demand. Certainly, issues of biodiversity and landscape need to be given full consideration in choosing sites across a local authority area, as does transport and the need to reduce energy use. Many of these issues would be addressed better by looking across wider spatial areas than just one local authority. Regional Spatial Strategies had a lot of merit. Each local authority can contribute to a regional plan, submitting its land allocations in a common format, rather than receiving a top-down allocation from MHCLG. And some are undeniable consequences – including the loss of some open landscape and the need to improve water supply if new development were to be heavily concentrated in South-East and Eastern England.

Policy proposals

- *Plan housing numbers using more sophisticated measures of affordability.*[3]
- *Move back towards planning development across wider areas.*

Infrastructure

Infrastructure discussion is often curiously confused. The demand for schools and medical care surely stems from the number of *people and their ages* in the UK, not the number of *dwellings*. In principle health and education plans should keep up: in practice this does not happen because schools, hospitals, and GP surgeries are 'lumpy' investments, and there is often a 'crowded' period before a significant new investment is triggered. This should be tackled by health and education spending policy.

Similar considerations apply to economic infrastructure (transport, energy, water, digital). The National Infrastructure Commission's (2018) Assessment looks in detail at the complex long-term issues here, although mostly it does not identify spatial conclusions. These recommendations should all be implemented, with government spending of at least 1.2 per cent of GDP on economic infrastructure achieved over the long term. Even then it is likely, in a relatively densely-populated island, that many areas will still press for additional funding to ease congestion.

Tax policy towards land used for residential development and the contributions to infrastructure and affordable housing are a topic of current debate. The answer seems simple in theory. When house prices (and therefore land prices) are high, it is necessary to find a way of taxing land that gains residential planning permission so as to maximise the tax take without unduly disincentivising landowners from bringing sites forward. This should also provide good financial incentives to local authorities for granting planning permissions.

At present there are a number of proposals aiming to achieve this by compulsory purchase (Aubrey, 2015), with compensation excluding 'prospective planning permission'. That might be too draconian, and any change to the taxation system needs to allow for a transition, as a considerable quantity of land is always moving through development at any one time. Of course, were house prices to decline in real terms (as many wish), there would be less value to share around. Scope for this tax or levy would then automatically reduce; local authorities may share in the downside as well as the upside.

Policy proposal

- *Consider alternative ways of raising a levy on development values that is more sensitive to the final sales value of the development[4] – in addition to the present S106 but replacing the Community Infrastructure Levy.*

Place, inequality and mobility

A body of evidence suggests that the UK (and England) is unusually spatially unequal (Martin *et al.*, 2016). (Not to forget that the country's major cities and more prosperous regions contain areas of extreme poverty.) It is striking that, notwithstanding a series of policies aimed at closing these spatial income gaps, they have tended to widen since the early 1980s.

Recent research from the US (Bayoumi and Barkema, 2019) and the UK (Judge, 2019) has outlined how the widening differentials in house prices between places have reduced labour mobility. This is not a new phenomenon, but has worsened recently due to the relative fall in earnings for the young, combined with the widening place-based income gaps. It is plausible that this lower mobility is affecting skills acquisition and productivity.

However, this is not a problem that can be resolved in the housing market, unless the only route is much higher home building in the presently successful areas (which is not being achieved; see Hliber and Vermeulen, 2014), and managed abandonment in the failing places. Rather, it is necessary to have stronger and more sustained policies aimed at strengthening economies across the country, enabling those living there to reach their full potential, and narrowing house price gaps to foster movement of younger workers in particular.

There have been many attempts at regional policies, but they have suffered from a variety of weaknesses: simple lack of resources; being spread too thinly; and being halted without having been given a proper chance for success. Place is one of the five foundations in the government's Industrial Strategy – but it will be at least a decade before it will be possible to judge the success of the policy initiatives. During this time it will still be important to supply sufficient homes in the successful high demand areas.

Policy proposal

- *Develop, alongside the Industrial Strategy policies, the idea of Universal Basic Infrastructure (Coyle, 2017); and*
- *Combine this with varied cultural provision and well-designed urban centres in less well-performing places.*

Conclusion

While the housing crisis stems in part from familiar issues around restrictive planning policy, it is also a symptom of problems in the wider economy. It will not be solved simply by fiddling with housing policy. These problems are: low relative wages for the young; poor planning of infrastructure; a lack of clarity about environmental issues; and failing places. These problems should be addressed directly. Further, the setting of monetary and macroprudential policy will not always serve the cause of housing policy at the same time as their inflation and financial stability targets.

In the housing market itself the issues are: the number of people who simply cannot afford decent housing; how to manage financial risk when house prices are high relative to incomes and an apparent inability to push up the supply of market housing sufficiently. The last reflects both problems in the acceptability of high housing numbers in local plans, and also the 'scarring effect' on the housebuilding industry of market downturns – each one of which has sharply reduced the numbers of small- and medium-sized housebuilders.

The housing problem also could be characterised as a problem of the distribution of space. Census data reveal that, since the 1980s, housing space has become more unequally distributed, at least in terms of rooms (Tunstall, 2015). However those who can afford space will purchase it – and the elderly often do not wish to downsize for a range of understandable reasons. It is unlikely that draconian policies to prevent this would be desirable, so under-occupation (relative to the 'bedroom standard') among owner-occupiers is likely to persist.

There are demand side fiscal issues too. The tax benefits of owner-occupation undoubtedly incentivise overconsumption of housing: a couple may stay in a large house when the family have left not just because they like the space, but also to continue to build up housing equity. The wealth gap between renters and home owners, who increasingly own second homes for their own use or as rental properties, has widened (Bangham, 2019), as has that between those owning homes in different parts of the country. Housing investment is viewed as too good a bet.

The outcome of all these trends is a knot of increasing inter-generational and inter-regional inequalities that are starting to damage social cohesion.

If it is necessary to spend more money to enable those who struggle to afford decent housing (and this paper is replete with suggestions to do just that), then it is necessary to find a way to raise more taxation from those who benefit from restrictions on housing supply, whether through reform of council tax, a wider wealth tax, or by introducing a limited form of Capital Gains Tax on principal residences. Without such an approach, some of the earlier policy proposals could prove counter-productive.

These tax changes are politically highly unpalatable. Yet the UK needs to start on this path urgently, not least because all the proposed policies engender significant transition problems. Once upon a time the abolition of mortgage interest tax relief was unthinkable. This new, supposedly unthinkable, taxation needs to be peddled over and over until it becomes a cliché, and politicians are able to act.

Policy proposal

- *Lobby politicians to grasp the strongly stinging nettle of housing taxation reform.*

NOTES

1 Quotes from 1945 and 1946 cited in Kynaston (2007).
2 Thanks are due to Professor Paul Cheshire as critical commentator for this paper – many of the issues are considered far more fully in Cheshire *et al.* (2014).
3 See for example Meen (2018).
4 See Professor Paul Cheshire, written evidence to House of Lords Economic Affairs Committee, Building More Homes EHMP0156 for more detail.

REFERENCES

Affordable Housing Commission (2019), *Defining and Measuring Housing Affordability – an alternative approach*, June.

Aubrey, T. (2018), 'How land reform can help deliver the government target of 300,000 homes a year', Centre for Progressive Policy.

Bangham, G. (2019), *Game of Homes: The Rise of Multiple Property Ownership in the UK*, Resolution Foundation, June.

Barker, K. (2015), 'How many houses should we plan for?', *Journal of Planning and Environment Law*, Occasional Papers No. 43.

Bayoumi,T. and Barkema, J. (2019), *Stranded! How Rising Inequality Suppressed US Migration and Hurt Those 'Left Behind'*, IMF WP/19/122, June.

Bramley, G. (2018), *Housing Supply Requirements across Great Britain: for low-income households and homeless people*, London: Crisis and National Housing Federation.

Cheshire, P. *et al.* (2014), *Urban Economics and Urban Policy*, Edward Elgar.

Coyle, D. (2017), 'Universal basic services are more important than income', *Financial Times*, 4 April.

Hall, P. (1973), *The Containment of Urban England*, George Allen and Unwin.

Hliber, C. and Vermeulen, W. (2014), 'The impact of supply constraints on house prices in England', *Economic Journal*, March.

Judge, L. (2019), *Moving Matters: housing costs and labour market mobility*, Resolution Foundation, June.

Kynaston, D. (2007), *Austerity Britain 1945–51*, Bloomsbury.

Martin, R. *et al.* (2016), 'Spatially rebalancing the UK economy: towards a new policy model, *Regional Studies*, 50, 2.

Meen, G. (2018), *How Should Housing Affordability be Measured?* UK Collaborative Centre for Housing Evidence.

National Infrastructure Commission (2018), *National Infrastructure Assessment*.

Tunstall, R. (2015), 'Relative housing space inequality in England and Wales, and its recent rapid resurgence', *International Journal of Housing Policy*, 15, 2.

REDUCING INEQUALITIES

Russell Jones* and John Llewellyn*

Executive Summary

A backlash against numerous inequalities – and in particular against perceived unfairness in society – is a significant driver of the UK's current political malaise. Addressing inequalities between income groups, regions and generations will thus be key to re-establishing faith in government and avoiding further decline or even the threat of social unrest.

In income terms, the UK has become much more unequal than in the immediate post-war decades, and it should be a goal to reverse that trend – targeting the OECD average for income inequality and a halving of the number of those living below the poverty line. Measures to deal with perceived unfairnesses could include tighter scrutiny of competition in high-yielding sectors such as technology, and incentives for the appointment of worker representatives to company boards. But a government intent on tackling inequalities will inescapably need to raise public spending and direct taxation of income and capital from their current historically low levels. In particular spending on education and active labour market policies needs to increase, while gaps in the benefits system and regional imbalances are addressed.

Given the scale of technological change and the severe implications for the labour market, the risk is that policy will be insufficiently bold to deal with widespread disenchantment, which could ultimately pose a threat to democracy.

Introduction

Inequality is patently a moral issue; and one that can have major economic, financial, social, and political consequences. For all these reasons, inequalities have to be taken seriously.

A fact of life in all market economies, inequalities take many forms: inequalities of income, inequalities of wealth; inequalities across activities, regions, generations; and more.

Progressive tax systems go some way to reducing inequalities of income and wealth; and sustained improvements in real incomes and living standards help further by financing infrastructure, education, health services and more, which are available – in principle – to society at large.

Notwithstanding these various policies, however, UK society today is riven, socially and politically. In a complex world there is seldom a single cause for anything. But it is hard to escape the conclusion that, behind all the anger that is laid at the door of conventionally-measured inequalities, lies something even more fundamental: disillusionment at *unfairness*. A range of perceived unfairnesses – from lack of educational opportunity to uneven access to health and social care; from sub-standard housing to inadequate access to training – produce for many an environment from which they feel that they, and even more importantly their children, cannot escape. And these perceptions of unfairness become amplified in the era of social media.

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Not surprisingly, the UK, like a number of other countries, now faces a backlash, and is at a point of inflexion, a point of decision. Over the coming five to ten years the countries that best address this backlash against inequalities, in the broadest sense, stand to be the best placed to escape populism. Those that fail may well experience relative, or even absolute, decline – and, at worst, social and political disruption.

It will take major and enduring policy action across a number of areas not only to make UK society less unfair, but also for it to be perceived as such. And, to be effective, the requisite policies will need to be based on evidence, whether from home or abroad, of what works and what does not.

This paper first considers inequalities as conventionally measured – mainly income, wealth, regional, and generational. Other papers consider other dimensions, including importantly housing, infrastructure, and industrial policies.

Income inequalities

In the initial post-war decades the UK became, in income terms, a much less unequal nation. However, this changed in the late 1970s and 1980s. Like many advanced economies during this period, the country experienced a significant increase in overall income inequality, driven primarily by the rapidly rising earnings of those at the top, and especially at the very top, of the distribution.

Since the early 1990s, changes in post-tax income inequality have been less dramatic. After falling slightly over the early to mid-1990s, overall income inequality reached a new peak in 2009–10, before easing back somewhat. It has been relatively stable since.

The Global Financial Crisis (GFC) is often credited, in popular discussion at least, with having caused a widening of inequalities of various forms. Contrary to this belief, however, the GFC exerted only a comparatively small effect overall. Income inequality, for example, is currently a little lower than it was just before the crisis.

However, all this does not change the fact that, in income terms, Britain remains a much less equal society than in the 1950s, 60s, and mid-70s. Moreover, with a disposable income Gini coefficient of around 0.34 per cent before housing costs, and 39 per cent after housing costs, the UK is by this standard now much more unequal than the average OECD society. Indeed, its distribution of income is more akin to some developing economies. Since 1980, the share of total income going to the top 1 per cent has more than doubled, to around 8 per cent, much as in the US.

Policy proposal

- *Target average levels of OECD income inequality, or a return to levels of UK inequality in 1980.*

Meanwhile, the United Nations has recently suggested that, with the poverty line set at 55 per cent of median disposable income, some 14 million people, one-fifth of the UK population, live in poverty, while 1.5 million experienced what it described as 'destitution' in 2017.

Policy proposal

- *Target a halving of those below the poverty line.*

Health is also important for well-being, and it is noteworthy that continually-rising life-expectancy, long taken for granted, has recently begun to reverse. Stress, depression, and obesity have been on the rise. Middle-age mortality rates have increased. Deaths from suicide and those related to drug and alcohol abuse have multiplied. In these respects, the UK seems to be following in the unfortunate footsteps of the US.

Regional inequalities

Income inequality is but one dimension of inequality; and inequalities of different sorts – income, wealth, health, regional, generational – are likely to reinforce each other.

The UK's inequalities are certainly substantial at the regional level. London has grown significantly faster than other areas of the country over recent decades and, on the basis of gross value added (GVA) per head, is by far the richest region, followed by its South Eastern hinterland. All other regions fall below the national average, with Wales, the North East, Northern Ireland, and Yorkshire at the bottom of the pile.

Opportunities for social mobility too are higher in the capital. Meanwhile, in Britain's old industrial towns, many of which are located in the north, employment rates lag behind the national average, and 1 in 12 of working-age people receives incapacity benefits for poor health.

All this is having political consequences. Resentment of London and the South East is palpable in the UK's poorer regions. And the 2016 EU referendum outcome, while the result of a number of factors, was in part an expression of discontent with the growing divide between London and the rest of the country: pro-Brexit voting patterns correlate closely with relative regional poverty.

Inter-generational equality

Then there is the issue of inter-generational inequalities. Notwithstanding the efforts of the Bank of England, young adults were hit the hardest, in terms both of pay and employment, by the 2008 financial and economic crisis. Millennials born in the 1980s are the first post-war generation to have lower incomes during early adulthood than the previous cohort. Over the past two decades young people, reflecting their (relative) decline in homeownership, are accumulating significantly less wealth than did previous generations.

Inequalities between generations can bleed into the following generation. Elderly households are now much wealthier than were their counterparts a decade or two ago, and are more likely to leave a large inheritance. With today's young relatively slow to accumulate wealth, and older generations wealthier than before, inheritances are increasingly important to the living standards of the young. Those with wealthy parents can expect a substantial increment to their lifetime wealth.

The sense of injustice that these various forms of inequality have engendered has been deepened by sluggish growth in disposable incomes, which in turn has been exacerbated by extended fiscal austerity. The aggregate UK fiscal stance was tightened by some 7 percentage points of GDP between 2009 and 2018, with a particular focus on restraining public sector pay, and reductions in welfare spending and local government funding. Household disposable incomes fell sharply in the post-crisis period, and then took an extended period to recover the ground lost. Aspirations have not been realised; savings buffers are lower; the vulnerability to income or employment shocks much greater.

Back to the future

In reviewing this catalogue of inequalities, some have gone so far as to conclude that the five social evils identified by Sir William Beveridge 75 or so years ago – want, disease, ignorance, squalor, and idleness – continue to stalk the land, even if their precise make-up has changed (Blanchflower, 2019).

Forces acting

No doubt, these trends in inequalities have been influenced in part by powerful structural forces, many of which have been operating at the global level.

Globalisation. Greater economic integration has had a range of effects. For example, competition for internationally mobile executives has driven top incomes higher, while import competition and offshoring have reduced blue-collar employment and job and income security.

Import competition has also encouraged technological progress and innovation, and shifted employment towards high-tech firms. These forces seem to have been particularly costly for male employees, female employment being more focussed in the service sector.

Technological change. Advances in computing and the internet have made skilled workers more productive, so that earnings growth at the top of the income distribution has been much faster than in the middle, while real earnings have actually fallen for low-paid men. At the same time, changes in production technology have made it more attractive to automate some workplace tasks. Manufacturing jobs, or at least important elements of them, have increasingly been replaced by machines, or by new pieces of software.

Increased market power of large firms. Product market concentration has tended to increase over recent decades. The share of turnover captured by the 100 largest UK firms has risen by more than one-third since the late 1990s. Corporate mark-ups have also risen on average since the 1980s, with much of the increase traceable to a small number of highly profitable, rapidly expanding entities. New technology industries often exhibit strong network effects and economies of scale, which encourage a 'winner takes all', or at least 'a winner takes most' effect, allowing so-called 'superstar' firms to capture an increasing share of a global market. This is especially the case where these firms are aggressive in entrenching their position through predatory buyouts, etc.

The question is whether this simply reflects returns to innovation, which could be argued to be fair reward for effort and success, or whether it reflects opportunistic and unfair abuse of market power – in which case it represents a failure of competition policy.

Declining trade union membership. Trade union membership has declined, from more than 50 per cent of the UK workforce in 1980 to less than half of this figure today. In the private sector, less than 15 per cent of the workforce is now unionised. This reflects both the relative decline of manufacturing and a less sympathetic legislative environment for organised labour since the early 1980s. Manufacturing's share of UK GVA is now around 10 per cent, as against closer to one third in the 1960s. Meanwhile, the trade union reforms of the Thatcher government, which shifted the balance of power against workers, remain largely in place.

Falling union density appears to have reduced the limitations on wage dispersion, increased the share of profits going to executives, and more generally reduced the political power of the average worker.

New forms of employment have also reduced the bargaining power of workers at the lower end of the income scale. Many low-paid workers today are self-employed contractors, not covered by standard employee protections. The rise of the 'gig-economy', and the trend towards outsourcing of low and semi-skilled jobs to large agencies, may also make it harder to bargain collectively for higher wages.

Meanwhile, at the top end of the pay spectrum, the increased importance of bonuses and stock options in total remuneration seems to have afforded top executives a greater ability to extract a higher share of company profits.

Policy choices

The major trends in UK inequalities have also been driven by domestic policy choices in a number of areas, including financial integration, regulation, and government spending and taxation.

Financial sector favouritism. From 1979, successive UK governments have viewed the financial sector, the greater part of which is located in London, as an important source of economic growth, export earnings, and tax revenue, while also seeking to keep regulation of financial services in general at unobtrusive levels.

Competition policy. The current competition regime, while impressive on many levels, was designed largely for the goods markets, as they functioned a generation or so ago. It is less appropriate for the new technologies. Standard market definitions struggle, for example, to come to terms with the competitive ramifications of one social media firm acquiring another.

The way that patents are used can also result in excessive market power. High tech firms have spent heavily on patent purchases and litigation. The threat of the latter can act as a major deterrent to new entrants into the tech sector, blunting competition and innovation. Political lobbying may also have contributed to a weakening of competitive forces.

Policy proposal

- *Tighten competition rules for tech companies.*

Labour market policy. Given that the trade union legislation of the 1980s was a key element in the blunting of the power of organised labour, a constructive strengthening of the trade unions could encourage the pendulum to swing back. In the Nordic countries, for example, where inequalities are less pronounced, and less of a burning political issue, anything between 50 per cent (Norway) and 85 per cent (Iceland) of the workforce is unionised.

Having workers on company boards, as is mandatory in Germany, could also have a similar rebalancing effect.

Policy proposal

- *Provide new incentives for the appointment of workers to company boards.*

Increases to the UK's minimum, and living wage, standards represent a further mechanism whereby workers' bargaining power can be embellished. These initiatives have already raised earnings at the bottom of the income distribution, with to date no obvious harmful effects on employment. That said, minimum wages in the UK are now already quite high in an international context, and may be approaching a threshold where that may no longer be the case. This could be particularly so should increases in minimum wages begin seriously to affect the attractiveness of those in relatively 'automatable' jobs. (These issues are taken up further in the papers *Maintaining stable macroeconomic conditions* and *Supporting dynamic economic adjustment*.)

Policy proposal

- *Continue the strategy of progressively raising the minimum wage.*

Monetary policy. Monetary policy changes always generate real and financial side-effects, not least on resource allocation, asset prices, risk tolerance, and the distribution of income and wealth. Where the latter is concerned, it is widely believed that the unconventional initiatives employed during the GFC and its aftermath added significantly to inequalities in the UK.

As ever, however, the construction of the counterfactual can be revealing (Bunn *et al.*, 2018). It has been estimated for example that, in the absence of the Bank of England's unconventional policy response, real GDP would have been some 8 per cent lower, and the jobless rate 4 per cent higher. The balance of household interest payments and receipts would have been more onerous. Equity prices, house prices, and pension wealth would all have been markedly lower in real terms.

The average household would have been 5 per cent worse off in the absence of the BOE's interventions, the dominant positive impact of which was on jobs and wages. The average UK household thereby gained in income terms by an estimated GBP 1,500 per year, or close to GBP 9,000 cumulatively.

The gains were reasonably evenly spread as a proportion of income, although they were slightly smaller among lower-income households and, troublingly, they were negative for the lowest income decile. The balance of benefits was spread rather more unevenly: the initial distribution of wealth meant that the absolute monetary gains were skewed towards upper income groups.

In proportionate terms, the income gains were greatest among the young, largely because of their improved employment prospects. Older cohorts lost out because of lower interest earnings on their savings. Wealth gains, in contrast, were fairly evenly spread across the age distribution in percentage terms, although the elderly benefitted most in money terms because of the impact of higher asset prices on the value of pensions and housing assets.

By region, the benefits of BOE policy were evenly spread in percentage terms, and there was no significant widening of regional inequality as a result. However, given the unequal initial distribution, the absolute monetary gains were heavily skewed towards London and the South East. It has perhaps been the initial unequal distribution of income and wealth, and the manifest variation in absolute monetary, rather than percentage, gains that has coloured perceptions and bred misinterpretation of BOE policy during the crisis.

Fiscal policy. Besides its important role in encouraging macroeconomic and financial stability, which can contribute importantly to solving distributive issues, fiscal policy is a particularly powerful weapon in redistribution, working through three, sometimes conflicting, channels:

- Progressive direct taxes and transfers act directly on disposable-income inequalities.
- Indirect taxation, while essentially regressive, can fund progressive state spending.
- In-kind outlays on education and health ameliorate inequalities, improve the stock of human capital, and promote social mobility, thereby addressing, to some extent at least, issues of perceived unfairness.

The overall effect of fiscal policy depends on the magnitudes of these three considerations, and their progressivity.

The 1980s saw significant increases in initial income-exemption thresholds, reduced top rates of income tax, and increases in VAT rates. At 20 per cent, the standard rate of the latter is now double its initial 1973 level. Since the 1980s there has also been rapid growth of capital income – profits, interest, and capital gains – which is generally distributed more unequally than labour income, and is taxed at a lower rate than labour income. This reflects two main considerations: first, to tax capital income similarly to labour income is effectively to tax future consumption at a higher rate than current consumption, and thereby to discourage savings, investment, and economic growth; second, capital income is more elastic with respect to taxation than is labour income. Hence, lower capital taxation can influence the location of business activities.

The share of total tax revenue accounted for by direct levies on income, profits, capital gains, social security contributions, and payroll taxes is about 56 per cent, which is around 5 percentage points below the OECD average, and some 15 points below Sweden, Germany, Switzerland, and Japan.

The primary reason for the reduction in tax progressivity has been that it is considered to undermine incentives and economic growth, although the evidence for this is questionable until tax progressivity reaches truly elevated levels.

On average in the advanced economies, direct transfers and taxes reduce income inequalities by approaching one-third. About three-quarters of the effect comes via transfers, with public pensions accounting for around half of this. Britain broadly fits this pattern. However, today, the UK redistributes less than the OECD average via fiscal policy.

Policy proposal

- *Increase the level of direct income, and especially capital income, taxation towards the OECD average.*

At the very least, this will involve broad-based efforts to reduce opportunities for tax avoidance and evasion; capping or eliminating deductions, such as the favoured status of fringe benefits, or unlimited tax deductibility of medical insurance or mortgage interest; and reducing the scope for labour income to be presented as capital income.

Universal basic income. To achieve their distributional objectives, most governments employ a mix of means-tested and universal measures. Means-tested income support programmes are used to realise a minimum income guarantee, but they are combined with universal family benefits such as child allowances and public pensions.

To cap the disincentives inherent in means-tested transfers, eligibility on participation in active labour market policies is conditioned, while wage subsidies are also used increasingly to raise work incentives for the lowest income householders, normally the most responsive to financial incentives. Nevertheless, there is ample scope for reform.

The introduction of a Universal Basic Income (UBI) – a common cash transfer made to all individuals – is increasingly being discussed. This has the potential both to overcome the information constraints and administrative costs involved in means-tested systems, which leave them prone to errors of inclusion and exclusion, and to reduce the stigma associated with state income support, which can significantly reduce take-up. UBI is also seen as a possible answer to the income uncertainty that comes with technological advancement, and as a means to build support for structural reforms, such as the removal of food and energy subsidies, or the broadening of the indirect taxation base.

UBI would however be extremely expensive; its benefits would extend to the wealthy, raising issues of fairness; it could significantly loosen the link between income and worker participation; and, by potentially sustaining high levels of unemployment, it could undermine social cohesion, if not directly encourage social decay.

The ultimate costs of UBI would depend on its level, and how the broader tax and benefit systems evolved in its wake. Estimates have however been made. The IMF has calculated that, were UBI to be set at 25 per cent of median per capita income, the direct cost would amount to some 6–7 per cent of GDP in OECD economies, and 3–4 per cent in emerging-market economies. That said, the impact on inequality would be dramatic in all economies: on average, Gini coefficients would likely drop by some 5 percentage points (Francise and Prady, 2018).

Overall, UBI would seem to be better suited to emerging-market countries wishing to develop a more comprehensive social safety net. In advanced economies such as the UK, where benefits are already comprehensive, and progressivity is widely embedded, the introduction of UBI could sharply reduce the targeted benefits already received by many low-income families, or drain resources from other social support systems. It might be more feasible to try to close the gaps in the existing system due to eligibility rules or incomplete take up, while providing well-designed wage subsidies to raise work incentives.

Education and health spending

Unlike explicit redistributive fiscal policies, which target inequality of disposable income, government outlays on education and health impinge on underlying market income inequality. The two are strongly correlated and, although by relaxing individuals' budget constraints they can deliver a conjunctural distributional effect, their real benefit is felt over the longer term. They enhance human capital and productivity, raise growth potential, and encourage greater equality of opportunity. In this way they can reduce the persistence of inequalities over time.

Public education spending in advanced economies like the UK tends to favour the poor, although this is not the case for outlays on tertiary education, which accrue mainly to the well-off.

In the UK, participation in higher education has risen rapidly since the 1980s, and there is less of a wage premium for graduates than there is in the US, for example. Nevertheless, the ratio of earnings of tertiary educated workers relative to those with upper secondary education is higher than in most advanced economies.

High-quality vocational education can improve the prospects for those who do not follow an academic path, while retraining is vital to develop new skills and help workers displaced by globalisation and technological change. (This issue is considered also in the paper *Supporting dynamic adjustment*.)

Policy proposal

- *Increase spending on education, but especially on vocational training, and active labour market policies in general.*

Disparities in health are strongly linked to socioeconomic status. Nor is there much evidence of these disparities narrowing. Indeed, on a number of metrics, gaps have been widening. Government efforts to address geographical inequality have been patchy, episodic, and have lacked sufficient coherence, funding, and vision. Numerous initiatives have come and gone over the years, yet progress has been limited.

There would appear to be a strong case for more devolution, and co-ordinated long-term investment in areas such as transport, research and development, and skills training. It has also been suggested that greater efforts should be made to relocate some national administrative functions to the regions, and to encourage more regional cultural activities. All this would appear to be fertile ground for a National Investment Bank. (This issue is considered in greater detail in the paper *Improving infrastructure*.)

Policy proposal

- *Establish a National Investment Bank, or broader development bank, to coordinate long-term infrastructure investment, and encourage it better to allocate health related spending across regions.*

Turning the tide

Whatever the nuances of inequalities in the UK, there is little doubt that they are causing resentment in the population. This is especially the case among those whose real incomes have stagnated, and whose job security has ebbed. Political intolerance, fragmentation, and polarisation have followed.

Without wishing to be unwarrantedly alarmist, our judgement is that inequalities represent a burgeoning threat to political and economic stability. Extended episodes of growing inequalities are nothing new – they have been a feature not just of recent centuries, but of civilisation since the Stone Age. The concern is that typically they are brought to an end only by violent events – wars, transformative revolutions, or state collapse.

The risk is of too timid a response to inequalities, especially given increasingly disruptive technological change, and the bleak outlook for many unskilled workers. This would particularly be the case should today's elites, as they have done through much of world history, become ever more determined to seize whatever they can for themselves. The unpleasant conclusion is that democracy itself may come under increasing threat unless governments work more aggressively to redress inequalities in the distribution of income, wealth, and opportunities.

Fiscal policy can be a powerful tool to moderate inequalities, both conjuncturally and over the longer term. But its design necessarily has to reflect social preferences, administrative capacity, and fiscal space: and these can be powerful constraints. The oft-expressed concern that increasing the progressivity of taxation will harm economic growth potential seems to be exaggerated. There is scant evidence for this, unless it is taken to extremes.

UBI is one possible option, but it has significant drawbacks, and is an unlikely panacea. A more efficient and cost-effective approach would be to close the gaps in existing benefit systems, return to more progressive income taxation, and supplement these measures with further minimum wage increases (until they exert a more discernible cost on employment) and additional levies on wealth. More generally, however, governments will need to think more seriously about the future of work and income, what it means to societies, and how they will manage it.

This is nothing less than a matter of survival. Whatever method or methods are adopted, offsetting the tendency for the distribution of income to become progressively more unequal will not be easy. There stands to be strong opposition from entrenched interests. But it seems highly likely that if Britain handles this issue well, it will enjoy a more stable economic environment, that allows the private sector to prosper. If it fails to tackle the issue successfully, it will likely experience political disturbance and perhaps even, ultimately, social upheaval.

To target and address income inequalities would not require that the mixed economy model be overturned. Notwithstanding its shortcomings, this model has brought much progress and development to the vast majority of mankind. Rather, the point is that future UK governments may increasingly find that, in order to sustain the mixed economy, they will have to take inequalities more seriously.

At some 37 per cent and 38 per cent of GDP respectively, the proportions of UK general government revenue and expenditure are relatively and historically low at this juncture. It seems unavoidable that they will have to rise towards the European averages of 46 per cent and

47 per cent of GDP, and that greater sacrifices will have to be made by the wealthy on behalf of the poor, and by the old on behalf of the young.

Policy proposal

Accept a significant rise in the proportions of taxation and public spending in national income, with the European averages reasonable targets.

NOTE

1 This chapter draws extensively on the work of the Institute for Fiscal Studies on UK inequality. For the various papers used, see www.ifs.org.uk.

REFERENCES

Blanchflower, D. (2019), 'Not Working. Where have all the good jobs gone?', Princeton University.

Bunn, P., Pugh. A. and Yeates. C. (2018), 'How does monetary policy affect the distribution of income and wealth?', Bank Underground blog, 27 March.

Francise, M. and Prady, D. (2018), 'Universal basic income: debate and impact assessment', IMF Working paper WP/18/273, December.

EFFECTIVE DEVOLUTION

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Executive Summary

Brexit creates deep challenges for the UK's structure of governance; not least concerning the degree and manner in which powers are devolved within one of the most centralised countries in the world. Departing from the EU is likely to exacerbate regional inequalities and possibly social divide, while at the same time leading to further centralisation of powers, at least in the short term. Most Brexit analysis looks at the reorientation of the UK's external relationships, but the most significant impact may be on its internal constitutional affairs.

While it is generally agreed that the UK needs more devolution, there is little discussion about how and why it sometimes succeeds, but also sometimes falls short of expectations. Ever since Adam Smith it has been known that economic prosperity, justice, and social cooperation are mutually reinforcing. Therefore, policy must be built around community and a sense of belonging, rather than a collection of anonymous individuals. The Core Design Principles set out by Elinor Ostrom provide a framework to transform governance structure at every level from the smallest communities all the way to parliament.

Necessary institutional changes include giving local authorities much greater control over revenue-raising powers and therefore the services they wish to support. National legislatures must have the power to borrow for investment without limit, but with sole responsibility for repayment, to enhance local political accountability. A statutory body should be established, including representatives of the devolved assemblies and English regions, to address regional disparities, and there should be a much stronger regional presence in decision-making by HM Treasury and the Bank of England.

Introduction

Governance within the UK has changed profoundly over the past twenty-two years. Citizens of Northern Ireland, Scotland, and Wales have voted by referendum for their own national legislatures. More powers have been gradually devolved, culminating in the Scottish Parliament and Welsh Assembly, obtaining permanency within the UK's constitutional structures (unless citizens vote for dissolution). Some constitutional experts suggest that the permanency implies that the UK has become either a quasi-federal state, or at least a unitary state with federal characteristics.[1] Regional Development Authorities in England were abolished in 2010, and replaced with Local Enterprise Partnership and City-Regional devolution deals.

Brexit creates some deep challenges for the UK's structure of governance. First, some of the poorer areas that voted Leave will probably be most adversely affected. This may lead to further disillusionment and divide. Second, the UK Parliament has reclaimed some powers from the national legislatures through the EU Withdrawal Bill leading, at least temporarily, to more centralisation

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of decision making. The Supreme Court ruled that constitutional conventions were not justiciable, which raises questions about the status of conventions integral to the UK's constitutional arrangements. Third, the UK will be repatriating areas of policy from the EU including commercial, competition, and single market policy. This raises the question of how these powers will be devolved while respecting the need for a domestic single market?

Most economic analysis of Brexit concerns the reorientation of the UK's external relationships. Yet the most significant impact of Brexit may be on its own internal constitutional affairs. The aim of this paper is to contribute some policy ideas to this rare opportunity of constitutional change. While there is near-consensus that more devolution is necessary and a good thing, there is little discussion about how and why it sometimes succeeds, but also sometimes falls short of expectations. There is a gap between the abstract case for devolution and institutional design that makes the difference between success and failure. The ideas presented here are an attempt to bring the ideas of identity and local control, so clearly expressed in the Brexit discussions, into the heart of the debate.

Devolution

The classic justification for devolving economic decisions was given by Oates, writing in 1972. Local decision making is optimal where local preferences are sufficiently different, where there are no cost savings from centralisation, and where spillovers can be reasonably minimised. Subsidiarity implies that public services should be provided by the lowest level of government if these conditions are met. In this standard account, no distinction is made between whether the funds are raised at local or central government level: the emphasis is on preference revelation, information advantages, and competition.

Beyond this traditional 'policy assignment' question, regional policy has been based on the application of some very basic economic ideas. The argument posits that inventive people in poorer areas tend to move to richer areas for better job matches, thereby raising both their real wage and national prosperity. This migration of talent in turn reaps economies of scale and information advantages, in the process creating prosperous city agglomerations. Over the long term, prices adjust until businesses are eventually attracted back to the provinces. When Tim Leunig was pilloried for a famous speech in Liverpool's Anglican Cathedral for saying as much, he was sincere that this was the implicit assumption behind decades of regional economic policy.[2]

It is important to be explicit about what is left unsaid by abstracting from spillovers:

- **First**, there is no notion that the loss of talent and wealth in one region might lead to a deterioration in the expectations, conditions, or social behaviour of those left behind.

- **Second**, it is far from clear whether successful agglomerations can be easily replicated simply by central government spending.

- **Third**, if local public service provision is funded by central government, incentives are not always aligned, possibly leading to excessive spending, improper budgetary control, and a lack of local accountability.

- **Fourth**, if local governments instead fund their spending by borrowing, there is a risk of moral hazard to the extent that they expect to be bailed out by central government.

The question of how decision-making is devolved thus raises important questions that greatly influence the effectiveness of the policy. As so often with public policy, the details really matter. Given the challenges that this raises, the default position has too often been 'you can't buck the market'. This may be why the UK remains one of the most centralised countries in the world. But the price of centralisation is likely to be egregious differences in regional productivity, prosperity, and social cohesion.

Identity and location

Getting the prescription right for a post-Brexit world requires first an accurate diagnosis of the problem. The underlying causes have some commonalities with other countries but, borrowing from Tolstoy, every unhappy country is unhappy in its own way. The American Dream is a distant past for much of the rust-belt and fly-over states; in France the *gilet jaunes* began as a rural protest in response to fuel duties; and Hong Kong has been seeing the biggest per capita demonstrations in defence of the region's special autonomy. Elections in Austria, the Netherlands, Italy, Germany, and Eastern Europe show extreme voices based on regional grievances gaining a foothold. Each case shows widening disparities between communities, leading to division and political fragmentation.

Regional disparities in the UK are well documented in the excellent work by the UK2070 Commission. It claims that the UK is the most centralised major economy in the world, and that this is patently not working for many citizens. There is a plethora of evidence. Economic measures show that the amount that households have to spend or save in the ten richest local authorities is three times higher than in the ten poorest authorities. Social indicators show the divergence in healthy life expectancy is nearly twenty years between local authorities – and in some, absolute life expectancy is actually falling.

Ahead of the Scottish and EU referendums I was awarded Economic and Social Research Council (ESRC) Fellowships to engage with members of the public about the economic issues. I take three lessons from this experience:

- **First**, economic aggregates matter only so far. When there is so much variation between peoples' standards of living, talking about averages or national income means very little.[3] This is now immortalised by the woman in Newcastle who said, "that's your bloody GDP not mine".
- **Second**, Brexit is not a *ceteris paribus* question: all else will not be held equal. Trade reorientation due to Brexit might well cost 5 per cent of GDP, but this is not the full story, as many other changes need to be considered. On matters of constitutional change, 'all else equal' answers are incomplete.
- **Third**, identity and local connection are extremely powerful forces. In each discussion there would be different and strongly-held views, but a common sense of loyalty and commitment to the community.

Colleagues from the independent ESRC think tank *UK in a changing Europe* had more thorough and representative discussions in citizen assemblies and focus groups.[4] They found that people identified with their communities, and the most pressing issues were local, concerning crime, policing, community resources such as libraries and facilities, and pressure from immigration on shortages of school places and housing. Whatever the economic position of the area, people had a strong sense of what needed to be done in their communities. Yet there was also a sense of frustration at not having the tools or wherewithal to make the necessary changes. There is too much distance from policy makers, and from those in London and Westminster in particular.

Groups over individuals

All this raises the question whether the powerful sense of identity and community can be brought into a framework for effective devolution? This is part of a research agenda being led by the Social Macroeconomics hub of the ESRC's *Rebuilding Macroeconomics* network.[5] A new approach would start by focussing on 'groups' rather than individuals. This is quite natural. We humans are naturally prosocial animals, with feelings and affiliations for others; we can reciprocate; and even be altruistic and see matters from others' perspectives. Rather than assume that our preferences are given and stable, it is appropriate to recognise that our values are shaped by our social context, and that we share with others in order to help us navigate our uncertain world.[6]

Adam Smith's famous opening words in *The Theory of Moral Sentiments* remind:

> "How selfish so ever man may be supposed, there are evidently some principles in his nature which interest him in the fortunes of others, and renders their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it."

This is a long way from being motivated purely by self-interest. Smith understood that we have emotional needs that can be satisfied only when we engage with others. Psychologists and neurologists identify emotions that are susceptible to uncertainty, and can be satisfied only by or with others. Being a member of a group involves accepting some values and patterns of behaviour of the group. These behaviours become a 'social identity', which evolves according to its members and circumstances. Groups can also erode or dissipate if behaviours and values are no longer being upheld.

Groups also have a spatial texture. Like his great friend David Hume, Smith believed that sympathy is strongest for those who are closest, and becomes fainter for those farther away.[7] Here there is a sense of a local community of people. Depending on the values and strength of identity within a group, it can command tremendous loyalty far beyond self-interest – and even the ultimate sacrifice. The psychological costs of violating group norms can be high, for example in terms of divided loyalties.

Economic efficiency

Groups also serve a vital economic role. Such are the uncertainties in the real world that, in most transactions, all possible eventualities can be known rarely, if ever, let alone agreed upon and priced in advance. In other words, we all live in a world of incomplete contracts. In some simple transactions, such as buying a cup of coffee, the uncertainty is resolved quickly. But many other transactions do not take place because the two parties cannot resolve to manage the risks. Groups, however, offer a durable solution to many of these problems, by creating informal and formal institutions (Arrow, 1992) – codes and customs that become stable behaviours that promote reciprocity and trust, allowing transactions to take place. Large groups can formulate formal institutions such as laws and public goods to overcome these risks.

Recent writings by Alex Lindbeck and Dennis Snower (2019) suggest that economic cooperation rests on social cooperation, and vice versa. Typically, the most successful economic groups tend to dominate the less successful groups. However, if the group fragments and cooperation is undermined, they become economically less successful. Evolutionary biologist David Sloan Wilson (2019) describes how this is exactly Darwin's great insight of natural selection.[8] Selection happens at the level of groups: those that sustain the most effective cooperation tend to be the most successful, and thereby perpetuate.

Our world is of course more complicated. Groups are necessarily nested within bigger groups in order that we live together in harmonious societies. If they are not nested, then we fragment along group lines. For example, social groups exist within a community, which exists within a region, which exists within a collection of regions or a nation. The past century even had groups of countries cooperating. Relations between the tiers of nested groups are paramount to social cooperation and prosperity. This resembles Gandhi's famous 'oceanic circles'. Edward Wilson and David Sloan Wilson (2007) refer to this as Multi-Level Selection.

Tragedy of the Commons

The basic arguments for devolution tend to abstract from the all-important practical issues of institutional design, and this can make all the difference between success and failure. Public sector action involves a collective effort to deliver goods and services, or to influence private actions to achieve outcomes that would not otherwise arise out of individual decision-making. Each of these public actions inevitably carries its own side-effects, which may variously be insignificant or important.

If local goods are funded from centrally collected money, the local authority may be less inclined to spend wisely. If local goods are funded through borrowing, the fact of support of others can lead to over-borrowing. These are versions of the 'Tragedy of the Commons Problem', whereby individual incentives can undermine the best social outcome. The standard economics answer is to privatise or regulate. Yet experiments demonstrate that imposing fines may 'crowd out' the very ethical behaviour that it is desired to promote (Gneezy and Rustichini, 2000).

An alternative approach to solving 'Commons Problems' is given by Elinor Ostrom, for which she (the only woman) was awarded the Nobel Prize in Economics. Rather than start from modelling individual optimising agents in a world without real uncertainty, she observed how groups around the world have actually found solutions. The observations are perforce grounded in real-world uncertainty, and they show people acting together as a group to achieve a better outcome for all members. From these observations Ostrom extracted eight Core Design Principles (CDPs), which determined the difference between success and failure in the groups she observed (Wilson *et al*., 2013). They are:

1. Strong group identity and understanding of boundaries and purpose.

2. Proportional equivalence between benefits and costs to members.

3. Fair and inclusive decision making by members.

4. System for community members to monitor members' behaviour.

5. Graduated sanctions for transgressions from group rules.

6. Fast, fair and low-cost means for dispute resolution.

7. Rule-making rights of community to be respected by outsiders.

8. Polycentric governance where nested groups must follow the same principles.

CDPs 1 to 6 apply *within* groups, and 7 to 8 apply *between* groups. They encourage members' actions to be consistent with the whole group. Principle 8 recognises that groups are nested within bigger groups; and yet the same principles apply at each tier. In other words, the principles are independent of scale. These principles give rise to the all-important question: how can they be used in the context of devolving power to achieve better outcomes in terms of citizens' engagement, greater inclusion, and more prosperity?

Policy implications

This chapter began with the claim that the most significant impact of Brexit may be on the UK's internal constitutional arrangements. Narratives of being left behind, of elites and metropolitans, and taking back control reflect inequality, differences in identity, and a sense of disempowerment. More devolution may be necessary, but it is not sufficient unless it reverses these deep-rooted divisions.

The key question is how, or to what extent, devolution can harness natural, inherent, prosocial instincts to have more responsive and effective local policy that supports productivity and prosperity. Ostrom's CDPs show how groups within groups can lead members to work for the social good in real-world situations. Devolution is about more than delivering public services. The Lyons Inquiry into Local Government in 2007 introduced the idea of 'place-shaping' which includes building and shaping local identity, maintaining cohesion as well as understanding local needs and preferences.

The immediate governance challenge from Brexit is specific to Northern Ireland. A broader problem relates to Scotland, where 62 per cent voted to Remain. The Scottish Government has taken the opportunity to introduce a bill for a second Independence Referendum only five years after the last 'once in a generation' independence vote. This is only three years after more powers were devolved under the Scotland Act (2016), making the Scottish Parliament one of the most autonomous sub-central assemblies in Europe. While it is too early to reach firm conclusions, it is worth considering whether devolution has been consistent with the CDPs.

In keeping with CDP8, consider first local government. Scotland has 32 local authorities, designated as councils, that cover very different areas (e.g. Glasgow with 600,000 citizens, Orkney with just 20,000). Councils have a strong sense of identity and purpose, with councillors subject to a code of conduct with clear complaints, enforcement, and discipline procedures. However, they have little control over revenues. Local fees and customer receipts account for around 15 per cent of revenue; business rates and council taxes are controlled or capped by central government. This violates CDPs 3 and 7, and possibly 1. Local authorities have little power over revenue raising, and therefore the services they can support.

The Scotland Act (2016) devolved further spending, and especially revenue-raising powers, to the Scottish Parliament. More than 40 per cent of spending and revenue decisions are under the responsibility of the Scottish Government, and the Scottish Fiscal Commission and Audit Scotland provide important oversight. There are tight controls over the Scottish Parliament's borrowing powers. It can borrow to cover fiscal forecast errors and reconciliations from the National Loan Fund (NLF), an HM Treasury-subsidised account. However, capital borrowing has a statutory aggregate limit of £3bn (less than 2 per cent of GDP including oil). The funds may be borrowed from the NLF; commercial loans; or through the issue of bonds. Not surprisingly, the Scottish Government has opted to borrow from the NLF.

The capital borrowing limits clearly violate CDPs 3 and 7. They limit the freedom of the Scottish Government to make its own decisions, and diminish political accountability. Because it can borrow from the UK Government, the capital borrowing limits also violate CDP2, because borrowing from the NLFs is cheaper than market rates. Some have argued that devolving borrowing powers may lead to higher overall debt and an inflation bias (fiscal dominance). The risk of excessive borrowing is minimised where the authority has significant revenue raising powers (as in Scotland), with clear legal delineation of responsibility and with a clear dispute resolution system. Inflation bias is unlikely to hold where there is an asymmetry of size in the monetary union (Armstrong and Ebell, 2014).

Devolution must support a common UK identity and purpose for constituent nations consistent with the CDP1. At present, devolved governments and the UK government meet on an *ad hoc* basis through the Joint Ministerial Committee. This is a consultative committee that does not have statutory basis, does not make binding rulings, or even have a regular meeting schedule. The obvious weakness is the absence, or rather dual role, of England through UK representation. The question of English regional representation, which gave rise to Brexit, has to be grasped.

Finally, important economic institutions, such as the Treasury and the Bank of England, must also have a stronger and more substantive regional presence, and perhaps even some form of regional representation in decision making. The point may well have been reached where citizens of all constituent nations require significant institutional change if they are to believe that their economic interests are being represented fairly.

Policy proposals

- *Local authorities should have much greater control over local tax-raising powers, including setting local business rates and council tax (or alternatives), to allow them to best represent local preferences.*
- *National legislatures should be able to borrow for investment without limit, but only from the private sector, and with sole responsibility for repayment to promote greater local control and political accountability.*
- *The Joint Ministerial Committee must be overhauled or replaced with a statutory body in which English regions are represented, to address regional disparities which in part gave rise to the Brexit vote.*
- *The Treasury and Bank of England must have a much stronger regional presence, and perhaps some form of regional representation in decision-making if all UK citizens are to be convinced that all have the same interests.*

NOTES

1 A shorthand distinction is temporary sovereignty is devolved while permanent sovereignty is federal.
2 This approach has been championed in the think-tank Policy Exchange's reports.
3 The closeness of the Scottish Referendum was the biggest surprise. By every economic, social and cultural measure Scotland is far more integrated with the rest of the UK than the UK is with the EU. There is an undisputed net fiscal transfer to Scotland. Yet Scotland came within 5 percentage points of becoming independent from the rest of the UK.
4 For example, see Menon and Bevington (2019).
5 See www.rebuildingmacroeconomics.ac.uk.
6 This distinction between trivial tastes and values goes back to the 1980s debates between Milton Friedman and Gary Becker on one side and Albert Hirschman and Amartya Sen on the other.
7 Forman-Barzilai (2010) suggests an enticing insight that Smith's meaning of 'sympathy' was a principle of judgement and influenced by cultural, affective as well as physical proximity. This means that we may have sympathy for others far away who perhaps share our values and culture.
8 Sloan Wilson (2019) cites the following passage from Darwin's Descent of Man: "It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over other men of the same tribe, yet that an increase in the number of well-endowed men and advancement in the standard of morality will certainly give an immense advantage to one tribe over another. There can be no doubt that a tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection."

REFERENCES

Armstrong, A. and Ebell, M. (2014), 'Monetary unions and fiscal constraints', *National Institute Economic Review*.

Arrow, K.J. (1992), 'Social responsibility and economic efficiency', *Public Policy*.

Forman-Barzilai, F. (2010), *Adam Smith and the Circles of Sympathy: Cosmopolitanism and Moral Theory*, Cambridge University Press.

Gneezy, U. and Rustichini, A. (2000), 'A fine is a price', *Journal of Legal Studies*.

Lindbeck, A. and Snower, D.J. (2019), 'Social foundations of economic activity', mimeo.

Menon, A. and Bevington, M. (2019), 'The real meaning of Brexit', *Prospect Magazine*: https://www.prospectmagazine.co.uk/politics/what-brexit-means-britain-towns-uk-prosperity.

Oates, W.E. (1972), *Fiscal Federalism*, Harcourt Brace Jovanovic.

Wilson, D.S. (2019), *This View of Life: completing the Darwinian Revolution*, Pantheon Books.

Wilson, D.S., Ostrom, E., Cox, M. (2013), 'Generalizing the core design principles for the efficacy of groups', *Journal of Economic Behaviour and Organization*.

Wilson, E.O. and Wilson, D.S. (2007), 'Rethinking the foundations of sociobiology', *The Quarterly Review of Biology*.

IMPROVING GOVERNANCE

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Executive Summary

Government post-Brexit will face sustained and difficult challenges as the UK adjusts to its new situation. Yet these challenges risk being exacerbated by fundamental changes in UK political debate that are affecting the perceived legitimacy and effectiveness of the system and structures of government. These include erosion of the clear distinction entrenched for the last 150 years between political choices by elected representatives and impartial administration by the civil service; the disruption of traditional deliberative processes by digital and social media; and increased centralisation of decision-making in No. 10 Downing Street combined with inadequate scrutiny of that decision-making either by the Cabinet or by Parliament.

The centralisation of executive power reduces its perceived legitimacy across the UK, with devolved government in Scotland and Wales seen as contingent on the Westminster Parliament and Northern Ireland under control by central government. Fiscally, the UK has become the most centralised democratic country in the world. As government faces up to the challenge of unwinding membership of the legal and regulatory framework developed during 45 years of EU membership, it is vital that the UK's political structures restore their legitimacy and efficiency.

Necessary reforms start with greater transparency about how government really works today. A PM's Department should be created, separate from the Cabinet Office; senior appointments including the Chief of Staff and 'Advisors', as well as instructions from No. 10 to departments, should be subject to effective Parliamentary scrutiny. Legally entrenched structures are required to confirm that devolved powers cannot simply be overridden by the Westminster Parliament. Greater fiscal autonomy should be guaranteed to local government.

Finally, politicians should choose either to recommit explicitly to the original system whereby the civil service remains separate from politics and take steps to make it effective; or acknowledge the drift towards greater political control of the civil service and introduce safeguards to minimise political abuse, for example by taking steps to increase scrutiny of appointments and expenditure.

Introduction

A liberal democracy expects laws to be made through an agreed democratic process, and then be implemented impartially.

To achieve this requires a distinction between the process of political choice and administrative expertise – between the roles of politicians and officials. The former are elected and receive their legitimacy through the ballot box. The latter are appointed and promoted for their capacity to advise and administer effectively.

Together this provides a democratic mandate for the decisions made within government, and an assurance that those decisions will be implemented efficiently by those with the relevant skills and experience to do so.

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This system has been entrenched in the United Kingdom for one hundred and fifty years. A shared culture of government, accepting that both politicians and officials have legitimate and separate functions to fulfil, has underpinned it.

Often the focus in the UK is on efficiency within government, as something to measure and improve. But the wider legitimacy of the system is a precondition of efficiency, and is needed for any system to be sustainable. It requires a shared view of how government should work, including respecting the different roles of Ministers within a government, limits on political patronage, and control on how public money can be spent.

In recent years however UK political debate has changed, challenging the legitimacy of this culture, and arguably making it less fit for purpose. This reflects wider social and technological trends as well as political developments.

A speeded-up world

There is no longer a confidential, closed off space for government processes, providing time for a largely written decision-making system. Choices between policy and financial priorities can no longer be proposed, challenged, and reshaped in private discussion between Ministers and officials, safe from public challenge or lobbying.

Today, 24-hour media and open online comment have reduced the private time available to government for analysis, discussion, and refining of evidence before decisions are announced.

Well before the government is able to present its own analysis and conclusions, those interested will likely have received information online, engaged with others sharing or opposing their view digitally, and decided on their views.

Against this background the temptation of those involved in the internal political debate to pass information or comment supporting their position into the public sphere, and thereby increase pressure for government to reach the same conclusion, is considerable.

In parallel, the end of any deference culture with regard to government has reduced the perceived legitimacy of the governmental decision-making process, and therefore has lowered trust in its likely effectiveness.

If citizens no longer consider that government has the capability to know best, or question its desire to govern on behalf of the wider public good, they will not be swayed by civil service claims to greater expertise or experience of what works and what does not.

Moreover, if politicians come to power with no direct experience of administration or understanding of the role of the civil service, they are less likely to consider the role of officials in government as useful or even legitimate.

A shifting centre of power

UK politics have become more personalised around the Prime Minister. The appointed group of advisers in 10 Downing Street have become the source of governmental decision-making, initiatives and political direction, at the expense of cabinet ministers' authority, the cabinet committee system, and the wider departmental structure across Whitehall.

In government today, information no longer flows openly between the centre and individual departments. Rather than leading policy in their own departments, many ministers are effectively under the control of the Prime Minister's personal advisers, and decisions are taken at the centre without their full involvement. Cabinet meetings, with some thirty ministers present, no longer play a significant part in deciding policy, and cabinet committees in so far as they take place are in practice subordinate to the views of advisers in No. 10.

The formal procedures of government, including legal and financial delegations, do not yet reflect this reality. Parliament is unable to scrutinise decision-making effectively within the opaque centre of government around the Prime Minister. Cabinet Ministers may have no real input into decisions that affect their areas of responsibility.

When informal decision-making by the Prime Minister's team makes it harder to allocate responsibility for decisions or their implementation across government, the consequence is frustration among MPs and the wider public. Parliamentary debate and Committee investigation are distanced from the process of how real priorities are arrived at and implemented, because those taking the decisions are not available for detailed scrutiny.

In parallel, the centralisation of executive power in Downing Street reduces its perceived legitimacy across the nations of the UK. Twenty years of devolved government in Scotland and Wales have been seen, in the context of Brexit, to be purely contingent on the Westminster Parliament. Northern Ireland's devolved authority has been replaced for several years by an informal control by central government that satisfies no one.

Over the decades since the 1980s the UK has become the most fiscally-centralised country in the OECD world. Local authorities have highly-constrained revenue raising powers and a series of centrally-defined statutory duties to fulfil. There are no effective regional government bodies. Only the Scottish Parliament has even limited revenue-raising powers.

This leads to a perception of central government as remote from more local concerns, and reduces the incentive on citizens to become involved in local politics where the scope for decision-making on both control of resources and wider policy direction is now so limited.

These long-term trends have been exacerbated since 2016 by the referendum vote in favour of UK departure from the European Union.

Brexit requires a complex process of negotiation with the European Commission, the European Parliament, and 27 EU member states to unwind or amend the legal and regulatory frameworks that have been agreed over the past 45 years-odd since the UK joined in 1973.

This negotiation is the single biggest administrative challenge to any UK Administration in peacetime. It will require detailed decisions on UK government priorities within a coherent framework of objectives. There will also have to be a realistic assessment of what can be negotiated, and the timescale to achieve it.

At the end of the process the UK government may be less directly constrained in its policy choices in sensitive areas such as providing state aid to failing businesses, giving local companies favourable access to public sector contracts, changing food safety or consumer protection standards, and recognising the standards of other countries as equivalent to those of the UK.

All these new policy options carry serious risks to growth, investment, and jobs as well as possible political advantages. It is therefore vital that the UK's political structures restore their legitimacy and efficiency before embarking on strategic decisions to move the UK outside the EU's regulatory framework.

Three areas for change

What can be done to strengthen governance in this challenging context? I propose three main areas for change, and one explicit choice to be made.

First main area. Given that governmental decision-making is now more challenged, both in process and in substance, there is an urgent need to reveal precisely how decisions are made within 10 Downing Street and the Cabinet Office.

It is no longer acceptable for No. 10 political appointees to take decisions while Departmental Ministers and officials are made to justify them before Parliament and to the wider public. Ideally Cabinet Ministers should expect to act as the Prime Minister's senior representatives in their policy areas. But since No. 10 has become the central executive of the government, those given senior positions there should at least be subject to greater Parliamentary scrutiny.

The position of Prime Minister's Chief of Staff is more important than that of almost all Cabinet Ministers, and requires similar levels of public and Parliamentary attention.

Policy proposals

- *Replace the title of Advisor within the No. 10 system with something that more accurately reflects the executive power that now goes with these appointments.*
- *Reform No. 10 as the Prime Minister's Department, with its own Parliamentary scrutiny committee and annual reporting system, separate from the Cabinet Office.*
- *Make instructions given by No. 10 to departments available to Parliament.*

This can be done consistently with the usual national security constraints on the provision of sensitive information. Most decisions do not raise genuine security concerns, and would benefit from a clearer decision audit trail.

Second main area. Central government currently is constrained only by convention, not by law, from ignoring the views of devolved governments on sensitive issues.

There is an urgent need to reassure voters that the devolution settlement is not simply dependent on the continued political acquiescence of a majority in the House of Commons.

A failure to provide this minimum level of security for devolved decision-making simply strengthens the case made by those seeking independence for Scotland from the rest of the UK. At present Brexit-related decisions by central government, e.g. on fishing or higher education, can override the existing devolution of powers.

Policy proposal

- *Legally entrench structures to confirm that devolved powers cannot simply be overridden by the Westminster Parliament in the event of a dispute. Greater transparency about how government really works today.*

Third main area. There is a need to recognise and accept that the potential efficiency gains of centralisation in resource allocation and project management have been overstated. Even where these benefits exist, they do not provide the acceptance of centralised decisions as legitimate, which effective government requires.

Greater fiscal autonomy at local and regional level also requires acceptance that a centrally defined standard of service cannot be guaranteed in all areas.

Criticisms of a 'postcode lottery' have over time served to undermine the ability to make local trade-offs between services and tax levels. These can still be set within agreed national parameters to prevent unacceptable outcomes in key services.

A recommitment to local democracy requires acceptance that different decisions on services and tax levels can legitimately be made by elected politicians at regional and local levels. This is an investment in restoring active democracy across the UK outside the Westminster square mile.

Policy proposal

- *Guarantee a level of fiscal autonomy in local government.*

A fundamental choice

In this environment of contested government, the United Kingdom faces a critical choice.

Option A: recommit to the current system

In principal at least, the civil service remains separate from politics, while supporting the elected government. Recommitting to this separation would require explicit acceptance across party politics that a non-political permanent administration is an advantage, not a hindrance, to effective government by Ministers and needs to be given the space and trust to carry out all of its functions effectively.

It would also be necessary to explain why the expertise, continuity, and professionalism that is required of officials is so important that it enables politicians to make real choices between priorities, use funds appropriately, and achieve outcomes, some of which require continuity beyond the normal political time horizon of the next election.

If politicians accept that this system produces more efficient government, then the next step is to combat the creeping marginalisation, or on occasion politicisation, of senior administrative posts, through overly centralised decision making in No. 10, and attempts by political advisers to micro-manage the administration of government.

This would require a renewed commitment to the independence and effectiveness of the Appointments Commission. The Commission must be vigilant to ensure that the criteria for senior posts across the civil service are not written in ways that give politically friendly candidates an unfair advantage. The choice of senior officials should not depend on how much they are seen or liked by Ministers, or their political staff. Once appointed, their input on the evidence base for policy decisions and leadership of the implantation of those decisions needs to be taken seriously across government.

Similar rigour would need be applied to regulatory agencies and other public sector arm's length bodies. To ensure effective governance, non-executive appointments to Boards should also require the agreement of the Board Chair. Former politicians moving into regulatory positions should be appointed on merit, and expected to behave while in post as officials outside political debate.

The current system aiming for promotion and appointment by merit can be sustained only if politicians support its underlying aims, and say so publicly. In parallel the civil service needs to continue to show that it is efficient when benchmarked against other high-performing administrations internationally. Essentially civil servants need to be trusted to do their job, so that Ministers can take political decisions that are evidence based, and professionally implemented.

Option B: continue the drift towards more political control of the civil service

In this case there would need to be at least an acceptance that explicit new safeguards would be needed to minimise the risk of political abuse.

For example, if Permanent Secretaries were to be appointed by political choice, they would expect to change with each new Administration. In that case a limited degree of continuity could be provided by more junior officials. But as a minimum those officials would require some externally-policed guarantee that they too could not be moved aside on political grounds.

If senior appointments both in Whitehall and to Chief Executive posts in major regulatory agencies were to be made by Ministers, these would have to be examined and, if need be, constrained through robust Parliamentary scrutiny. Their decisions would need to be clearly recorded to ensure responsibility and power were better aligned than at present.

When in post, political appointees would also require continued external control. This might be achieved through extending the current role of the National Audit Office into an Office of Government Efficiency. It would include managerial capability and administrative capacity-building within its remit, report regularly to Parliament on effectiveness, and have a process to recommend removal of non-performing executives.

The system of Accounting Officer control whereby Permanent Secretaries are personally responsible to Parliament for the expenditure of all public funds spent by their department would need to be amended to ensure that political decision-making around these positions remained compatible with rigorous transparency on how expenditure was decided and how contracts were awarded. This would not be easy to do.

All that said, even limited politicisation of the most senior administrative levels in government comes with serious risks. The loss of a coherent group of senior officials able to discuss cross-government issues frankly, draw on their professional experience of the conditions needed for successful policy implementation, and provide continuity across elections, would reduce overall government cohesion, resilience and efficiency. A further extension of political patronage, or marginalisation of official advice, would reduce the incentive of permanent officials to tell Ministers honestly what they would rather not hear. Instead there would be pressure to offer politically attractive options unsupported by the balance of evidence.

Politicians may decide that greater political control of public policymaking and administration is worth the damage caused to the effectiveness of government. If this is the choice they make, they must at the least accept the additional transparency and scrutiny described above. Otherwise government becomes a spoils system for the political winners and their friends, irrespective of the cost to citizens.

Government post-Brexit will face sustained and difficult challenges as the UK adjusts to its new situation. Current structures are too centralised and contested to deliver outcomes that are accepted as both legitimate and effective. Unless government can respond more openly to these challenges the UK risks continued political instability, with serious economic and social consequences. The UK cannot carry on without making a clear choice about how government works and ensuring that those who take the decisions are held accountable for their choices.

Hence:

Policy proposals

- *Reaffirm commitment to the present system; or*
- *Accept a continuing politicisation of senior civil servants or diminution of their role – in which case build in new safeguards for public accountability.*