The UK tourism productivity gap

Challenges and potential for tourism productivity

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Executive summary

This report was commissioned by VisitBritain to provide a synthesis of existing knowledge about the productivity challenge facing the tourism industry in the UK, its determinants, future challenges, and approaches to raising productivity based on an analysis of secondary sources.

Since 2008, the overall productivity of the UK economy has been lower than all other G7 countries and the gap has been growing. Despite tourism currently being one of the strongest sources of employment in the UK economy, its productivity is strikingly low compared to other countries and other sectors of the UK economy.

The challenges and potential for tourism productivity:

- Traditional productivity measures have limited applicability to the tourism industry but service productivity measures, which might include components of service quality and consumer satisfaction and need to cover the diversity of the industry, have not yet been effectively operationalised by government, industry or academic research. This makes quantitative benchmarking difficult.

- As a key determinant of output, variations in demand are one of the biggest influences on tourism productivity. Demand variations include both changes in numbers of visits and also in visitor spend. Regional demand variations highlight the concentration of tourism in London influencing regional productivity differentials that add to the long tail of weak productivity in the sector.

- A lack of investment in capital and infrastructure is restricting productivity growth in the tourism sector. Poor connectivity due to limited transport infrastructure and broadband bandwidth and speed are a significant drag on tourism productivity levels, especially in rural and coastal areas.

- The tourism workforce tends to be transient, temporary, low skilled, young and migrant, with EU nationals being an important segment of the labour market. High labour turnover/low staff retention and difficulties in recruitment are a major dampener on tourism productivity due to the loss of skilled and experienced workers, and the disincentive to training. The sector faces a potential major skills gap, especially due to uncertainty about Brexit which will impact on skills, talent and employment.

- The rise of digital platforms and the emergence of new forms of economies, such as the gig or sharing economy, have led to an increase in non-standard work and negative impacts on traditional businesses. Increased accessibility to data can generate insights from data analytics and data-driven innovation, which can enhance productivity in the long-run; but infrastructural weaknesses are barriers to realising these benefits. Emerging automation and AI capabilities are considered to be productivity enhancers, but costs, skills shortages and lack of investment mean this is still in the very early stages for the majority of the industry.
Key responses:

- The government and industry need a better understanding of tourism productivity and this requires better knowledge sharing and collaborative discussions in the form of business networks and communities. New and alternative measures of productivity and its components should be explored that can capture the many different dimensions of productivity. Digital tools and platforms for benchmarking performance and productivity should be further developed and used by tourism businesses.

- Improved demand management is a key to improving productivity, and there are existing technologies and data analytical systems which can be used to enhance forecasting and revenue management. Diversification and market development, segmentation and targeting can raise productivity.

- Government support is needed to increase connectivity and provide relevant and state of the art infrastructure. Collaborative partnerships at a regional or local level can help to deliver stronger and more sustainable investments in capital and infrastructure, which can help address the regional differences in tourism productivity.

- Flexible labour arrangements are an important means to manage labour inputs in the face of demand variations, and for enhancing productivity. Relevant skills to effectively use data as a key infrastructure for potential economic and productivity growth and innovation needs to be explored in order to identify the skills gaps. Regular meetings and communication between managers and employees can help identify skill needs and training requirements, employee motivation and career pathways in order to improve staff retention. Planning for post Brexit is essential but difficult given continuing uncertainties, but campaigns to recruit more British workers can be promoted regionally.

  Apprenticeships offer an important means to attract workers into the industry and raise skill levels so as to improve productivity. Collaborative partnerships in local areas can improve understanding of the people and skills in an area and deliver strategic solutions to enhance tourism employment and productivity.

- There is a need for stronger linkages between tourism infrastructure, policy and regulatory environments as well as providing the necessary skills base to stimulate and deliver effective innovation in the sector. This could be achieved through the creation of networks, business communities and/or tourism zones to share knowledge and best practice on working practices, IT adoption and innovation. There is a need for policies which specifically target innovation in tourism businesses, especially SMEs, as a means to raise productivity. This could be addressed with further opportunities for government funding and KTPs to encourage collaborative research between industry and academic institutions.
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Key terminologies
Productivity puzzle refers to the stagnant productivity growth levels after the 2008 global financial crisis
Productivity paradox refers to the existence of low productivity levels despite high investment and expected benefits from the application of information technology (IT)
Tourism productivity challenge refers to the persistent low productivity levels of the tourism industry in the UK; this is the outcome of the productivity puzzle and productivity paradox in the tourism industry
Tourism and The UK Tourism Productivity Gap

Key points
• The productivity puzzle post-2008 has been larger in the UK than in other G7 countries.
• Despite tourism being one of the strongest sources of employment in the UK economy, its productivity is strikingly low.
• There is a substantial productivity gap between the tourism sector and most other sectors in the UK economy.

Productivity in the UK has been at the frontline of government agendas and economic debates over many decades, but these have been given greater emphasis due to the uncertainty surrounding Brexit and the 2017 ‘Industrial Strategy: Building a Britain fit for the future’. In the face of concerns about changes in international migration and labour skills and costs, global competition, and exchange rate fluctuations, UK businesses are facing intense competitive pressures, as well as the need to engage with rapid, often radical, technological shifts. Within this context, there have been growing concerns about productivity in recent years.

Productivity is a key driver of long-term economic growth, competitiveness, wages, and national living standards, and its growth has persistently slowed down in many advanced economies in recent decades. This is linked to the so-called ‘productivity puzzle’, whereby productivity levels have stagnated following the 2008 global financial crisis, and the long-standing concern about the ‘productivity paradox’, the decline in productivity growth since circa 2004 despite anticipated gains from technological innovation. This overview is something of an oversimplification because although the productivity slowdown after the 2008 crisis was evident across the whole economy, the detailed evidence for each sector is different.

What is productivity?

Productivity is usually referred to as labour productivity, which is simply measured as the total output of a business divided by the number of employees or total worked hours. The total output of a business can be measured in various ways: total revenue or sales, turnover or value of goods and services supplied. The common measure used is gross value added, which is the difference between revenue and the intermediate inputs used to produce this value added. Productivity shows us how effective and efficient an individual, firm or country is.
During the 2008+ economic recession, the highly performing and productive (large) firms have been driving UK productivity, and this same pattern persisted after the recession. However, these ‘globally leading frontier’ firms, as the OECD labels them, are a small minority of the total body of firms which make up the economy, which implies that ‘the rest’ are making little or no progress. They have formed the so-called ‘long tail of productivity laggards’, which is mainly – but certainly not entirely – comprised of small- and medium-sized enterprises (SMEs) and is essentially pulling down the overall growth of productivity. Furthermore, two-thirds of the workforce are employed in these low productivity firms. This is particularly pronounced in the UK tourism industry which is one of the four sectors (construction, retail, administrative services and hospitality and tourism) with the lowest levels of productivity in the UK.

Given that the sector is comprised of over 240,000 businesses, of which the majority are SMEs or micro-businesses, this means that there is a very substantial ‘long tail’ of productivity laggards in tourism. This creates a large productivity gap within the sector, as well as contributing to the productivity gap with other sectors. However, it is also a potential source of substantial productivity increases, if effective solutions can be found to address the factors that are shaping these gaps.

Concerns about productivity levels are by no means unique to the UK as the OECD have also highlighted a major disparity between the ‘global frontier firms’ to ‘the rest’, which has led to substantial productivity gaps within and between sectors and major national economies. Amongst the advanced economies, the UK is one of those which is considered to be struggling to recover longer term productivity levels, following the financial crisis, and it has also been reported as having the weakest performance amongst the G7 countries across a range of measures. UK productivity, measured by output per hour worked, was 16.3% below than of the rest of the G7 in 2016. Using a slightly different measure, output per worker was also 16.6% below the rest of the G7 in 2016. Taking a longer term view, whereas up to 2007 the UK had relatively strong productivity compared to the other G7 countries, after the 2008 global financial crisis, its productivity has been the weakest, and has worsened in the following seven years. Moreover, the size of the UK productivity puzzle post-2008 has been larger than in the other G7 countries – productivity based on output per hour worked fell more sharply and persistently in the UK in the immediate aftermath of the financial crisis, and that gap has subsequently widened (Figure 1).

Figure 1 Comparison of gross domestic product per hour worked in the UK and the other G7 countries (1997-2016)
Tourism has had one of the fastest growth rates in employment and in gross value added (GVA) since the 2008 crisis: between 2009 and 2017, its total contribution to employment grew by 7.4%. However, despite, or perhaps because of this, tourism has long been considered to be integral to the challenge of how to increase aggregate UK productivity levels. Figure 2 illustrates the strong overall growth in GVA in tourism compared to the other sectors of the economy. There was a 52% increase for tourism and hospitality, whereas the economy as a whole only expanded by 28%.

Despite being a thriving sector and playing a critical role in the growth of output and employment in the UK, productivity – measured as GVA per capita – is strikingly low (Figure 3) compared to the rest of the economy and even compared to other highly-labour intensive sectors, such as retailing.

There have been extensive debates about the causes of this. On the supply side, it has generally been characterised as a low wage, low skill and low productivity sector, and also has one of the weakest innovation rates of any UK sector.

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On the demand side, it is a sector which faces high but, to some extent difficult-to-predict, demand variations – seasonally, within the week, and within the day – posing enormous challenges for efficient staff rostering and for productivity. The industry is also at the forefront of changes driven by the digital revolution, especially the growth of online platforms and social media, which although creating exciting new opportunities, has also increased competition and pressure on prices. Uncertainty surrounding Brexit (in whatever form it takes) is also posing a significant challenge for the industry’s labour markets due to its substantial reliance on international migrant labour. In the face of these concerns and challenges, there is an urgent need to tackle the productivity challenge of the UK tourism industry, and to bring fresh perspectives to this persistent task.

Tourism productivity: challenges and potential

The UK tourism industry has long been known for its low productivity and this is not just a recent phenomenon due to changes in the socio-economic, political and/or technological environment. However, the challenges of increased competition, technological shifts and uncertainty surrounding Brexit have served to exacerbate concerns about these low productivity levels. Industry and government increasingly recognise the importance of tourism productivity for the UK economy.

As the new Industrial Strategy has highlighted, the productivity puzzle and productivity challenges are pervasive across the entire economy, but it is especially acute in particular sectors and regions. The Strategy states that “some of the biggest opportunities for raising productivity come in sectors of the economy that have lower average productivity levels, but where many people work and which are vital to our economy” 4. In particular, the new Sector Deal in the Industrial Strategy offers an opportunity to bring tourism productivity into greater focus in national productivity debates, and also to emphasise that it represents both a challenge and an opportunity to raise productivity, reducing the long tail of lagging firms and sectors.

Responding to this opportunity, a recent study analysed productivity in the UK’s low-wage sectors compared with ten major economies, such as the US, Germany, and France 5. Ten sectors were analysed – also including administrative services and agriculture – amongst which hospitality and retailing were central due to their highly labour-intensive nature and having the lowest pay levels. The findings of the study inferred that raising productivity in these low-wage sectors to the levels of Germany, France and the Netherlands would narrow the UK productivity gap with these countries by 21%, 23% and 21% respectively. In the hospitality sector, when compared to the UK, productivity levels are significantly higher in the US and Germany by 10% and

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in France by as much as 45%. These findings do highlight that the performance of the different segments of the tourism industry will vary and that each may have specific needs.

However, productivity diffusion is especially challenging across the whole of the service sector because of the perceived low competitiveness motivation which dampens the ambition to adopt best practices. This is particularly important in the tourism industry given the high proportion of SMEs in the sector, and that smaller firms tend to have relatively low productivity. The reasons behind this include the limited resources and lack of economies of scale to drive productivity within the business. Yet, there is potential for productivity improvements and growth in tourism. For instance, New Zealand was facing similar struggles with productivity and developed Tourism 2025, which plans to identify economic value in addressing seasonality issues with events and localised strategies to sustain business operations, helping to retain skilled workers in the locality and sector. After the launch of Tourism 2025 in 2014, various off-peak marketing, active pricing strategies and specialised event offers during off-peak seasons have shown positive progress in enhancing their demand and subsequent productivity.

There are several key challenges in the tourism sector that needs to be addressed to solve the productivity puzzle. Major factors that have shaped the UK tourism productivity puzzle will be discussed, and these include the following:

- Measurement issues
- Demand variation and markets
- Capital and infrastructure
- People and skills
- Digitisation and innovation

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Measurement issues

Key points

- Measurement of productivity in tourism is made difficult by the intangible nature of both inputs and outputs, which calls into question the appropriateness of traditional productivity measures.
- Service productivity measures are conceptualised as including the components of service quality and consumer satisfaction, but these have not yet been effectively operationalised by government, industry or academic research.
- In the expanding digital economy, innovations are both tangible but also intangible, creating new sources of inputs to production and generating new business models that further challenge the measurement of productivity.

Traditional measures of productivity are based on the production function, where output is seen as the product of three main inputs – capital, labour and technology. In practice, most analyses have focussed on only one aspect of this larger relationship, which is labour productivity. Labour productivity measures have a major disadvantage, in that they exclude other important aspects of production such as capital, technology and finance. The alternative measure that includes them all is total factor productivity, which has its roots in studies of the manufacturing and production industries, but the service sector in general and tourism, in particular, have been long neglected in these terms. Despite this critique, labour productivity is still the most widely used measure of productivity in most industry and academic analyses; this is reinforced by the focus of the government on labour productivity.

Starting from the manufacturing sector has meant that there have been significant difficulties in effectively capturing performance measures in the context of tourism. It is recognised that the measures of the quality of the experience, or customer satisfaction are central to capturing some of the long term sustainability of the product or firm. However, the difficulty is how to capture this systematically in secondary data, as opposed to one off studies of particular firms. It is not surprising, therefore, that the recent Bean Review strongly and convincingly contended the need for new measures of productivity for the service industry, recognising the overwhelming dominance of this sector in the UK economy.

However, due to the intangible nature of the industry (so many of its outputs are not material, easy to measure physical goods), measuring productivity is a major challenge. In response to the limitations of existing measures, there are emerging alternative service productivity measures which seek to challenge the evaluation of intangible tourism service and experiences. For example, measures including service quality, customer satisfaction and the service encounter between the supplier and the consumer. It has long been argued that there is a close relationship between service quality, customer satisfaction and productivity due to the integration and involvement of consumers in the process of creating value in services. However, whether it is possible to separate the quality of output from the measure of productivity remains debatable. Yet, researchers agree that inputs and outputs should be considered together so as to improve the measurement of productivity. Given the
distinctive characteristics of the tourism industry, how labour is defined and measured is inevitably the key to the production and productivity of the industry. However, this has not yet been translated into industry, government or secondary statistics.

New measures of productivity are also required in response to the structural changes in the economy and rapid digital transformations. The productivity paradox contends that information technology (IT) has not led to an increase in productivity; this partly reflects the issue of measurement. It is argued that national productivity has been under-estimated due to weak or missing data on technological impacts and time delays in these being filtered into productivity measurements. This includes the long time lag in the introduction of technologies widely across the sector and the lack of investment in the managerial and organisational changes required to maximise the benefits of such technologies. Additionally, the slowdown of research and development (R&D) investments, innovation and human capital accumulation have also affected the operationalisation of IT on business productivity.

The growing digital economy means there are more intangible and tangible digital innovations, which are difficult to quantify and value using traditional measures. For example, the introduction of new software and big data analytic systems for enhancing revenue management and pricing strategies for hotels (e.g. Expedia’s Rev+). The importance of intangible assets and products has led to disputes about how to capture the full value of inputs and outputs of production, leading to claims that productivity has been underestimated in official statistics. The growth of robotics and artificial intelligence (AI) in tourism is also challenging tourism productivity, which will be further discussed in the innovation section.

With the advancement of digital technology and the emergence of digital platforms, new business models such as the gig and/or sharing economy and other forms of peer-to-peer (P2P) transactions have made it more difficult to capture productivity. This is because it is difficult to measure the labour input due to non-standardised contracts and indirect labour payment. In addition, there is some evidence of only partial output returns for business and taxation purposes. Moreover, productivity in tourism is not just about the formal labour required for production, but also the inputs from customers who consume the products. This form of P2P transaction has further blurred the distinction between input and output of production as consumers are both producing and consuming a product or service at the same time; for instance, house swapping or sharing (e.g. Airbnb) or various self-service approaches in hotels and restaurants. This blurred distinction challenges the traditional productivity measure of input and output. This links back to the difference in the nature of services compared to manufacturing, which further underlines the question of the suitability of the traditional measures in the rapidly evolving digital economy.
Demand variation and markets

**Key points**
- Variations in demand are one of the biggest issues for tourism productivity.
- Reduced visitor expenditure growth in recent years.
- Business cycles impact on demand as shown by the 2008 global financial crisis.
- Regional demand variations highlight the concentration of (international) tourism in London influencing regional tourism productivity differentials that add to the long tail of weak productivity in the sector.

Demand variation is a major factor in tourism productivity. Due to the nature of travel, work and leisure patterns, seasonality is endemic to the industry, as also are variations across the week and day. In 2018, VisitBritain reported that the highest percentage of visits was 29% during the summer months of July to September, with only 21% during January to March\(^9\). One study estimated that approximately 73% and 68% of the variation in the productivity in two hotel chains was accounted for simply by the variations in demand\(^{10}\). Some variations are relatively predictable, but others are not. Seasonality impacts on revenue and investment returns due to under-used capacity and the fixed costs of providing minimum service levels even when there is little or no demand. During off-peak seasons, it can be difficult to maintain service quality and guest satisfaction, which impacts on performance and, in the long term, on productivity. This affects various sub-sectors within the tourism industry differently, for example, between accommodation and transportation.

Business cycles are also an important source of demand variations, as evidenced by the impacts of the 2008 global economic crisis. This led to increased unemployment and job security and a reduction in disposable income, affecting consumer expenditure on tourism. Asset and capital prices declined, weakening business capabilities to fund debt or invest in physical and human capital and innovation, leading to a decline in productivity. In addition, different market segments were also affected having adverse effects on tourism productivity. For example, high value products such as long-haul flights declined more than short-haul flights due to price differential and risk averse tourists. Tourists are also more likely to demand discounted prices and offers, which favours and is favoured by the market entry of low-cost carriers, such as EasyJet and Ryanair, and more recently Norwegian Airline, or budget hotel chains such as Travelodge or Premier Inn. The enhancement of competition, via the accessibility of the internet, adds to the downwards pressure on prices and productivity.

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Demand variation can also be measured by expenditure per visitor. British tourism has faced challenges to visitor spending in recent years. Demand, as measured by visits and spending, has grown, but when adjusted for inflation, visitor expenditure has actually decreased. Figure 4 shows the change in the growth of visitor expenditure in percentages for inbound tourism from 2012 to 2018.

The peak in 2017 can be explained at least in part by the British pound’s ‘Brexit slump’, especially the growth in Asian and American source markets. However, the general decrease in average spending is a source of concern in relation to productivity. This has been due to significant changes in consumer behaviour after the financial crisis, with consumers seeking greater value-for-money purchases, as well as changes in market composition. Some of the more rapid visitor growth rates have been in Eastern European markets which tend to spend significantly less on average per capita than the average of all visitors. Growth in the use of new technology and the effects of online competition in dampening the scope for increasing prices is also reducing visitor expenditure, with negative implications for tourism productivity.

There is also considerable and uneven geographical distribution of tourism demand. London is a key tourist destination in Britain, both for international and domestic tourism. London accounts for 54% of inbound visitor expenditure, the rest of England for 33%, Scotland for 10% and Wales for 2%. This has led to significant geographical disparities in tourism demand and productivity. Regional differences in productivity in the UK are one of the major challenges in terms of the productivity puzzle, contributing to the long tail of laggard performance; it is likely that, in the case of tourism, the demand variations noted above also contribute to regional productivity variations. Such regional disparities can be explained by infrastructural weaknesses and variations in innovation, which will be discussed later in more detail.

Capital and infrastructure

Key points

- Lack of investment in capital and infrastructure is restricting productivity growth in the tourism sector.
- Poor connectivity due to limited transport infrastructure and broadband bandwidth and speed are a significant drag on tourism productivity levels.
- Data (including big data) are a key aspect of infrastructure with considerable potential for driving economic and productivity growth and innovation. However, the lack of broadband speed and internet connectivity, especially in rural and coastal areas, means this potential is not being fully realised.

Some tourism sub-sectors have relatively low capital intensity and lack capital investment and funds compared to other sectors in the economy. Given the service nature of tourism, much of its infrastructure (hotels, airports, etc.) and capital does not change over long periods of time, i.e. existing inventories continue in use or are renovated, which minimises capital investments. However, the air transport industry is relatively highly capital intensive compared to the other sub-sectors of tourism. Recently, with increasing tourism demand, the lack of capacity at major airports, notably Heathrow, has been pronounced, which has constrained the development of new connections to new markets, especially Asia, as well as tourist dissatisfaction and price pressures. It has been estimated that the delay in building a new runway is costing the economy up to £6 million a day in value loss. Yet, from 2012 to 2015, the hospitality industry was estimated to have accounted for an average of 1% of all investments in the UK economy.

Despite London being the financial capital of Europe, it continues to lag behind neighbouring destinations, such as Amsterdam, Barcelona and Vienna, as a hub for international conferences and events. The main reason is probably the lack of capacity. Competing destinations have made significant investments in the conference and events sector and have the basic requirements of capital, access and infrastructure, coupled with high-value offers and experiences. However, in the UK, the urban hot spots, like London, Birmingham and Manchester, are less competitive in these respects and this is holding back potential productivity gains.

The UK is underperforming in terms of its public infrastructure, which has had damaging effects on welcoming visitors to the country. The relative absence of public Wi-Fi and weakness of integrated transport links have damaged its destination reputation. These tourist service infrastructures need improvements to enhance the competitiveness and productivity of UK tourism. It is evident that the UK has a general weakness in its transport infrastructure, which reduces the connectedness between regions and widens the polarisation between urban and rural tourism development, compared to many international competitors. This can partially explain the persistent regional disparities of productivity across the UK. Due to the lack of connectedness, both employees and tourists experience accessibility constraints across the UK regions, which can affect the work-life balance and wellbeing of employees but also affect the general competitiveness of parts of the UK as tourist destinations. This can influence regional tourism productivity, which in some cases is known to lag significantly behind the overall productivity of the sector.

Not only transport but also other forms of infrastructure have limited the sharing of input and output resources, knowledge and expertise which can further constrain the potential for productivity growth. Infrastructural weaknesses in broadband bandwidth and speed have hindered digitisation and the exploitation or dissemination of productivity-increasing innovations. This is particularly acute for rural businesses. It is evident that the lack of high quality internet and mobile access is restricting opportunities for the growth of small tourism enterprises, in both the use of digital platforms to attract customers and being able to provide high-speed internet access to customers. The general lack of government expenditure on the tourism sector may explain the range of infrastructural weaknesses, which is why the modern Industrial Strategy Tourism Sector Deal will be vital for such improvements.\(^\text{14}\)

The impacts of Brexit potentially could mean a reduced openness for goods, services and capital, leading to further uncertainties which impact on investment levels. This will mean constraints in investments in capital, infrastructure and skills, all of which are key to productivity. Moreover, it may also constrain inward knowledge flows embedded in foreign direct investment and may mean a substantial loss of human capital, representing a threat to global competitiveness. Changes in the legal and regulatory environment post-Brexit could also further affect the investment and development of various capital and infrastructure projects in the UK.

Capital not only refers to traditional physical capital but, with digitisation and the rise of the digital economy, digital capital and infrastructure have become key assets for firms. One of the major infrastructures that the UK government is focussing on is big and/or open data. By improving access to and increasing the quantity of data, the UK government is encouraging businesses to use and analyse data to increase productivity and competitiveness. With digital platforms and increasing data generating technology, big data is enabling businesses to enhance the monitoring and forecasting of both demand and performance.

In the context of tourism, increasingly enriched data content is becoming available via business-to-consumer and P2P websites and digital platforms; for example, TripAdvisor's or Airbnb's guest satisfaction and reviewer's comments. Such data can be collected and analysed to identify how different intangible and service-based factors impact on firm productivity. However, to date research has focussed more on the demand side of the business, e.g. how to improve guest satisfaction and service quality, and relatively less on supply side concerns such as productivity and efficiency. The scope for further research in this area is huge as the level of information and data that can be extracted from these digital platforms and tools can assist in exploring how productivity issues are perceived by customers, managers and employees.

People and skills

Key points

- The tourism workforce tends to be transient, temporary, low skilled, young and migrant, with EU nationals being an important segment of the labour market.
- High labour turnover, low staff retention and difficulties in labour recruitment are a major dampener on tourism productivity due to the loss of skilled and experienced workers, and the disincentive to training.
- The sector is concerned about a potential major skills gap, especially due to uncertainty about how Brexit will impact on skills, talent and employment, and this may exacerbate the productivity challenge.

Tourism is a highly labour intensive sector – indeed the service encounter is central to the tourism experience and this is shaped by the quality as well as the quantity of labour that helps to produce this experience. Its importance is underlined by the relatively low levels of capital investment compared to most other sectors of the economy. It is not surprising therefore that the rapid growth of output in the sector has also been associated with having one of the fastest employment growth rates. Yet tourism continually struggles to recruit and retain new staff. This is due to both the actual and perceived (verging on stereotypical) characteristics of the industry and its workforce. Due to perceived relatively low wages and relatively limited opportunities for career advancement, and – in some cases – difficult working conditions and unsocial hours, the industry faces high labour turnover and low staff retention rates.

Further exacerbating employers’ concern is the increase in the minimum wage. The National Minimum Wage increased from £6.19 (age 21 and over) in 2012 to £7.70 (age 21-24) and £8.21 (age 25 or over) in April 2019. This is particularly significant to tourism because of the prevalence of low wages. This direct increase in labour cost, and thus of inputs, will put further downward pressure on productivity unless there are compensating measures such as more training and investment.

A skilled workforce is a major resource in production, but tourism is one of the sectors with the highest skills gap in any UK sector. As tourism jobs are seemingly unattractive to British people, employers are considered to be heavily reliant on relatively less skilled, migrant (25% are non-British) and young (35% are under 25; 16% are full-time students) labour, which tend to be highly transient. This partly reflects the skills polarisation within the industry, whereby a large share of jobs does not require any formal entry qualification, in contrast to the relatively small number of highly skilled top management level jobs. In 2015, 18% of tourism businesses reported a significant skill gap, yet this marked a decrease compared to 2011 unlike other sectors such as manufacturing and constructions. Some staff do not even stay long enough to complete their training and be fully operationalised into the business; these leavers are then again likely to be replaced by workers who are new to the job role. High staff turnover rates can also be a disincentive to invest in training. There is a reliance on various forms of temporary contracts in response to variable demand conditions, and this could militate against investment in skills and training by both employers and employees. This leads to detrimental effects on tourism productivity.

With rising labour costs and increasing recruitment difficulties, it is likely that many tourism businesses are becoming more short-term orientated, focussing on their survival and short-term gains at the expense of long-term productivity and value-creation goals. This is being exacerbated by the uncertainties surrounding Brexit because of the considerable reliance of tourism not only on migrant labour but especially on EU migrants (48% of the non-British workforce). KPMG has estimated that in order to maintain the current level of sector activities and fulfil recruitment needs, the sector has relied on some 62,000 EU migrants per year. Yet the number of EU migrants in the UK has already been declining since the referendum. The ONS reported that 130,000 EU nationals moved out of the UK in the 12 months after the referendum, and fewer were coming to work in the UK. Moreover, there are considerable concerns as to how future immigration and employment regulations will influence the supply of labour. Any significant constraint on the supply of labour and talent, whether high or low skilled, will have an impact on overall performance and specifically on productivity until such time as alternative sources of labour can be secured.

\(^{16}\text{KPMG (2017) Labour migration in the hospitality sector. Report for British Hospitality Association}

\(^{17}\text{BBC (2018) Migration figures: Highest number of EU nationals leaving UK in a decade.}\)
Digitisation and innovation

**Key points**

- Digitisation and technological changes are transforming the tourism industry.
- The rise of digital platforms and the emergence of new form of economies, such as the gig or sharing economy, have led to an increase in non-standard work and negative impacts on traditional businesses.
- Increased accessibility to data can generate insights from data analytics and data-driven innovation, which can enhance productivity in the long-run; but infrastructural weaknesses are barriers to realising these benefits.
- Emerging automation and AI capabilities are considered to be productivity enhancers, and the next great productivity challenge, but costs, skills shortages and lack of investment mean this is still in the early stages.

Another major set of challenges arises from the various digital transformations and structural changes in the economy, which have affected the tourism industry in recent decades. These include the rise of digital platforms, the sharing economy, big data, automation and more, all of which are intensifying the focus on the productivity challenge. For instance, the emergence of online travel agencies and search engines brings in new forms of tourism intermediaries, and the increasing use of mobile-based applications in the tourism experience. This has led to an increase in online sales by 11.4% whilst in-store bookings have reduced by 4.3% \(^{18}\). Additionally, there has been a subsequent reduction in visitor expenditure, and changes in the costs of businesses, which have consequently affected tourism productivity.

Big data has become a key digital infrastructure in many sectors, including tourism. The increase in the quantity and quality of data has enabled tourism businesses to obtain a better understanding of their consumers and their markets, helping businesses to strategically market and target their business performance. With this availability, data analytics can generate product innovation and analytical tools and systems to enhance revenue management and pricing for hotels, airports, etc.; there are new innovative ways to record employee scheduling and effectively monitor them. For example, UK company Eproductive provides online workforce scheduling for hotels, where weekly rotas are managed at the department level against the latest demand forecast but can be monitored at the department, hotel and group levels. In another example, Japanese restaurants have increased table turnover using standing format ‘seating’ with a value-for-money meal proposition. Digital solutions enabling self-service in airport and hotel check-in, for example in Citizen M, and increasingly in food and retail outlets, such as McDonalds, thereby reducing labour inputs, speeding up queues and reducing error. This has also been extended to better payment systems via technological solutions, e.g. Coastes Singapore. With the increasing accessibility of data, innovative analytics have empowered people and businesses to forecast, price and operate more effectively. However, there is still limited evidence on its influence on overall productivity, given the difficulty of rolling such innovations out to the very large number of SMEs and micro businesses.

There have been increasing numbers of start-ups within the tourism sectors. The

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\(^{18}\) Davies, P. (2016) Online travel agent sales up but high street sees decline, *Travel Weekly*. 
rise of digital platforms and various forms of new economies based on these platforms, i.e. the sharing economy, have impacted on how businesses operate and manage. The OECD reported that in 2015, Airbnb, was valued at US $25.5 billion, and was therefore the third most valuable venture-capital company globally. Uber was valued at up to US $62.5 billion. The sharing economy is growing rapidly now and is expected to grow faster than ever due to the rapid advancement of digital platforms and the availability of data. These new forms of economies have led to a growth in non-standard work, which is usually not officially measured, and such innovative business models are affecting the more traditional businesses.

Data-driven innovation (DDI) is a source of economic growth as an infrastructure and via value-creation through knowledge and automated decision-making. Through data analytics, knowledgeable insights can be gained that can enhance organisational capacities and enable more efficient and accurate business-related decisions through machine learning and advanced algorithms. In tourism firms, DDI can be relatively easily implemented due to the increasing quantity of data from user generated content or consumer data. However, there are barriers in the form of the lack of data analysis skills and competences in the workforce, the limited scope for organisational change and infrastructure, the limited (mobile) broadband as a key to enable DDI, and also the regulatory environment. There is as yet limited research around this in the context of tourism, and an exploratory study is needed to explore the use of data (e.g. to create new products and services and for business decision-making) and its relationship with (labour) productivity.

With the richness and openness of big data, the emerging capabilities of automation and artificial intelligence (AI) are pushing the boundaries of productivity. The diffusion of robotics and AI in tourism is growing and adding to the potential for productivity gains. The tourism sector is still at an early stage of implementation and diffusion, but there is considerable attention being given to the innovation and productivity around it. In Japan, the ‘Henn Na Hotel’ is a robot-run hotel with robotic information agents. There are also robotic cleaners and porters, waiters, bartenders, museum and airport guides and destination greeters. This means a potential loss of jobs for human labour and possible productivity gains through substitution; but, the extent to which robotics and AI can replace human receptionists or bartenders is still contentious. However, there is no doubt that it represents one of the biggest future challenges for tourism. Systematic and technical data analysis can also be automated via complex machine learning and algorithms, raising the productivity of a firm and individuals. This is an evolving challenge in the tourism sector as it is changing the way people work and how businesses operate and transact.

After a long period of persistently low and stagnating productivity levels, the tourism industry is now facing a raft of new challenges in respect of demand, labour supply, technology and Brexit. Added to this is the challenge that many businesses lack an understanding of the drivers of productivity and of the challenges that await the industry. Yet each of these problems can also be seen as a potential area to raise productivity through appropriate measures. With the Industrial Strategy and Sector Deals and government commitment to boosting productivity and helping to solve the productivity puzzle of the UK, it is clear that is has never been timelier to have a better understanding of tourism productivity in order to evaluate the ways in which to address the industry’s weak productivity.


Responses to tourism’s productivity challenge

The previous discussion has outlined some of the major factors that have shaped tourism’s productivity challenge. In this section, we consider some of the ways in which the challenge can be addressed through a variety of approaches by both government and industry. These include the following:

- Measurement issues
- Demand variation and markets
- Capital and infrastructure
- People and skills
- Digitisation and innovation

In addressing these issues, we draw on both the previous assessment of tourism productivity and also – where possible – seek to benchmark against improved productivity measures and successful examples both in the UK and globally. International comparisons are especially important for an industry such as tourism which is subject to strong globalisation tendencies in competition.
Measurement issues

Key points
- The government and industry need a better understanding of tourism productivity and this requires better knowledge sharing and collaborative discussions in the form of business networks and communities.
- Digital tools and platforms for benchmarking performance and productivity should be further developed and used by tourism businesses.
- New and alternative measures of productivity and its components should be explored that can capture the many different dimensions of productivity.

In light of the measurement issues outlined earlier, there is some questioning of the real extent of the productivity gap and whether it has been exaggerated due to the reliance on outdated or inappropriate data and statistics. Government and businesses need a better understanding of tourism productivity in order to address the extent of the productivity challenge and the practicality of addressing this. Existing productivity measures, such as output over input, and value added over number of employees or hours worked, need to be revisited in order to try and reflect the complexities of tourism productivity. Alternatively, new measures of productivity can be explored using new measurements of service quality, the use of digital applications, etc.

There are no easy solutions to this measurement problem, but the first necessary step may be for firms to benchmark themselves against the best practice of other successful tourism businesses in order to learn how to improve productivity levels. Knowledge sharing is needed to discuss how productivity is understood in the tourism industry, which can be facilitated via cluster networks or business communities at a local level and through digital tools and platforms. The Business Leadership Group of Be the Business have developed online benchmarking tools for hospitality sub-sectors and industrial manufacturing so that businesses can assess different performance dimensions using robust data and identify key areas for improvement.

New measures of productivity and its components also need to be addressed by the Office for National Statistics (ONS), which currently lacks rich secondary data in general and, in particular, in the context of the tourism and hospitality sector. An annual e-commerce and ICT survey of businesses is conducted by the ONS to measure the adoption and use of IT and e-commerce. A recent ONS study on the feasibility of measuring the sharing economy and increasing data collection on IT-related and digital-related activities suggests there is the possibility of significant breakthroughs in how to improve the measurement of productivity, but there is still a lack of data on tourism compared to other service sectors such as the financial service sector. There is therefore considerable potential for government to partner with the tourism industry in order to enhance the measurement of and the availability of data on tourism productivity.


Demand variation and markets

**Key points**

- Improved demand management is a key to improving productivity, and there are existing technologies and data analytical systems which can be used to enhance forecasting and revenue management.
- Market segmentation: targeting high value source markets can help tackle demand variation and constraints.
- Diversification of tourism can raise productivity – e.g. enhancing the business and events sector to attract business visitors during off-peak seasons.
- Flexible labour arrangements are an important means to manage labour inputs in the face of demand variations, and for enhancing productivity.

There are various strategies to address demand variation. One of the key strategies is revenue management which uses variable pricing strategies based on consumer behaviour to maximise revenue and profit. Dynamic pricing strategies also offer price differentials depending on the changes in the unsold inventory. With technological capabilities, competitive pricing strategies have become easier to implement via off-the-shelf software and database systems to analyse and forecast demand and revenue, which can help address the issue of demand variation within the tourism industry. Government funding to support tourism businesses to invest in the necessary tools and systems to enhance their demand forecasting and analytics to optimise their yields would also contribute to raising productivity; this could take the form of funding for system investment and training.

Market segmentation and diversification can also provide a strategy to address demand variations. There has been a change in the composition of visitor markets, whereby there is an increase in Eastern European markets which are relatively low spend, contributing to an overall reduction in visitor expenditure. Businesses need to strategically target higher spending as well as higher growth market segments. Existing market segments, such as the Asian market, also need to be marketed more effectively. VisitBritain has implemented the GREAT China Welcome programme to attract more Chinese visitors, and there is evidence that there has been an increase in visitor numbers and spending since the programme launch. Such examples of good practice confirm the positive impact of managing demand variation, which can enhance productivity in the long-run.

Diversification also offers advantages by enhancing the scope to raise productivity in particular sub-sectors of tourism. For example, in New Zealand, the International Convention Centre aims to improve the competitiveness of the business event sector so that it can attract more high value international business travellers during the off-peak seasons. In Hawke's Bay, increased visits during the off-peak seasons were targeted by developing the Food and Wine Classic in November 2012, as a means to increase productivity. This event was successful in raising demand during the low season, so they introduced a four-day festival – a Winter Season of the Food and Wine Classic – and in 2019 this will run over a whole month. The New Zealand Tourism 2025 report states that this strategy is working, confirming that diversification has real potential to lift off-peak demand and thereby increase productivity.

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23 VisitBritain (2018)
GREAT China welcome. https://www.visitbritain.org/great-china-welcome

24 Tourism Industry Association New Zealand (2014)
Tourism 2025: Growing value together. www.tourism2025.org.nz
Flexible labour is a characteristic of the UK tourism workforce. On the one hand, the persistence of temporary contracted work and part-time workers within the industry has been challenging for firms seeking to manage and improve productivity levels. However, on the other hand, with new forms of business models and shifts in the nature of work, labour flexibility has increased in the UK economy, in particular in tourism, and is an effective means to respond to demand fluctuations. For instance, when demand is low, business capacity is underused but still incurs fixed costs, including those of maintaining minimum staffing levels, with significant negative effects on productivity. When demand is high, firms require additional labour, suggesting an increase in the total establishment which would exacerbate the under-used capacity at periods of low demand, having a further negative effect on productivity. Thus, increasing the flexibility of labour can be effective in responding to changes in demand, both predictable and unpredictable.

Examples of flexibility include using variable amounts of labour within the existing workforce (expanding or decreasing hours worked) or by sourcing workers from external sources such as agencies. This is one form of numerical flexibility. The UK tourism sector has 10.4% of jobs that are temporary, whereas in non-tourism sectors it is only 6.1%; the tourism sector accounts for 14.4% of all temporary employment in the UK, which reflects a larger proportion of temporary (or casual) workers in the sector. This allows firms to retain skilled workers and providing flexibility to reduce costs when the demand is low. Another example of flexibility is where internal workers can transfer between departments or different job roles in response to the demand variations across the firm. Such examples of what are termed functional flexibility can also help address the issue of demand variation and difficulties of recruitment. Functional flexibility is evident in the tourism industry, but the extent to which this is possible or effective is very much reliant on the skills requirements needed to undertake different job roles. One of the advantages of flexible working is that employees can gain department-specific or firm-specific skills via multi-skilling and on-the-job training. A recent study on two anonymous medium-sized UK hotel chains found that employment practices encouraging flexibility had significant positive effects on productivity, accounting for between 6-13% of the variation in productivity. This is another key factor in productivity that needs to be addressed.

EasyJet has developed recruitment campaigns to find the most appropriate workers to fill their available posts and have been trialling new and flexible employment contracts for their cabin crew, which has helped the company to manage seasonal demand and enabled more cabin crew permanent employment opportunities. Recently, they launched an external recruitment campaign for pilots, aimed not only at those who are currently experienced but also those requiring training, such as ex-military pilots. This can be facilitated by having a stronger relationship with pilot training suppliers and clarifying better career pathways for pilots. This can ultimately increase staff retention and have productivity growth effects.

There is still a lack of studies of labour flexibility and productivity in tourism and it is, therefore, necessary to encourage researchers, both in academia and industry, to explore and examine further the costs and benefits of flexible labour.

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Capital and infrastructure

Key points

- Government support is needed to increase connectivity and relevant infrastructure.
- Collaborative partnerships at a regional or local level can help to deliver stronger and sustainable investments in capital and infrastructure, which can help address the regional differences in tourism productivity.
- Relevant skills to effectively use data as a key infrastructure for potential economic and productivity growth and innovation need to be explored in order to identify the skills gaps.

The Tourism Sector Deal aims to unlock the key potential of tourism to drive the economy, and capital and infrastructure investments will be vital to facilitate such ambition. As identified above, better connectivity linking tourists to destinations, but also skilled workers to businesses, needs to be prioritised to meet changing and growing demands. It will be important to benchmark how European competitors have raised capital, markets and taxes to improve their infrastructure and destination competitiveness – Switzerland, Spain and some of the Nordic countries tend to have higher tourism infrastructure quality and capacity. In the UK, there has been a consistent government policy on capital investment but there is also a government role to enhance connectivity infrastructure. However, it is not as simple as in the manufacturing industries as tourism is about people and places. Connectivity will be essential to building and promoting distinctive places, which can provide further links into the wider Industrial Strategy.

Regional differences in tourism and its productivity also link with the infrastructural weaknesses. One of the key targets of VisitBritain and the government has been to increase visitation beyond London. With campaigns to increase domestic tourism and visitor markets around the whole of the UK, there has been positive growth. However, more research is needed to understand the needs and interests of visitors and strengthen the infrastructure and accessibility to support greater regional diffusion of international tourism in particular. There is also a need for urban and rural planning to focus on narrowing the regional productivity gap. At the city, regional or local level, key stakeholders can come together to share knowledge and expertise and plan strategically to build a stronger tourism market within the region or locality. In New Zealand, a closer working relationship between airlines, airports, the Ministry of Transport, Aviation Security Service and many other stakeholders has been encouraged and is helping to deliver greater cohesion in enhancing their air transport connectivity and the necessary regulatory support. This is a good model of stakeholder cooperation which can help to deliver stronger and sustainable capital and infrastructure investments in the UK.
User generated content, consumer data and other forms of data are increasing in volume as more and more tourists are using digital platforms. Such data are beneficial for tourism businesses to understand their customer market and enhance their business branding and revenue. With the support of big data analytics, this can help enhance productivity for destinations and businesses by enabling them to strategically target their tourism market and improve their revenue and productivity on both aggregate and business levels. However, there is the issue of skills mismatch, in that there is a shortage of relevant expertise in the tourism workforce in response to digital transformations. In addition, due to the lack of infrastructure, the weaker connectivity with tourists, workers and businesses makes it more challenging to match relevant skills and is also influencing the regional disparities in productivity. To tackle this, there is a need to investigate the changes in the skills requirement and human resource management practices of tourism businesses. A study using the OECD Survey of Adult Skills on labour market participation and skills and the industry digital penetration index has explored the different skill sets needed for the digital economy, but sector-specific research is needed to tackle tourism-specific issues. Industry collaborations with academic researchers could also be stimulating to explore measuring productivity and business impacts using new forms of data and maximising data analytics to drive business performance in innovative ways.

People and skills

Key points

- Regular meetings and communication between managers and employees can help identify skill needs and training requirements, employee motivation and career pathways in order to deliver systematic uplifting of skills and better career progression opportunities to improve staff retention.
- Planning for post Brexit is essential but difficult given continuing uncertainties, but campaigns to recruit more British workers can be promoted regionally.
- Apprenticeships offer an important means to attract workers into the industry and raise skill levels so as to improve productivity.
- Collaborative partnerships in local areas can improve understanding of the people and skills in an area and deliver strategic solutions to enhance tourism employment and productivity.

Tackling staff retention is important in the industry in order to narrow not only the skills gap but also the productivity gap. Focussing more on retention involves improving employee engagement and motivation, new training and developing, better career progression opportunities amongst other measures. This can be in the form of more regular meetings with managers face-to-face or virtually and having better measurement systems for performance and progress reviews. This can involve conversations on skill needs and training, which can be collated and addressed when creating a more systematic training programme. Tourism businesses have also pointed out the issue of staff being promoted beyond their capacities and the lack of management skills within the business. Another barrier is the highly diverse workforce, with staff on varied contracts and fixed and temporary workers, making it even more difficult to converse with staff as a whole and to identify well targeted strategies to improve their retention and productivity. The Eproductive system mentioned earlier also allows employees, whether full time, part time or casual, direct access to their operation using a smart phone. This provides accurate information on rota status but also allows employees to book holidays, request training, access reward schemes and read staff notices.

Despite the availability of the government employment and skills survey and internal performance reviews, with the benefit of IT applications and tools, more efficient and productive systems to monitor and evaluate staff can be developed and implemented. People1st is working with Accor, Hilton Worldwide, Mitchells and Butlers and Whitbread to develop a human capital model with analysis, behavioural and career coaching tools to assess, develop, and retain the improvement of labour skills to prepare for career progression. The Food and Drink Federation has also been working with the Productivity Leadership Group of the Be the Business to tackle their skills gap. These include collaborative initiatives across the food supply chain such as an image campaign for new entrants to the sector, school engagements, apprenticeships and driving business and university collaboration to support talent and innovation targets.

Promoting tourism careers in schools, colleges and other forms of institutions is important. Given that tourism jobs, in general, are seemingly less attractive to the British workforce, especially because of the perceived poor working environments, it is important to promote the sector to a wide target audience for...
recruitment purposes and in particular, to UK workers. UKHospitality (formerly the British Hospitality Association) has discussed with government officials its 10-year campaign to raise the sector profile and create local centres around the UK to connect with those who are unemployed, school and college students and potential returners to the labour market. Campaigns such as these can help promote the tourism sector and diffuse knowledge and awareness of the potential career progression pathways in tourism. Regarding new ways of recruiting, the industry does need to diversify their recruitment pool. The high reliance on young and transient workers has been one of the major reasons for high turnover and low retention, thus a more diverse pool of labour (including older workers and women returners and even ex-prisoners) could enhance the labour demand and supply. The adoption of flexible working arrangements can also help retain the existing workforce, and also build human capital within the businesses. This can help to fill in some skills gap if the appropriate skills can be transferred within the tourism business. Enhanced training can also help retain the existing workforce. In 2017, the apprenticeship levy was introduced whereby employers pay to fund training and assessment for apprentices. Employers are able to access funds via the new digital apprenticeship service accounts, which can be used to support training and/or apprenticeships at different levels. There is considerable potential here for the tourism industry to utilise this scheme as a means to efficiently and effectively train their workforce. The Institute for Public Policy Research has pointed out that businesses should establish degree apprenticeships for the low-wage sectors, which includes tourism, following the earlier developments for aerospace and high-growth sectors. This can help promote career progression within the tourism sector, and if businesses, universities and vocational training providers can be brought together to coordinate a range of schemes, effective alternative educational and training programmes could be delivered.

In Cornwall, there is evidence of hospitality employers coming together at a local level. Jamie Oliver’s Fifteen restaurant trains young apprentice chefs and it has partnered with the local hotel (Watergate Bay Hotel) and brewery (St Austell’s) to discuss the way work is done in the industry and aims to have a better joint understanding to ensure employees see the long run prospects in their careers alongside sustainable business models. The results show they have changed their talent management practices and improved operational performance. This example suggests the potential for businesses to collaborate regionally or locally, creating tourism clusters, to share knowledge and expertise to enhance skills and talent management.

\(^{30}\text{Be the Business (2015) How good is your business really? Cornwall.}\)
Digitisation and innovation

Key points

- Creation of networks, business communities and/or tourism zones to share knowledge and best practice on IT adoption and innovation.
- There is a need for stronger linkages between tourism infrastructure, policy and regulatory environments as well as providing the necessary skills bases to stimulate and deliver effective innovation in the sector.
- There is a need for policies which specifically target innovation in tourism businesses, especially SMEs, as a means to raise productivity.
- More opportunities need to be provided for government funding and KTPs for collaborative research between industry and academic institutions.

Given that innovation in the tourism sector cannot be narrowed down simply to R&D expenditure and patenting as it is in manufacturing, tourism innovation needs to be seen from a different perspective. Considering the high labour intensity of the sector and thus the importance of the personal knowledge held by the people and the businesses, innovation can be stimulated by creating networks and business communities where individual businesses can come together and share their knowledge and best practices. These provide platforms for benchmarking and knowledge exchange, for possible collaborations in innovating and changing business practices to enhance productivity in new and efficient ways. Online tools, such as Konfer, can help SMEs find opportunities to collaborate and connect with research communities.

The Tourism Sector Deal proposes the creation of ‘Tourism Zones’ which will help develop places, products and destinations across the UK. These Tourism Zones can help local product development and local digital plans for innovation but also to address seasonality, and improve regional connectivity. This will involve partnerships and collaborative work between local authorities and the Local Enterprise Partnership, which can help diffuse knowledge and innovation and ultimately, productivity, and increase the competitiveness in the UK tourism sector. There are other countries that are developing or have already implemented similar tourism zones, for example: Shanghai where the International Tourism Resorts Zone was created in 2010; in Japan, the Tourism Zone Development Act allows the creation of tourism zones to enable longer stay travel via cooperation amongst the tourism sites; and now, South Korea which is creating numerous ‘Special Tourism Zones’ in popular touristic areas, which will benefit from deregulation and financial incentives for product development.

Sharing knowledge is only the first step. After that, the level of absorptive capacity a business has comes into play. This refers to the ability of the business to acquire new knowledge, link that to its existing knowledge, and transform its business capabilities and practices to perform better. It is important to consider that delivering innovation also requires enough capital and infrastructure. IT adoption and diffusion within the tourism sector can be influenced by the accessibility of capital and infrastructure, but also the managerial quality of businesses to manage and diffuse new technology and knowledge. Thus, IT adoption and managerial capital is key to disseminating innovation. This not only
refers to the physical capital, but also human capital, i.e. having the right skills to match new job roles in relation to innovation, but also have a level of absorptive capacity. This not only allows businesses to thrive but their connections via networks and platforms can result in such positive effects being spilled over to neighbouring businesses as well as regions if the networks or business communities operate regionally.

However, it is important to consider that as tourism is a relatively low margin sector with a large number of SMEs, businesses, such as restaurants, may struggle to find sufficient capital to invest in new technology. Depending on the scale of the business, implementing new technology and digital innovation may be difficult and expensive. Large firms tend to be more effective at claiming R&D tax credits, whereas SMEs are relatively poorly informed about such incentives. Thus, an increase in the awareness of schemes such as tax credits and greater clarity about eligibility may stimulate tourism firms to innovate via IT adoption. Moreover, with the possibilities of shortages of skills and talent post-Brexit, it will be challenging to match the relevant skills set for IT-related job tasks or data analytics. Integrating new innovation or technology with existing digital infrastructure, interoperability, is key. However, the tourism sector still tends to lack interoperability, and thus it is important for technology suppliers to work closely with the business end users to develop and provide solutions that are fit for purpose.

In New Zealand, co-investment from the Tourism Growth Partnership with government is helping businesses invest in initiatives to boost their innovation and productivity. In Australia, the Cooperative Research Centre (CRC) for Sustainable Tourism (Sustainable Tourism CRC) was established in 1997. Initially, it was a small operation located in North East Australia combining the strengths of five universities, one State department and two industry association partners, with a projected annual cash budget of $2.8 million. The CRC’s areas of research expertise include tourism planning and environmental management, tourism information technology, tourism policy and products and business systems. The CRC provided a scientific R&D facility managing and delivering research to support the sustainability of the tourism industry in Australia and encompassing the issues faced by both small and large operators, tourism destination & natural resource managers, land custodians and the other stakeholders in the industry. In its first five years of operation, the centre produced important research outputs including new technologies, expert systems, best practice protocols and tools; over 100 peer reviewed, Centre published, technical reports; and 2 international patents. In the UK, the research council funded Knowledge Transfer Partnerships (KTPs) have
provided funds for industry and university collaboration in many industries, such as the aviation industry, but in tourism, the take up of the scheme has been thin on the ground. A greater research collaboration between industries and universities could facilitate technological diffusion to those with lower performance by providing smaller and less productive firms with access to key sources of knowledge.

Tourism policies also need to focus on innovation in tourism. An example of a tourism innovation policy is the Spanish Tourism Plan Horizon 2020, which was the first tourism policy that had a major focus on innovation. The plan addresses the barriers to innovation through three programmes of innovation, knowledge and talent attraction. Additionally, Spain’s R+D+I Plan (2008-2011), which is the national innovation policy, has identified the need for tourism innovation. Within this policy, the Programme of the Innovative Business Groups for tourism SMEs was evaluated by academic researchers and it was found that it did stimulate innovation-related activities, bring together experienced or new innovators and created new partnerships. New strategies were created, and a large number of pilot projects were funded across different tourism sub-sectors. Organisational and product innovation was evident, with strong technological applications. This example illustrates some of the positive impacts of tourism innovation policies, which, if delivered and evaluated rigorously, can accelerate innovation in the tourism sector, generating long-term value creation and productivity.

Conclusions

Tackling the productivity puzzle is one of the top agenda items for the UK government. With concerns about Brexit and the consequential impact on the UK’s competitiveness and talent and skills inflow, the tourism sector faces major challenges in respect of demand, labour supply, and technology. Many businesses lack an understanding of the drivers of productivity and its measurement, and the potential challenges that the sector will face. With the sector’s high reliance on migrant labour, especially EU migrants, and the continued persistence of low productivity, addressing tourism productivity is important and timely, especially with a government commitment to boost productivity via the modern Industrial Strategy and the Tourism Sector Deal.

There is a prioritised need for the government and industry to have a better understanding of tourism productivity and how it is best captured, which requires knowledge sharing and significant benchmarking. Collaborative partnership, in the form of cluster networks, business communities or tourism zones, at a regional or local level can help facilitate this, but also deliver strong and sustainable investments in capital and infrastructure, better talent management and innovation within the sector. Technological shifts have enabled the development of digital platforms and various digital applications and tools, allowing more efficient and effective business operations and management that can be adapted to increase productivity in the light of the problems caused by demand variation. Additionally, changes in market segments and new ways of market diversification may generate opportunities to extend performance and productivity beyond the traditional travel seasons and regional boundaries. In order to address the challenges of the labour supply and significant skills gap, flexible labour arrangements and better training and apprenticeship programmes need to be considered with the involvement of government, businesses, universities and training agencies to provide more opportunities for funding and investment in the UK tourism sector.

All the challenges mentioned are intrinsically interrelated to each other. Fundamental improvements in productivity cannot be achieved without improvements in infrastructure and connectivity, through which knowledge and understanding of tourism productivity can be shared and innovative activities can be diffused through a more skilled workforce to support demand beyond peak seasons. Exploring the different challenges and potential of the UK tourism sector, there is a need to be flexible and responsive to the changes in the socio-economic and technological environment, informed by the distinctiveness of tourism as well as the diversity and variation within the sector.
The UK Tourism Productivity Gap: challenges and responses
a synthesis of existing knowledge about the productivity challenge facing the tourism industry in the UK, its determinants, future challenges, and approaches to raising productivity based on an analysis of secondary sources.