Hidden Figures

Why incentivising Digital Adoption matters for tech startups - and how to do it

COADEC

The Coalition for a Digital Economy

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About Coadec

The Coalition for a Digital Economy (Coadec) is the policy voice of UK tech startups and scaleups in Westminster, Whitehall and Brussels.

Founded by Mike Butcher (TechCrunch) and Jeff Lynn (Seedrs) in 2010, Coadec has fought for a policy environment that helps early-stage British tech companies grow, scale and compete globally.

Coadec works across a range of priority issues for startups including access to finance, immigration and skills, and technology policy.

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Summary of Recommendations

1 Create a digital adoption fund that provides tax credits for SMEs adopting new technology

SMEs who invest in technology see the rewards, love them, and would recommend them to their peers. But one in three SMEs cite the cost of investment as being the biggest barrier. The Government should establish a digital adoption fund that enables first-time adopters to receive tax relief on their use of productivity-boosting digital services and technologies. With an estimated £92bn worth of productivity gains up for grabs, this would help the economy to bounce back.

2 Establish a sector-by-sector technology matrix

Many SMEs lack the capacity to understand all the digital tools available to them, and how they can help improve their business' productivity. The Government should establish a sector-by-sector technology matrix that lists a set of pre-approved productivity tools as a guide for SMEs. Even without a full digital adoption fund, this standalone policy would help to signpost the options available to SMEs.

3 Work with LEPs and local groups to build links between start-ups and SMEs

Start-ups are eager to help SMEs understand the benefits of tech adoption and lean business models, but the necessary communication channels are lacking. Government should work with LEPs and other local groups to build links between start-ups and SMEs. This should be run as a pilot, with a view to rolling out more widely.

4 Develop new thought leadership on a post-covid digital adoption strategy

The pandemic has blown huge holes in much of the thought leadership conducted on digital adoption. Government must kickstart a post-covid rethink of our national strategy on tech adoption by consulting with SMEs, tech startups and experts, in order to boost economic productivity and revitalise the British economy.

Section 1:

Introduction

The COVID-19 pandemic has dramatically affected almost every facet of our daily lives and that is no different for British SMEs. As lockdown eases it seems that many of the changes we have experienced will permanently alter the way we work. Whether it is forcing high-street retailers to transition to e-commerce, or conducting business meetings remotely, these changes are unlikely to be reversed in their entirety once the crisis abates. The pandemic has simultaneously highlighted the centrality of technology to the future of SMEs, whilst also exposing the digital adoption gap that exists and has been hampering UK productivity since long before the pandemic.

The UK's productivity crisis is well established and there have been a number of reports that have underlined its causes, moreover, the government have made improving productivity and "levelling up" lower performing regions a top priority of their administration. In particular both the Business Productivity and the Small Productivity Inquiry have singled out uptake of digital tools amongst SMEs as a key area for improvement. This section of the report will provide a summary of the existing literature on the UK's productivity crisis and outline its relationship with digital adoption.

UK productivity – the sick man of Europe again?

Productivity is universally accepted to be one of the most important economic metrics available. On a base level it describes how efficiently inputs such as labour and capital are used to produce outputs such as goods and services. Consequently, the ability of a nation to improve its standard of living over time depends heavily on its ability to raise productivity[1].

$$\text{Labour productivity (output per hour)} = \frac{\text{Gross added value (real terms)}}{\text{Total number of hours worked in economy}}$$

Productivity is also a key component in determining long-term growth rates which increases tax revenues and lowers budget deficits. However, a crucial difference between improvements in productivity and GDP growth is that the benefits of the latter are often concentrated amongst particular areas of the economy or segments of society. By contrast improvements in productivity are directly linked to an improvement in wages and social prosperity[2]. For this reason, many economists see improvements in productivity as the best answer to public dissatisfaction with the UK economy characterised best by the heckling of an economist during the Brexit referendum: *that's your bloody GDP, not ours.*

Historically, UK labour productivity has grown by around 2% per year, but since 2008 it has stagnated. According to the latest statistics from ONS, labour productivity in Quarter 1 2020 (Jan to Mar) fell by 0.4% compared with the same quarter the previous year, with the overall picture being around 25% lower than where we were projected to be on the pre-crisis trend[3]. This is estimated to represent a massive blow to living standards with average wages around £5,000 lower than predicted. By contrast the average French worker is estimated to produce more by the end of Thursday than their UK counterpart can in a full week[4].

Although most nations have experienced slow productivity growth since 2008, the situation in the UK is by far the worst amongst our peers and one of the worst performances in UK history. However, the British economy hasn't always been characterised by slow productivity growth, but performance has fluctuated compared to that of our peers across the last 60 years. In 1960, the UK had the highest level of productivity

1 http://researchbriefings.files.parliament.uk/documents/SN06492/SN06492.pdf
2 https://www.epi.org/publication/webfeatures_snapshots_archive_03222000/
3 https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/articles/gdpandthelabourmarket/januarytomarch2020
4 https://www.ft.com/content/6ada0002-9a57-11e8-9702-5946bae86e6d

in Europe before suffering a slowdown in the 1960s and 1970s which led to the UK becoming known as the "sick man of Europe". This was followed by an extended period of efficiency between 1980 and 2008 with the UK making up much of the lost ground off the back of economic reforms and increased openness to globalisation[4].

The causes and context of low productivity

For their part, the government is acutely aware of the dangers low productivity poses for the long-term success of the British economy and have made narrowing the productivity gap an essential component of their plans to "level up" the British economy. The causes of the UK slowdown have been widely analysed with the Bank of England citing: weak investment that has resulted in reduced quality of equipment employees are working with; low interest rate environment propping up failing businesses; and reduced lending as a result of the banking crisis[5].

Analysis by the Productivity Leadership Group (PLG) points to an economy that has many high performers but where there is a long tail of unproductivity that accounts for 75% of UK businesses, concentrated in SMEs and regions outside of London. The government has also explicitly linked the productivity gap to the performance of SMEs and improving the uptake of digital tools was a core recommendation of both the Business Productivity Review and the Small Business Productivity Inquiry. The PLG report finds that two-thirds of the UK workforce are employed in underperforming companies and that only 6 of the UK's 63 towns and cities have a higher productivity than their European counterparts[6].

Similarly, the government's Industrial Strategy estimates that the regional productivity gap is now at its highest level for over a century. Their research found income per hour in West Inner London to be more than twice as much as lowest performing Cornwall. They cite agglomeration effects as a key factor, whereby some cities have been able to attract clusters of activity which have become self-sustaining. By contrast less productive areas simply don't have enough productive companies to attract sufficient numbers of skilled workers which can lead to small initial differences in performance growing rapidly[7].

It is clear from analysis undertaken by the Office for National Statistics (ONS) that the underperformance of SMEs plays a pivotal role in the story of British low productivity. Table 1 shows that businesses with less than 250 employees are significantly less productive than Large (250-999) businesses. It is worth noting that although Large (1000+) firms perform poorly, this is understood to be as a result of the industries that these firms are found such as retail and hospitality which are largely occupied by low skilled members of staff.

Firm size	Mean average	Median average
Micro (1-9)	£43,400	£24,000
Small (10-49)	£45,400	£29,400
Medium (50-99)	£53,000	£35,000
Medium (100-249)	£53,400	£36,700
Large (250-999)	£56,600	£37,000
Large (1000+)	£45,500	£27,500

Table 1

Source: Office for National Statistics, "Understanding firms in the bottom 10% of the labour productivity distribution in Great Britain: "the laggards", 2003 to 2015".

4 https://www.ft.com/content/6ada0002-9a57-11e8-9702-5946bae86e6d
5 The UK Productivity Puzzle – Quarterly Bulletin 2014 Q2
6 https://www.gov.uk/government/publications/made-smarter-review
7 https://industrialstrategycouncil.org/uk-regional-productivity-differences-evidence-review

With small firms disproportionately represented amongst the UKs more unproductive businesses, it is clear that any path to returning the UK to a higher rate of output will require significant improvements targeted at this cohort. This is especially true given that SMEs employ 60.5% of the population and generate 52.2% of turnover[8]. Consequently, there is a huge amount of room for the government to lift UK productivity through targeted action aimed at supporting SMEs innovate and embrace more effective technologies and workplace practices.

The link between productivity and technology

There is a raft of literature establishing the positive impact that digital adoption and ICT use has on productivity both on a micro and macro level. In particular analysis has shown that UK firms have benefited from an 8% increase in productivity through the use of online analytical services compared to comparable businesses that don't[9]. It is estimated by Oxford Economics that there are potential gains of £92bn if lower performing British firms can increase their digital technology use to the same standard as leading firms[10].

Similarly, research conducted by the ONS has revealed that firms using more digital tools had more sales per worker, with a 1.0% increase in turnover share through web sales correlating with a 0.2% increase in productivity. Although the benefits of adopting digital tools vary from sector to sector, clear patterns have emerged such as the service industry benefiting especially from tools to improve business organisation and manufacturers seeing an improvement in productivity when hiring ICT specialists[11].

Digital adoption can improve productivity for businesses in a number of different ways with the most obvious being direct innovations that reduce the administrative cost of basic tasks. However, there are a number of technological improvements that SMEs may have less knowledge about with the Centre for Policy Studies listing 9 productivity boosting types of technology included in the table 2[12].

The potential benefits of these technologies for SMEs and the wider UK economy is considerable. The Enterprise Research Centre[13] conducted a three-year study into the impact of digital adoption on the performance of 6,200 micro firms and found the following:

CRM software – sales increase of 18.4% per employee
Cloud-based computing – sales increase of 13.5%
Web-based accounting software – added 11.8% to sales per employee
E-commerce – added 7.5% to sales per employee
Computer-aided design – added 7.1% to sales per employee

Were these results to be replicated across the UK's 1.1 million micro businesses it would amount to a £16.6 billion productivity boost. They estimate that this would amount to a £4,050 average wage increase for the 17.6% of the UK's workforce that is employed by micro businesses. While this research covers micro businesses only, a recent report into the productivity payout estimates that an additional £11.9 billion in turnover would have been gained by UK SMEs had they fully adopted Financial Management Software .

8 https://www.cps.org.uk/research/platforms-for-growth/
9 Volterra Partners (2017) The Productivity Payout UK Small Businesses and the Digital Economy The UK's £92bn Digital Opportunity
10 Oxford Economics (2017) The UK's £92bn Digital Opportunity
11 https://www.tenentrepreneurs.org/research/upgrade
12 https://www.cps.org.uk/research/platforms-for-growth/
13 https://www.tenentrepreneurs.org/research/upgrade

Table 2

Technology type	Description
Advertising	Digital platforms have transformed advertising from a huge financial barrier to entry for smaller firms into a more democratised industry that allows smaller firms to micro-target their products at those profiled as most likely to make an order.
Sales and growth	The expansion of e-commerce and an increasingly trusting consumer base is allowing SMEs to grow their businesses and export their goods through platforms such as Amazon. This is critical since increased exports is seen as a key driver of productivity gains.
Digitising operations	There is now a plethora of digital apps aimed at reducing the amount of admin that occurs in the workplace. For example, an app that scans documents and allows them to be processed quicker will allow workers to complete significantly more tasks than if workers had to type up the relevant information. This in turn frees up workers to focus their efforts on other areas of the business.
Customer relationship management systems	CRM software allows businesses to keep track of potential customers, translate leads into more sales, and better monitor worker performance. Some also have functionalities to allow customer analysis based upon location, purchasing preferences and demographics.
Digital accounting software	Digital accounting software allows businesses to conveniently store, handle and analyse financial data. This allows them to more rapidly process important information and better monitor cash flow issues. Furthermore, it has the potential to significantly reduce the amount of late payments that cause such disruption for SMEs.
Human resources software	HR software can assist in reducing and improving employee admin such as holiday entitlements, timesheets etc. HR software can also assist in the recruitment process allowing for a more rigorous approach to hiring.
Project management software	Project management apps allow colleagues to collaborate on key multifaceted projects while enabling managers to monitor the work to ensure that efforts aren't duplicated and that the progression stays on course.
Enterprise resource planning systems	ERP systems help businesses integrate various parts of their firm to ensure they can stay on top of important tasks and procedures. Examples include inventory management and performance management.
Cloud computing	Cloud computing allows businesses to access technology services such as computing power, storage and databases on an "as needed" basis without owning and maintaining physical data and servers themselves. SMEs overwhelmingly believe that cloud technologies allow them to scale up faster and facilitate access to new markets.

The Cloud: unlocking transformation

Cloud services have emerged as the central player in the story of innovation and dynamic working for businesses across the globe. Understood at its most basic level cloud computing refers to the delivery of services through the internet without direct active management by the user including services such as: servers, storage, databases, networking, software, analytics and intelligence[15]. Cloud services are a foundational technology that productivity boosting tools rely upon and will underpin the next wave of transformation through artificial intelligence, the internet of Things and robotics.

Businesses that use cloud technologies overwhelmingly identify its the benefits as lower cost, increased speed, improved security and productivity gains. The transformative economic effect of cloud technologies is illustrated by research conducted by Deloitte showing that the adoption of cloud services by businesses in Australia resulted in a cumulative productivity benefit to the economy of $9.4 billion dollars between 2014 and 2019[16].

Recent years have seen an important shift in the way businesses employ cloud from using this technology for application hosting and data storage to deploying cloud-native applications and on-demand computing power. This is allowing businesses to refine their business models around cloud services, however, it varies considerably from sector to sector with high-skilled industries at the forefront of use. This presents a considerable opportunity for SMEs and sectors with low productivity such as hospitality to radically improve their services and economic performance[17].

But of course, this only matters if we're able to turn the jargon heavy world of technology transformation into a tangible conversation that small business owners want to engage with. That's where British tech startups, with their own tech both designed as cloud-first and powered by cloud services, could play a critical role.

Digital Adoption in the UK

The available data on digital adoption in the UK shows that while there is considerable strength in the UK's innovation, the UK continues to lag behind Europe's digital leaders when it comes to the spread of digital adoption throughout the wider economy. Alarmingly the UK ranks 26th for use of enterprise resource planning (ERP) according to the EU Digital Indices and only 10th and 8th on e-commerce and e-business respectively[18]. Overall the UK ranks 11th on the EU's Digital Intensity Index which measures the adoption of 12 different technologies[19].

The data also illustrates the chasm between the UKs most productive and least productive firms. For example, the UK ranks fifth for knowledge creation amongst 129 countries in the Global Innovation Index

14 Volterra Partners (2017) The Productivity Payout UK Small Businesses and the Digital Economy The UK's £92bn Digital Opportunity
15 https://azure.microsoft.com/en-gb/overview/what-is-cloud-computing/
16 https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-value-cloud-services-australia-230719.pdf
17 What is cloud computing? Available at https://aws.amazon.com/what-is-cloud-computing/
18 https://ec.europa.eu/digital-single-market/en/desi
19 https://www.tenentrepreneurs.org/research/upgrade

yet when it comes to spreading best practice to all SMEs the UK only ranks 12th, having been 20th the year before[20]. Likewise, the UK is ranked as a strong innovator by the EU's Innovation Scorecard with 50% higher employment in knowledge-intensive industries compared to the EU average[21]. However, just 3% of UK businesses use ten or more key digital technologies compared to 12% in Denmark.

Although there is generally a shortage of official data on small businesses and digital adoption, the Small Business Survey conducted by the Department for Business, Energy and Industrial Strategy gives an indication of digital take-up amongst SMEs. The most recent sample survey found a mixed picture with 85% of respondents using digital accounting software, 49% using web-based software for sales, and just 16% using HR management software[23]. While 38% of UK businesses still have very low levels of digital adoption, there have been some success stories with the number of micro businesses storing data in the cloud quadrupling from 10% to 40% between 2012 and 2018.

Barriers to digital adoption

Analysis of the technological performance of UK SMEs finds three main themes that explain the barriers to greater digital adoption with the UK economy; awareness, knowledge, cost.

Put bluntly, many unproductive firms don't realise that they are unproductive. At the root of this is that SMEs frequently fail to monitor their own productivity levels. Remarkably one piece of research found that 80% of SME owners believe their business to be more productive than their rivals[23]. Likewise, it has been suggested that perceptions of low productivity amongst rival firms can create a spiral effect where businesses don't feel the need to improve their own productivity as a result[24]. This reveals a level of complacency in some instances but also a lack of understanding of the processes that they can undertake and where they can receive professional advice. The solution to this problem is widely seen to be increased knowledge sharing between business owners to build networks that can spread best practice and expose SMEs to the limits of their current approach.

A lack of digital skills amongst management and employees remains a significant barrier to digital adoption. The ability to implement new digital systems rests on the digital literacy of current employees or the ability to hire additional members of staff to fill the gaps. Surveys have shown that almost half of SMEs felt unable to hire staff with the right level of digital skills. There can also be managerial barriers if owners are unable to persuade employees of the merits of innovation or if they are unable to take advantage of the benefits of new systems. The government is committed to improving digital skills amongst the workforce and a number of recommendations including R&D tax credits have been made to allow this training to take place in the workplace[25].

Finally, cost is seen to be the most prohibitive factor for many SMEs whether it is a result of limited access to cash or transition costs associated with new technologies. In particular there is an issue with banks refusing to fund digital projects as result of their own lack of expertise and risk aversion[26]. Similarly, investments in digital assets are risky by nature given it is difficult for lenders to recoup cost by taking collateral. There are a number of options to financially support SMEs who are committed to adopting new technologies that we will explore in greater detail in the recommendations section of this report.

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23 Be the Business. (2018). Overconfidence on productivity is hampering British performance characteristics and HR expertise. The International Journal of Human Resource Management, 25(8), 1149-1169.
24 https://www.tenentrepreneurs.org/research/upgrade
25 Volterra Partners (2017) The Productivity Payout UK Small Businesses and the Digital Economy The UK's £92bn Digital Opportunity
26 European Investment Bank. (2019). The digitalisation of small and medium enterprises in Ireland: Models for financing digital projects.
27 https://www.imda.gov.sg/-/media/Imda/Files/Programme/SMEs-Go-Digital/Media-Factsheet_SMEs-Go-Digital_24-June-2020.pdf?la=en

Examples from abroad – the Singapore scheme

Launched in April 2017, Singapore's 'SMEs Go Digital' programme aims to make going digital simpler for SMEs and provides them with a government grant of up to 70% (with an annual cap of $30,000) to make long-term investments in approved digital solutions that have been scoped to enhance productivity[27].

How the scheme works

Sector-specific Industry Digital Plans (IDPs) provide SMEs with a simple guide on digital solutions to adopt and the relevant training that is available for their employees. IDPs have been created for a wide range of sectors including: Retail, Logistics, Environmental Services, Security, Food Services, Wholesale Trade, Media, Sea Transport (Harbour Craft and Ship Agency), Accountancy, Hotel management, and Construction and Facilities Management. SMEs are given a list of pre-approved solutions that have been market-proven to be cost effective and are supported by successful businesses within their sector.

What the scheme delivers

This programme is designed to both boost productivity and grow the start-up ecosystem within Singapore. Grow Digital also provides a tool to help SMEs expand into international markets by allowing SMEs to participate in overseas e-commerce platforms and build networks that allow for greater overseas exposure, optimised listings and cross-border e-payment facilities. SMEs that successfully improve their digital capabilities and broad base of enterprises are rewarded with a Digital Resilience Bonus. During the Covid-19 pandemic this has been targeted specifically at Food Service and Retail that have been most affected by social distancing requirements.

Over 4000 SMEs had signed up within the first 2 years and the scheme has continued to grow rapidly since. Research conducted into the adoption of Basic Digital Tools (BDT) and Advanced Digital Tools (ADT) in Singapore found that they produced a significant increase in their value-added productivity, at 25% and 16% on average[28]. Likewise, a 2018 study by Microsoft found that 56% of SMEs had a digital transformation strategy in place and those who embraced digital adoption saw average revenue gains of 26% and an average 22% in cost savings[29].

Case Study 1: LeadGen

LeadGen is a UK based start-up formed in 2016 that has developed an online software service tool that helps online marketers to build lead capture forms. This helps marketers to connect with their target audiences and to more efficiently convert web visitors into captured leads. LeadGen App is used by hundreds of SME businesses, digital marketers and digital agencies around the globe.

Co-Founder and CMO of LeadGen, Christopher Lier, explains: "Our promise to businesses that use our app is that they can expect to capture 5 times more leads as before – we are confident about that as well as it is often much bigger. The LeadGen app improves productivity in a number of ways. First of all, it can take less than 5 minutes to develop a custom form and does not require any coding skills. This saves a huge amount of time and the cost of using a private developer. Secondly, our app allows customers to more effectively capture and maximise leads which allows them to grow faster and build a better relationship with their customers. Finally, our app builds a user journey that allows customers to feel

27 https://www.imda.gov.sg/-/media/Imda/Files/Programme/SMEs-Go-Digital/Media-Factsheet_SMEs-Go-Digital_24-June-2020.pdf?la=en
28 https://www.mti.gov.sg/-/media/MTI/Resources/Economic-Survey-of-Singapore/2019/Economic-Survey-of-Singapore-First-Quarter-2019/FA2_1Q19.pdf
29 https://news.microsoft.com/en-sg/2018/10/23/singapore-smes-who-embrace-digital-transformation-expect-to-see-average-revenue-gains-of-26-asme-microsoft-study/

safe and more comfortable about giving away their personal details."

"Attracting customers is our biggest challenge, once businesses adopt our product we find they are delighted with the results and our customer retention rates are excellent. Our experience is that US SMEs are much more open to new technologies than in the UK where they are more cautious about adopting new technologies. People in the UK have excellent skills, the benefits of an English-speaking market, access to capital and tools, but the challenge is to get SMEs excited about change and the adoption of new technologies. Innovation is essential to keep British businesses competitive, when the pace of technological change is so rapid."

"LeadGen is a relatively new start up but even in the last couple of years the tools have changed almost beyond recognition. Companies need orientation around these schemes as well as financial incentives because the amount of options available are growing at a considerable rate. The UK skill set is good but SMEs don't always have access to those skills and they need help understanding what tools are available to them and advice on implementation."

"It goes without saying that government grants to encourage SMEs to adopt new technologies would be hugely beneficial to both our company and our customer base. This would open up opportunities for start-ups like Leadgen to expand to new audiences. We have less resources than the tech giants to educate potential customers so a scheme that creates the space for SMEs to link with start-ups would be of huge benefit."

"There is always a risk with any grant-based policy that the biggest companies will take advantage but the question is how do you structure it in a way that focuses on benefiting smaller British start-ups. This concern is real but the benefit to SMEs and smaller start-ups outweigh that negatives in my view."

Case Study 2: Harri

Harri is an end-to-end HR and workforce management technology platform aimed at improving the productivity of businesses in the hospitality sector. Their software allows businesses to manage and engage more effectively with their teams and provides a huge range of services that covers more than 30 modules.

CEO and founder of Harri, Luke Fryer, told us: "To be blunt the industry that is most backwards when it comes to technology is hospitality. Although the nature of the sector means that some organisations employ large numbers of staff they absolutely share the same problems with productivity as SMEs. Our platform helps those companies acquire their talent, manage the hiring process and manage the day-to-day body of work. We cover everything including scheduling, communications, workflows, task lists, training performance review and analytics for management on labour cost, revenue and productivity."

"The challenge in the hospitality sector is that in the past the cost benefit of adopting new technologies hasn't always been there in the UK. Until recently the cost of labour has been lower than in other countries and that has allowed the hospitality sector to avoid adopting innovative solutions. However, the situation is changing rapidly with a number of pressures driving up wages faster than the menu prices. The simple fact for those in the hospitality sector is that they need new technologies to operate effectively otherwise they won't make a profit. That is where Harri comes in. Our system will make sure the right people are in the right place at the right time, not too few of them so that customers are unhappy but not too many so businesses are wasting money. We improve productivity measures between 10 and 20% as our technology is implemented."

"For SMEs as a whole it's really hard for them to take a strategic view of how to buy technology. They don't have specialist staff that allows them to take a strategic view so they end up shopping for point solutions which can end up with a whole series of tools that don't work together effectively. The UK could benefit hugely from a sector by sector matrix issued by the government that outlines the options available to SMEs."

27 https://www.mti.gov.sg/-/media/MTI/Resources/Economic-Survey-of-Singapore/2019/Economic-Survey-of-Singapore-First-Quarter-2019/FA2_1Q19.pdf
28 https://news.microsoft.com/en-sg/2018/10/23/singapore-smes-who-embrace-digital-transformation-expect-to-see-average-revenue-gains-of-26-asme-microsoft-study/

"The UK government has made a great start on the supply side with the R&D tax credit which has allowed Harri to invest massively in the UK. In my view it would be a no brainer to invest in the demand side of this equation as well by providing tech adoption grants to low productivity sectors. This would provide an excellent opportunity to smaller tech companies who can move faster than the tech giants to meet the ever-evolving needs of SME businesses. In particular many SMEs will require bespoke services that more nimble start-ups are much better placed to deliver."

"To put it simply, the UK has both a fantastic base of tech start-ups building productivity tools and a huge number of SMEs in need of technological improvements – a scheme that benefits both seems like a win-win situation to me."

27 https://www.mti.gov.sg/-/media/MTI/Resources/Economic-Survey-of-Singapore/2019/Economic-Survey-of-Singapore-First-Quarter-2019/FA2_1Q19.pdf

28 https://news.microsoft.com/en-sg/2018/10/23/singapore-smes-who-embrace-digital-transformation-expect-to-see-average-revenue-gains-of-26-asme-microsoft-study/

Section 3:

Our Research

1. Government funding for digital adoption has overwhelming support of start-ups… but there is a diverse set of opinions about how it should be implemented

Our survey of B2B tech start-ups found that an overwhelming 93% of those surveyed agreed that a Government backed financial incentives for small businesses to invest more in cloud software would boost sales of their products and services. However, we found that there was a range of views amongst the start-ups about what would be the best mechanism for the Government to provide financial incentives with 41% favouring cloud software being included in capital allowance claims, 28% supporting one time use vouchers and 24% backing time-limited discounts. This overall picture chimes with the views expressed by the founders of Harri and LeadGen who were categorical in their support for benefits of government grants for SME digital adoption. It is clear that tech start-ups view this as a policy that would benefit the whole sector and not just the largest companies.

2. Start-ups think that SMEs need more advice to take advantage of the productivity tools available

Both the founders in our case studies expressed concern that many SMEs lack the resources to take an effective strategic overview of the technologies available to them. This is reinforced by our survey data that found over 90% of those surveyed would be willing to engage more with traditional SMEs to educate them on the benefits of technology adoption and lean business models.

3. SMEs are enthusiastic about the technology that they have adopted so far

Our survey found that take up of basic technology solutions was high for Email (71%), Office Software (58%), File Sharing & Storage (34%). Video Conferencing (34%). For more advanced technology solutions results were mixed (table below). However, there are encouraging signs that remarkably high rates of SMEs that have already adopted advanced solutions would recommend them to other SMEs.

Technology solution	Have implemented in their own business	Would recommend to other small busiensses
Email (e.g. Gmail)	71%	91%
Office Software (e.g Microsoft Office)	58%	92%
File sharing & storage (e.g dropbox)	34%	93%
Video conferencing/ VoIP (e.g Zoom or Microsoft Teams)	34%	95%

Accounting & Bookkeeping Software (e.g Quickbooks)	39%	89%
Electronic Payments systems (e.g Stripe)	21%	92%
Customer Relationship Management Software (e.g Salesforce)	11%	90%
Project Management Software (e.g Monday.com)	8%	88%
Computing power to run business (e.g AWS or Microsoft Azure)	12%	89%
Human Resource Management (e.g CIPHR)	6%	91%
Enterprise Resource Planning (e.g Oracle Netsuite)	6%	85%

4. Lowering cost would dramatically increase the number of SMEs able to adopt new technologies

A clear majority SMEs (69%) say that Government provided financial incentives for their businesses to adopt more technology would result in their business implementing more digital tools. There is some regional variation within the English regions with the South East scoring the highest (76%) and East of England (58%) the lowest. Several regions that struggle with low productivity such as the North East (75%) and Yorkshire & the Humberside (72%)scored particularly high results also. Overall this picture is similar to the views of start-ups who by a margin of 93% to 7% believe government grants would boost sales of their products.

5. SMEs are open to a wide-range of measures to encourage tech adoption

By an overwhelming margin, 80% of SMEs say that at least one government programme would encourage them to adopt more technology in their business. There was a wide range of views as to which would be the most successful with 42% of respondents seeking better information on which products are best suited for their business, and 32% each for a programme of discounts on productivity-enhancing software, and personalised support from local tech experts & other small businesspeople.

Section 3:

Our Recommendations

Throughout our research and discussions with start-ups, three areas in need of attention have been highlighted repeatedly: the cost of adopting new technologies; insufficient knowledge for SMEs to take a strategic overview of the technologies available to them; and a rapidly changing environment in light of the pandemic and economic downturn. Based upon these areas of concern, we have made four recommendations for the UK government to consider that would reduce the barriers to British SMEs adopting new technologies and ultimately reduce the productivity gap.

We would recommend that each of these policies be considered on their own merit but contend that the combined effect of their implementation would have a much greater impact on the sector. We are conscious of the scale of the challenge facing British business and start-ups during the Covid pandemic and would seek to work as closely as possible with the Government to implement these changes and support the sector throughout this challenging period and beyond.

Recommendation 1: Create a digital adoption fund to provide tax credits for SMEs

The vast majority of small business owners are aware that upgrades and investments can transform the productivity of their businesses, but 1 in 3 SMEs consider costs to be the biggest barrier for them to invest in productivity enhancing technology. Furthermore, our research shows that SMEs and start-ups both overwhelmingly support government based financial incentives. We propose a digital adoption fund to help small businesses and first-time adopters receive relief on their use of productivity-boosting digital services and technologies.

We propose a system – based upon the Singapore "SMEs go digital" programme – that would provide SMEs government grants of up to 70% (with an annual cap of £22,500) to make long-term investments in digital products that are pre-approved by the government as productivity enhancing tools. We recommend that the following types of cloud technologies be included in the government's pre-approved list:

Accounting & Bookkeeping Software	Document Management and Mobile Access Systems	Human Resources Management Software	Sales Management Systems
Computing power to run business software	E-Procurement Systems	Inventory Management Systems	Smart Toilet Systems
Customer Relationship Management Software	Electronic Payments systems	Learning Management Systems	Source Code Review Tools
Cyber Security	End Point Protection Platforms	Online Legal Research Systems	Video Analytics for Crowd Management
Digital/Online Ordering and Payment Systems	Enterprise Resource planning	Project Management Software	Waste Tonnage Monitoring
Distribution Management Systems	Fleet Management Systems	Remote Working Tools	Workforce Monitoring & Reporting Management

The UK government should be inspired by the huge success of the Singapore model that has seen a rapid increase in the number of SMEs adopting new technologies since the scheme's introduction in 2017. The impact of this policy in the UK could be worth billions to SMEs with an £92bn worth of productivity gains estimated to be up for grabs if lower performing British firms can close the productivity gap. Our research also shows that government funding for digital adoption has the backing of British start-ups and SMEs alike which see it as a win-win for British industry.

Recommendation 2: Establish a sector by sector technology matrix to provide SMEs a strategic overview

There is concern amongst British start-ups that SMEs lack the capacity to keep up to date with an ever-changing set of productivity tools available to them. In particular many SMEs are unable to take a strategic overview of what tools their business needs and how they relate to each other. To remedy this problem, we propose a sector by sector technology matrix to provide SMEs a strategic overview of the tools available to them.

If recommendation 1 were to be implemented, this matrix would work hand-in-hand with the list of pre-approved productivity tools to guide SMEs to the tools that they need to most effectively boost productivity. However, we believe that even without a full digital adoption fund, this would be a worthwhile stand-alone policy for the government to consider to help boost awareness of the options available to SMEs.

We recommend that Industry Digital Plans be considered for the following sectors based upon the Singapore model:

Accountancy	Healthcare	Retail
Building & Construction	Hotel Management	Security
Cleaning	IT	Training and Adult Education
Childhood Services	Legal	Travel Agents
Food Manufacturing	Logistics	Waste Management
Food Services	Pest Management	Wholesale Trade

Recommendation 3: Work with LEPs and other local groups to build links between start-ups and SMEs

While it is clear that SMEs see cost as the biggest barrier to adopting new technologies, our research shows that British start-ups still see knowledge as a key barrier. The adoption and roll-out of new technologies requires effective management combined with a high-level of IT literacy that not all SMEs are able to afford.

We propose that the UK government work with LEPs and other local groups to build links between start-ups and SMEs. We envisage the creation of a pilot through the business basics fund at BEIS as a starting point with a view to rolling out more widely.

Our research shows that there is considerable willingness on the part of start-ups to engage in a programme of this type with over 90% of start-ups saying that they would be willing to engage with SMEs on the benefits of tech adoption and lean business models. It is our view that this is most effectively delivered within the regions that individual SMEs operate in, with local partners who they trust to understand their business and the environment which they are operating within.

Recommendation 4: Develop new thought leadership on a post-covid tech adoption strategy

The Covid-19 pandemic has been a wakeup call to British businesses with regards to the adoption of new technologies. Remote working facilities and online marketplaces have been a lifeline for those who were prepared, but others have been forced to play catch up at considerable cost to their business and the wider UK economy.

These changes in the economic landscape have blown huge holes in much of the thought leadership on digital adoption conducted before the pandemic. Perceived barriers such as management and skills may be proved to be nonsense in a world where 90% of the public say they wish to continue working from home until Covid-19 is eradicated.

Consequently, we propose that the government recognise that we are operating in a fundamentally different technological environment by kickstarting a post-covid rethink of our national strategy on tech adoption. This should include consideration of our proposals and wide consultation of SMEs, tech start-ups and experts to generate a new strategy to boost economic productivity and revitalise the British economy.

In particular the government could have a renewed focus on boosting digital skills & literacy focused both at SME employees and users of SME services. For SMEs to fully digitise, it is essential that their customer base is sufficiently tech savvy to feel comfortable using their services. This can be particularly problematic in areas with ageing populations, however, the pandemic presents an opportunity to initiate wider changes in behaviour amongst a population that is conscious that they need to adapt to operate services in their day to day lives.