

How can Government and Regulators keep up with Disruptive Innovation?

This is a note by Richard Howard and Jonathan Dupont of a roundtable organised by Policy Exchange in July 2017.

From self-driving cars to peer-to-peer lending, new technologies look set to disrupt not just markets, but many of the assumptions which lie behind their regulation.

Working with the UK Regulators Network, this week Policy Exchange hosted a roundtable with politicians, regulators and leading businesses to look at some of the pressing questions concerning disruptive innovation and regulation. How well are we doing at enabling a culture of permission-less innovation? To what extent can disruptive innovation result in consumer empowerment and lessen the need for regulation? What barriers stand in the way of being still more friendly to innovation?

As Alan Mak MP argued, the world stands on the verge of a Fourth Industrial Revolution, bridging the gap between the physical, biological and digital worlds through new technologies like machine learning, big data, robotics and gene editing. This will enable the creation of new products and services and offers an opportunity to improve productivity. Indeed, the UK and other countries will need to harness such innovation to tackle the stagnation in global productivity seen since in recent years – particularly in sectors such as energy and transport. In Peter Thiel's now infamous phrase, "We wanted flying cars, instead we got 140 characters." (We now look to get [both](#).)

In the last few decades, Europe has done much less well at developing tech giants than the US. Even today, only six of the 177 tech unicorns, or start-ups valued over \$1 billion, are located in the UK. While regulation is not the only factor which lies behind the innovation disparity, in certain sectors it has played a huge role in Europe falling behind. The EU's over reliance on the 'precautionary principle' has seen progress held up in industries such as pharmaceuticals and GM crops. Leaving the EU offers Britain the opportunity to create its own regime, and take advantage of ['global innovation arbitrage'](#). As venture capitalist and internet pioneer Marc Andreessen has [argued](#), using liberal regulation to enable permission-less innovation is potentially the best strategy areas outside Silicon Valley have to copy its success.

There are at least three reasons why regulation can act as a tax on innovation:

- **Increases start-up costs.** Regulation is a disproportionate burden for start-ups without long established compliance departments. Regulation widens the 'valley of death' between basic discovery and commercialisation.
- **Backwards not forwards looking.** Good regulation is intended to address market failures, but sometimes does a poor job of adapting as technology provides new market based ways to internalise externalities or reduce the asymmetry of information.
- **Asymmetric approach to risk and opportunity.** Liberal regulation should never come at the cost of public safety or consumer welfare. However, we cannot

always predict ahead of time the opportunities created by new business models, and delaying innovation has its own costs for public health or welfare.

The good news is that this is an area in which the UK already genuinely does pretty well. The Financial Conduct Authority has a good reputation internationally for being a responsive regulator, with innovations like its 'regulatory sandbox' often held up as best practice (albeit that the process for obtaining sandbox status can be lengthy). The Civil Aviation Authority is much more responsive than the equivalent regulator in the US (the FAA), leading Amazon to move much of its drone trials to the UK. Personal genome services like 23andMe were prohibited in the US, but have been permitted and made progress in the UK. While the UK has not left new sectors completely unregulated, Government proposals in reports like the [Woskrow Sharing Economy review](#) or Tuesday's [Taylor review of Modern Working Practices](#) have largely recognised the value new business models can bring. There is an opportunity for the UK to lead the way in defining best-practice regulatory approaches for emerging technologies and markets and set standards globally.

That does not mean that there is not still more that the UK can do. As both businesses and regulators accepted at our roundtable, the reality of regulatory openness does not always match the rhetoric. The details of how regulations are created and implemented matter, and this can be as much about culture change as it is regulatory policy.

Regulators need to adopt a **pro-innovation culture**. Rather than a pernicious dynamic of 'box ticking', regulators should design regulatory processes which mirror the growth phases of start-ups as far as possible, aligning regulatory requirements with the different stages in a start-up's life-span as it seeks to raise capital. Regulators need to be hyper-alert to vested interests and the potential for rent-seeking incumbents trying to block disruptors and innovators.

One problem that surfaced repeatedly at our round-table was often that the biggest demand for new regulations and boxes to tick comes from the companies themselves – and in particular, large incumbents. By contrast, start-ups often believe they need special regulatory dispensation to try something which in actual fact is already allowed. For example, there are examples of companies applying for a regulatory sandbox, which regulators subsequently told them they did not need. Double checking every detail with the regulator may reduce investor uncertainty, but as John Penrose MP argued it also adds significant delay to bringing in new innovations. There is a huge difference in culture between companies in the digital economy and those in heavily regulated industries. One tells you their current strategy while they go full pace ahead – the other waits for permission before they proceed.

Equally, in a world where technologies and markets are fusing, there is a case that **regulators need work together far more closely**. With the emergence of '4IR' technologies, markets are beginning to fuse and new markets are emerging. More and more companies are now operating across multiple regulated markets. At a basic level, regulators need to respond to this by collaborating more and sharing best practice on what works. Beyond this, there is a case that regulators' statutory duties and functions may need to change. Current duties and functions reflect historic market structures, and just as these market structures are evolving, so to do the remits and functions of

regulators. Cross-regulator collaboration is not helped by the fact that they all report to different government departments.

What are the next steps? Our roundtable discussed three potential policy interventions to encourage innovation:

The first, as suggested by Alan Mak MP, is the introduction of a **British Innovation Principle**. As first [suggested by the European Risk Forum](#), this would help balance out the current over-reliance on the precautionary principle, and ensure that new regulations are not brought in without considering their wider impact on innovation. While few people could disagree with the principle behind this, there are still significant questions remaining about how the details of this would work in practice. How can we judge ahead of time the impact on innovation?

The second, stressed by John Penrose MP, is the use of **outcomes based regulation**. Instead of trying to set regulatory procedures in stone, we instead should clarify the goals we are trying to achieve, and leave the methods open to companies and innovators. However, in order to make this work, we will need better data, which often remains siloed within companies, and clearer guidance from central Government as exactly what the precise objectives should be in a particular area of regulation. Without a clearer steer on what market failures regulation is supposed to be solving, it is very hard to judge how well it is working.

Finally, while not a panacea, the **regulatory sandbox** initiative pioneered by the FCA and more recently Ofgem has provided a new way to test a new idea outside the constraints of the full regulatory system and gain data on how well it works when applied to real customers. There remain significant opportunities to build on the principles behind the sandbox across the range of sectors. Nevertheless, we have to be careful that the sandbox doesn't become a trap, or a skunkworks completely divorced from the day to day running of the regulator. The sandbox should be a start, but we need to make it easier for innovations to graduate out of it, and for the culture of innovation to permeate out across the whole of a regulator.

Over the next few months, Policy Exchange will be working to better understand how Britain can take the new opportunities from the Fourth Industrial Revolution and leaving the EU to put innovation right at the centre of the Government's new Industrial Strategy. How would a British Innovation Principle work in practice, and how can we do a better job of creating outcomes-based regulations? What other markets could benefit from a regulatory sandbox? What about other potential interventions, such as mutual international recognition of regulation, rights to challenge and bounties for identifying outdated regulations, or the wider use of sunset clauses?

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