PRODUCTIVITY AND DIGITAL: A VEXED RELATIONSHIP?

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Paul Connolly, MCA Think Tank Director, argues that the UK is inadequately prepared to get the best from digital

The most frequently trumpeted solution to the UK's productivity problems is digital. Of late, this has meant particularly, though not exclusively, automation and AI. Computers and robots can process information and carry out tasks faster, over longer periods and with fewer errors than people. A shift in the balance of workplace inputs in favour of digital automation can realise productivity gains. Indeed, some commentators argue that properly deployed, digital could yet facilitate productive advances on a par with previous historic leaps forward, such as factory organisation and rail transportation.

Except...

If that is the case, why is productivity so poor in the digital-adopting UK?

Of course, some policymakers have argued that deployment of digital across British business is not that deep. Despite the apparent enthusiasm of the large corporates, overall digital penetration is less advanced than in, say, Denmark. But this is misleading. The UK has far more registered businesses that Denmark. Many are micro-enterprises, including the vast number of one-person concerns established since 2008. Their owners have often left full-time occupations in a particular sector to which they have then returned as a contractor or interim.

The suggestion that overall UK productivity could be significantly improved through targeted digital investments by these enterprises – or through similar investments by local plumbers and building contractors – is a red herring. There

is absolutely no harm in improving SME or microbusiness productivity, of course. But it is in the large UK corporates that major gains can be secured. And large firms have been significant investors in digital. Yet while their productivity has grown faster than SMEs' since 2008, it has done so more slowly than pre-2008.

And then there is the US, a pre-eminent driver of digital across the globe, apparently becalmed in the same productivity doldrums as the UK.

For some economists, there is no surprise here at all. While others argue that digital has yet to get going, pointing to the future potential of AI, they contend that all the significant productivity gains from digital have already happened in the 1990s. Digital is a one-off, they argue, comparable to sharp, but singular productivity lifts of the past, like electrification of the US Mid-West in the 1930s. Yet even those who are positive about the productive potential of digital must wonder why its benefits are so elusive. Online banking and retail, automated shop-assistants, instant access to information on price, real-time customer feedback, collapsed value chains bringing consumers and producers closer than ever: but no productivity revolution.

Consultants suggest that part of the problem is that we have yet to understand what characterises a successful digital deployment. There is an assumption that if you graft digital onto the side of the analogue business model, then all will be well. Indeed, the first wave of digital, with its emphasis on agile solutions, perhaps encouraged this thinking. Don't wait around for the long-term systems overhaul. Just use a miracle digital solution and thrive.

To some degree, this perception has been strengthened by the very visible and enviable productive dynamics among the next generation of digital agitators, especially the integrators. These dynamics include very small human capital and premises overheads. But it is questionable whether these new businesses are the right model for those with an analogue heritage (still the greater part of the economy) to ape. Integrators may have spectacular, almost asset-free growth. But these outcomes may be sui generis – specific digital responses to wholly digital problems; a solution that only digital can fulfil. And they are not necessarily sustainable.

Many analogue businesses have recruited armies

of coders and app writers, created a board-level Chief Digital Officer, and bought lots of kit. Many know what they are doing. Some, searching for competitive digital parity with the integrators, may have the wrong assumptions. Others, knowing they need to do something digital, but with little internal understanding, could simply become the prey to a great number of digital snake oil salespeople.

A large UK network of visitor attractions recently digitised its car parking system. Members, who already possess a readable card to access the attractions, were asked to swipe their cards at the new carpark terminals then print off and display a carpark ticket. Many were irritated. They pointed out that their windscreen membership badges, annually issued, were already sufficient identification. Queueing alongside non-members, who pay at the terminals, in order to swipe a card, which would in due course be read at the entrance to the attraction, was inconvenient. Now there is a customer segment that uses the carparks but does not enter the attractions. However, since this is impossible at some of the attractions and pointless at others, the group is diminishingly small. And while there may be a further subset of this tiny group who forge, steal or borrow the (ebbingly adhesive) windscreen stickers, as yet the police have not set up a special unit to target them. So the organisation announced at some locations that for members displaying their window sticker, use of the machines was 'merely optional'. Accordingly, it had invested in a new system, annoyed its members and achieved limited business gains.

This is not an isolated instance of poor digital procurement and integration. Yet, the truth is that without a fundamental examination of its purpose, structure, products, marketing, culture and skills base, an analogue business cannot hope to exploit digital properly. The most effective utilisations of digital frequently accompany a wider programme of business modernisation and transformation. Indeed

without a fundamental review of the business model, a digital deployment may prove an expensive white elephant.

There are, however, some positives. Our research suggests that UK businesses are wising up to these matters and deploying digital gradually more effectively. And it points to *potential* productivity dividends.

The findings of MCA's survey of senior business leaders, conducted by our research partners VIGA, are balanced about digital's potential. More than 90% of respondents indicated that digital deployments had improved productivity in their business. (The percentage was rather lower in the manufacturing sector, at 74%.) When describing those gains, they highlighted better transaction speed, efficiency, predictability and, significantly, the freeing of human capability to create value for customers. However, a fifth of respondents reported that they had experienced *suboptimal productivity gains* from digital deployments. Explaining this, they indicated that expectations were too high, benefits were taking longer to realise than had been predicted, and that there were problems with staff engagement, mobilisation and training.

What this seems to point to is a fine distinction. Business leaders believe that digital *can* be a route to productivity and have enjoyed some gains to date. But as yet those gains are not reaching their fullest potential. When respondents were asked in what areas they might need productivity advice in the future, digital was first. Second, interestingly, was quality. Digital is helping. But as yet, businesses do not necessarily feel that they have benefited fully from it. A culture of digital excellence is what is what they need.

Excellence will certainly be essential to exploit emerging technologies. Managementors have pointed to the growth in the deployment of Field Service Management Technologies, which help coordinate dispersed workforces, but which have realised extremely different outcomes for firms – even those utilising the same solutions. PwC have recently suggested that the utilisation of drone technologies could add £42bn to the UK economy by 2030. The potential for delivery fulfilment,

public service enhancements (from home care to policing) and even new transport systems is considerable. PwC are ahead of the curve in highlighting it. However, what will matter here is the intelligent and imaginative use of drones. Wherever new capabilities are deployed with the naivety shown in our earlier example, then they may simply create new problems and costs.

The search for a compelling, widely understood consensus on what a strong digital deployment looks like is challenging. In today's fast-moving digitally disrupted context the answer may prove elusive. Businesses need to be savvy about digital investments, to be sure. They need to know what they are doing and why they are deploying digital. Ideally, as we have argued, they need to examine how they use digital alongside a fundamental assessment of their mission and business model. But they must also avoid throwing out the digital agility baby with the bathwater of sound business sense or time-consuming strategic reviews. They need to create space to try things out, adopt them where they work, and discard them quickly if they fail. That means having a great digital culture. Not every firm does.

This may prove a problematic mix of considerations. Businesses face the obvious need, driven by competitors, consumer expectations, and the success of the integrators to 'go digital'. But there is no authoritative instruction manual explaining how. Business cultures characterised by successful digital experimentation are not universal. These challenges could impair investment decisions or, potentially as bad, stifle investment completely. The latter outcome is more likely now than five years ago in an investment climate increasingly depressed by economic uncertainties, especially the trajectory of Brexit.

ATKINS
Member of the SNC-Lavalin Group

60% of respondents to Atkins' Digital Reality report revealed that it would take them two years to become digitally enabled. But given the pace of change, is that timescale appropriate? Some would argue that it is too slow. Isn't true digital enablement

the attainment of an agile and adaptive culture? And if so, what is a strong digital culture? What is the necessary balance between raw technological capabilities and digital skills? And most fundamentally of all, what are those skills?

ARCADIS

As Arcadis point out, all of this really matters since almost whatever analysis is applied to the UK's skills condition the issue boils down to one thing. Gaps.

Skills plainly matter in digital, for the obvious reason that most digital needs people to operate it. If one excludes the wholesale automation of a business function, then digital value is largely co-created. A robotised production line simply has to be installed and switched on to realise its potential. But most workplace digital capabilities are used by workers. They are sometimes complex. They often have functionalities many users don't know about. They must be used with sensitivity, understanding and imagination to derive value. To do so requires skilled workers. To some degree, this takes us to the longstanding issue of inadequate vocational training in the UK, highlighted by Ian Stewart at Deloitte.

Deloitte.

But that is not the complete picture. The problem is not just our technical skills gaps. Of course these matter. Many firms that sought app writers and coders a few years ago may still need them. But others are already finding their needs are better met through off-shoring or even automation. What they now demand is people who know enough about digital to be able to use it *and* can do so with real entrepreneurial nous and creativity. Needless to say, these don't grow on trees.

Elsewhere, in the MCA's response to the Industrial Strategy, *New Economy 2020 and Beyond*, we have argued that to survive the impact of Brexit, the UK should fundamentally overhaul its education system. That the most successful educators on earth, the Finns, are tearing everything up and starting again, is

business schools, our policymakers and our think tanks to place some bets on what business models we will need to thrive in the digital, automation and AI eras, not just today, but over the next twenty to fifty years.

Perhaps I should take a punt. Plainly, we will need people with great technical skills to build and manage our new technologies. But we will also need creative minds to apply them: to commission, adapt, refine, deploy and then work alongside the new capabilities imaginatively and creatively. These people will need digital literacy, to be sure. But they will also need imagination, teamworking skills, empathy, entrepreneurialism, a capacity to challenge received wisdom, strong visual awareness, clarity in communication, tenacity, and enthusiasm. These skills *can* be picked up during a technical education. But they are not exclusive to or synonymous with that sort of training. The arts/science divide, as we have argued elsewhere, identified by CP Snow in the 1950s, is something we must overcome, to create more rounded, adaptable, curious and entrepreneurial school-leavers and graduates, technicians who can create and creatives with a good understanding of what is technically possible. This is perhaps the workforce required to meet the challenges of the 'new normal' of relentless change, identified by Moorhouse.

Moorhouse

In the 1930s, 40s and beyond, almost all the wonderfully creative people in cartoon-making drafted with pen and pencil painstakingly. Since the early 1990s, digital animation has revolutionised the discipline, with the creation and manipulation of digital images at once facilitated and hugely extended in scope and potential. The modern cartoon-maker must have the necessary digital capabilities. But common to both 1930s and present-day cartoonists is creativity. The medium may have changed. But just as not everyone who could draw in the 1930s was not going to create *Tom and Jerry*, so not everyone who can manage a computer animation programme today will produce *The Simpsons*. This fusion of digital and creativity,

blending the miracles of binary coding with the disciplines of design, graphic art and the human genius of narration, is instructive. Many more emerging digital disciplines will demand this cross-boundary approach.

Digital is creating value already. But to optimise that value and thrive, especially in the context of Brexit, will require a culture of digital excellence, with adaptive, creative workers deployed alongside the most cutting-edge technologies.

We are nowhere near prepared.

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(MCA) is the representative body for
management consultancy firms in the UK
and has been at the heart of the UK Consulting
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management consultancy for the economy and
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