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"TECHNOPOLY" and what to do about it:

Reform, Redress and Regulation

Tim Cowen and Phillip Blond

BIG INNOVATION CENTRE

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About ResPublica

The ResPublica Trust (ResPublica) is an independent non-partisan think tank. Through our research, policy innovation and programmes, we seek to establish a new economic, social and cultural settlement. In order to heal the long-term rifts in our country, we aim to combat the concentration of wealth and power by distributing ownership and agency to all, and by re-instilling culture and virtue across our economy and society.

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Foreword

The best advertisement for capitalism is its capacity to harness science and innovation to drive growth and rising living standards. Every new wave of technology throws up transformed production and delivery possibilities, along with the creation of whole new markets, as businesses experiment with and trial the new. This necessarily puts existing businesses and business models into a state of flux - an essential part of the creative destruction that drives capitalism forward, and without which the new cannot take-off. The advances of the steam, electricity and oil eras are well known. Now it is data that is the new oil,[1] the driving force of digitisation, which is the transformative technology of our times.[2]

Digitalisation and the new world of Big Data are already conferring vast benefits. They include dramatically lower business costs, the creation of new business opportunities, the acceleration of the destruction of obsolescent business models, and the potential to increase rates of economic growth to a remarkable degree - all of which may be amplified through the use of artificial intelligence. This is all good news.

Not such good news are the new threats that digitisation poses to competition and the weakened capacity of insurgents to be lode-bearers of the new. Investment in patents, copyrights and computerised systems has become a new form of intellectual capitalism. The company that gains first mover advantage (with the creation of the fastest growing network of digital users) is the company on the way to establishing a monopoly position, which can be further entrenched – as monopolies have always been – by buttressing that position through making its services as distinctive and non-reproducible as possible. If unconstrained by competitive alternatives, there is a danger that these companies can eliminate all potential competition through acquisition strategies. Lastly, digital platforms' commercialisation of data raises awkward ethical questions. Data is both a public good and a source of commercial advantage. Who owns the data? How is the balance to be struck between achieving the public good, protecting privacy and yet allowing data to be a key part of evolving business models? What redress can be sought if the data is used in a different manner to that which the user consented?

The Big Innovation Centre's position is that we must seek to maximise the public benefits of new digital technologies, while reversing the negative impacts of new market dynamics, by keeping policy and regulation relevant and up-to-date. The digital economy and society represent an enormous opportunity. We want to capture the benefits of the speed, intelligence and connectivity they bring. But we must also be alert to the risks of emergent monopolies and business strategies imposing costs on competition and society. This is why we are pleased to support this report by ResPublica.

It is critically important that action is taken to tackle the accumulation and abuse of excessive market power, as Tim Cowen and Phillip Blond rightly argue. We need faster, savvier interventions by competition authorities who understand the economics and dynamics of the digital economy, and who put innovation first, rather than continuing with outmoded short-term views of consumer welfare. We also need stronger checks and balances within companies' governance systems, along with effective initiatives governing the terms on which personal data is used.

The aim is not to sponsor policy that would stifle the digital economy; rather we want to unleash it for the benefit of all, and we strongly support one of the report's core contentions: competition policy must be innovation friendly.

The IT revolution raised profound questions from the beginning. The first controversies centred on companies like Microsoft and IBM's restrictive approach on IP. Now it is the turn of Facebook, Spotify, Uber, Amazon, Google, WhatsApp, Airbnb and others to exhibit both the best and worst of data capitalism. Network effects and other common economic characteristics of the weightless economy have seen these companies grow exponentially. People use these platforms when they are innovative, helping them become ubiquitous; we then use them because they are ubiquitous, despite their lack of continuing innovation. Scale breeds scale. However, scale also brings attendant problems, as the Cambridge Analytica data harvesting scandal has recently dramatized. Suddenly the issue of data privacy and the sheer size these tech goliaths have, become the number one public policy issue.

Debate about how companies gain a competitive advantage, market power and monopoly is as old as economics; how to address its use and abuse is a matter for competition law and policy. Now is the time to consider and reflect on how competition policy and enforcement can be adapted and applied to fast moving markets in a fast-moving world, reframed to support increasing productivity and innovation for our times.

Of course, much monopolistic behaviour bridges both new and old economies. For example, potentially predatory pricing familiar in the old analogue economy can be seen in the manner in which Amazon is securing lower and lower pricing from its online and off-line products, from books to groceries. Facebook and Google leverage their market power to divert huge volumes of advertising to their platforms, accounting for half of all digital advertising revenue.[3] Conventional condemnation of such monopoly practices still applies, although in a digital universe, competition authorities must take remedial action even more rapidly. This is a fast-moving environment where monopoly positions can be built incredibly quickly.

However, the threat posed by digital monopolists goes much further, and certainly a step further than the current remit of national and international competition authorities. Anticipating technological developments, they use their financial strength to buy-out present and future competitors: the "kill in the crib" strategy. For example, Facebook bought many small and growing companies such as WhatsApp that could have become a competitive threat, and Google purchased many more, integrating their products into prime positions in its ubiquitous search engine.

Here, any comfort provided by traditional economics has been exploded. It used to be claimed that as companies got larger they became more inefficient, which acted as a check on monopoly. In today's digital marketplace, however, the larger the company, the cheaper each successive unit of "production" becomes, almost indefinitely. Artificial Intelligence and digital techniques can allow costs to be ever-more efficiently managed as the companies expand. Network effects, whether in a peer-to-peer network such as Facebook or a centralised hub and spoke model like Amazon, make membership of such networks more valuable for consumers. In the digital universe, big is good, and bigger is often better.

The damage to competition arises at multiple levels. Size facilitates the creation of bundled services, so the consumer enters a "walled garden" which they can struggle to break out of. These are the "network effects" Professor Brian Arthur famously warned of when the internet was in its infancy.[4]

It is imperative, therefore, that the CMA and other competition enforcement agencies take a more pro-active and alert approach, reviewing current turnover thresholds which allow many such strategic acquisitions to go unchallenged. There must also be keen awareness that alliances and collaborations between small firms, seeking to create networks of countervailing scale to an entrenched incumbent, should not be considered a priori anti-competitive. Here the body of contrarian economic work represented by Professors Jeff Dyer and Harbir Singh,[5] showing the value of stable inter-organisational ties, is especially important. This report posits the idea of safe harbour provisions allowing small firms to create collaborative networks of their own, without attracting charges of collusion or anti-competitive behaviour. It is as important to encourage such countervailing power as it is to limit the monopolist's power.

The new technologies present astonishing opportunities, and the stakes are high. For example, Accenture has estimated that Artificial Intelligence alone may double the growth rates in advanced economies over the next twenty years.[6] Other technologies offer similar opportunities for growth, but also harbour similar monopolistic dynamics. It will be a period of massive Schumpeterian creative destruction; policy must be designed to ensure that alongside this destruction there is creativity. Monopoly is the long run enemy of creativity.

We need innovative firms, and policy must protect them. The Big Innovation Centre has developed a self-diagnostic innovation framework with seven categories under which firms can organise their innovation thinking.[7] Innovation should be streamed into all avenues of a firm's strategy – from cost reduction to its stewardship of human capital. An appropriate wider policy framework should support and facilitate innovative strategies, rather than firms feeling there are better rewards from developing a monopoly position and harvesting it.

The ResPublica report draws on recent American evidence highlighting that we need greater awareness of the new market dynamics, and a new urgency from competition authorities. The British government in its recent Green Paper "Modernising Consumer Markets" has recognised some of these themes, and we hope it takes forward the proposed recommendations in this report; but we also recognise that national action alone is inadequate. We must try to marshal global institutions to tackle these issues. Despite Brexit, Britain must work closely with EU competition authorities to take on the difficulties posed by digitalisation.

Moreover, the Big Innovation Centre's view is that an overhauled competition policy, although critically important, will not be enough to counter all the issues. We need clear regulatory policy for the digital ecosystem. For example, there is a need to establish clear protocols for the ownership of data. At the Big Innovation Centre, we have consistently pushed for a Data Charter[8] which would establish the principle of personal data ownership and data use. People should be considered as born into the data sharing revolution, having been opted into sharing their data under fair use principles, to achieve the public and social good that data use confers. Organisations would be obliged to offer individuals the opportunity to opt out, and to establish transparent processes so that data-owners can understand how their data is being used, along with a clear procedure for redress in the event of misuse. Although there are hopes pinned on Solid, a software product being piloted in the US that enables consumers how to rank the protection they want for differing aspects of personal data, they need better information on which to make such decisions.

The focus of policy would thus change from laws governing data protection, to how data can be used by ensuring that common, transparent and effective governance processes are in place for all data-using organisations - a change that would make the UK the European leader. Companies would then be expected to create ethics boards which would systematically report on data use. The aim is to create clarity over data ownership and a social contract for data use, and in so doing create forces that countervail the market dynamics propelling monopoly. Work at the All Party Parliamentary Groups on AI and Blockchain, for which the Big Innovation Centre acts as secretary and research hub, shows how the regulatory process can be democratically strengthened, and open innovation better promoted. We need to open up our high-tech companies to ever higher standards of transparency and accountability. There may also be a case, where private digital platforms seem to have unassailable monopoly power, to create public benefit digital platforms as a source of competition.

An innovative economy and society is a more competitive one. We hope we have begun a vital discussion about the options available both to national and supranational competition regulators to achieve that end. Competition authorities must be hawkish, not only in assessing what is happening today, but also the likelihood of what may happen tomorrow. This report by Tim Cowen and Phillip Blond offers the intellectual foundation for a new and common approach, the necessary precondition for effective action, along with practical ways forward. It deserves the widest possible reading.

Professor Birgitte Andersen and Will Hutton


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1 The Economist, https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data

2 Made famous by Nicholas Carr, 2013, *The Big Switch – Rewiring the World from Edison to Google*, (W. W. Norton & Company, London).

3 Emarketer report, 2017, 'Digital Duopoly to Remain Dominant in UK Ad Race', https://www.emarketer.com/Article/Digital-Duopoly-Remain-Dominant-UK-Ad-Race/1016481

4 See an Interview with W. Brian Arthur, 1998, https://www.strategy-business.com/article/16402?gko=8af4f. See also Arthur, W.B., 1996, 'Increasing Returns and the New World of Business, Harvard Business Review; Arthur, W.B., 2009, The Nature of Technology: What It Is and How It Evolves (New York, NY: Free Press).

5 Dyer, J. and Singh H.,1998, "The relational view: Cooperative strategy and sources of interorganizational competitive advantage", Academy of Management Review, 23(4): 660-79.

6 Accenture, 2016: "Why Artificial intelligence is the future of growth.", https://www.accenture.com/gb-en/insight-artificial-intelligence-future-growth

7 See http://biginnovationaudit.com/survey/biginnovation/agreement

8 Our Data Charter idea is not new but already published in Big Innovation Centre – Written evidence (AIC0119) to Lords Select Committee on Artificial Intelligence – (06 September 2017), https://www.parliament.uk/business/committees/committees-a-z/lords-select/ai-committee/publications/; and the All-Party Parliamentary Group on Artificial Intelligence, October 16 2017, 'Theme Report: Evidence Meeting 3 – Ethics and Legal: Data Capitalism' (including Big Innovation Centre text box on a Data Charter from Professor Birgitte Andersen, Big Innovation Centre, Big Innovation Centre), http://www.appg-ai.org/evidence/

Executive Summary

Markets matter as they allow more people to own and trade, and monopolies are an evil that restrict such ownership and trade. They illegitimately crush rivals and funnel the rewards their dominance creates to themselves and they expand relentlessly unless stopped. Economic concentration also hinders innovation and productivity, and if unchecked it can predetermine not just the economic fate of individuals, but also of nations. It is not too extreme to say that we increasingly risk re-feudalising society, where ownership in any substantial degree has become an unrealisable dream for too many. This rentier society has created a new digital road to serfdom and unless or until we chart a different path, we risk recreating the market dynamics of the middle rather than the modern age.

In what follows are some of our ideas and policy recommendations for reversing this trend. It builds on our submission to the House of Lords on the impact of Brexit on UK Competition Policy in September 2017,[9] and has culminated in the publication of this report.

We outline in Part I that *market concentration* levels are increasing across many parts of the economy and most clearly in the tech sector. Part II offers a series of concrete recommendations to rectify the situation.

Why is 'increased concentration' a problem for the consumer?

People think Big Tech equals free products e.g. Facebook and Google's services that come at no cost to the consumer. But the consumer does pay, not just with the unacknowledged surrender of their own data, but through other hidden costs. Primarily, with big tech, consumers pay for the choices and services forgone, for the innovation and products lost to market dominance. The major tech players simply pursue "kill in the crib" strategies, buying-out the most viable competitors in their infancy - before they can grow to a size and scale that would challenge the incumbents. The net loss is the denial of all the other multiple centres of innovation and development whose products will never see the light of day. Market concentration, as we will argue, markedly reduces innovation and dramatically narrows the options for consumers.

Why is 'increased concentration' a problem for society?

Since Brexit, Trump and the rise of various European nationalisms, commentators have identified a failure of the market mechanism as in part a cause of political populism. For what market and platform dominance do is restrict ownership and the economic security that this can and should bring. With insecurity the mark of the new age, and workers in the West increasingly unable to access society's goods through wages. Oligopoly and monopoly are, we argue, one of the proximate causes of a rising asset inequality benefitting almost exclusively those at the top, while leaving ordinary working people ownerless and ill served by the market.

This is happening. The economic evidence in this paper supports this thesis. Consequences include an effective re-feudalisation of society, with concentrations of wealth and power in an ever-smaller number of major global companies and their owners. However, action is now possible and urgently needed to prevent these structures from resembling those of feudal lordship in the middle ages and avoid this new emergent serfdom.

Our paper does not accept that the market mechanism has failed and something else should be tried entirely. Rather, it demonstrates that the market has not been allowed to work as it should, and how it could. Part I demonstrates that concentration of industrial structure and oligopoly has arisen in many sectors of the economy. We outline the evidence on market concentration, dynamism over time, entry and exit and increasing profitability and dividend share. The data is US based. None exists yet in the UK, as no similar research has been commissioned. This indicates a shameful complacency on the part of British regulators. The EU has recently launched a study to gather similar data and evidence for the EU – we suspect it is unlikely to produce different results, as a similar 'competition' regime has until recently been in the ascendancy across the West. This paper therefore acts as a warning. The form of economic dominance revealed herein is incompatible with the free market and if we are to defend the openness of markets, regulators (especially the UK bodies such as the CMA) need to dramatically up their game and improve their concepts and practices.

The risk to well-being and economic and personal freedom for many people, cannot be overstated. Young people question whether they will ever have an opportunity to own anything and make a meaningful contribution to society. We do not doubt that these issues have fuelled populism and find their voice in support for figures as diverse as Trump and Corbyn. The behaviour of purely profit maximising businesses is widely perceived to be immoral. Intervention to impose what is morally correct via direct state action is understood to be under consideration on the left. We would prefer to argue for a different course – a reconceptualization and repurposing of competition law so that it explicitly breaks with the pro-dominance criteria and practises of the past. And that innovation and distribution are recognised as legitimate goals of competition enforcement.

We refer to the most likely culprits and causes that have allowed high levels of concentration to arise. The central economic principle adopted by all competition authorities, the so-called "consumer welfare" standard (against which mergers have been judged) is large part of the reason that big companies have been allowed to get bigger. That principle as we will argue is demonstrably flawed - it promotes and allows deals that improve short term efficiency at the expenses of other long term economic goods and goals. It allows those businesses that achieve global scale, to expand yet further and deny other businesses their legitimate place in the world. Other causes include the incoherent system of outdated turnover thresholds – wholly inappropriate for catching and looking at internet companies whose value is measured in the numbers of people seeing adverts, not in the revenues generated. The likes of Google and Facebook have been able to pursue their "kill in the crib" strategies, taking out infant challengers, outside the remit and hidden from the gaze of the authorities.

In Part I we also identify methodology and management practices and policies which have contributed to these outcomes, which need to be changed. The system needs to be dramatically speeded up. Enforcement needs to operate at internet not analogue speed.

To exemplify and make our case, we focus on the most egregious and telling cases in the technology and media markets. We provide examples of assessment failures and highlight the wider consequences of a failure to act. There is a very real threat to future economic and personal freedoms, from an increasingly concentrated if not monopolised market place.

We reserve a special place for data hungry companies. Our competition law assumes that consumers will be looked after individually or collectively where they drive demand – needless to say recent events and exposures have shown this to be a false conceit.

Data driven businesses are different. They require different assessment. Transactions over the internet leave traces and we can be followed by the digital footprints we all leave behind. Businesses have followed us and captured our needs, wants and desires. They have used that information to tailor ads to us or sold the data to advertisers. Where those players have market power the interests of consumers and the advertisers diverge - users become assets and are routinely exploited for profit. Protecting personal data is vital. However, controlling the use of data, with such mechanisms as the General Data Protection Regulation, presupposes ownership. We consider that clearly establishing, protecting and safeguarding ownership of data is a necessary first step the UK has yet to take. In the face of monopoly or market power, where lack of choice means that data ownership is meaningless, we argue that safeguards need to be put in place to redress the balance of bargaining power, to ensure that users have real sovereignty over their data.

Why is 'increased concentration' bad for democracy?

We make the case that increasing concentration affects economic and personal freedom. It also threatens press freedom and choice of media and, in turn, democracy is threatened if either the message or the medium of its communication is monopolised.

All society benefits from challenge to opinion, testing of received wisdom and disruption of established thought. Groupthink has grown in the filter bubbles - newsfeeds promote a bland perspective and society's concern to ensure plurality of media is all too often revealed as a sham. The British government has, for example, spent the last 18 months examining, in considerable detail and significant cost, the proposed merger of Fox with Sky. Its conclusion - that the merger can go ahead, but because of a concentration of media ownership in the hands of the Murdoch family, the transaction can only proceed if Sky News is sold. In the meantime, Google and Google News has dominated visibility online. It has continued to strip advertising budgets of many other media businesses and accumulate great wealth. This has reduced further the opportunities for many online media businesses and regional and local newspapers, taking the money directly from the budgets of those that could otherwise have advertised and financed great reporting and a stronger and more diverse press.

The "Fantastic Four" (Google, Facebook, Amazon and Apple) are now widely recognised to be dominating the technology sector and controlling the media. They have wrapped the planet with their platforms and inhabit all, or almost all offices, schools and homes. Their impact on communication is pervasive and the consequences for freedom of expression and press freedom is only now becoming clear. We now find ourselves a year later, living in a surveillance society even further down the road, with more and more evidence of data abuse, and the control of communications and publishing in the hands of a small number of global players. Do we really think that stopping the Murdoch family from owning Sky News will make much difference? It will be irrelevant to the billions of people whose only source of news is their daily Facebook feed. To be clear, we agree with the sentiment and support the conclusion (if not the speed of the decision making), but we point to the scale of what more needs to be done if choice and plurality of the media is to be truly achieved.

Players such as *The Guardian*'s Adam Rusbridge have claimed that Facebook sucked up £20m of his newspaper's digital advertising revenue. If such players can accumulate control of visibility, they can threaten diversity of supply. Weakening of the press is the first step toward weakening of viewpoints, and it undermines democracy. Visibility is everything online. Control over what is seen or found determines what people see, read and, ultimately shapes what they think.

Recommendations for change

We argue that true market liberalism hasn't failed; it hasn't been given a chance, because our regulators have not recognised or responded to changes in the market. The Marxist dictum that markets tend to monopoly appears, in the face of widespread inaction by competition authorities, to have become true. If liberal capitalism is simply reduced to oligopoly or monopoly capitalism, then it behoves those who would defend it to do far far better. Our proposals would seek to restore the focus of the authorities on factors that underpin a merits-based system of competition. Capitalism will only succeed if it is seen to the mechanism that distributes ownership and economic agency to the widest possible extent. On that measure it has currently failed.

This does mean success being rewarded, but success has to be based on the merit of products and services, based on business insight and innovation. Products should be designed around consumer needs. To be sure that they are designed to meet those needs consumers need to be in a position of bargaining power – otherwise the supplier can impose terms on the consumer. In circumstances where there is no choice but to 'click and accept' the terms of the relationship are dictated to and not agreed by the consumer.

If we want to get the benefits of markets pursuing socially beneficial outcomes and a social market economy, the authorities need to intervene to correct the course of dynamic markets. Here, merger control provides an opportunity and it avoids the well-known problems of static intervention and the inflexibility from regulation, state control or even nationalisation. We consider effective merger control, and effective competition law enforcement to be able to correct the course of the market as it changes.

Enforcement action can be used to block or stop unwelcome structural change. Conditions can be imposed to ensure compliance with the law, and to force sales of businesses to reinforce a plural market structure and increase beneficial competition. Anticompetitive practices and increases in market power and its exploitation can and should be nipped in the bud – but enforcement needs take place at speed.

Enforcement action is a way of avoiding the excesses of laissez faire and preventing oligopoly and monopoly. When done well, it can provide a middle ground between the polarised view of free marketeers and those that would regulate away all dimensions of a market.

Our recommendations focus on changing the current prioritisation of consumer welfare and introducing consumer choice and innovation as additional factors. These points may look innocuous, so we provide some examples. Choice would encourage genuine variety. In media we call this plurality. This would be especially welcome in our online media markets – and we use media in a broad sense, including online social media and all forms of communication that can affect people's viewpoints.

Online platforms that already control significant channels or media outlets should be recognised as media players and prevented from accumulating market power. We do not advocate bringing back a general public interest test – our proposal is a very specific realignment of policy without the need to change the law.

Refocusing on innovation is critical. We first suggested this in submission to the DTI when we proposed the Ministerial Steer to restore democratic oversight. It was included in a Ministerial Steer in 2013. It has been largely ignored by the authorities and the profession. The new Ministerial Steer should make it clear that innovation should override efficiency. For example, mergers that restrict or reduce post-merger innovation should not be allowed to proceed even if they can show efficiency benefits through synergies. More care about post-merger market dynamics is needed. Innovation is more important than short-term efficiency for our society, and entry can and should be promoted to encourage longer-term production in ways that will benefit us all over time.

We recommend closing the existing gaps in the system. We suggest monitoring outputs and checking that the markets and remedies are working well. This is simply not done at present, for which no good reason can be established. We outline below specific and concrete steps to fix the problems we have identified.

9 ResPublica, September 2017, House of Lords Written Evidence Submission (CMP0030), https://www.city.ac.uk/__data/assets/pdf_file/0008/400004/Res-Publica-Markets-and-the-New-Monopolies-2017.pdf

RECOMMENDATIONS OVERVIEW

1. Assess consumer welfare but also give equal weight to innovation and consumer choice when examining transactions and competition matters.

Our proposals include a change to the existing system. We respect the importance of consumer welfare as a factor to be taken into account in competition assessments of transactions and competition matters generally. But, we suggest that the promotion of both innovation and consumer choice is at least as important, if not more so. Promoting competition in the interests of all in society would, if consumer choice were to be truly meaningful, lead to increased media plurality and diversity of viewpoints. Market structure is important and competition policy needs to be aligned with the government's Industrial Strategy for this to be achieved. We use media in a broad sense, including online social media and all forms of communication that can affect people's viewpoints.

2. Restoration of society's interests. The Government's Strategic Steer should promote greater enforcement of the law, especially in the technology sector, to promote innovation and customer choice. This would recognise the importance of market structure and small business to the economic and social wellbeing of the UK, and people's views of how they see the world and what it means and can mean to them.

The more important innovation becomes to society, the greater the need to enforce the law. The UK has low productivity and increasing inflation. Economic growth, productivity improvements, and worthwhile jobs for people now, and in the future, are the challenge for all governments. We believe this means that enforcement priorities should be established by government in its Strategic Steer and it should place greater emphasis on enforcing the law, especially in the tech sector, to promote innovation and customer choice. Greater levels of innovation, and increased opportunities, means emphasis on choice, and that means emphasis on market structure and entry by small business.

Small business provides about half of all job growth. Small businesses require confidence in the future. Small business involves a sense of ownership and changes the way people think about themselves. Entrepreneurship reinforces certain values. Values like opportunity and responsibility, both for ourselves and to others, be they customers, employees or suppliers.

We understand that succeeding or failing on our own merits changes the way people look at themselves and the world. However, opportunity has to be truly open and the economy free, for each and every one of us to pursue our own goals. Fear of failure corrodes confidence, and a sense of purpose needs daily sustenance.

People won't be willing to spend money, sweat, time and tears on their own venture if the market is rigged against them. People are willing to take risks, but not foolish risks. Innovation, like entrepreneurship, is risky. It costs money. It takes time. It often fails. Therefore, common sense tells us that there will be a lot less of it if markets are not open to competition from businesses that have a better idea or a new way of doing things.

Effective competition is an important contributor to how people see the world as fair or unfair – success based on merit is readily understandable. Markets that promote success based on the merits, either support belief in fairness of the market mechanism or undermine it - a world dominated by the unfair gains from monopoly support a view that capitalism is only for the rich. Currently the view from the street is of a world of major global companies dominating many aspects of life. Personal opportunity is limited and globalisation, epitomised by global tech platforms, is dislocating and contributing to deep insecurities and the "gig economy". A failure of liberal capitalism has been repeatedly blamed for the rise in populism. Viewed through a slightly different lens, what if the analysis is different - what if liberal free market capitalism has not failed - but has not existed and doesn't exist where markets have become monopolised? Where opportunity is dependent on innovation, and that is stifled by Big Tech's behemoths, complaints about the re-feudalisation of society can be seen to be more legitimate and the use of extreme language justified. We consider it is time to reassert the public interest to ensure that markets work in the interests of the many not the few.

3. We recommend that outcomes should be measured by the authorities. Measurement of outcomes should be used to review the authorities' performance.

Outcomes require measurement and enforcement requires testing. The authorities do not currently measure outcomes or effectiveness of remedies over the time they should. Indeed, there is no credible case that can be made for the absence of such measurement save that it would show up the effectiveness of administrative action or its lack. Post-merger price rises have been found in certain cases where the predicted outcomes are taken into account in allowing the merger to proceed and would have led authorities to expect competition to drive prices down. In technology markets innovation can be expected in terms of quality improvements. Outcomes in terms of innovation, and measures of innovation, need to be developed and assessed by the authorities on a consistent basis over time. The authorities currently measure their activity in terms of cases taken, and books full of cases stand in silent testament to market failure.

4. The current merger control system does not properly address innovation mergers: we recommend that the current thresholds should be changed. Assessment practices toward transactions and assessments of market power also need to change.

Competition is the mother of invention and the current system fails to support smaller players, as it does not catch or scrutinise mergers between major players and innovative upstarts. The jurisdictional thresholds that set the starting point for merger review in the EU and UK were set partly as a political compromise to allocate work between authorities, such that bigger transactions - which tend to be more pan-European or global - are dealt with under the one stop shop approach in Brussels.

Change to merger control has recently taken place in Germany, following concerns that turnover thresholds are the wrong test - since they don't capture transactions that are important, but where the target has a low turnover. Indeed, turnover is a deceptively simple measure that was assumed to represent value of business and is peculiarly inappropriate for the tech sector where the number of users, or volumes of people in terms of internet traffic seeing advertising, is a better measure. In the industry, the number of "eyeballs" or unique users is often referred to as a measure of value. Businesses are bought for many billions on this basis without having much or any turnover - confusing ordinary assessments of value for those who don't appreciate that the volume of people passing a billboard is a better way of assessing the people seeing it, than the turnover generated. For this reason, Germany recently changed its law to adopt a value-based threshold aimed at catching such mergers and subjecting them to more careful scrutiny. The EU has been consulting on making changes to the thresholds on a similar basis. Whatever the outcome of Brexit, the UK should quickly revisit its system of merger control tests and should assess mergers between major companies and upstarts. Current thinking may be that the UK's voluntary system is sufficiently flexible – or vague enough that it can and does catch these types of transactions, whether on its market share or share of supply thresholds – but it is missing something. Given the risk involved in allowing transactions to proceed that should have been blocked, the wrong decisions are with us for a lifetime of regret. Allowing damaging market structures to continue to develop is difficult or impossible to undo. A narrower value-based threshold should be adopted.

We outline in this report the issues that arise from the 'digitisation of machines', and the problems that rapid technology developments create for those assessing which products are operating as competitive constraints over others. Market definition in the old, slow moving real goods world, does not generally need or require an appreciation of left field developments and supply side alternatives as a threshold matter - it is needed in technology markets at the threshold stage, in review of transactions and assessment of market power and its abuse. Indeed, the price of economic freedom could be said to depend on such vigilance.

Reform also means much more careful assessment of the supply side, productive efficiency and market structure. The investigation of productive efficiency and supply side substitution has to be given equal prominence, if not more, to forward-looking supply side analysis of alternatives that would or could meet the same need. If not, the system is blind to new developments meeting current needs and fails to understand the true nature of competition taking place.

5. We suggest that the current CMA notification system should be enhanced, and smaller businesses encouraged to obtain safe harbour protection under CMA administrative guidance.

Vertical agreements and innovation-enhancing collaboration, deserve special attention. The current system provides only weak signals to beneficial collaboration. This is because the current law prohibits all vertical agreements, subject to certain "safe harbours" that are defined in EU wide block exemptions. This is an out of date approach toward enforcement, based on an out of date administrative system, and one that has to change.

We have overlooked the importance of collaboration and market structure for the commercialisation of basic research, where public/private as well as multi-private firm collaborations are vital to the effective commercialisation of modern innovation. Persistent productivity failure could be derived from failure to collaborate effectively. Increasing productivity is driven by the use of new processes, often requiring collaboration to meet or beat market power. New ways of working - with productivity per worker often being driven by the adoption of new technology in existing firms, and new or improved products and services being created that tap into existing or latent demand - should be fostered. Small and medium-sized businesses are known to drive innovation and job creation. The innovation process is much more dynamic and interactive than innovation in labs of big companies funded by large R&D budgets – it has to be, to discover latent customer demands. It occurs in places where the new is tested, tailored, and tinkered with by multiple market-facing organisations often developing and using applied research in collaboration with universities. It depends on the integration of ideas from a wide range of organisations. Again, this should be supported and encouraged.

In the UK and the EU we have, in general, banned collaboration and made it illegal, subject to exemption on a self-certified basis. This creates peculiar risk assessments and strange consequences. From the Commission's e-commerce sector results, we have seen that the tech sector is riddled with anti-competitive practices, but lack of clear 'safe harbours' may also have led to risks not being taken when they could have been and where beneficial economic outcomes would have been desirable.

For smaller firms to collaborate they need to know whether their agreements are beneficial and acceptable or not. At present the system is unintelligible and complex, often requiring legal advice that is too expensive for smaller businesses to obtain. The system should support the commercialisation of R&D, support smaller businesses, and be pro-innovation through collaboration. We suggest that the current CMA notification system should be enhanced, and smaller businesses encouraged to obtain safe harbour protection under CMA administrative guidance.

6. We recommend that the role of the state, in addressing market failure in R&D and helping businesses cross the "Valley of Death" from invention to commercialisation, be enhanced and that state aid and public purchasing can be used to address the innovation deficit with other countries. We also recommend that Intelligent Purchasing can be used to support innovation and competition.

The relationship between government-funded R&D, government procurement, and commercialisation is not coherent. When it comes to competing with other global economies such as the United States, the UK's track record on the collaboration between the private and public sectors is unimpressive. It is also widely accepted that the funding of basic research is a role for the state, because the market will not deliver. The next step, the commercialisation of the benefits of publicly funded developments, is under-examined and poorly promoted or protected from exploitation. This risks capture by existing market players. This requires our attitude to collaboration and commercialisation, through collaboration among industry participants and government, whether direct (through grant funding) or indirectly (through its purchasing practices), to change radically.

7. Enforcement of the law needs to be swift and meaningful. We recommend prioritisation of enforcement against abuse of dominance in the tech sector.

Our system of enforcement is too slow. Saying that whole industries are blighted before enforcement action is taken, does not bring home the full force of the effect on individuals trying to run their businesses, the corrosion of confidence of small businesses, and the enduring damage to people's lives and our society.

To some extent this is because of the allocation of responsibilities between the UK and EU, and the limited resources and capabilities available to Brussels based enforcement. Especially in comparison to the budgets and interests of the biggest companies in the world. Failure to enforce the law quickly means that we fail to keep markets open and functioning. Further discussion is needed about the factors that may affect speedy outcomes, including:

i. **Management experience.** Where heads of authorities have limited litigation experience is it fair to give them a mandate to take and manage litigation against the world's biggest companies, with unlimited budgets and the best lawyers money can buy?

ii. **Processes and procedures** adopted also typically mean that people are assembled to deal with specific transactions, investigations and issues rather than being organised into industry specific groups. The complexity of the modern economy demands greater knowledge through specialisation, measurement and monitoring of outcomes which would facilitate speed of understanding and more rapid decision making.

iii. **Timescales** are measured in the time taken to achieve perfect administrative outcomes, rather than provide the response needed by markets in market defined timescales. Our authorities need to move at internet speed.

8. We recommend that the current Ministerial Steer should be overseen and monitored against outcomes.

We recommend that the goals of policy could be reset to become: *timely action to promote competition, innovation and consumer choice* - this could be sufficient for goal setting - while detailed measurement metrics need to be further developed.

The current system lacks democratic oversight. The system is modelled on the EU administrative system. That system is often derided for its democratic deficit. The EU system also inherently allows a conflation of competition policy, integrated with industrial policy, toward different sectors through the EU Commission and EU legislative proposals. That is why it is enforced by a Commission that is an integrated body. Going forward the UK needs to reconnect its economic management with governance and reconnect democratically elected ministers with industrial policy goals. The administrations must be charged with carrying out their functions in accordance with those goals. A balance needs to be struck between alignment to political goals and certainty for investment. The Ministerial Steer was created in 2013 and included reference to innovation. By and large, however, that steer has not led to any discernible change in the approach or practice of the authorities. It could provide a framework that allows outcomes and policy goals to be defined and a basis on which market participants could make their investments, while administration and enforcement would be for the CMA and sectoral authorities.

That steer should, in our view, seek to ensure that decisions are taken quickly, that breach is not tolerated, and that the focus of the public enforcement of the law promotes innovation and choice to a greater extent. The current draft is simply too long. To provide a meaningful steer to the CMA and regulatory authorities, and the people working in them, it needs to be about the goals of the system. Something along the lines of: "timely action to promote competition, innovation and consumer choice", could be sufficient for goals setting while detailed measurement metrics need to be developed.

In our view, administrative and enforcement bodies should not set policy. In the UK we have a Ministerial Steer that is designed to provide direction from democratically elected ministers. It needs to be used to set goals, and the achievement of those goals needs to be monitored by the government and parliament to ensure they have been achieved.

9. We recommend that breach of the law should, in addition to compensatory damages, be able to strip the wrongdoer of the profits of their wrongdoing. The CMA should be empowered not only to take enforcement action in the public interest, but to coordinate and support action for harm and damages claims by government bodies.

In simple terms it doesn't pay for dominant companies to comply with the law as currently enforced. The current system takes a long time and much hay is made while the sun shines. The penalties, which are designed to signify the public interest or damage to society from the breach of the law, are capped at a percentage of turnover. This means that public action and penalties are limited and not truly related to the profits that can accrue to companies who break the rules.

As well as penalties imposed by public authorities, damages actions may be brought by private parties or public authorities that have been harmed. Compensatory damages for breach of the law means that only that which compensates the claimant, need to be paid out and the lawbreaker can profit from its wrongdoing - this can be significant, if only a small percentage of those harmed ever make a claim. Under long established English common law, the courts reserve the power to award exemplary damages in circumstances where deliberate breach of the law was found. Otherwise the law would not be worthy of its name and be brought into disrepute. Deliberate non-compliance for economic gain undermines the rule of law. The ability of the courts to award exemplary damages, and for claimants to take action for exemplary damages, was recently limited by the EU Damages Directive. The position as established at common law needs to be re-asserted. English courts should be able to award exemplary damages in suitable cases.

The law thus does not properly set up compliance incentives, and it does not strip abusers and cartelists of the benefit of their illegal actions. Private actions are only available for those that can provide evidence of harm, causation and loss. It can then take years of expensive private litigation, claiming damages for breach of the law, which leads at best to compensation.

Compensation for only the limited set of brave claimants that can afford to take cases and prove harm, is a wholly inadequate basis to ensure compliance. For example, if a major tech platform abuses its dominance, excludes smaller rivals from the market and reaps huge rewards, claims for compensation cannot hope to strip the abuser of the benefits of its illegal actions. The genie cannot be rebottled, and compensation of a small number of small players for their relatively small losses, may be a worthwhile strategy for the dominant firm who can make more by continuing its practices and paying off those harmed. Worse still for a merits-based society, small rivals may be crushed. Business may become worthless overnight. Even taking a claim would often be financially impossible in such circumstances. The signal sent to other players is that big companies rule. A generation has been taught that moving fast and breaking things pays off - even if that means breaking the law.

The position of public authorities that have been harmed through anti-competitive abuse or the activity of cartels, is a cost to the public purse that is often unrecovered. For example, there has been case after case against pharmaceutical companies abusing their position (overcharging hospitals and healthcare providers), but only one known case of a claim for compensation. The hospitals and public bodies are being overcharged but often have no capability to talk action and no funds to do so. The CMA could be empowered not only to take enforcement action in the public interest, but to coordinate and support actions and claims for damages for harm to government bodies. Each government body would continue to need to establish its case in causation and continue to need to quantify its losses and be separately represented in doing so. But the CMA's evidence gathering powers could be more broadly used on behalf of the state, and available for subsequent enforcement action. These powers could also be adapted and used to support claims where the state's own financial interests have been harmed and public bodies have to be compensated.

10. Establish data ownership clearly in law - enabling end users to trade their data.

Protecting personal data is vital. However, controlling the use of data presupposes ownership and clearly establishing and protecting ownership of data is a necessary first step for the UK. In the face of monopoly or market power, where lack of choice means that data ownership is meaningless, we consider that safeguards need to be put in place to redress the balance of bargaining power to ensure that users have real sovereignty over their data. This may require regulation. It could be achieved by enforcing the existing laws against abuse of dominance. This would support fair, reasonable and non-discriminatory terms of trade with relation to consumers' data interests.

We also consider that advertising markets in general, and online advertising markets in particular, exhibit certain features that allow the interests of advertising customers (such as the merchants and their online platform intermediaries) to become divorced from the interests of their users, the end consumers. Users can become assets of the major platforms. To address this issue, we consider that data ownership is more clearly established in law, so that end users can exert the primary driving force in the operation of competitive markets.

Introduction

Something has gone wrong with our markets and something has gone wrong with our competition law.[10] That is the contention and argument of this paper. A central point is that higher levels of concentration in the structure of markets can be observed. The UK Government's recent Green Paper and consultation recognises certain flaws - in that markets will not always work well for consumers, business and society, and provides additional examples to those in this paper.[11] Both the House of Lords review of post Brexit competition law and the Government's Green Paper also accept that abuse of dominance can occur through technology platform companies acquiring innovative smaller companies. At the time of writing this report the Government is consulting on what to do.

We consider that an active competition policy is critical for raising living standards and improving economic growth, as called for in the industrial strategy. Government is now also seeking views on a new Strategic Steer to the CMA to ensure that its industrial strategy is supported by CMA actions and current priorities - all good news and welcome recent developments since the core arguments in this paper were submitted to the House of Lords in response to its call for evidence in September 2017.

The concerns we initially raised in 2017 were based mainly on US data. It is possible, although unlikely, that a different picture could be painted with EU or UK data. The EU Commission is at least alive to the problem - although moving at a ponderous pace. On the 3rd May 2018 it issued a tender for evidence of concentration to help establish and verify the position outlined in this paper that markets are concentrated and holding back innovation and consumer choice. The statistical basis and the levels of concentration in the UK remain formally unknown at the time of writing. Without further statistical evidence on concentration levels in the UK a challenge is created for the CMA in how to report publicly on "*the health of competition across the UK economy and creating and maintaining markets that work well for all*" as called for by the proposed new Strategic Steer.

As we outline below there is, nevertheless, increasing evidence of market concentration across a range of industries, a rise in economic rent, a fall in new market entry and a corresponding and evidenced threat to innovation. We do not claim original research or unique insight - such data as exists is assembled below and is public for all to see.

We argue that these outcomes have arisen in part at least because of a conceptual failure of competition law and policy to grasp the problem, lack of appreciation of the importance to the fabric of society of a diverse and competitive market, insufficiency of the tools used for analysis, especially the narrow focus on the consumer welfare standard as currently understood, an ineffective system of merger control and lack of enforcement of the laws on vertical restraints. Understanding levels of concentration and the importance of market structure requires the measurement and monitoring of markets in practice. We speak to the legal thresholds, methodology and management practices and policies which have contributed to these outcomes and which need to be changed. To exemplify and make our case we focus on the most egregious and telling issues and cases in the technology and media markets, providing examples of cases of assessment failures and highlighting the wider consequences of a failure to act and very real threat to future economic freedom from a monopolised market place.

Part I of this paper outlines the issues and problems we face in the broader economic context, followed by proposals for reform in Part II. As highlighted above, we provide 10 recommendations on changes that can be made to address the problems identified.

10 As warned about by Robert Pitovsky in "How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on U.S. Antitrust" 1, 6 (Pitofsky ed., 2008).

11 See BEIS, April 2018, 'Consumer green paper: Modernising Consumer Markets', Ref: Cm 9595 especially Chapter 5 and paragraph 108, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/699937/modernising-consumer-markets-green-paper.pdf

PART 1

Issues and Problems We Face

Economic Outcomes

We briefly outline below the recent evidence of economic outcomes. The data that we have available has mostly come from US markets, but the question is – why would Europe or the UK for that matter be any different? The same economic forces are in play and very similar competition law and criteria govern all these markets. So, we would contend that in this regard what holds true in the United States will most likely hold true in Europe and the UK. It is remiss of our own competition authorities both in Europe and the UK not to have already commissioned or done the work that has been completed in the US. We also consider that while a start has now been made at EU level, it remains a limited initiative in a sea of inertia.

Regardless, debate on market concentration and other issues about the monopolisation of markets has proceeded apace in the United States. This has been highlighted by publications during 2016 from the Obama Administration's Council of Economic Advisors and material from the Economist - as noted, this is mostly based on US statistics. Increasing concentration has in fact been identified across a range of industrial sectors.[12] The economic indications are compelling and the actual and potential social consequences profoundly disturbing. They include a slowdown in the creation of new businesses, and declining dynamism, with market exit rates remaining roughly constant but, most significantly, with market entry reducing. Since there are increased barriers to entry, one clear potential factor is the advantage accruing to incumbents over time. The table below is from the Obama administration Council of Economic Advisors issue brief updated in May 2016.

The majority of industries have seen increases in the revenue share enjoyed by the 50 largest firms between 1997 and 2012; see above. Along similar lines, *The Economist* (2016) found that in 42 percent of the roughly 900 industries examined, the top four firms controlled more than a third of the market in 2012, up from 28 percent of industries in 1997. Of course, an increase in revenue concentration at the national industry level is neither necessary nor sufficient to indicate increases in market power as a legal matter, but it is an indicator of a key issue.

Change in Market Concentration by Sector, 1997-2012

Industry	Revenue Earned by 50 Largest Firms, 2012 ((billion $)	Revenue Share Earned by 50 Largest Firms, 2012	Percentage Point Change in Revenue Share Earned by 50 Largest Firms, 1997-2012
Transportation & Warehousing	307.9	42.1	11.4
Retail Trade	1,555.8	36.9	11.2
Finance & Insurance	1,762.7	48.5	9.9
Wholesale Trade	2,183.1	27.6	7.3
Real Estate Rental & Leasing	121.6	24.9	5.4
Utilities	367.7	69.1	4.6
Educational Services	12.1	22.7	4.2*
Professional, Scientific & Technical Services	278.2	18.8	2.8*
Arts, Entertainment & Recreation	39.5	19.6	2.5*
Administrative/Support	159.2	23.7	1.6
Health Care & Assistance	350.2	17.2	0.8*
Accomodation & Food Services	149.8	21.2	0.1
Other Services, Non-Public Administration	46.7	10.9	-0.2*

*Note: Concentration ratio data is displayed for all North American Industry Classification System (NAICS) sectors for which data are available from 1997 to 2012. * indicates that the percentage point change is calculated using only taxable firms in that industry, as its 1997 revenue share data are only available for the 50 largest taxable firms and the 50 largest tax-exempt firms as separate categories, rather than for all firms combined. Performing this same calculation using data for only tax-exempt firms results in two additional industries showing a decline in concentration (Arts, Entertainment and Recreation, and Educational Services), while one shows a slight uptick (Other Services).*
Source: Economic Census (1997 and 2012), Census Bureau.

Returns on investment capital have increased,[13] and entry levels have decreased, with increasing levels of exit. See Figure 1 below.

Labour markets are becoming less dynamic, with less movement between firms. This may well be related to the fact that firms now inhabiting markets tend to be older, and given that markets involve a small number of larger firms, opportunities for movement will be reduced by comparison with market structure where there are large numbers of smaller firms. See Figure 2 below.[14]

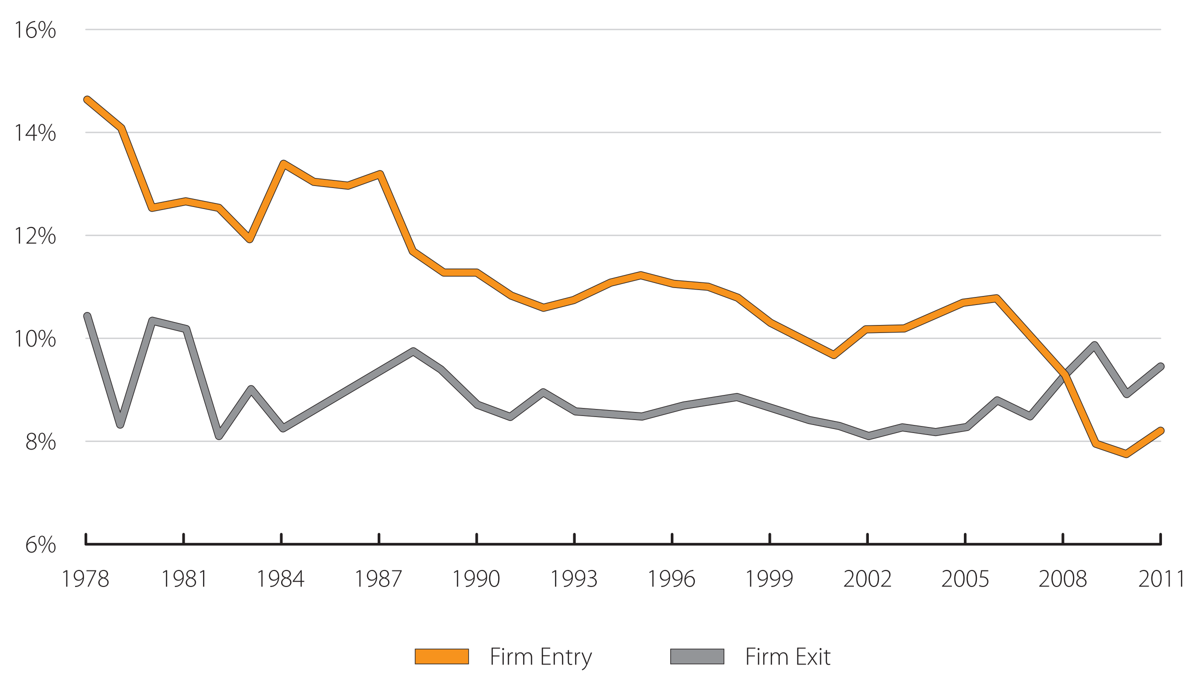
Young firms being those that are less than 5 years old, have been declining as a share of the total numbers of firms in the US economy. See Figure 3 below.

Shares of income going to capital has risen with income going to labour falling, notably since 2000.

Moreover, recent research into the rise of market power from De Loecker and Eeckhout[15] has also indicated that price mark-ups have increased dramatically in recent years. Figure 4 below represents the weighted average mark-up across the US economy over time, where weights are based on firm levels sales. It demonstrates that average mark-ups have risen since the 1980's. This research suggests that in 2014 the average firm charges 67% over marginal costs, compared to 18% in 1980.

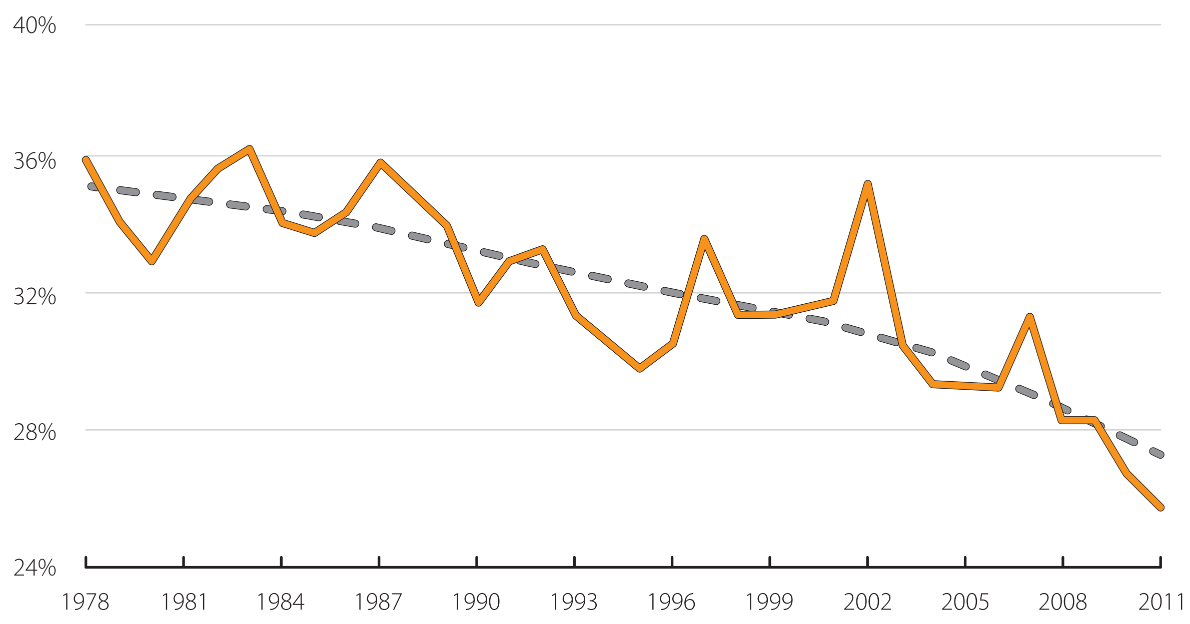
Increasing mark-ups suggest that the margin of revenue over variable costs has increased. That does not necessarily imply that firms are making higher profits. If, for example, the source of the increase in mark-ups is technological change that reduces variable costs, and the same technological change increases the fixed costs, then

Figure 1: Firm Entry and Exit Rates in the United States, 1978-2011



Source: U.S. Census Bureau. BDS: authors' calculations

Figure 2: US Job Reallocation Rate and Trend, 1978-2011



Source: U.S. Census Bureau. BDS: authors' calculations

Note: Trend is calculated by applying a Hodrick-Prescott filter with a multiplier of 400

Figure 3: Young Firms as a Share of the US Economy

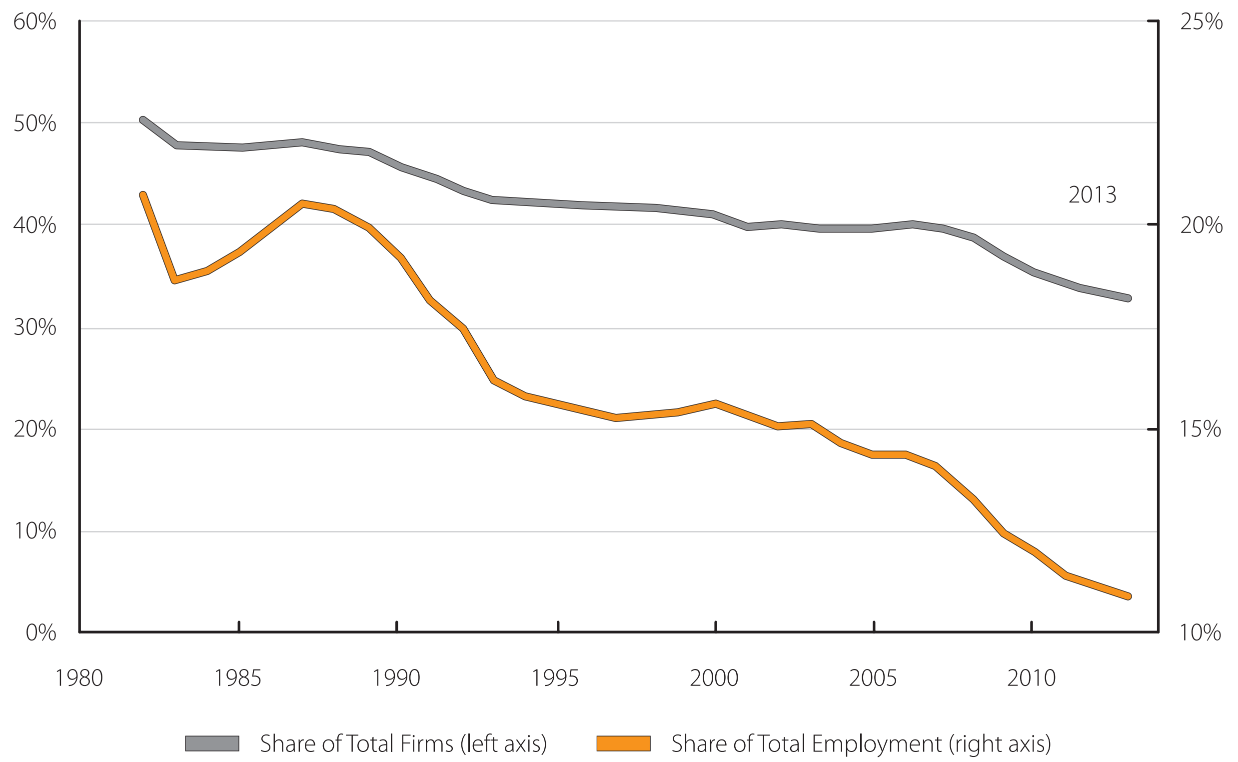
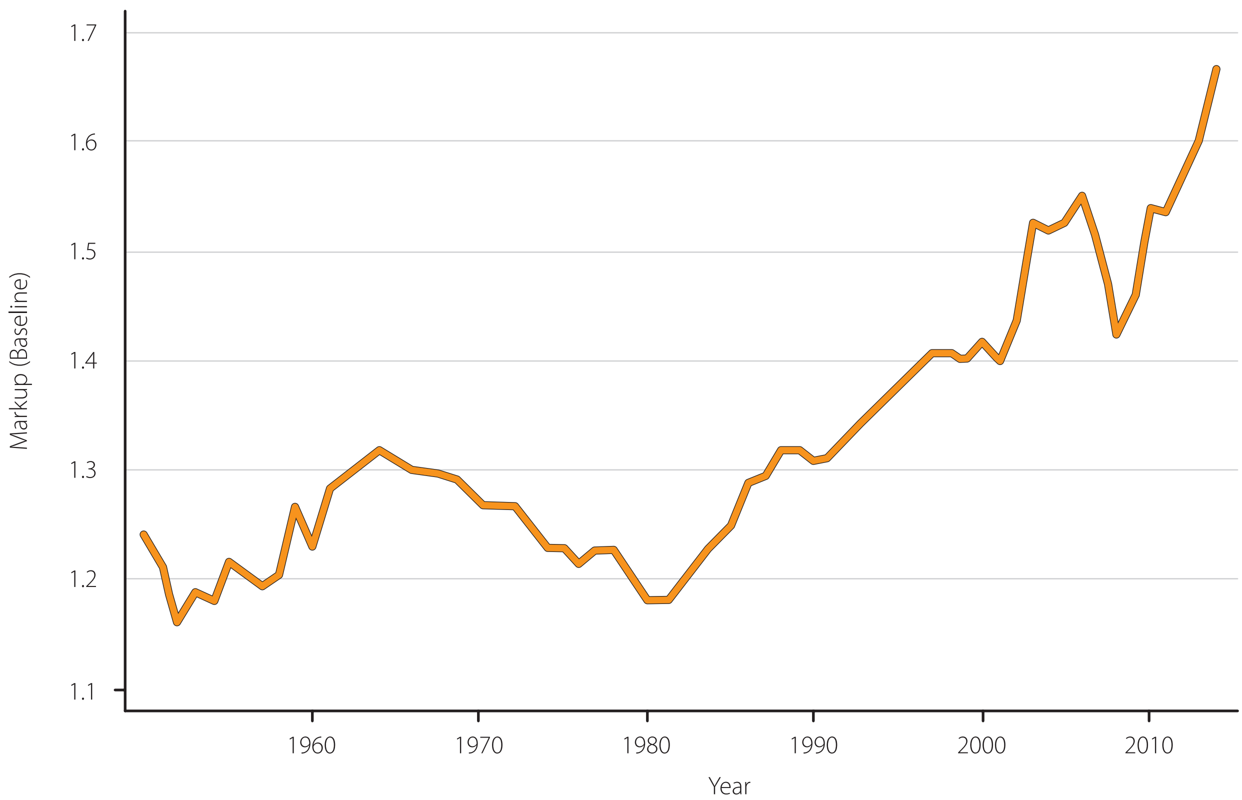


Figure 4: Weighted Average Markup across US Economy



mark-up is not synonymous with profits. Consider high tech firms that produce software products that need one big upfront investment and then can be scaled nearly without any additional cost. Such technological change will lead to higher mark-ups (due to lower variable costs), but prices will not drop because firms need to generate revenue to cover fixed costs, and profits will continue to be low overall.

In order to investigate whether firms that were able to raise mark-ups were also increasing profits, the authors assessed the mark ups and dividend growth together and found the following. See Figure: 5A&B.

The graphs above clearly illustrate that there is a strong correlation between increasing mark-ups and increasing dividend growth. In simple terms those firms that raise price have been able to increase profits and dividends, indicating an increasing level of market power. Questions have also been raised about why high rates of profit have not stimulated sufficient entry by new competitors to force profit rates to converge rather than diverge?[16]

From a financial perspective, it is clear that the increasing concentration of industry leads to increasing returns. In the words of one Goldman analysis:

> *"Oligopolistic market structure can turn a cut-throat commodity industry into a highly profitable one. Oligopolistic markets are powerful because they simultaneously satisfy multiple critical components of sustainable competitive advantage— a smaller set of relevant peers faces lower competitive intensity, greater stickiness and pricing power with customers due to reduced choice, scale cost benefits including stronger leverage over suppliers, and higher barriers to new entrants all at once."* [17]

In oligopoly, stable income and less pressure to innovate may have contributed to the outcome. Jason Furman,[18] Chairman to the then Obama Presidency's Council of Economic Advisors provided a detailed description of these issues and referred to the fact that return on invested capital has risen dramatically, specifically in healthcare and information technology, at the same time as other measures point to a reduction in competition.[19]

For the above outcomes to have occurred under the noses of the current antitrust authorities suggests that the current system is in some ways flawed or not adequate at recognising and preventing the increasingly oligopolistic outcomes that have taken place. Recent work by the Chief Economist at the EU Tommaso Valetti tends to confirm the above, and the willingness of the EU Commission to investigate and challenge the status quo is to be commended.[20] In the next section possible reasons for the anti-competitive outcomes we have seen are examined.

12 The Economist, 31 May 2017, 'Seven wonders: tech stocks', https://espresso.economist.com/03492e99e42e7ea8480cdfb4899604f5?fsrc=scn/fb/te/bl/ed/sevenwonderstechstocks20170601espresso; Council of Economic Advisers Issue Brief, 2016, https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160502_competition_issue_brief_updated_cea.pdf; Center for American Progress, June 2016, 'Reviving Antitrust', https://www.americanprogress.org/issues/economy/reports/2016/06/29/140613/reviving-antitrust/ - and has been seen in the tech sector with cases being brought by the US authorities.

13 Ian Hathaway and Robert E. Litan, May 2014, 'Declining Business Dynamism in the United States', Brookings Institute, https://www.brookings.edu/research/declining-business-dynamism-in-the-united-states-a-look-at-states-and-metros/

14 Ibid.

15 Jan De Loecker and Jan Eeckhout, August 2017, 'The Rise of Market Power and Macroeconomic Implications', *The National Bureau of Economic Research,* http://www.nber.org/papers/w23687

16 Center for American Progress, June 2016, 'Reviving Antitrust', https://www.americanprogress.org/issues/economy/reports/2016/06/29/140613/reviving-antitrust/

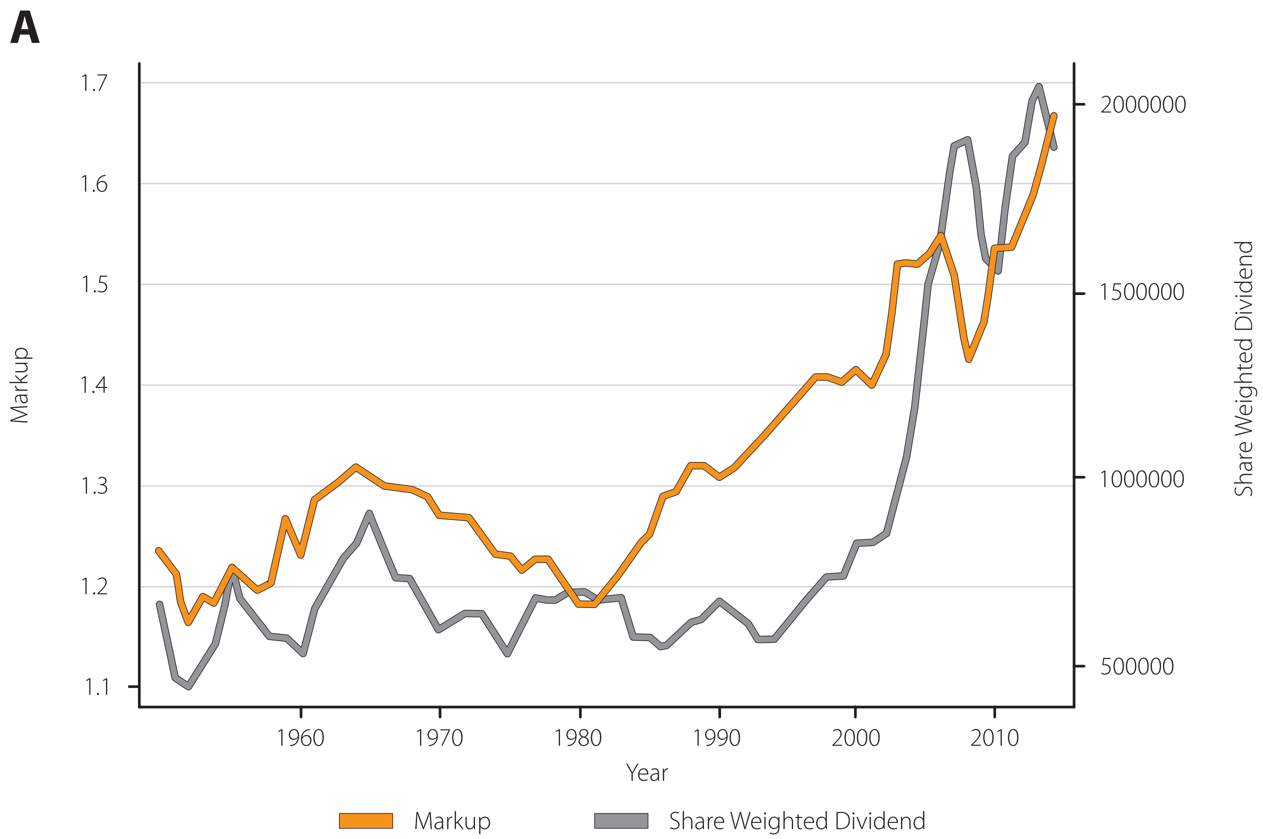
17 Goldman Sachs Global Investment Research, 2014, "Does Consolidation Create Value, The Case for Disruptive Change".

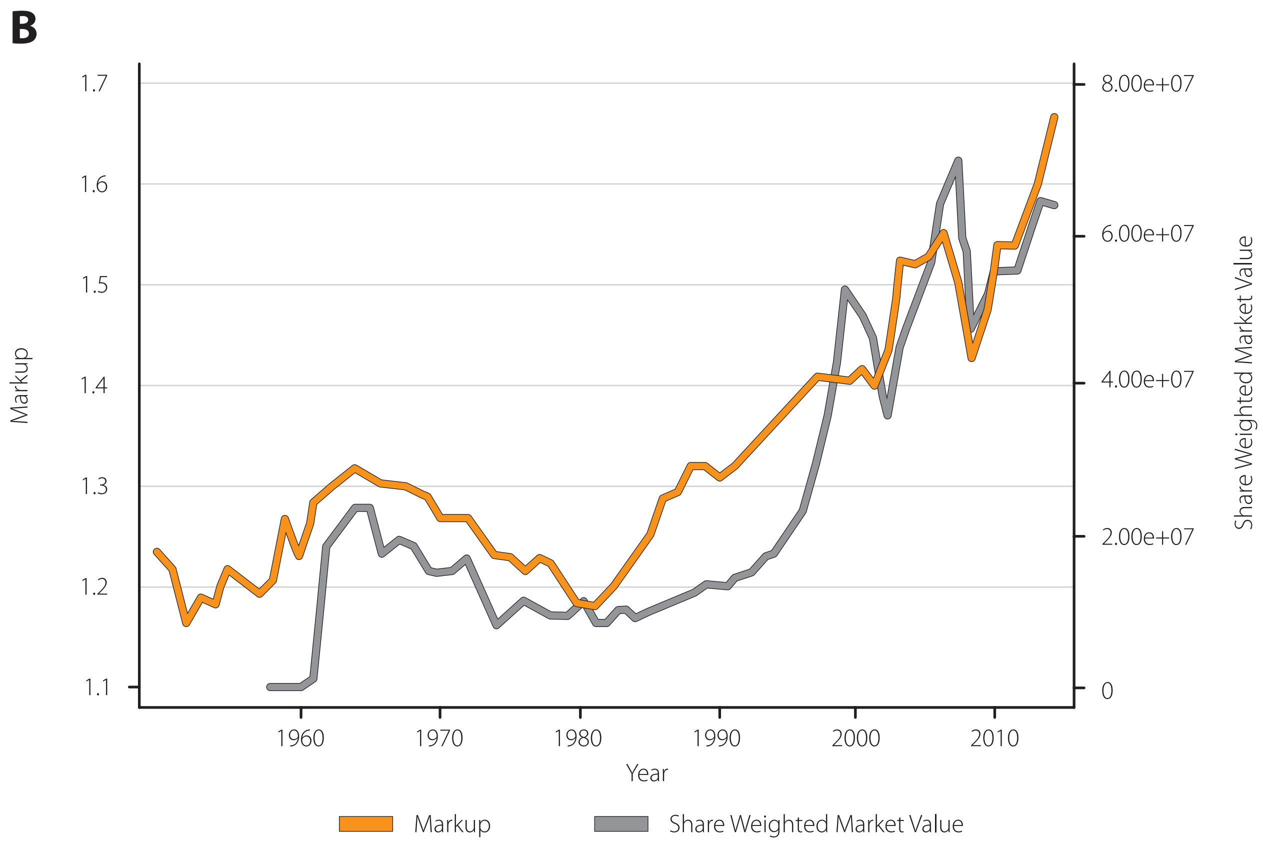
18 Jason Furman, September 2016, 'Beyond Antitrust: The Role of Competition Policy in Promoting Inclusive Growth, *Council of Economic Advisers Searle Center Conference on Antitrust Economics and Competition Policy* (Chicago, IL).

19 Ibid.

20 Giulio Federico, Gregor Langus and Tommaso M. Valetti, February 2018, 'Horizontal Mergers and Product Innovation', *SSRN*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2999178

Figure 5: A) Average Dividends (weighted). B) Average Market Value (weighted)





Legal thresholds for merger control contributing to high levels of concentration and unwelcome economic outcomes?

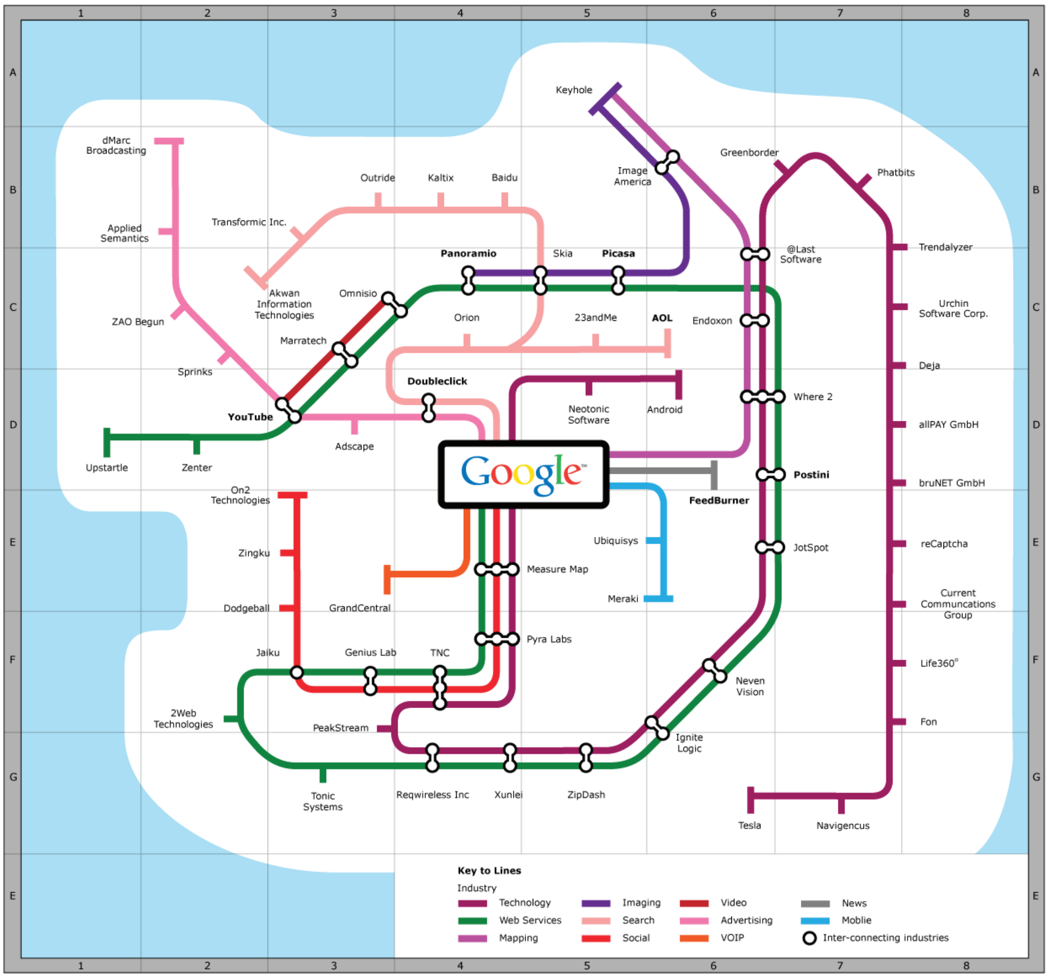
The current European system of merger control, including in the UK, is a system that sees only part of the picture of economic activity. Of the thousands of mergers that take place every year, jurisdictional thresholds mean that only a small sample are subject to scrutiny.[21] The system currently allows major firms, even those that are dominant in already concentrated sectors, to buy up smaller businesses, with such transactions being outside the thresholds for merger control, since such thresholds are judged by turnover rather than by value, or in the UK are subject to a voluntary merger filing regime, and hence avoid routine scrutiny by the authorities.[22]

Google has acquired at least 215 businesses since 2001,[23] but its rate of acquisition has increased in recent times, with 167 since the beginning of 2008,[24] the date from which the EU Commission recently found Google to be dominant, following a 7-year enquiry. See Image 1 below.

Facebook has acquired 69 companies[25] since 2007, and at an increasing rate. A formal investigation or finding of dominance as a social media platform has yet to be made, but with its 2bn user base, massive investment and high barriers to entry, with stable market share and no meaningful alternative since Myspace in 2006, Facebook could, we venture to suggest, be dominant.[26]

The reasons for acquisitions are many and varied with the direct benefits to the

Image 1: Google Acquisitions and Investments



Acquisitions

Deja	C7	*	allPAY GmbH	D7	*	Tonic Systems	G3	*
Outride	B3	*	bruNET GmbH	D7	*	Marratech	C3	*
Applied Semantics	B2	$102m	Skia	C5	*	GreenBorder	B7	*
Neotonic Software	D5	*	dMarc Broadcasting	B2	$102m	Panoramio	C4	*
Pyra Labs	F4	*	Measure Map	E4	*	FeedBurner	E6	$100m
Genius Labs	F3	*	Upstartle	D1	*	PeakStream	F4	*
Sprinks	C2	*	@Last Software	C6	*	Zenter	D2	*
Kaltix	B4	*	Orion	C4	*	GrandCentral	E3	$45m
Ignite Logic	F6	*	2Web Technologies	F2	*	Postini	D6	$625m
Picasa	C5	*	Neven Vision	F6	*	Image America	B6	*
Keyhole Inc.	A5	*	YouTube	D3	$1.65bn	Zingku	E3	*
Where2	D6	*	JotSpot	E6	*	Jaiku	F3	*
ZipDash	G5	*	Endoxon	C6	$28m	Omnisio	C3	$15m
Urchin Software Corp.	C7	*	Reqwireless Inc.	G4	*	TNC (Tatter and Company)	F4	*
Dodgeball	E3	*	Transformic Inc.	B3	*	ZAO Begun	C2	$140m
Android	D6	*	Adscape	D3	$23m	On2 Technologies	E3	$106.5m
Akwan Information Technologies	C2	*	Trendalyzer	B7	*	reCaptcha	F7	*
Phatbits	B7	*	DoubleClick	B4	$3.1bn			

Investments

Baidu	B4	$10m
Current Communications Group	E7	*
AOL	C6	$1bn
Tesla	G6	*
Xunlei	G4	$5m
Ubiquisys	E5	*
23andMe	G7	$3.9m
Navigenics	F7	*
Fon	F7	*
Life360°	C5	*

Year of Acquisitions or Investments

2001 2002 2003 2004 2005
2006 2007 2008 2009

* Cost of Acquisition or investment not disclosed

Sources:
http://www.seobythesea.com
http://startup.partnerup.com
http://pulse2.com
http://www.crunchbase.com/company/google
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Source: MeetTheBoss.com

acquirer including additional product ranges, increased efficiency and operational and system improvements. In any such acquisition, for whatever reason, an already dominant player may be enhancing its dominance and raising barriers to entry by other firms. A concentration in an oligopolistic market may also reduce the innovation incentives for other players in the market.[27]

In some cases, the anticompetitive consequences may be more blatant. Buying up by the dominant player of the most likely successful entrant that might displace the current incumbent involves taking out a competitor before it has time to grow. This has been described as a "Kill in the Crib" strategy by one US commentator.[28] It is known to be of concern to the EU Commission and the German competition authority, as described in Vox:

> *"Today's technology giants have become a lot more savvy about anticipating and pre-empting threats to their dominance. They've done this by aggressively expanding into new markets and by acquiring potential rivals when they're still relatively small. And, some critics say, they've gotten better at controlling and locking down key parts of the internet's infrastructure, closing off paths that early internet companies used to reach a mass market.*
>
> *As a result, an industry that used to be famous for its churn is starting to look like a conventional oligopoly — dominated by a handful of big companies whose perch atop the industry looks increasingly secure."*[29]

The jurisdictional thresholds that set the starting point for merger review in the EU and UK are also set with relation to measures that are inappropriate for technology and online media markets. As previously mentioned, they are defined mainly in terms of rules concerned with the *turnovers* of the target and acquiring entities. These thresholds were developed for administrative convenience and to allocate basic responsibilities between the EU and member states, at a time when most businesses generated revenue from contracts with customers. They are inappropriate for a digital economy where value, for advertising purposes in online markets, is often represented by the number of visitors to a website. It is readily apparent that there is huge value in millions of users seeing millions of adverts, and that companies generating huge attention are of enormous interest to advertisers. In the bewildering world of the internet, the battle is for consumer attention, and online advertising has become more sophisticated to achieve its aims in selling us more products.[30] Inappropriate turnover based thresholds may well have contributed to hundreds if not thousands of tech sector mergers being completed "under the radar" and to increased levels in the concentration of the sector over time.[31]

The internet companies themselves know that their smaller deals will be subject to no scrutiny if they catch smaller companies in their infancy. A few years ago, Eric Schmidt, CEO of Google, admitted that the strategy was to purchase beneath the thresholds for merger notification when he said that "*Google made the decision last year to accelerate the acquisition of companies below the HSR*[32] *threshold, or the amount that is subject to FTC notification requirements and a waiting period"*[33]

Criticism has also been made of those mergers within the thresholds and subject to authority control because of the narrow interpretation of the legal test that has been applied, focussed mainly on consumer welfare. Over the past 20 years the defendants of mergers have been able to promote and obtain clearances for deals where they can show efficiency benefits in the merger and post-merger competition being likely to deliver benefit to consumers.[34]

A 'consumer welfare' standard is embraced by the US authorities and is also prevalent in UK and EU merger control. The approach to consumer welfare in the assessment of whether the transaction substantially lessens competition or not, may have led to a focus on short term benefits to consumers. This is not reprehensible in itself. However, it could feed the authorities' increasing predilection toward detailed consideration of the modelling of company data from the merging parties, with perhaps less attention paid to the ecosystems and market structure that the mergers inhabit. Legally, in the UK and Europe the test is not confined to consumer welfare,[35] and a change in approach could allow the authorities to take into account other factors, such as the effects of the transaction on customer choice and innovation.

Under EU law, the EU Treaty provisions have varied over time as the different EU Treaties have evolved. The EU courts have been called on to interpret the goals of competition law in many cases. One leading recent case in the EU's Court of Justice suggests that these are broader than pure consumer welfare when its stated:

> *"The function of those rules is precisely to prevent competition from being distorted to the detriment of* **the public interest, individual undertakings** *and* **consumers***, thereby ensuring the well-being of the European Union."*[36]

That case involved an abuse of dominance not a merger, but the systems should be consistent if similar abuse is not to be engineered through merger. The UK Government's formulation in its proposed Strategic Steer is different, and potentially narrower. Only time will tell whether this is intended, and if it will become the basis for its final position and policy direction.

21 In the EU and the US, horizontal mergers above the relevant notification thresholds are subject to the highest scrutiny by the authorities. Those mergers have been examined and tested against the question of whether they substantially lessen competition or enhance dominance or tend to monopolise markets.

22 See the leading example of Facebook's acquisition of WhatsApp

23 The Street/CB insights. ResPublica Research

24 Crunchbase inc., 2017, https://www.crunchbase.com/search/acquisitions/field/organizations/num_acquisitions/google

25 Crunchbase inc., 2017, https://www.crunchbase.com/organization/facebook/acquisitions/acquisitions_list

26 WhatsApp may have become that meaningful alternative but was bought by Facebook. Jason Furman has also observed: "One type of business model that has flourished with digitization is the "platform" model, which relies heavily on network effects to grow because the primary product is access to other customers. Examples include payment platforms like PayPal, sales platforms like eBay, and social networks like Facebook. Switching costs for customers are particularly high in these markets—no one wants to be the first and only user of a platform—and these network effects can act as a barrier to entry."

27 Giulio Federico, Gregor Langus and Tommaso M. Valetti, February 2018, 'Horizontal Mergers and Product Innovation', *SSRN*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2999178

28 By Scott Clelland at Precursor Inc, presumably with reference to Zeus's wife Hera's attempt on Hercules life by introducing snakes into his crib.

29 Timothy B. Lee, 'The end of the internet startup' Vox, https://www.vox.com/new-money/2017/7/11/15929014/end-of-the-internet-startup

30 Tim Wu, 2016, *The Attention Merchants: The Epic Scrabble to Get Inside Our Heads,* (Atlantic Books: London).

31 For example, *Business Insider* estimates that Google has acquired on average almost one company a month since 2001 (see: http://www.businessinsider.com/important-google-acquisitions-2014-8?IR=T). If we look back only to January 2014, Google has acquired 70 companies (according to Wikipedia) in those 29 months, averaging at over two companies a month.

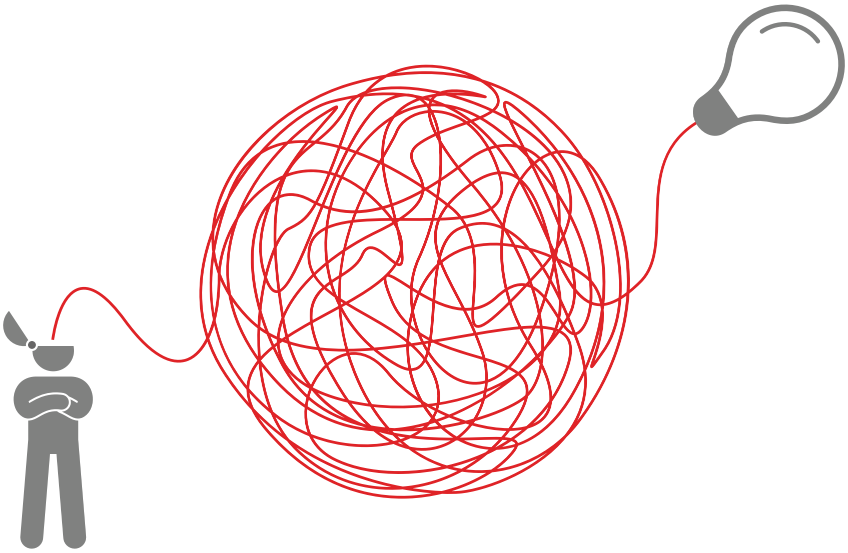
32 HSR is the Hart Scott Rodino Act - the US legislation setting out merger control thresholds.

33 Alexia Tsotsis, 2011, 'Eric Schmidt on Google's Acquisition Strategy', *Tech Crunch*, https://techcrunch.com/2011/07/13/eric-schmidt-on-googles-acquisition-strategy/

34 See in particular the criticisms of Harry First and Spencer Weber Waller, 2013, 'Antitrust's Democracy Deficit', *Fordham Law Review*, https://works.bepress.com/spencer_waller/46/; see also the promotion of a total welfare standard rather than a consumer welfare standard in the work of Roger Blair and Daniel Sokol, 2013, 'Welfare Standards and US and EU Antitrust Enforcement' *University of Florida Levin College of Law,* http://scholarship.law.ufl.edu/facultypub/360

35 See the recent speech by US Senator Orrin Hatch espousing consumer welfare and condemning proposals in the Democrats Better Deal which he called "Hipster Antitrust", http://www.preiskel.com/hipster-antitrust-senator-orrin-hatch-on-democrats-and-antitrust/

36 See CJEU TeliaSonera Case C52/09 17 February 2011 para 21, http://curia.europa.eu/juris/liste.jsf?language=en&num=C-52/09



Methodology Failures: Authorities' Difficulty in Identifying Innovation

Merger control, and indeed all full assessments of competition, require the authorities to look forward and understand the dynamic of competition in a relevant market. Alternative sources of direct competitive substitutes arise from new technology, and auxiliary ways of meeting similar demands. Market players will understand the market and the new products which meet demand (or which companies are rapidly expanding and becoming a competitive threat), far more quickly than the authorities. This is because firms in markets monitor competitive activity and take special care. Authorities can't hope to do the same but could do better. At present the information gathering in the authorities is backward looking, static and based on historic statistics and past histories. As discussed above, failure to follow, measure, and monitor outcomes and market structure is a central problem.

The task of measuring competition is undeniably complicated. In digital markets, it is especially difficult. Usually, economists use prices as indicators of the level of competition. In technology markets, where one side of the market is provided free of charge, the usual tools do not apply easily.[37] Businesses on the internet are often complementary, so companies may subsidise one side of the market by profiting from the other side of the market. For example, social media sites often offer free services to users and charge for advertisements. However, the lack of high prices for consumers does not mean that consumer harm or other wider risks do not occur, as was noted by one eminent US economist:

> *"The large companies that dominate search and social networking may be able to acquire inefficient power in ads or control people's access to news. Another concern is that instead of raising prices or reducing quantity, these companies may reduce innovation."*[38]

System failure also includes the failure to appreciate the importance of innovation and market structure that certain types of mergers "crowd out the horizon" and limit access to customers. Changing the approach would involve authorities gathering more and different evidence of the effect of such transactions on innovation, and the innovation enhancing properties of dispersed market structures and sources of innovation.[39] The current data driven focus is based on historic information and may constrain a wider consideration of market structure and its relationship to innovation.[40]

37 This is recognised in the Just Eat/Hungry House CMA decision in Case ME/6659-16 of November 2017, https://www.gov.uk/cma-cases/just-eat-hungryhouse-merger-inquiry

38 Jason Furman, September 2016, 'Beyond Antitrust: The Role of Competition Policy in Promoting Inclusive Growth, *Council of Economic Advisers Searle Center Conference on Antitrust Economics and Competition Policy* (Chicago, IL).

39 See for example very detailed upward pricing pressure analysis in EU mobile telecommunications mergers.

40 F.M. Scherer, 2018, Industrial Economy, Digital Economy and Innovation and Philip Aghion et.al, 2016, 'Innovation and Top Income Inequality', https://scholar.harvard.edu/files/aghion/files/innovation_and_top_income_inequality.pdf

Methodology failures: Is digitisation affecting markets? Are two-sided advertising funded markets creating a confusing place for competition assessment?

Voices have been raised for some time about monopolies existing in places where the law cannot find them. John Naughton writing in The Guardian suggested that competition law analysis of markets "lacks common sense".[41] Perhaps there is something wrong with the system and tools used for analysis?[42] Andreas Mundt, President at the German competition authority appears to agree that the system doesn't work well in technology markets and needs to be reformed.[43]

History as a guide?

Confusion could be arising, in part, because current antitrust law takes current consumer choices (in terms of products and services) as a starting point. It then looks at substitution in terms of product characteristics and examines substitution through the lens of those characteristics and prices, gathering evidence and information on them and the geographic areas in which the relevant products and services are supplied. Enormous amounts of historic activity and evidence are gathered, whether in merger cases or cases concerning the abuse of dominance or cartels.[44]

Digitisation

For those used to looking at offline goods markets such as beans or potatoes, cars or cameras, the online world can be a confusing place in part because of a process of supply side substitutability popularly known as 'Digitisation'. Take, for example, telephone answering machines. They existed at a time when there was a market for physical tape players attached to fixed telephones. All the components in the box that recorded, or 'taped' messages from telephones were manufactured and there was an aftermarket for spare tapes, heads and head cleaning equipment. The physical product of the tape recorder was in a market that was disrupted by supply side alternatives: the recording service can now be digitised and provided by software on a chip in a network or handheld device. CDs and CD systems are another example of digitisation, where CDs and CD systems have become out dated - with multiple types of player integrated within smartphones and all types of different end user device and tracks now stored on servers in "the cloud" or hard drives of one sort or another. These are examples of physical goods currently existing in markets, alongside many others, which are in the process of being "digitised". Substitution from the digital services eliminates the demand for products in physical goods markets.

"Digitisation" is then the process through which markets for goods and services are substituted by computer code, so messages and music, and many other products and services, can be accessed online. The code can exist in a microchip or software that can be accessed inside a mobile device, or a computer server or provided centrally in the telecoms network, or embedded as service at low cost from a cloud computing service provider on servers anywhere worldwide. Products can be contained or controlled by online gatekeepers in what is confusingly described as "a platform" or communication system of one type or another.[45]

Market structure and supply side substitution

The key issue for authorities facing the challenge of market assessment in a competition case is that demand side analysis is important and tells us what customers are looking for, but that currently supplied products which meet that demand cannot be the end of the enquiry. The investigation of substitution has to be given equal, if not more, prominence to forward-looking supply side alternatives that would or could meet the same need. Supply side factors and the analysis of potential competition require a different starting point, and a different enquiry would mean different evidence being gathered at a much earlier point. It is also critical to look closely at supply side factors on the other side of the platform where merchants are shopping around among a number of different alternatives, understanding that the true customer driving supplier decisions is the merchant or its advertiser.[46]

Use of existing tools in new ways? Economies of scope.

It also needs to be recognised that online markets often have different economic characteristics from goods and services markets in other industrial sectors. It is often argued that the tools available to the authorities do not need to be changed. That is as may be, but they will need to be used differently. For example, online markets may have a tendency towards monopoly or oligopoly because of enormous economies of scale and scope. High scalability of online businesses, accessing worldwide demand from software and services-based systems which don't require much, if any, additional investment to meet that demand is one well known feature. Economies of scope[47] are not often referred to and may be prevalent in online markets or platform businesses. These are efficiencies formed by variety not volume. Economies of scope involve lowering average cost by producing more types of products. Network industries are characterised by what technical economists call cost subadditivity, which means that it is cheaper to produce A and B together rather than separately; this means that economies of scope allow increasing ranges of goods. See Image 2 below.

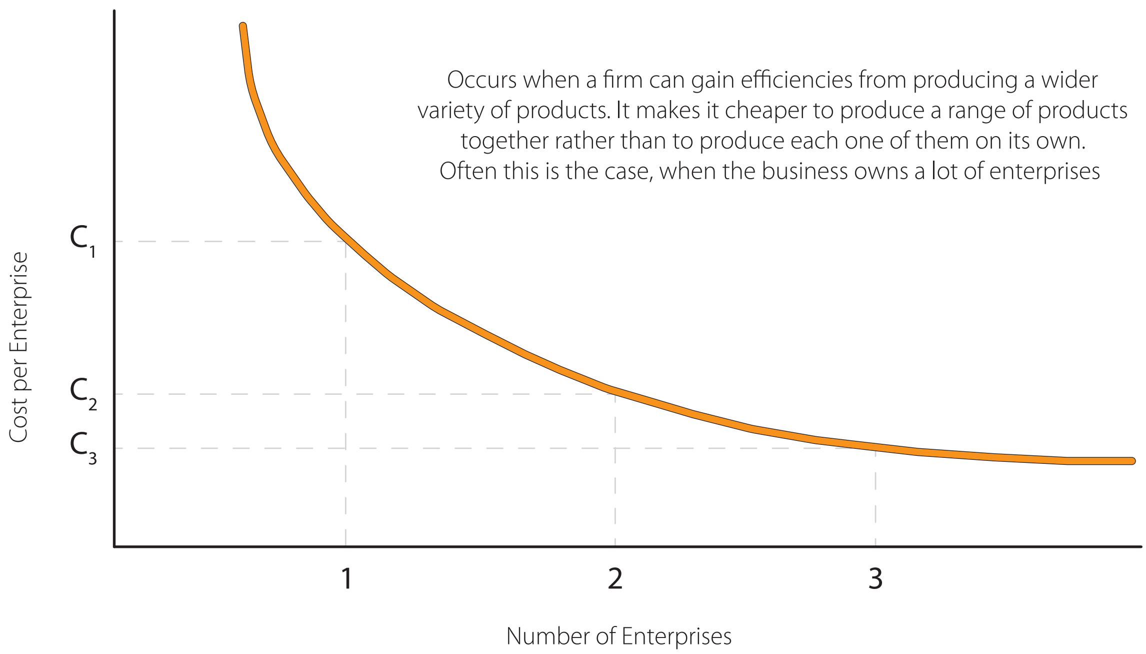
Accumulate knowledge and measurement and monitoring of market outcomes

For those conducting competition analysis there is an increased need to accumulate knowledge about markets and their operation over time which involves monitoring the supply side, since substitutes for existing products meeting existing demands may come from left field and be produced more efficiently by online suppliers adding to their range of existing products.

One key point also arises when looking at industrial strategy and competition: market structure matters. Small businesses should be the innovative heart of the economy and the growth and productivity generator - this isn't addressed in the Government's Green Paper and should not be forgotten, given recognition of the idea of aligning competition policy with industrial strategy.

Particular issues also arise when looking at advertising and online markets funded by advertising. Economic theory suggests that the internet should increase transparency and provide opportunity for worldwide scale for smaller players to compete on their merits. The reality, as found in the CMA research,[48] and the EU Commission's Decision concerning Google's abuse of its dominance, is that consumers' searches online can be complex but that consumers seem to compare fewer options than might be expected. They focus mostly on results at the top of the search results – even more so on mobile. Meanwhile we know that Google is dominant in online search and distorts the results shown on the Google results pages, *positioning and displaying* its own products at the top of the page.[49] This self-preference through positioning and display is then identified by the Commission in its detailed decision on search as a practice that affects many other products offered by Google - potentially leading to many more markets being distorted.[50] See Image 3 below.

Image 2: Economies of Scope



Bias against entry

Where search and communication are ad-funded, and the basis of search is set up on the basis of the historical popularity of products investigated on the web by billions of users over time, there is an inevitable bias built into the system against the new (see e.g. the Page Rank algorithm that works on this basis driving for Google Search). Where popularity is based on history and historic patterns of search, there is a surprising conservatism built in – the potential for new entry and innovation in meeting demand in truly new ways can then suffer. Add to that the ability of the main platforms to use search histories to track user behaviour and advertise based on the most money paid to know a user's needs, and we find differentiated product offerings abound. If a search history reveals previous business class use, a user could pay more for an airline ticket than someone who has always taken budget airlines, for example. We may actually have a limited type of "curated competition" taking place, and a great illusion that people are able to look in the great online Aladdin's cave of treasures for everything available online everywhere; but what a user sees is limited by the technical prowess of the gatekeeper.

Typical economics of internet companies: risks of competition for the market

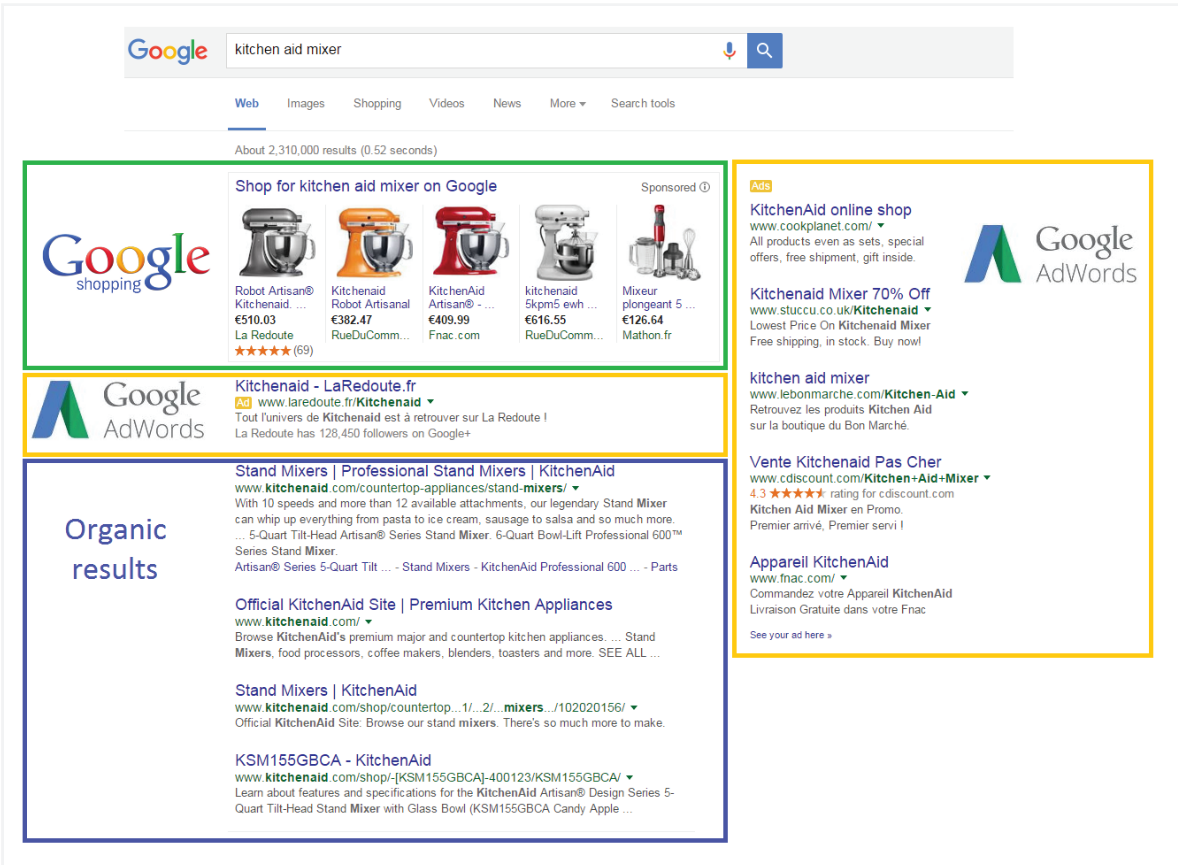
Online businesses may also benefit from network externalities available from producing software-based products and services at low incremental cost to meet potentially worldwide demand, for which each additional user obtains the benefit of being served by the same system. Left alone, markets may rapidly become dominated because competition can be 'for the market'. Barriers to entry can become enormous very quickly, before anyone else can enter at equivalent scale or reach equivalent numbers of customers at similarly low costs. Swift intervention may be needed to prevent dominance from occurring.[51] All would suggest a need for closer scrutiny of those sectors with these economic characteristics: close scrutiny of tech/telecoms sector deals may thus be needed.

The importance of innovation and market structure

The current approach of the authorities typically, and not unreasonably, starts with the products that are the subject of the enquiry. Existing products meet current demand, and supply some useful information about the nature of demand and supply, but not enough information about actual and potential alternatives and market structure. The enquiry does encompass effects on innovation, but such effects can be hard to assess, because of the inherent uncertainty associated with R&D, because of the difficulty of evaluating an organisation's innovation capabilities, and because these effects are often more distant and in the future. However, they can be very important, due to the critical role of innovation in generating long-term consumer benefits.[52] In practice, investigations look into demand and supply, but may be ignoring vital information about

Image 3: Google Shopping Dominance

Google abused its dominance as a search engine to give an illegal advantage to 'Google Shopping'



Source: EU Comission

alternative disruptors or alternative sources of supply. Digitisation makes the enquiry doubly challenging for authorities, as does the fact that they are set up to investigate each matter from scratch. This may lead to misunderstandings of the market and failure to appreciate the true nature and conditions of competition that is taking place or will be likely to take place post-merger.

We refer below to the work of Phillipe Aghion on innovation and suggest that it provides a direction in which further investigation of evidence of innovation, in markets by competition authorities, can be undertaken in particular cases.

Issues arising in advertising funded markets - where customers are merchants and advertisers and users become assets

Here we raise certain issues in advertising funded markets after a brief outline of the basic assumptions of the standard economic model of competitive markets. The starting point is that the current system accepts that competitive market forces drive consumer benefits. This is based on a lot of assumptions. To achieve beneficial outcomes the system needs to be safeguarded in the public interest. Analysis by the guardians of the system, the competition authorities, starts with the consumer, with an in-built assumption that consumer choices drive suppliers to differentiate their offerings to more readily make a sale. This does happen in some markets, those where there are a lot of suppliers and a lot of customers and the products are readily substitutable. It also assumes that the consumer is paying and that competitors compete with each other to meet consumer led demand. It further assumes that the consumer has a degree of bargaining power. Add to that a competitive dynamic over time and we would expect to see increased innovation leading to product differentiation supporting different consumer needs and wants - a system designed and built around the consumer and fulfilling their every wish and desire. Suppliers fulfil the almost noble pursuit of virtue in meeting their customers' needs. In short, it is a model whereby consumers are sovereign and make decisions that determine the operation of supply.

Investment and capital is then in theory attracted to meet socially productive purposes - as competitive markets are driven by the consumer demands. Demand drives supply not vice versa. However, we know that market forces can be distorted. Anticompetitive activities can arise and need to be addressed - suppliers may build a position of market power and abuse that position in multiple ways either individually or collectively (e.g. via cartels) at the expense of consumers. Enforcement of a competitive market economy is needed to ensure that competition is driving socially beneficial outcomes.

Advertising is the source of finance for many online markets today. Advertising can be procompetitive and beneficial where it promotes product differences and increases transparency, allowing comparisons to be made by consumers and enhancing consumer choice. Consumer protection laws have been passed to prevent misleading advertising in many jurisdictions ensuring that truth is told and not varnished. However, even with such protections operating well, advertising may also give rise to imperfect competition through 'perceived' differentiation in product characteristics. Some downsides include consumers being sold a set of attributes that, for example, encourage them to become emotionally attached to brands, or mislead or encouraged into not making rational decisions.[53] Evidence has emerged from online gambling investigations that companies are using advanced knowledge of human psychology to create attention and this may be creating unhealthy dependency.[54] In many ways suppliers can obtain price premium and increased profit - in economic terms - a loss of consumer welfare from successful advertising. It can, however, be difficult to distinguish beneficial product differentiation from consumer harming exploitation.[55]

Where there are increasing economies of scale (high fixed costs and low variable costs), network externalities, and global access to people (as happens with many internet businesses), together with high first mover advantages and barriers to entry, then a position of enduring market power can arise. This has probably happened to the benefit of social media market leader, Facebook. Once market power happens in ad-funded markets the consumer, who only exerts weak demand over the supplier's incentives as it does not pay the supplier directly, has an even weaker position in the system - markets are not being driven by consumer demands and welfare can be reduced. If the market power of an ad funded supplier is big enough, the user can become an asset of the firm with market power. The firm with market power can also be expected to exploit its market power. An example of users' exploitation would be Facebook's user terms where the one-sided terms are set without reference to user needs and instead to Facebook's needs.

Strip mining user data

Facebook's value depends on obtaining data from users, so it can be expected to exploit that position - it will have every incentive to strip mine data from users for use in advertising. Compliance with data protection becomes an impediment to profit; non-compliance becomes increasingly profitable. When Facebook bought WhatsApp, it bought a player who was trading on the basis of subscription. To be fair, the subscription was low. It involved offering the WhatsApp service for £1 or $1 or €1. It was the point where the consumer driven economy collided with the advertising driven economy. The argument is that exploitation of data would lead to WhatsApp users' data being mined by Facebook. Facebook gave undertakings to the Commission that would not happen. However, after the transaction was cleared it has happened, and the Commission has found non-compliance and fined Facebook €110 million for misleading it.[56]

Data sovereignty

Data sovereignty would help to restore the competitive dynamic and put the user back in control of the market. Data sovereignty would have to involve users having the clear right to their own personal data clearly established in law. At present this is unclear.[57] Data protection provides some control. But a clear right of ownership would enable each user to trade their data with suppliers or with intermediaries looking after their interests and redressing their lack of bargaining power. Some people would sell for very little - some would not. Overall greater power would be placed back in the hands of individuals and they could make choices, and those choices would now be better informed by greater knowledge of the truth about the uses of consumer data.[58] The idea of data sovereignty would enable online markets to function better - customers would be paid and we do see examples of customers valuing their data; WhatsApp's business model was to promise greater data security than others and was very successful before it was bought. Advertising markets do not have to be the norm. However, the problem of Facebook's market power isn't solved by data sovereignty alone. Facebook, and firms like it, still impose typical exploitative monopoly or abusive terms on customers and others, whilst calling for further antitrust enforcement (for example with the objective and outcome of imposing terms benchmarked against competitive markets).

Part of the problem caused by market power where the supplier has much greater bargaining power than the consumer is addressed through consumer protection laws. Many countries also tackle such terms and conditions in consumer contracts - see for example the CMA's latest enforcement action against online gambling companies.[59] Such enforcement would still need to ensure that it would reflect choices exercised by consumers in competitive markets, and it would need to aim to further restore the balance that would arise from competitive market forces working beneficially. This would remedy the inequality of bargaining power.[60]

41 John Naughton, June 2017, 'Tech giants face no contest when it comes to competition law, The Guardian, https://www.theguardian.com/commentisfree/2017/jun/25/tech-giants-no-contest-on-competition-law-amazon-whole-foods?CMP=share_btn_link

42 The BEIS Green Paper referred to above on Modernising Consumer Markets raises this issue at 109 where it states that "Whilst the CMA's tools are very flexible, platforms operating in digital markets pose challenges to the established techniques for assessing competition in markets.

43 See, for example, Andreas Mundt's comments in this interview, https://www.competitionpolicyinternational.com/wp-content/uploads/2016/07/AC_july-2016.pdf

44 See for example that the Commission gathered 5.2 terabytes of search results in the Google case, and more routinely the quantities of documents gathered in merger and cartel cases.

45 Nicholas Carr, 2009, *The Big Switch: Rewriting the World from "Edison" to "Google"*, (W.W.Norton & Company: New York and London).

46 This is understood by the EU Commission in its Google Search (Shopping) decision in *CASE AT.39740*. The CMA's approach to two-sided markets recognises this in its Just Eat/Hungry House merger, https://www.gov.uk/cma-cases/just-eat-hungryhouse-merger-inquiry

47 John C. Panzar and Robert D. Willig, May 1981, "Economies of Scope", *American Economic Review*, 71 (2): 268–272, https://www.jstor.org/stable/1815729?seq=1#page_scan_tab_contents

48 Competition & Markets Authority, 2017, 'Online search: consumer and firm behaviour - A review of existing literature', https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/607077/online-search-literature-review-7-april-2017.pdf

49 See EU Commission Decision in the December 2017 Google Search (Shopping) CASE AT.39740, http://ec.europa.eu/competition/antitrust/cases/dec_docs/39740/39740_14996_3.pdf

50 Ibid., see para 24.

51 The Intel, Microsoft and Google cases have all taken about 10 years. There are also many examples in economic literature and antitrust case law where returns to scale can accrue to firms that can provide broader ranges of services off common cost technology platforms, meeting the needs of different categories of customer on different sides of the markets in as many ways as possible, where all contributions are contributions to the common platform. Additional users may benefit from the network effect of joining the biggest and most widespread network; all driving lower cost output per product and additional benefits to existing and new members, making bigger networks inevitably more attractive to customers. See for example the work of Katz and Shapiro, 1994, "Systems Competition and Network Effects", *The Journal of Economic Perspectives*, vol.8. no.2, pp.93-115, http://www.jstor.org/stable/2138538; and the work of Jean Tirole and Patrick Ray at the Toulouse school who have often led the thinking in this area.

52 See for example Carl Shapiro's seminal explanation of changes to US merger guidelines that have progressed over time in the following http://faculty.haas.berkeley.edu/shapiro/hedgehog.pdf, unfortunately the world's antitrust authorities have adopted similar if not identical approaches to mergers that do not adequately deal with digitisation and its consequences. The most recent guidelines place an increased emphasis on innovation, but perhaps too much emphasis is placed on detailed data gathering of historic price and product information in an attempt to accurately model the future.

53 For example, see the work of EH Chamberlain which suggested that differentiation may in some circumstances be welfare reducing.

54 Mattha Busby, 'Social media copies gambling methods to create psychological cravings', *The Guardian,* https://www.theguardian.com/technology/2018/may/08/social-media-copies-gambling-methods-to-create-psychological-cravings

55 Tim Wu, 2016, *The Attention Merchants: The Epic Scrabble to Get Inside Our Head*, (Atlantic Books: London).

56 European Commission, 2017, http://europa.eu/rapid/press-release_IP-17-1369_en.htm

57 See EU commissioned study, Jan 2017, 'Lack of clear rule for data treatment', *Osborne Clarke*, http://www.osborneclarke.com/news/osborne-clarke-erstellt-studie-fur-die-eu-kommission-klare-regeln-fur-die-nutzung-von-daten-fehlen/

58 Particularly since the Cambridge Analytica scandal.

59 Competition and Markets Authority, February 2018, 'Gambling sector told to raise its game after CMA action', https://www.gov.uk/government/news/gambling-sector-told-to-raise-its-game-after-cma-action

60 The CMA's recent enquiry into online gambling is an example of investigation and enforcement under consumer protection laws- but is itself problematic given the limited enforcement powers available to the CMA. See https://www.gov.uk/government/speeches/online-gambling-the-investigation-so-far-and-next-steps

Sub-optimal and Optimal Outcomes

There is nothing inevitable about technology markets being competitive. Left alone they could be dominated. This may arise as a result of certain features of the economic fundamentals that operate in such markets, which drive returns to scale. This may also occur because bigger firms can provide broader ranges of services for common cost technology platforms, meeting the needs of different categories of customer on different sides of the market. Additional users may benefit from the network effect of joining the biggest and most widespread network. Smaller rivals with better ideas, and products more suitable for meeting consumer needs on their merits, may simply not make it in competition with established firms. If this happens, innovation dies on the vine.

Technology markets may also lead to the early winners taking the whole market, and to players becoming entrenched through the swift establishment of scale - excluding other players and leading to a market structure that inhibits innovation. Access to worldwide demand and low costs of production may allow organisations to grow very swiftly and they can become embedded through network effects, entrenching their position. This may be achieved through the acquisition of smaller and innovative firms or, under commercial agreements, through technology transfers. These agreements may also be restrictive of competition and foreclose entry. A combination of mergers and restrictive commercial agreements can contribute to the further entrenchment and concentration of the market. Problematically, a combination of system blindness to innovation mergers and the existing relaxed rules and de-prioritisation of enforcement on vertical agreements, may have now significantly (if not permanently) altered the structure of markets - to the benefit of increasingly entrenched players. This limits the horizon of opportunity for smaller businesses.

Following the Commission's decision to abandon its control over notifications in 2004, restrictions in vertical agreements have been de-prioritised. The vertical agreement block exemption only applies based on percentage of relevant market.[61] The threshold is based on a market that cannot easily be defined. This can be seen as yet another 'loophole', given market definition problems. The Commission's review of online markets in 2015, alongside CMA studies,[62] show restrictive vertical agreements are now widespread. A failure of enforcement may thus have reinforced concentration, operating as it has, in parallel with limited scrutiny through merger control.

61 See VABER, April 2010, EU COMMISSION REGULATION (EU) No 330/2010, http://www.euchinacomp.org/attachments/article/523/02%20-%20SAIC%20-%20Session%201_KRAMLER_EN.pdf

62 See Oxera study for CMA into online market practices. Oxera Consulting LLP, 2016, 'Vertical restraints; New evidence from a business survey' http://www.mlex.com/Attachments/2016-03-30_39Y6LY4QX5WQS2Y8/Final_report_on_vertical_restraints_240316.pdf

Examples of Assessment Failures

EXAMPLE 1: ANTI-COMPETITIVE HORIZONTAL MERGER - FACEBOOK/WHATSAPP

In February 2014, Facebook bought the messaging app WhatsApp for $19bn, without opposition from the EU Commission. The merger testifies to the need for the competition system to advance competition on the merits of products and services. Innovation and consumer choice should be promoted, rather than theoretical efficiency or incentivising businesses to exploit legal loopholes. This case was not initially notified to the EU Commission, but third-party complaints successfully persuaded three national competition authorities to refer the case for a full EU investigation. It is an example of the practice of internet companies targeting acquisitions beneath the relevant turnover thresholds to avoid scrutiny. There are consequent risks to competition from such transactions in both horizontal and vertical mergers.

The case is also a clear example of increasing consolidation in the sector, with direct horizontal overlaps between social media services provided by Facebook, with competing communications provided by WhatsApp. Direct horizontal overlap is disclosed in the Commission's decision where it indicates that in the period between December 2013 and April 2014, between [20-30]% and [50-60]% of WhatsApp users already used Facebook Messenger. Between [70-80]% and [80-90]% of WhatsApp users were Facebook users and were therefore already within the reach of Facebook Messenger. Conversely, over the same period 60% to 70% of Facebook Messenger active users already used WhatsApp.[63] Users saw material differences in the different types of offering, in particular because while WhatsApp groups could provide equivalent functionality to Facebook in contacting groups of people, WhatsApp assured users of privacy in their communications.

The Commission decision clearing the merger ignored the complaints of third parties about overlapping data having considerable value when targeting customers for advertising. While the Commission has revisited the fact that Facebook misled it over the ease of integration of databases, and has fined Facebook for misleading information, depressingly it has done nothing about the substantive issue. The transaction involved a clear reduction in competition and increase in horizontal concentration, through a major platform targeting a smaller, fast growing competitor and enhancing its dominance – shoring up its market position and eliminating innovation.

EXAMPLE 2: ANTI-COMPETITIVE VERTICAL MERGER - GOOGLE/BEAT THAT QUOTE

Another example is the Google purchase of Beat that Quote. In this case, Google acquired the small online insurance provider back in 2011. Immediately following the acquisition, Google promoted Beat that Quote into its search rankings ahead of more relevant rivals. Given past experience, this outcome was likely and was the subject of third party complaints. The Office of Fair Trading (the CMA's predecessor), in allowing the transaction to proceed, suggested that it would be economically non-feasible for Google to self-promote because promotion of Google's newly acquired own products would forego revenue from the products of others.[64] The economics looked compelling: Google could demonstrate that as a matter of consumer welfare it would be in its own interest to promote all and sundry rather than privilege its own products, at least in the short term. The deal was allowed to proceed. Google almost immediately promoted its new product in search results to the detriment of rivals.[65] The practice of self-promotion and prominent positioning and display is the subject of the Commission's recent €2.42bn fine on Google. Once again, UK authorities bought their own theoretical analysis rather than investigating real-world innovation effects.

What could be measured in the merger control process was revenue from others and the likely losses if Google took the risk of promoting its own products into the rankings ahead of others following its acquisition. What couldn't easily be measured were post-merger incomes, likely effects on innovation and strategic foreclosure in the interest of Google's platform more generally.[66] Yet, the former effects are given more weight purely because they are easier to measure.

Google has been fined the highest ever amount for its abuse of dominance, through which it promoted its own products into its own search engine results and excluded its rivals. Complaints concerning that practice and its anti-competitive potential were well known to the authorities when Beat that Quote and other mergers were taking place, but the merger was nonetheless allowed to proceed.

EXAMPLE 3: ANTI-COMPETITIVE VERTICAL MERGER - AMAZON/WHOLE FOODS

Vertical restraints and vertical mergers may have efficiency enhancing benefits, but they may also foreclose rivals. Take, for example, Amazon's recent successful bid for Whole Foods.[67] Amazon has been investigated by the authorities for its activities as an online bookseller.[68] Amazon began by selling books, but today has built a technology platform, and logistics and delivery system that are capable of delivering anything from groceries to golf balls. When it announced the acquisition, costing $13.7 billion, Amazon's own shares rose by $11bn. Competitors such as Walmart, competing with Whole Foods in US food retailing, saw their shares drop.

If, for example, the deal delivers synergies and Amazon uses them to deliver lower prices and faster delivery of food, perhaps combining free film on Amazon Prime with free pizza from Whole Foods, then it could be seen to be more efficient and consumers will have better products and lower prices - and competition is enhanced.

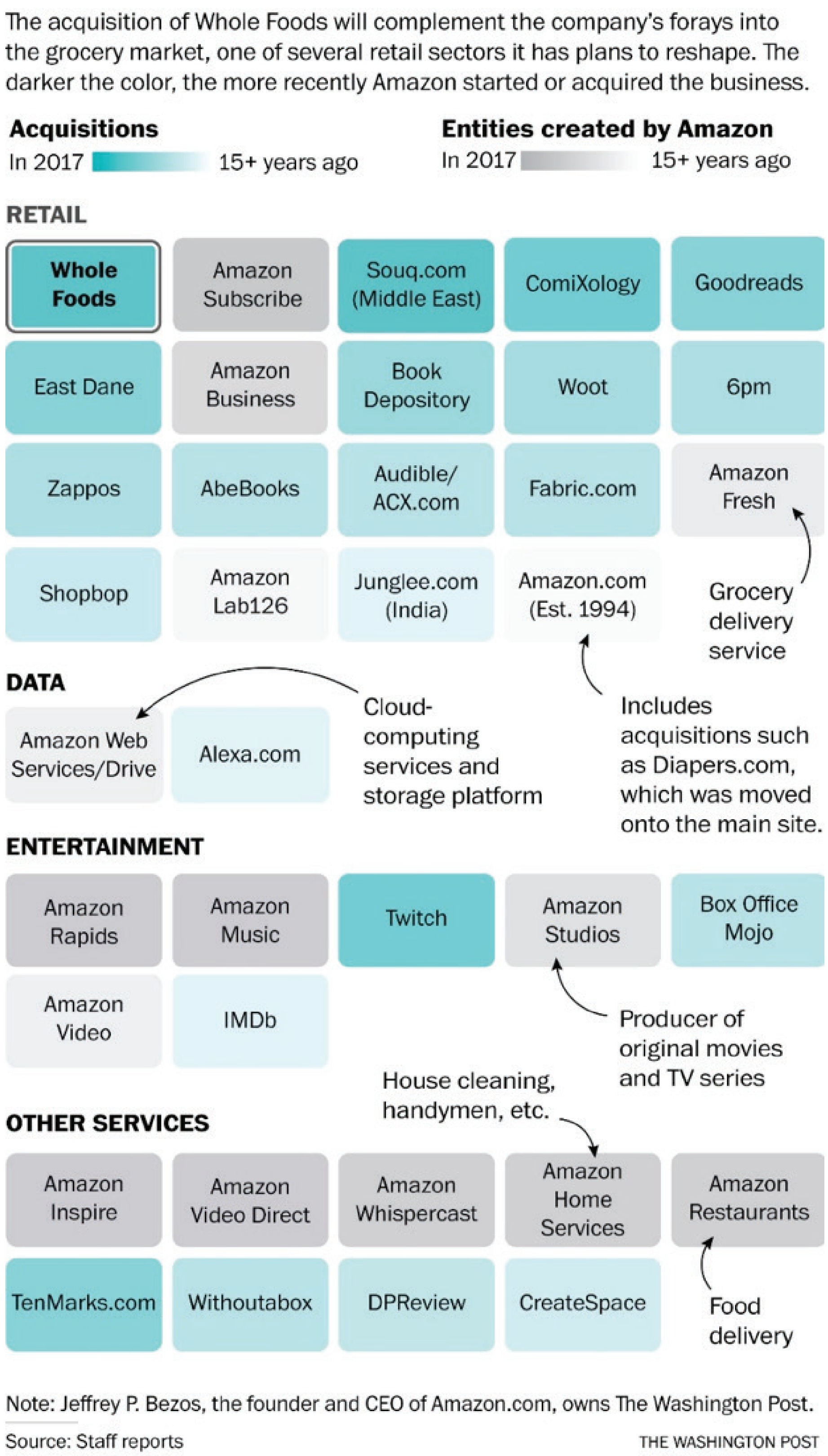
What is it that the financial markets think could happen? Maybe Amazon will sell its Whole Foods products over its brilliant delivery system and promote them against those of Walmart? Will Walmart be able to respond? Does a combination of alternative businesses exist to provide pressure on the new Amazon? Finally, do the authorities have a framework that can account for this?

As anticipated, the transaction was considered under the traditional analysis as a merger between two players in different markets. Books and golf balls and food are not substitutes. So, it was held that no direct horizontal competition would be reduced between Amazon and Whole Foods. Instead, the authorities should have looked at whether competitors such as Walmart would have alternative technology platforms that they could combine with, so that the post-merger firm would face genuine competitive pressure and meet any structural threat from the new and combined Amazon foods business.

On a traditional analysis the transaction could be argued to be in the "consumer interest" if alternative tech/food businesses can be created to compete with the merged firm, or if post-merger alternatives are many and varied. This is why the authorities found it to be unproblematic, as they see vertical integration to be the provider of efficiencies that may be passed on to consumers. In Amazon's defence, if it can do this so can others, and it would be more efficient for alternative vertically integrated platforms to provide their products and services over fast and efficient technology platforms. To put it simply, another grocer could merge with another technology platform.[69]

The clear difficulty with the current approach is that it can be taken only so far before vertical integration between the technology platform and the retail outlet stifles competition in the downstream market, raises barriers to entry for non-integrated rivals and leads to a world dominated by a so called "efficient oligopoly".

Image 4: Amazon's Basket of Companies



Source: The Washington Post

The effects on alternative players and the innovation process do not often receive the same degree of attention as the issues for consumers directly arising from the transaction. Deals may raise major issues in data markets and markets where the accumulation of data on individual household or customer buying patterns are concerned. This concern is particularly relevant where a full range of services across many markets is offered to meet the increasing needs of consumers, for example purchasing over Amazon's systems, watching Amazon-supplied films and eating food from Amazon, and suppliers using Amazon's delivery systems.

The structural issue for smaller players supplying customers using Amazon or competing with either party may be very significant.[70] Combinations of user data may be removed from view and unavailable to current suppliers and advertisers, depriving market players of significant sources of data and insight into demand. Innovation in many markets may suffer. Such is the peril of vertical integration, which involves the combination of a consumer staple such as food with a powerful provider of a general-purpose technology in a data driven age.

When considering such issues, the evaluation of convenience and benefit to users of the post- merger firm's products by comparison with others will be difficult to assess. Room exists for many to do what Amazon could do, and it would be a brave official that blocks such a deal based over concern that a market dominator might be better, faster, and more effective in meeting customer needs. But the point remains that there are un-investigated portfolio, joint and common cost effects. Some platforms are so dominant that it is an open question as to whether a competitive market structure exists or can exist in future.

Our view is that even if the transaction delivers efficiencies, the modelling of consumer welfare benefits and post-merger prices will be difficult and the loss of third party innovation will be difficult to measure and assess. However, the reaction of financial markets indicates that they expect Amazon's record of flawless execution to do very well post-merger, and its rivals will fare badly.

63 See para 140, Case No COMP/M.7217 - FACEBOOK/ WHATSAPP Article 6(1)(b) NON-OPPOSITION Date: 03/10/2014, http://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf

64 The OFT concluded that "*the evidence did not suggest that the merger added to any incentive that Google may have had to foreclose rival consumer finance PSCs on the basis that it would be foregoing greater upstream profits on lost advertising than it would be gaining on extra PCS sales downstream*". See full decision here: https://assets.publishing.service.gov.uk/media/555de311ed915d7ae200005f/Google-BeatThatQuote.pdf

65 See Initiative for a Competitive Online Marketplace, 'Google further expands in vertical search', http://i-comp.org/blog/2011/google-further-expands-in-vertical-search/

66 See, for another example, 21st Century Fox announced acquisition of Sky. The deal looks to be one where 21st Century Fox, which makes films, a high-risk product, may be seeking to promote its own products on the Sky digital distribution platform, to secure revenues and make its investments pay off more quickly. The Commission recently cleared the deal on a similar basis to the OFT assessment in Google/Beat that Quote.

67 Nick Turner, Selina Wang and Spencer Soper, 2017, 'Amazon to Acquire Whole Foods for $13.7 Billion', *Blomberg*, https://www.bloomberg.com/news/articles/2017-06-16/amazon-to-acquire-whole-foods-in-13-7-billion-bet-on-groceries

68 See EC case here: http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_40153

69 Since Google says that Google shopping is a competitor to Amazon, perhaps its next acquisition will be a grocer? Indeed, see Walmart and Google's latest venture: http://money.cnn.com/2017/08/23/technology/google-walmart-amazon-shopping/index.html

70 This is currently receiving the attention of the German competition authority

Abuse of Dominance: Vertical Foreclosure and Vertical Agreements in the Tech and Telecoms Sector

The record of the authorities in tackling abuse of dominance in the technology sector is, at best, patchy. Following liberalisation of telecoms in the late 1990's, the markets for the provision of communications services and infrastructure were opened up to competition. In doing so, liberalisation paved the way for the technology stack to be disaggregated, so different firms could operate in the different layers in the stack. Services such as internet access could now be provided over basic telecoms infrastructure. As a result, whole industries were created.

The incumbent telecoms operators in local markets in the EU and elsewhere had every incentive to abuse their dominance over their parts of the supply chain in local markets in the face of entry from players such as BT, AT&T, MCI, Sprint and latterly Verizon that were expanding globally. Many did so, with BT and its new entrant competitors taking action against the local incumbents, in conjunction with regulatory authorities, to keep markets open and competitive, leading to notable cases in the European Court of Justice.[71]

Alongside regulation, robust enforcement of the law by the authorities in newly liberalised markets is vital to prevent abuse of dominance through barriers to entry. Similarly, control over gatekeepers affecting the next level up or down in the technology stack is critical if players are not to dominate the entire system. At first sight, the Commission appears to have prioritised vertical access issues and enforcement, and taken cases both in the telecoms and in the tech sector, with actions against Apple for pricing of iTunes, territorial restraints in online music on iTunes, and access to the app store by developers, leading to changes in Apple's guidelines to ensure non-discriminatory access to the Apple store.[72] It also took action against Amazon for e-book pricing and IBM for maintenance bundling.[73] The same enforcement pattern can be seen in the Commission's investigation into restrictions relating to Thomson Reuters Instrument Codes ("RICs")[74] used to run financial software.

However, in truth, these are rare cases when looked at against a backdrop of the vast number of agreements entered into between different levels in online supply chains. Following the Commission's decision to abandon its control over notifications in 2004, the decentralisation of enforcement led to an inevitable non-enforcement or enforcement gap over vertical agreements. Revision to the vertical agreement block exemptions left vertical agreements as a notional 'safe harbour' based on percentage of the relevant market.[75] The threshold for dominance can be seen as yet another 'loophole', as it is notoriously difficult to define and assess market share in markets that are digitising and dynamic - a central characteristic of the tech sector.

The evidence that has emerged from the Commission review of online markets in 2015,[76] alongside market studies conducted for the CMA into common business practices,[77] shows that the anticompetitive vertical agreements are very widespread and that many industries are now riddled with such practices. The effects from such a failure of enforcement means that firms have become insulated from competition. There is a risk they have reinforced industrial concentration and constrained innovation.

The use and implementation of new technologies, and new processes, systems and know-how, is the way that advances in productivity typically occur.[78] Support for productivity-enhancing innovation and tech start-ups is given via tax breaks in the UK. Abuse of dominance through vertical agreements that foreclose competition and retard economic or technological progress is something that should therefore be condemned twice; once because it involves an abuse of market power that increases inefficiency, and second because it inevitably affects productivity and innovation, which are important public goods that need to be promoted in the wider public interest.

Instead of vigorous enforcement, since the abandonment of the notification system by the EU Commission in the early 2000's, antitrust enforcement has been decentralised and left in the hands of "self-certification". Those participating in agreements or subjected to verticals have to assess the risks themselves. This means that there is no scrutiny or threat of scrutiny or oversight of many agreements. Self-certification has not worked out well (see also its effects in financial services more generally) and could be revisited.

Restrictions of competition and accumulation of market power may happen in many ways. A successful tech, fintech, or biotech start-up may eventually exit through a sale to an existing industry player. Very few reach terminal velocity and become fully fledged vertically integrated operators or float their businesses on public markets. Alternatively, vertical integration through acquisition, technology transfer agreements, or exclusive tie ups mean that more established players may be able to benefit from new innovation through either buying the smaller firms, or capturing the benefits without having to buy out the smaller and more innovative business in full. Such agreements may simply reinforce dominance and become foreclosure agreements vis-à-vis third parties when entered into with dominant players.

When combined, the issue of perhaps defective market analysis and the commercial exploitation of the merger thresholds - taken together with a relaxed approach to vertical mergers, vertical foreclosure, and vertical agreements - may have created a cocktail of circumstances that has contributed towards more concentrated markets and poorly functioning promotion of innovation.

If the industry is concentrated, and the retail horizon is crowded out, the risk is that the fruits of innovation will then be captured by the existing firms. Over time, innovation and dynamic competition suffer.

Example of vertical foreclosure 'Google style', a confusion of activity with progress?

On the 27th June 2017, the Commission found that Google is dominant in online search, and that it has abused that dominance by promoting itself in its own rankings by comparison with other competing products. The circumstance is similar to the old case involving computer systems that were used by airlines in the 1980's to promote their own products. Both cases involve the exploitation of the limited space on a computer screen for the attention of the viewer, and the demotion of competing products out of sight, and out of mind. Today's case represents the enforcement of the law against abuse and vertical foreclosure - nothing new.[79]

The case is already well known for the size of the fine imposed. At €2.42 billion, it's one of the highest ever imposed by the Commission, and the highest ever for abuse of dominance. Perhaps those concerned about enforcement of the rules should applaud. However, the facts that are the subject matter of the case stretch back to a change in Google's strategy towards online shopping and vertical search engines in the mid 2000's. The Commission's case refers to practices in 2008, practices that have continued for approximately 10 years. The original complaints were filed in 2009.

The Commission has indicated also that there are at least two other vertical foreclosure cases against Google, if not more, in the pipeline.[80] It sees the decision as precedent setting, and the decision may eventually lead to the type of extensive remedy packages seen in other cases.[81]

Despite the size of the fine, the case currently represents the principle that abuse of dominance will benefit the abuser. This is both a financial gain and the gain of position and dominance over time, where the benefits accrued are maintained despite the efforts of the authorities. As such it represents a confusion of activity over progress. The activity is there, in the authorities doing work and taking cases, but progress would be a change in the abuser's behaviour, of which we have yet to see any evidence.

Economic incentives: fines and profits

Laws often incentivise desirable behaviour by reinforcing preferred outcomes with financial incentives. Company behaviour is thus conditioned and driven by operating within the law to meet profitable goals.

Oddly, competition law allows for damages actions to be brought against abusive dominant companies, and fines to be levied on them, but then as a matter of principle, because damages are quantified against the claimant's losses not the defendant's gains, also allows market abusers to keep the gains and profits from their wrongdoing.

The law needs to be respected to be worthy of its name, and in social terms, the signal sent by enforcement activity needs to be that breaking the law is unacceptable. The Google case is also a strong signal that breaking the law pays handsomely. To a generation of technologists and entrepreneurs brought up on the mantra much loved by Silicon Valley companies to "*Move Fast and Break Things*"[82] the law is just another obstacle and breaking it is all in a day's work.

In taking so long to reach its decisions, it is likely that the EU Commission, alongside other enforcement bodies, have reinforced bad behaviour and created a new antitrust paradox. Where it has failed to enforce the law, monopoly or oligopoly has blossomed.

Impacts on freedom of expression

Antitrust or competition law has roots in preserving democratic freedoms both in the US, UK and continental Europe. The law was originally motivated by legislators to address broad political issues and the risk to democracy of a small number of major payers controlling large sections of the economy. In both EU and US systems, concerns over the control of society by a small number of powerful industrialists, and the impacts of such concentration on freedom of expression and the press, were seen as central for the law to address.[83]

Unfortunately, in the EU at least, media plurality is considered through a bifurcated process that has probably contributed to a substantial reduction in the number and types of media outlets. Merger control at EU level, and national parallel jurisdiction, addresses the "competition issues" where the thresholds happen to be triggered. Plurality of the media is then looked at under local national rules.

But the plurality issue relates to a concern about a diverse and broad range of sources of news and editorial viewpoints being available to consumers. So, an immediate observation is that unless plurality control can override competition tests based on consumer welfare and efficiency, then having plurality control will be pointless. If merger control primarily deals with improving efficiency, then it will by necessity create scale competitors that aren't considered in the plurality rules, even though the plurality controls will be effectively undermined because the market structure will have changed.

The effects on concentration may be compounded because of a mixture of legal definitions under national broadcasting and plurality laws. These have led to a system that only applies plurality rules to part of the market, allowing other parts to operate unregulated. In particular, the EU mergers regime does not catch transactions of a value lower than the turnover thresholds for triggering consideration.

Facebook's acquisition of WhatsApp is just such an example. It could be seen as a media transaction that was not subject to scrutiny, as social media is not subject to the same plurality rules as other forms of media such as traditional broadcasting. Social media concentration can thus take place outside the scrutiny of the authorities, particularly for smaller deals. The outcome is increasing levels of concentration, which in turn may lessen both individual and collective sources of free expression.[84]

Perhaps this is the reason that Alan Rusbridge, former editor of *The Guardian* newspaper, believes Facebook sucked up nearly £20m of the newspaper's digital advertising revenue. If large players can accumulate market power over sources of income, they threaten diversity of supply and capture increasing amounts of advertising revenue from other media businesses. In such circumstances unless plurality control can override merger control, having a separate and subsequent plurality control will be truly without purpose.[85]

Despite the importance of the medium through which news and other content is communicated, whether that be through Facebook or other social media and online platforms, concentration can currently take place that affects attractiveness to advertisers. In turn, this threatens the revenue streams on which freedom of expression depends. The narrow view of the authorities, which looks at demand and products from a consumer perspective with insufficient account taken of supply side factors, means that media financing and plurality will be invisible, at least as a matter of merger control.

71 See for example European Commission vs France (on the services directive) Commission vs Germany (on ADSL pricing and national regulation of prices, TeliaSonera ECJ 2011 para 21 on the long running exclusionary practices of the incumbent.

72 European Commission, September 2010, 'Antitrust: Statement on Apple's iPhone policy changes', http://europa.eu/rapid/press-release_IP-10-1175_en.htm

73 See, for example, on the Apple store: http://europa.eu/rapid/press-release_IP-17-97_en.htm and see IBM case details here: http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39692

74 Case AT.29654 – Reuters Instrument Codes, http://ec.europa.eu/competition/antitrust/cases/dec_docs/39654/39654_2861_16.pdf

75 In both TTBER and VABER. E.g. the market share threshold is defined in Article 3 Commission Regulation (EU) No 330/2010 of 20 April 2010.

76 E-commerce enquiry alongside the Digital Single markets strategy.

77 See CMA RESPONSE TO THE PRELIMINARY REPORT OF THE E-COMMERCE SECTOR INQUIRY noting investigations of private motor insurance wide most favoured nation agreements (MFNs), Hotel on line booking MFNss, Restrictions over on line sales by Ping with relation to golf equipment, Resale price maintenance of commercial catering equipment, Resale price maintenance of bathroom fittings, Paid on line search pricing, Energy sector price comparison website negative keyword matching, concerns over price monitoring software and algorithmic collusion, Trod limited GB poster price fixing, https://www.gov.uk/government/publications/cma-responses-to-consultations-on-the-digital-single-market. Also see Oxera study for CMA into online market practices. Oxera Consulting LLP, 2016, 'Vertical restraints; New evidence from a business survey' http://www.mlex.com/Attachments/2016-03-30_39Y6LY4QX5WQS2Y8/Final_report_on_vertical_restraints_240316.pdf

78 Neelie Kroes was at one time quoted as suggesting that 50% of productivity gains came from new technology and indeed, in Article 101 terms, if an anticompetitive agreement has redeeming procompetitive technological or economic features, it may be regarded as economically progressive and benefit from the exemption criteria in article 101 (3).

79 Save perhaps for the remedies or lack thereof. By comparison airline reservation systems have been subject to the Computer Reservation System regulation since 1989. There are also strong parallels with the Commission's case against Microsoft where it bundled operating system software with window media player.

80 See Margrethe Vestager's comments here: https://twitter.com/dw_europe/status/879715619331035136

81 In order to meet the requirements of effectiveness indicated in the Ufex case C 119/97 before the Court of Justice.

82 See also Jonathan Taplin, 2017, 'Move Fast and Break Things', (Hatchette Book Group, New York) - which refers to this practice by major tech firms.

83 See for example the origins of the FTC in the US, designed to curb the power of the trust and the Ordoliberal tradition in Germany where the rules-based system is designed to address both political and economic power, contained in the ideas of a 'social market' economic model - now included in the goals of the Lisbon Treaty.

84 In some cases, national laws control only public service (old school) broadcasters that compete with social media, and in other cases they do take social media into account when considering plurality issues in reviewing consolidation through merger control. See for example Ofcom's current review of 21st Century Fox and Sky and its assessment criterial for media plurality.

85 Current non- economic public interest merger controls include prudential regulation media plurality defence and security and could well include scrutiny of Critical national infrastructure along the lines of the US CIFIUS system.

86 Council of Economic Advisers Issue Brief, 2016, https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160502_competition_issue_brief_updated_

Conclusions to Part I

In these expanded comments we have referred to the wider economic and social impacts which are increasingly being identified as a problematic consequence of increasingly concentrated market structures.[86]

Economic evidence is never complete and, while tending to demonstrate certain causes, may be insufficient to constitute legally compelling proof of wrongdoing. It could be observed that concrete proof is rarely possible and that optimal outcomes need to be achieved given limited information. Risk of unwelcome outcomes would then counsel for greater vigilance and enforcement over mergers and vertical agreements by dominant companies, and caution could become the watchword in allowing potentially concentrative mergers to proceed.[87]

The available evidence is, however, also consistent with market structure contributing to the high levels of insecurity and dislocation visible in large sections of society, and the feelings of alienation seen in the political world in recent times. If people feel that their jobs are insecure, their employer has a grip on their work and their work-life chances are limited to a small number of large employers, they can be expected to feel exploited and alienated.

On a personal level, reduced opportunity affects confidence. The promise of free markets to increase economic prosperity is only true if it is experienced. Increased personal freedom, and freedom to create and express is undermined if, instead of broader and deeper levels of prosperity, the fruits of many people's efforts are captured by the few. In addition, if prospects are limited and people feel a level of economic dependency and increased uncertainty, there are undoubtedly risks to freedom, not merely freedom of expression.

Change to our system of enforcement is needed and below in Part II of our paper, proposals for change to address the issues identified are made.

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87 Carl Shapiro, 2010, 'The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years', *Berkeley Antitrust Law Journal*, vol.77, pp.701-759, https://www.law.berkeley.edu/wp-content/uploads/2015/04/Shapiro-The-2010-Horizontal-Merger-Guidelines-From-Hedgehog-to-Fox-in-40-Years-2010.pdf.

PART 2

Proposals for Reform

This ResPublica report calls for change to the competition system. It identifies failures of outcome, based on current system failures, discussion of optimal outcomes, and calls for dialogue on potential solutions, including greater enforcement, compliance and monitoring of the system.[88]

Economic and Political Context: the Failure of Outcomes for the Economy and Society More Generally

As suggested by a former head of the US Department of Justice, the more important innovation becomes to society, the greater the need to enforce the law.

The UK has low productivity and increasing inflation. Added to general uncertainties in the world, we are also facing Brexit, potentially the biggest shock to the economy in a lifetime. Economic growth, productivity improvements, and worthwhile jobs for people now and in the future, are the challenge for all governments.

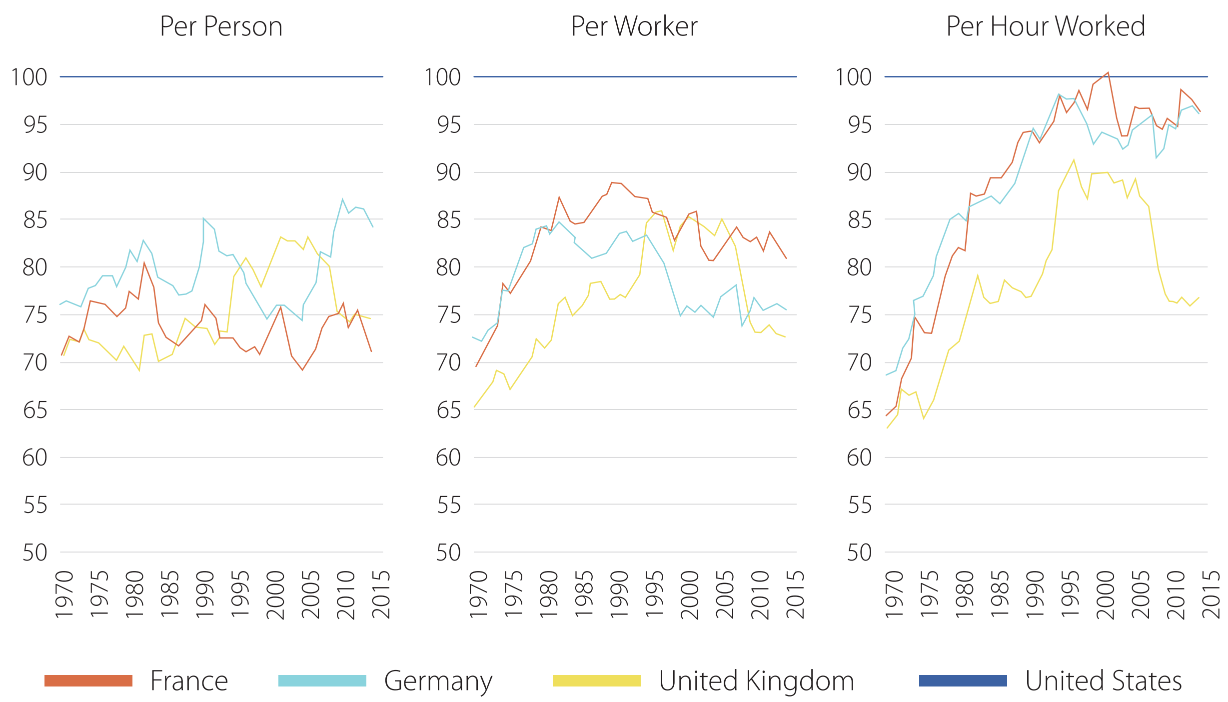
We believe this means putting more emphasis on innovation and customer choice.

We recommend that the Government's Strategic Steer should promote greater enforcement of the law in the technology sector to promote innovation and customer choice. It must recognise the importance of market structure and small business to the economic and social wellbeing of the UK, and to people's views of how they see the world and what it can mean to them.

Greater levels of innovation, and increased opportunities, means emphasis on choice, and that means emphasis on market structure and entry by small business. Small businesses are vital because they represent about half of all job growth.[89]

Technology is also at the core of strategically important UK industries such as financial services and defence, where the UK has comparative advantages and world leading capabilities that should be built on for the future. It is also clear that general purpose technologies such as computing and communications can have major productivity benefits to wide sectors of the economy more generally.

Image 5: Productivity and Output in the UK, France and Germany – Compared to the US



**As a percentage of the USA (USA=100)*

Source: OECD Dataset: Level of GDP per capita and productivity 2017 as published in the Industrial Strategy Green Paper[20]

Source: ResPublica Recommends - A New Bargain

Conversely, where general purpose technologies are not operating competitively, broad sectors of the economy can be held back. Technology-dependent sectors can be expected to suffer more seriously than others where technology is less mission critical, but with all sectors of the economy dependent on the digital revolution, complacency is not an option. With this in mind it is welcome to see that the Department for Culture, Media and Sport has reinvented itself as a digital department looking at important general-purpose technologies and is currently consulting on the improvements and impediments needed in the UK's communications infrastructure.

Small businesses require confidence in the future. Small business involves a sense of ownership and changes the way people think about themselves. Entrepreneurship reinforces certain values. Values like opportunity and responsibility, both for ourselves and to others, be they customers, employees or suppliers. We understand that succeeding or failing on our own merits changes the way people look at themselves and the world. However, opportunity has to be truly open and the economy free for each and every one of us to pursue our own goals. Fear of failure corrodes confidence, and a sense of purpose needs daily sustenance.

People won't be willing to spend money, sweat, time and tears on their own venture if the market is rigged against them. People are willing to take risks, but not foolish risks. Innovation, like entrepreneurship, is risky. It costs money. It takes time. It often fails. Therefore, common sense tells us that there will be a lot less of it if markets are not open to competition from businesses that have a better idea. Currently the danger is that the tech sector will buy out better ideas and stifle innovation; excluding competition to ensure greater success for the existing major players.

High levels of concentration are the enemy of small business and innovation. Market structure is important. It is worth remembering how antitrust law came about, originally in the US:

> *"Small businesses were an important constituency that helped to pass the Sherman Act in 1890. Then, small businesses were concerned that the railroads, which at the time enjoyed regional monopolies, were charging non-competitive and discriminatory shipping rates, and discriminating against certain customers for their own advantage. In addition, small businesses were concerned about the tactics of the Standard Oil company, and other trusts, that controlled, among others, the fuel*

oil, sugar, tobacco, cotton seed oil, and whiskey markets. The trusts employed predatory tactics against small businesses and drove out entrepreneurs with coercive threats of "sell or be ruined."[90]

Today's railroads are the information superhighways that have been supported and created by successive governments. The internet was born as a government program and nurtured by regulatory benefits. Loopholes, whether by accident or design, have been exploited by the major players for the gain of the established players, and society's loss.

The competition law system is designed to be a social safety net, correcting market failures as and when they arise. It is concerned with the interests not only of consumers but also of producers and in ensuring that the system innovates in the general interest. It is an important contributor to how people see the world as fair or unfair.[91] But the connection with social justice has been lost and now needs to be re-established.

The objectives of the law are broad enough for a wider set of factors to be taken into account. A clear statement of the law by the Court of Justice of the EU in the seminal TeliaSonera case provides a useful summary:

"The function of those rules is precisely to prevent competition from being distorted to the detriment of ***the public interest****,* ***individual undertakings*** *and* ***consumers****, thereby ensuring the well-being of the European Union (emphasis added)."*

This is a statement with a broad sweep. It is not about short-term consumer welfare or narrow efficiency considerations divorced from the wider public interest. Nor can it be seen as the EU Treaties of Lisbon setting competition law in a policy context - and one that requires a social market economy to fulfil the wider public interest. The system in the UK, EU and US has similar goals. As suggested some years ago by the Chief of Staff of the Antitrust division at the US Department of Justice:

"The antitrust laws help to sustain this entrepreneurial spirit by ensuring that markets are open, and that new businesses can compete, and, if they build a better mousetrap, -- have the chance to succeed. The importance of this role can't be overstated: in keeping markets contestable, ***the antitrust laws enrich our social fabric, and country, as well as our economy****."*[92]

Outcomes require measurements and enforcement requires testing effective remedies against market outcomes. The authorities measure their activity in terms of cases taken, and books full of cases stand in silent testament to regulatory failure. We recommend that outcomes should in future be measured by the authorities and systematically taken into account when considering transactions.

Action to ensure competition and innovation thrives is possible and now vital. Especially given the broad ranges of services and products offered by the major platform owners,[93] their economies of scale and scope, and massive investments in assets and intellectual property portfolios designed to create unassailable barriers to entry. We are optimistic that despite system blindness and mistakes that have been made to date, they can be rectified. We outline possible proposals for change below.

88 Similar concerns led the ordoliberals in Germany to emphasise the need to focus on consumer choice, not just consumer welfare and efficiency.

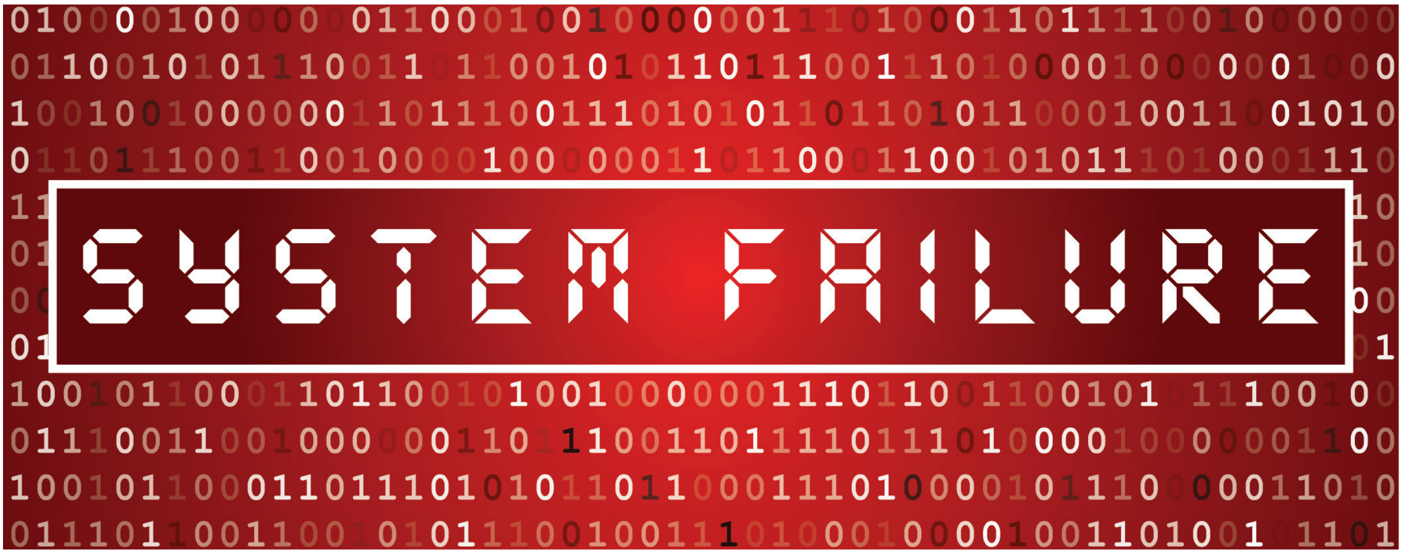
89 World Economic Forum, 2015, 'Collaborative Innovation, Transforming Business, Driving Growth', http://www3.weforum.org/docs/WEF_Collaborative_Innovation_report_2015.pdf - which also references "Recent research by the OECD shows that young firms, mostly SMEs, are responsible for at least 50% of job growth".

90 See the speech by Adam Golodner, Chief of Staff Antitrust Division, January 2000 "Antitrust Innovation, Entrepreneurship and Small Business", https://www.justice.gov/atr/speech/antitrust-innovation-entrepreneurship-and-small-business

91 Commissioner Vestager has spoken out on many occasions about fairness, not just in terms of procedural fairness but in terms of fairness of the system and it is to be hoped that this connection with social justice can be more firmly established over time.

92 See Joel Klein AAG DOJ stated in April 2000 at the height of the tech boom merger wave: "*The more important that innovation becomes to society, the more important it is to preserve economic incentives to innovate. Timely and effective antitrust enforcement may be essential to preserving the kind of environment in which companies new and old, large and small, can be confident that there will be no anticompetitive barriers to bringing their new products and services to market*." Statement to the Committee on judiciary US HoR.

93 In 2016, a House of Lords Select Committee found that "*The markets in which online platforms operate are characterised by accelerated network effects. These may fuel exponential growth, increase switching costs, increase entry barriers for potential competitors and lead to monopolistic outcomes. Firms that succeed in harnessing these network effects may become the main platform in a sector, gateways through which markets and information are accessed. This can reduce choice for users and mean that they become an almost unavoidable trading partner for businesses. Such platforms are likely to possess a significant degree of market power*." See *Online Platforms and the Digital Single Market*, published 20 April 2016.



Current System Failures

We contend that the following areas demand change:

a. The current focus on consumer welfare is misplaced. In practice, the current system is overly focused on short term consumer welfare, based on what can be measured in the short term.[94] A greater focus on productive efficiency, with the goal of increasing innovation, and opportunity, has suffered.

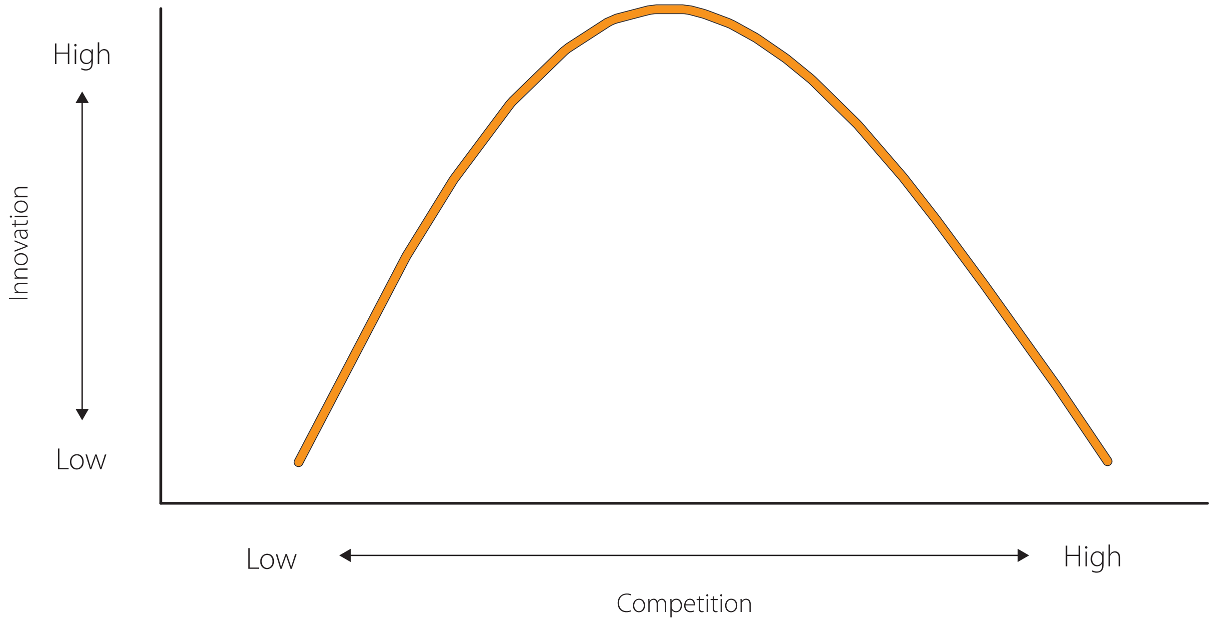
Most recently Tommaso Valletti, now chief economist at the EU Commission, and his colleagues have identified in a research paper that horizontal mergers in oligopolistic markets reduce innovation.[95] It follows that any horizontal mergers that are not caught by the system can have a damaging effect on innovation. This supports the established orthodoxy, but also reinforces the need for extra vigilance.[96]

Indeed, the EU has to an extent been leading the way in this respect, raising innovation concerns in a number of merger situations in the last few years – although there is undoubtedly more that can be done. One example of this is in the Novartis/GlaxoSmithKline merger, where concerns were raised about the parties' oncology business, and the Commission required the parties to divest one of the pipeline projects in order to mitigate risks to innovation.[97] Another example where innovation concerns were addressed by the Commission is the General Electric/Alstom merger, where concerns were raised about the impact on innovation in the energy sector.[98] Again, the Commission approved the acquisition of Alstom's energy business by General Electric subject to divestment of central parts of Alstom's heavy duty gas turbines business. The recent Dow/DuPont decision continues in this vein, as approval to the merger was given, conditional on divestment of DuPont's global pesticide business over innovation concerns about reduced numbers of new "active ingredients" in the pesticides business to be developed per year by the merged entity.[99]

There is considerable discussion of the need for authorities to move to more of a general welfare approach. The work by Philippe Aghion, F.M. Scherer and others have pointed to the importance of market structure for innovation, which

Figure 6: The Shape of the Competition and Innovation Relationship

In our model:
- At low levels of competition the "competition effect" dominates, leading to a positive relationship.
- At high levels of competition the "Schumpeterian effect" dominates, leading to a negative effect.
- Overall this leads to an inverted U-shape.



Source: Philippe Aghion et.al, 2005, 'Competition and Innovation: An Inverted-U Relationship

may not be fully assessed or properly considered in the current framework. Carl Shapiro, when commenting on the revisions to the US merger guidelines introduced in 2010, accepted that "*innovation can be hard to assess, because of the inherent uncertainty associated with R&D, because of the difficulty of evaluating an organization's innovation capabilities, and because these effects are often more distant in the future*".

We also know from the work of Philippe Aghion and his colleagues that there is generally an increase in innovation with competition, that large numbers of companies and highly competitive markets drive up innovation, but that very high levels of competition can reduce innovation.[100]

From a policy perspective, if an optimal outcome is to be achieved, considerable care needs to be taken over the activities taking place in, and structure of, competition in markets. This implies a greater level of monitoring and measurement of outcomes. Industrial structure is also needed by our competition authorities in their understanding and forward-looking assessments of the market, and how the dynamic operates over time. This will require organisation and process changes.

b. The current merger control system does not address innovation mergers: thresholds could be changed but assessment practices also need to change. EU Competition Commissioner, Margrethe Vestager, in her April 2016 speech "Competition the mother of invention" recognised the vital importance of innovation and the need for scrutiny. She also recognised that the failure of the current system is that it does not catch or scrutinise mergers between major players and innovative upstarts.[101] One former official commented that the internet market has "become concentrated via largely unfettered, serial, early-stage acquisitions".[102] Change to merger control has recently taken place in Germany following concerns that turnover thresholds are the wrong test, since they don't capture transactions that are important but where the target has a low turnover. The jurisdictional thresholds that set the starting point for merger review in the EU and UK are set partly as a political compromise to allocate work between authorities. This means that bigger transactions, which tend to be more pan-European or global, are dealt with under the one stop shop approach in Brussels. For this reason, Germany has recently changed its law to adopt a value-based threshold aimed at catching such mergers and subjecting them to more careful scrutiny. The EU has been consulting on making changes to the thresholds on a similar basis.[103] With Brexit, the UK will have to revisit its system and merger control tests - there is an opportunity to effect change.

Change to merger controls over Critical National infrastructure (CNI) are now taking place. Given this is happening, changing merger control to capture innovation mergers is needed. Brexit provides a timely opportunity to implement this - with a need for closer alignment of merger control with domestic UK economic policy, designed to support innovation and the needs of society.

We have outlined above the issues that arise from digitisation, and particular problems associated with advertising markets. Reform means more careful assessment of the supply side and market structure. The investigation of supply side substitution has to be given equal prominence, if not more, to forward-looking supply side analysis of alternatives that would or could meet the same need. If not, the system is blind to new developments meeting current needs and fails to understand the true nature of competition taking place.

c. Vertical agreements and innovation-enhancing collaboration. The current system provides only weak signals to beneficial collaboration. This is because the current law prohibits all vertical agreements subject to certain "safe harbours"[104] that are defined in EU-wide block exemptions. This is an out of date approach toward enforcement based on an out of date administrative system, and one that has to change with the UK leaving the EU. We have also overlooked the importance of collaboration and market structure for the commercialisation of basic research, where public/private as well as multi-private firm collaborations are vital to the effective commercialisation of modern innovation. Persistent productivity failure could be derived from failure to collaborate effectively.[105] Increasing productivity is driven by the use of new processes - often requiring collaboration and new ways of working - with productivity per worker often driven by the adoption of new technology in existing firms, and new or improved products and services being created that tap into existing or latent demand.[106] Indeed, the EU has estimated that 50% of all productivity gains can be attributed to technological improvements,[107] and small and medium-sized businesses are known to drive innovation and job creation.

As noted in the Hargreaves Report,[108] product innovation is rarely linear. Products and services are not invented fully formed in the R&D laboratories owned by a single firm. The innovation process is much more dynamic and interactive, and must be, to discover latent customer demands. It takes place in places where the new is tested and tinkered with by multiple market-facing organisations, often developing and using applied research in collaboration with universities. At least, that is the approach successfully adopted in the US. It also depends on the integration of ideas from a wide range of organisations.

In the UK and the EU we have, in general, banned collaboration and made it illegal - subject to exemption on a self-certified basis. This creates peculiar risk assessments and strange consequences. We have seen that the tech sector is riddled with anti-competitive practices from the Commission's e-commerce sector results, but lack of clear safe harbours may have led to risks not being taken when they could have been, and where beneficial economic outcomes would have been desirable.

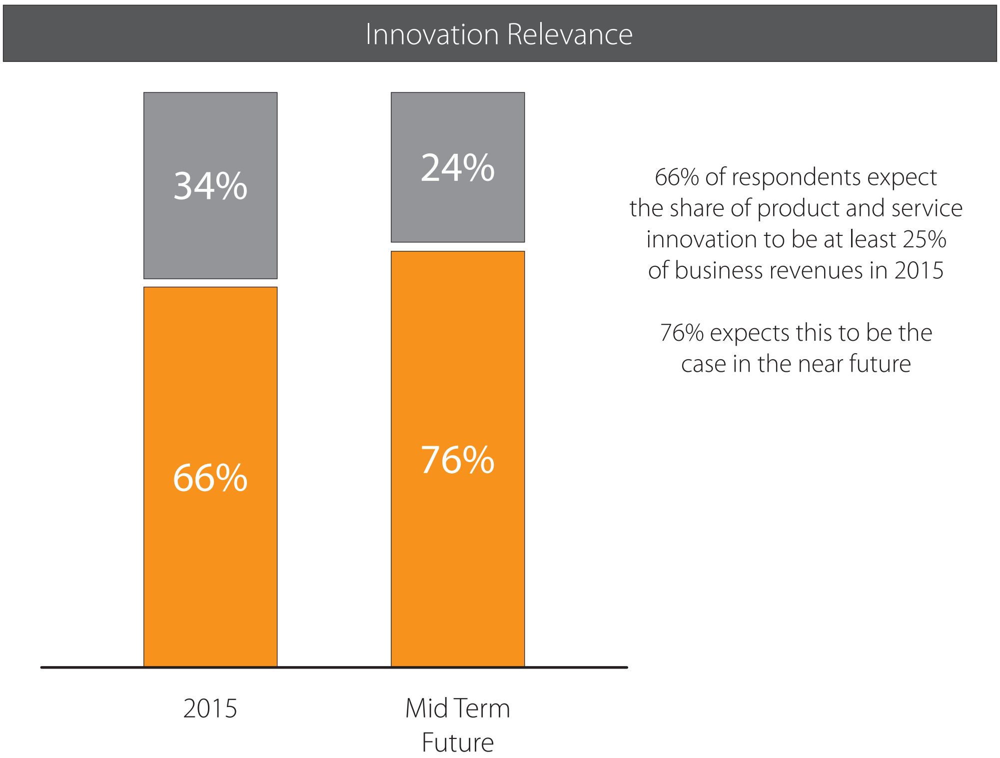
For smaller firms to collaborate, they need to know whether their agreements are beneficial and acceptable or not. At present the system is unintelligible and complex, often requiring legal advice that is too expensive for smaller businesses to obtain. The system should support the commercialisation of R&D, support smaller businesses and be pro-innovation through collaboration.

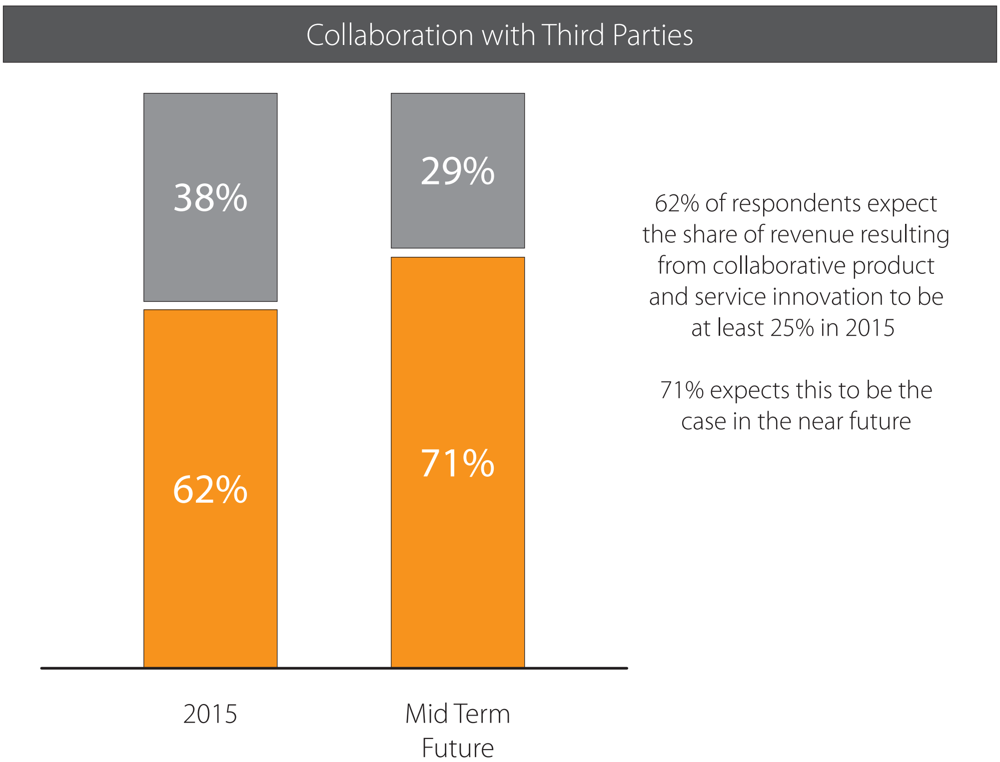
We believe the current law is incoherent. It condemns acceptable forms of collaboration alongside others. How is a digital firm going to know what is acceptable or not? There is no longer an administrative system under which firms can obtain assurance that their collaborations are ok. In digital start-ups, any cost and any cash out is avoided. These businesses husband and nurture scarce cash for growth. Some will argue that self-certification is possible: loss of the administrative system has placed the emphasis on assessment by lawyers. However, the cost of lawyers is easily borne by major existing players and less affordable by innovative entrants. More fundamentally why would we add additional burdens to those we want to encourage?

We suggest that the current CMA notification system should be enhanced, and smaller businesses encouraged to obtain safe harbour protection under CMA administrative guidance.

When considering whether agreements are anti-competitive, it must be remembered that while agreement between producers to fix prices and cartels should be prohibited, collaboration is critical for future development and growth. Firms are increasingly collaborating with other parties,

Figure 7: Expectation of the Revenue Generated from Collaborative Innovation, 2015 & 2030





Source: A.T. Kearney Survey

moving to more open forms of innovation that are needed in increasingly complex environments. Commercialising innovations with other parties may enable firms to accelerate the pace of commercialisation and speed up time-to market useful product improvements.[109] Furthermore, such a shift mirrors expectations of a change in revenue sources. A recent A.T. Kearney study on "Collaborative Innovation in Digital Europe", found that 71% of respondents expected more than a quarter of revenues to be generated through collaborative innovation by 2030.[110] See Figure:7 above.

d. The role of the state. The EU also administers a system of state aid that may allow acceptable forms of intervention, which would otherwise distort the market. This is another aspect of current competition policy that it is not closely coupled with other forms of government intervention, known in the EU as state aid. The relationship between government-funded R&D, government procurement, and commercialisation is not coherent. When it comes to competing with other global economies such as the United States, The UK's track record on the collaboration between the private and public sectors is unimpressive.[111] By comparison, in early 2011 the US White House, in its Strategy for American Innovation - Securing Our Economic Growth and Prosperity noted that:

> *"One central market failure is in the field of basic research. Basic research typically does not have direct commercial payoffs. Yet breakthroughs in basic research underpins downstream commercial ideas which can bring enormous commercial benefits. For example, engineering builds on Newton's laws of motion, the biotechnology industry builds on Watson and Crick's discovery of the structure of DNA, and the dot.com industry builds on government and university development of the internet."*[112]

The US administration adopted a more interventionist stance. It actively fostered commercialisation of R&D and took a range of actions, including major investment in R&D and coordinated commercialisation to get invention from universities to cross the "Valley of Death" into commercial implementation. This continues today in the face of global competition, with US institutions concerned about a risk of a US innovation deficit, as countries such as China, South Korea and Singapore outpace the US in annual percentage growth of R&D funding.[113] See Images: 7 & 8 below.

Intelligent purchasing and using the purchasing power of the state has been central to the US position. The policy is supported by massive levels of government spending on military and general government demand for technology products and services. It is no accident that the US has commercialised better, and that the leading players in the new economy are all from the US.

It is also widely accepted that the funding of basic research is a role for the state, because the market will not deliver. The next step, the commercialisation of the benefits of publicly funded developments is under-examined, poorly promoted or protected from exploitation, and risks are captured by existing market players. This requires our attitude to collaboration and commercialisation - through collaboration among industry participants and government, whether direct through grant funding or indirectly through its purchasing practices - to change radically.[114]

The Obama Administration also took a series of actions including executive orders to ensure that competition was enhanced, and innovation improved. In particular, action was taken to ensure that standard essential patents were not used as a mechanism for competitive "hold up".

In the UK, we are so far behind in our approach to nurturing inventors and innovation that we do not even have a clear mechanism for patenting software.

e. Our system of enforcement is too slow. Where merger control applies it is generally dealt with in commercially realistic timeframes. The same cannot be said about enforcement of the law against abuse of dominance, where notoriously, cases take years to even establish an infringement.[115] Saying that whole industries are blighted in the meantime does not bring home the full force of the effect on individuals trying to run their businesses, the corrosion of confidence of small businesses, and the enduring damage to people's lives and our society.

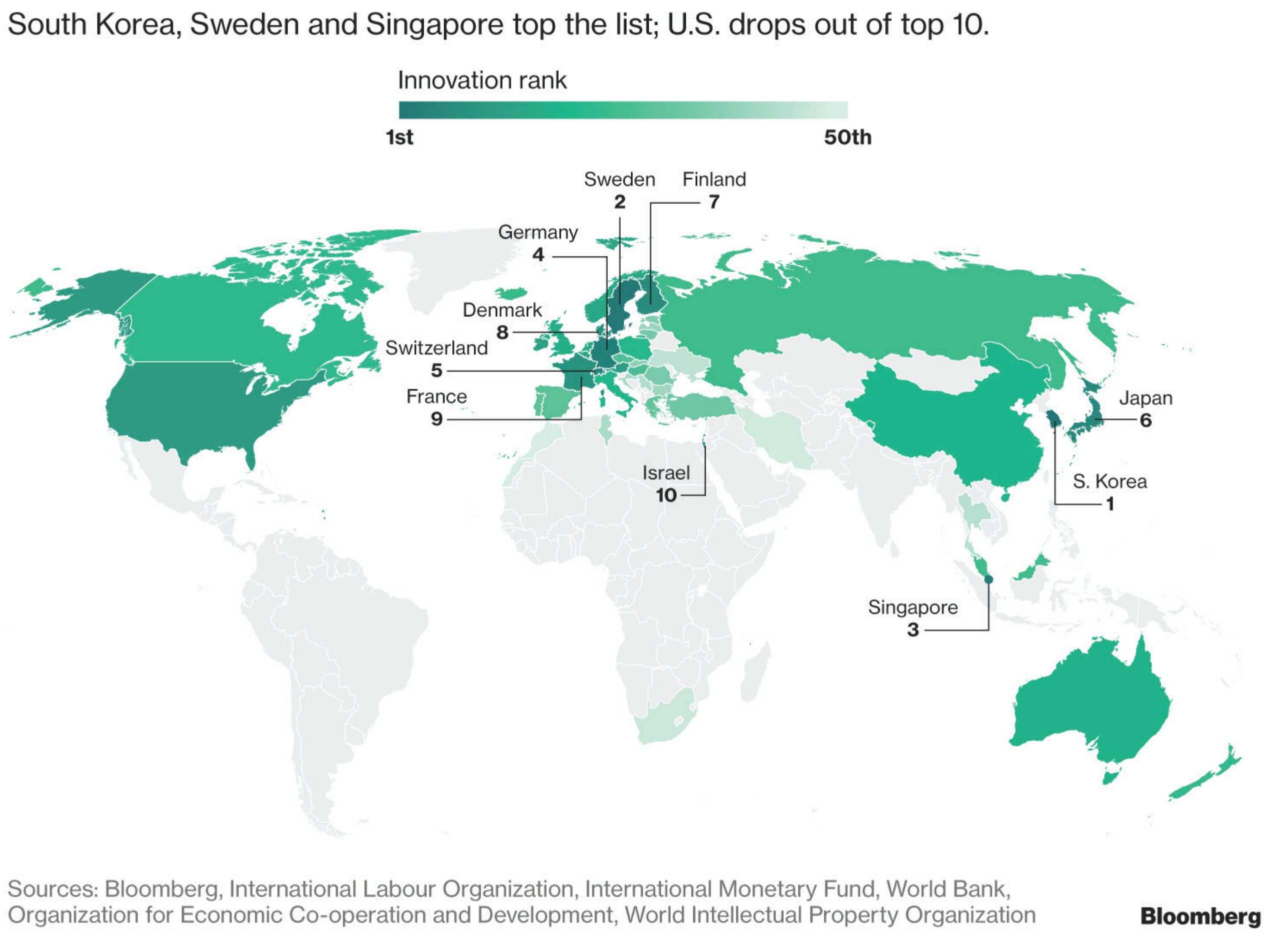
This applies to enforcement in the US as well as the UK. The Center for American Progress' report notes that enforcement has continued to be permissive, despite the fact that of the 21 mergers analysed exceeding the merger guideline threshold, 85% resulted in higher prices. As industries became more concentrated, the indication was that mergers were more likely to result in higher prices: "*of industries with six or fewer remaining competitors post-merger, nearly 95% of mergers resulted in anticompetitive outcomes*."[116]

Indeed, the Center for American Progress suggests that the authorities should rely on networks of experts where they cannot know or understand the complexity of the modern market, allowing a more rigorous review. In reference to the work of the regulatory review, the Center's report quotes Beth Noveck, former US deputy chief technology officer, as stating "*using expert-network platforms can only democratize what are not comparatively closed processes that typically rely on the same people to participate*".[117] We see considerable force in this argument, which would both allow the authorities to benefit from external and specialised help, and allow them to reach decisions more efficiently and faster.

Failure to enforce the law means that we fail to keep markets open and functioning. The point appears to be well recognised by the authorities. For example, Commissioner Vestager has said:

"So one of our basic jobs, as competition enforcers, is to make sure that companies don't abuse their power to hold back innovation." However, if in the meantime they take years to investigate and then the breach goes unpunished and markets are distorted, innovation is held back. Why is this case? Further discussion is needed about the factors that affect speedy outcomes; they include:

Image 7: Fifty Most Innovative Economies



i. **Management experience.** Where heads of authorities have limited litigation experience, is it fair to give them a mandate to take and manage litigation?

ii. **Processes and procedures** adopted also typically mean that people are assembled to deal with specific transactions, investigations and issues rather than being organised into industry specific groups. The complexity of the modern economy demands greater specialisation, measurement and monitoring of outcomes which would facilitate speed of understanding and more rapid decision making.

iii. **Timescales** are measured in the time taken to achieve perfect administrative outcomes, rather than providing the response needed by markets in defined timescales. Our authorities need to move at internet speed.

We support the statements made by Andreas Mundt, President of the Federal Kartellampt in Germany:

> *"Digitalization is revolutionizing all sectors of the economy. This is a challenging development not only for the business community but also for competition authorities. Digitalization and the competitive assessment of the global Internet giants is currently one of the most important issues for competition authorities around the world. There are many new questions on how competition law should be enforced in these days of digital revolution."*[118]

f. The management structures are inherently cumbersome. The debate leading to the organisation of the CMA raised questions about the need for a more streamlined enforcement system, with an ability to take decisions more swiftly. The structure is expressly required to be reviewed under the enterprise act this year. Both Brexit and the statutory deadline for review provide opportunity to review the methods, management and structure of the authorities. This should be grasped, with a view to speeding up decision making, with faster enforcement.

g. The current system lacks democratic oversight. The system is modelled on the EU administrative system. That system is often derided for its democratic deficit. The EU system also inherently allows a

Image 8: Bloomberg 2018 Innovation Index

2018 rank	2017 rank	YoY change	Economy	Total score	R&D intensity	Manufacturing value-added	Productivity	High-tech density	Tertiary efficiency	Researcher concentration	Patent activity
1	1	0	S. Korea	**89.28**	2	2	21	4	3	4	1
2	2	0	Sweden	**84.70**	4	11	5	7	18	5	8
3	6	+3	Singapore	**83.05**	15	5	12	21	1	7	12
4	3	-1	Germany	**82.53**	9	4	17	3	28	19	7
5	4	-1	Switzerland	**82.34**	7	7	8	9	11	17	17
6	7	+1	Japan	**81.91**	3	6	24	8	34	10	3
7	5	-2	Finland	**81.46**	8	16	10	13	19	6	4
8	8	0	Denmark	**81.28**	6	15	11	15	26	2	10
9	11	+2	France	**80.75**	12	35	14	2	10	21	9
10	10	0	Israel	**80.64**	1	27	9	5	41	1	19
11	9	-2	U.S.	**80.42**	10	23	6	1	42	20	2
12	12	0	Austria	**79.12**	5	8	15	26	12	12	5
13	16	+3	Ireland	**77.87**	22	1	1	18	20	14	33
14	13	-1	Belgium	**77.12**	11	22	13	10	37	13	21
15	14	-1	Norway	**76.76**	19	37	19	11	23	8	14
16	15	-1	Netherlands	**75.09**	17	26	20	6	47	15	18
17	17	0	U.K.	**74.54**	20	40	23	14	8	18	15
18	18	0	Australia	**74.35**	14	46	16	17	17	3	20

Notes: 1. R&D intensity: Research and development expenditure, as % GDP 2. Manufacturing value-added: MVA, as % GDP and per capita ($PPP) 3. Productivity: GDP and GNI per employed person age 15+ and 3Y improvement 4. High-tech density: Number of domestically domiciled high-tech public companies – such as aerospace and defense, biotechnology, hardware, software, semiconductors, Internet software and services, and renewable energy companies – as % domestic publicly listed companies and as a share of world's total public high-tech companies 5. Tertiary efficiency: Total enrollment in tertiary education, regardless of age, as % the post-secondary cohort; share of labor force with advanced level of education; annual new science and engineering graduates as % total tertiary graduates and as % the labor force 6. Researcher concentration: Professionals, including postgraduate PhD students, engaged in R&D per million population 7. Patent activity: Resident patent filings, total patent grants and patent in force, per million population; filings per $100 billion GDP and total grants by country as a share of world total

All metrics are equally weighted. Metrics consisting of multiple factors were rescaled for countries void of some but not all data points. Most recent data available used. Of the more than 200 economies evaluated, 80 had data available for at least six of the seven factors and were ranked; The top 50 and the metric ranks among them are displayed.

Sources: Bloomberg, International Labour Organization, International Monetary Fund, World Bank, Organization for Economic Co-operation and Development, World Intellectual Property Organization

Bloomberg

conflation of both policy-making, and the efficient administration and implementation of policy and priorities. Policy-making is, in a more trusted system of government, a matter for democratically elected ministers. While administration and enforcement are, in our view, for administrative and enforcement bodies. In the UK we have a Ministerial Strategic Steer, that is designed to provide direction from democratically elected ministers.

In the UK, a refocusing of the competition authorities' attention on innovation, among other things, was pressed for by Government in 2013.[119] The ministerial steer was created and included reference to innovation. By and large, however, that steer has not led to any discernible change in the approach or practice of the authorities. Much more needs to be done. A case for more detailed government policy setting needs to be made. Followed by clear properties defined by government, laid down such that authorities do not take unto themselves the discretion to determine their own priorities. They must only enforce the law without fear or favour, quickly. The UK has to review whether a change to a more prosecutorial model is appropriate by 2019.[120] It is hoped that such a change could now take place, with a renewed mandate and remit.

The Government's Green paper provides an opportunity to revisit the Strategic Steer and address the goals and purpose of competition policy afresh. That steer should, in our view, seek to ensure that decisions are taken quickly, that breach is not tolerated, and that the focus of the public enforcement of the law promotes innovation. The current draft is simply too long. To provide a meaningful steer to the CMA, the regulatory authorities and the people working in them, it needs to be about the goals of the system. Something along the lines of: "Timely action to promote competition, innovation and consumer choice", would be sufficient.

h. Compensatory damages for breach of the law mean the lawbreaker can profit from its wrongdoing. In simple terms it does not pay for dominant companies to comply. Neither does the law properly strip abusers and cartelists of the benefit of their cartels. In the current system, providing evidence of harm, causation and loss can take years of expensive private litigation for breach of the law - which leads, at best, to compensation.

The US system recognises that perpetrators, whether individual or collectively, profit from their wrong doing and strip them of their ill-gotten gains. The current position in the UK sets up the wrong incentives. Compensation for only those that can afford to take cases and prove harm, is a wholly inadequate basis to ensure compliance. For example, if a major tech platform abuses its dominance, excludes smaller rivals from the market and reaps huge rewards, claims for compensation don't strip the abuser of the benefits of its illegal actions. Worse still, small rivals may be crushed. Business may become worthless overnight. Even taking a claim would often be financially impossible in such circumstances. The signal sent to other players is that big companies rule.

A system of small pay-outs to small players is a misguided system, supporting major players and not innovation. The English courts have established that there is a right to exemplary damages, and the common law recognises that in certain circumstances the rule of law demands an account of profits or the disgorgement of unjust enrichment. Going forward, it should be clarified that the rule of law demands that justice does not allow the guilty to profit from their own wrong. Incentives toward compliance need to be re-set.

Moreover, the investigation and enforcement of abuse of dominance in Microsoft, Intel and Google, currently stand for the proposition that a strategy of "walking slowly backwards" will pay the abuser - despite the size of the fines. In social terms the signal sent to a generation of technologists and entrepreneurs is appalling.

94 See for example the practice of competition authorities in merger control focusing on short term pricing effects and upward pricing pressure analysis, which, while part of the evidence base, is over emphasised at the expense of assessment of levels of innovation and assessment of evidence of innovation intensity.

95 Giulio Federico, Gregor Langus and Tommaso M. Valetti, February 2018, 'Horizontal Mergers and Product Innovation', *SSRN*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2999178

96 Competition authorities typically maintain that horizontal mergers risk reducing innovation incentives. For example, the U.S. Horizontal Merger Guidelines state that competition often spurs firms to innovate". Similarly, the E.C. Horizontal Merger Guidelines maintain that effective competition benefits consumers by promoting innovation, and that a merger may deprive consumers of this benefit. The U.K. Merger Assessment Guidelines posit that rivalry between firms creates incentives to introduce new and better products. The problem is that many if not most mergers don't have to be notified for review.

97 See EC decision here: http://ec.europa.eu/competition/mergers/cases/decisions/m7275_20150128_20212_4158734_EN.pdf

98 See press release, European Commission, 2015, http://europa.eu/rapid/press-release_IP-15-5606_en.htm

99 See press release, European Commission, 2017, http://europa.eu/rapid/press-release_IP-17-772_en.htm

100 Philippe Aghion, Nick Bloom, Richard Blundell, Rachel Griffith and Peter Howitt, 2005, 'Competition and Innovation: An Inverted-U Relationship', *The Quarterly Journal of Economics*, Vol. 120, No. 2, pp. 701-728, http://www.jstor.org/stable/25098750

101 Margrethe Vestager, 18th April 2016, "Competition the mother of invention', http://ec.europa.eu/competition/speeches/index_2016.html

102 See Scott Cleland at Precursor.com e.g. Google 206 acquisitions in 19 years with increasing numbers in recent times, https://www.scottcleland.com/

103 Both in the UK and the EU, calls for greater alignment with the merger controls over Critical National infrastructure (CNI), which exist in other countries for security and strategic industry purposes have become ever louder and are now in the Conservative Party manifesto. Against this background, change to merger control is needed, and Brexit provides a timely opportunity with a need for closer alignment of merger control with domestic UK economic policy, designed to support innovation, aligned with the needs of society in the UK.

104 Also known as "Block Exemptions" under EU block exemption regulations; which are complex and may not apply to many beneficial real-world situations, or difficult to apply with any certainty since they are based on inherently uncertain "market share" thresholds; in technology markets such thresholds lack precision.

105 Daniel Harari, April 2017, 'Productivity in the UK', *House of Commons Briefing Paper*, Number 06492, http://researchbriefings.files.parliament.uk/documents/SN06492/SN06492.pdf - which refers to the UK's "persistent weakness in productivity".

106 Businesses need to step up the adoption of cutting-edge technologies, materials and processes if countries are to reap their full potential in terms of productivity gains, according to a new OECD report. Action on multiple fronts is required. It includes encouraging life-long skills development and greater interaction between industry and education, improving conditions for business creation and development, and supplying the infrastructure needed by firms using advanced, digital technologies. Assisting research and technological scale-up and establishing agencies to aid the spread of technological innovation are also key. The report is available at: http://www.oecd.org/industry/the-next-production-revolution-9789264271036-en.htm

107 World Economic Forum's Global Competitiveness Report 2014-2015, which describes "technological readiness" as the 9th of 12 pillars of competitiveness, https://www.weforum.org/reports/global-competitiveness-report-2014-2015

108 Ian Hargreaves, 2011, 'Digital Opportunity: A Review of Intellectual Property and Growth', http://orca.cf.ac.uk/30988/1/1_Hargreaves_Digital%20Opportunity.pdf

109 See also, K. Engel, V. Dirlea, S. Dyer and J. Graff, March 2015, 'Masters of Innovation: Building the Perpetually Innovative Company', (LID Publishing, London).

110 See also Chesbrough, H. and Schwartz, K., 2007, 'Innovating business models with co-development partnerships', *Research-Technology Management*, Vol. 50 No. 1 11; Chesbrough, H.W., 2003, 'Open Innovation: The New Imperative for Creating and Profiting from Technology', *Harvard Business School Press*, Boston, MA.

111 World Economic Forum Paper, 2015, "Collaborative Innovation, Transforming Business, Driving Growth", p.6 http://www3.weforum.org/docs/WEF_Collaborative_Innovation_report_2015.pdf

- US public/private scientific collaboration is almost double that in the EU, and new technologies are commercialized with 17% more license and patent revenues from abroad.

112 See also Martin Poel, 2013, 'The impact of the policy mix on service innovation', file:///C:/Users/Joe%20Cowen/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/TR-DISS-0000B.pdf, which also noted that R&D market failure is mainstream and noted the work of Nelson 1959, Arrow 1962, and Oxera 2005.

113 Association of American Universities, September 2014, 'Memorandum on the strategy for American Innovation', http://www.acenet.edu/news-room/Documents/Comments-American-Innovation-Strategy-Final.pdf

114 US programs such as the National Network for Manufacturing Innovation (NNMI), the Semiconductor Technology Advanced Research network (STARnet), Innovation Corps (I-Corps), the i6 Challenge and the NIH Research Evaluation and Commercialization Hub (REACH) and concept funding programs that increase innovation, technology transfer and commercialisation are models that government could emulate.

115 See for example the Intel, Microsoft or Google investigations.

116 Marc Jarsulic, Ethan Gurwitz, Kate Bahn and Andy Green, June 2016, 'Reviving Antitrust: Why our Economy needs a Progressive Competition Policy', *Center for American Progress*, p.15, https://www.americanprogress.org/issues/economy/reports/2016/06/29/140613/reviving-antitrust/.

117 Ibid., p.18

118 Competition Policy International, February 2017, 'Antitrust Chronicle', https://www.competitionpolicyinternational.com/category/antitrust-chronicle/antitrust-chronicle-2017/winter-2017-volume-1-number-2/

119 See Consultation Document on the creation of the CMA, "Towards the CMA", available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212285/CMA1_-_Towards_the_CMA.pdf - Foreword by David Currie: "The CMA will play a vital role in promoting competition and consumer protection across the UK, making markets work better for consumers and helping to foster innovation, growth and enterprise, the key to the delivery of future consumer benefit." [Emphasis added]

120 The UK Secretary of State has to lay before Parliament a report on the outcome of the review of the Competition Act within five years of the 2013 Enterprise and Regulatory Reform Act, which came fully into force in April 2014. See: http://www.fieldfisher.com/publications/2013/06/reform-of-the-uk-competition-regime-the-competition-provisions-of-the-enterprise-and-regulatory-reform-act#sthash.Cdhk8s4J.dpbs

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Prosperity

The UK has some of the highest levels of wealth concentration in the developed world. It has an economy where most mature markets are dominated by a small number of players and the barriers to entry are far too high. It is not an exaggeration to suggest that in many areas, from energy to banking to groceries, the UK has a monopolistic rentier rather than a market economy – a system in which certain individuals or small groups gain market dominance and excessive returns through anti-competitive practices. This conspires against innovation and is detrimental to the small and emergent businesses that generate growth and spread prosperity. Added to this, our education system, by specialising too early and often in the wrong areas, fails to produce students with fully rounded skill-sets. We are simply not equipping our future workforce with the means to safeguard our, and their, economic future. This is one reason why the real value of wages in proportion to growth in GDP continues to stagnate or fall. Our long-term productivity dilemma is a function of market capture and the effective de-skilling of the population.

We believe that shared prosperity cannot be achieved by simply tweaking the market. Britain needs significant demand and supply-side transformation, with new visionary institutions re-ordering our economy. We need long-term solutions that give power over wealth and assets, not simply handouts, to ordinary people. Central to this process of economic empowerment is an ethical, practical and adaptable education that gives people the skills to build their own businesses, or develop their own talents, rather than a conveyor belt to a service industry of low wage and less return.

New financial institutions to promote small business lending are required, and this involves smaller, more specialised and decentralised banks that can deliver advice as well as capital. We wish to explore ways in which all financial transactions can be linked to a wider social purpose and profit, which itself needs a transformation of the legal framework within which economic transactions take place. We believe that the future lies in the shaping of a genuinely social market which would be in consequence a genuinely free and open market. Internalising externalities and creating a level economic playing field in terms of tax paid and monopolies recognised and challenged, remains beyond the scope of contemporary governments to deliver. Such a vision requires new concepts. The viable transformative solutions lie beyond the purview of the current visions of both left and right in the UK.

Prosperity *Prosperity* *Prosperity*

Something has gone wrong with our markets and our competition law. That is the contention and argument of our report "Technopoly" and what to do about it: Reform, Redress and Regulation.

Promotion of global trade and the deregulation of industries such as finance are seen to have contributed to a growing political resentment and a backlash against elites. The failures to address moral questions is suggested as having provided fertile ground for a rise in authoritarianism and the collapse of the centre ground. The argument is that liberal neutrality flattens questions of meaning, identity and purpose. In short, the market mechanism is at fault and is a central problem in the world we live.

We argue that an active competition policy is critical for raising living standards and improving economic growth, as called for in the Government's industrial strategy. This report outlines that there are high levels of concentration in many industries and that there is a strong correlation between concentration and profitability. The report highlights that high concentration may contribute to the rise of income inequality. We accept that markets are inherently dysfunctional. They require intervention if they are to work in the public interest.

This report argues that the current system of competition regulation has over time gradually become narrowly focussed on consumer welfare and efficiency. We suggest that a lack of appreciation of the resulting social, political and moral consequences should cause policymakers to pause, reflect and take account of the political debate.

At least part of the reason for the outcomes we face can be laid at the door of competition and regulatory authorities and their enforcement policies. The current political debate indicates that there is considerable public disquiet and that the system is in need of reform. We set out 10 concrete and practical proposals to achieve this.

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