Written evidence submitted by the Local Enterprise Partnerships (LEP) Network

Introduction

1.1 For the past 10 years Local Enterprise Partnerships (LEPs) have formed **a unique partnership** of over 2,000 business leaders, 180 Local Government leaders and 250 FE/HE leaders to accelerate business-led local growth. These key decision makers have driven infrastructure investment, productivity improvement, skills development, and business support in local areas.

1.2 LEPs are ensuring the right investments are made in the right place at the right time and stand ready to play a central role in delivering the **Plan for Growth** across:

1) **Infrastructure**: LEPs provide a business led evidence based strategic framework to support local decision making, particularly around capital investment. This place based economic expertise and insight, can directly support government in its ambition to secure long-term inclusive growth.

2) **Skills:** LEPs' Skills Advisory Panels and relationship with the Careers and Enterprise Company has delivered an impressive Employer Advisor Network, and brought business leaders alongside Universities, FE colleges and apprenticeship scheme providers to set strategic priorities, shape local courses, ensuring the right skills for the right jobs. Every LEP Board has FE/HE representation.

3) **Innovation:** LEPs' integrated working with Universities, Catalysts, Catapults, Enterprise Zones and Freeports provides the environment and incentive for the private sector to invest in innovation.

1.3 The LEP Network is delighted to respond to the inquiry into **jobs, growth, and productivity** after coronavirus by the Treasury House of Commons Select Committee.

1.4 We have focused our response on the first part of the inquiry (jobs, growth, and productivity) rather than macro-economic policy.

1.5 The LEP Network has been working closely with our businesses and partners to mitigate the impacts of Covid-19 and to consider how we grow back out of this economic shock.

1.6 The combination of the economic and social effects of the pandemic and EU-Exit have and will shake up the UK economy. LEPs have seen at first-hand how our businesses, sectors, places and communities have been and are being affected. **In our conversations with businesses and partners there will not be a return to business as usual in all but a few limited instances.** This is creating some significant challenges, but there is clearly an opportunity to re-think and improve economic policy thinking and practice.

1.7 The key points in our response are:

1) **Long Term:** Government responses to addressing economic growth and productivity must be long term and sustained. They should work with existing economic and business support architecture and be large scale and consistent. The experience of other countries such as France and Germany are that long term strategies and consistency of support is key to success.

2) **Local:** There is a key role for local responses, particularly in addressing the 'long tail' of less productive businesses where often the most effective actions are at a local level. This is true

across many aspects of productivity including improving innovation, and requires solutions to be found that work equally well for our rural and coastal areas as our towns and cities.

3) **Spread the Tech:** There is a danger in focusing on the bright and shiny eye-catching ideas around technology and ignoring the less glamorous work of ensuring good practice and new technology and ideas are diffused more thoroughly and quickly across a larger swathe of the business base; again this is where co-ordinated local action can and will make a real difference.

4) **Furlough**: The response by the Government to deal with the initial economic shock on the labour market via the furlough scheme has been very successful and has meant the UK has avoided, so far, entering a period of mass unemployment.

5) **Impact on Young:** However, LEPs are particularly concerned about the long-term impact on young people whose education, personal and skills development has been interrupted and held back by Covid-19. Of all the economic and social consequences of Covid-19, this has the potential to have the longest lasting 'scarring' effect without sustained support and intervention for several years.

6) **Plan for Growth:** The Industrial Strategy provided a consistent framework for thinking and action at national level and importantly LEPS, through their Local Industrial Strategies, translated this framework to local level. Currently, Build Back Better: a Plan for Growth does not provide the same mechanism to implement this at local level. LEPs are ideally placed to do that and translate the Plan for Growth from national policy to local implementation.

Responses to questions

Q1: *How much difference can government policy make to economic growth?*

1.8 The LEPs' have first-hand experience of the direct impact of interventions and government policy and the difference that these can make to firms, sectors and areas. Clearly, the impact of government policy – fiscal, legislative, regulatory, communications and leadership – **can and will have profound effects on economic performance**. This impact can be both positive and negative; and of course economic growth is not and should not be the only policy objective. It is easy to overstate the impact of government on the economy. There are other factors external to the UK, technological drivers, and importantly business performance. These in the long run are profoundly important for the economy. Some, but not all of these, can be influenced by government policy.

1.9 LEPs have three principles based on our real-world experience about what can make (and does) make successful government policy and interventions:

1) Government has a key role in '**creating the conditions for growth'**; this is investment in the UK's infrastructure in its widest sense (from broadband, to energy systems and roads, to science and technology, to education and skills, to successful communities); it is also about providing a stable, fair and business friendly regulatory and legislative system; and must ensure appropriate and equitable solutions for rural, town and urban areas.

2) Government can and should provide **consistency and longevity**. In previous responses to this and other Select Committees the LEPs have noted that policy toward skills, business support and economic development has increasingly worked on shorter cycles and time horizons, with constant chopping and changing and new initiatives. This makes it hard for economic partners to prepare and respond and even harder for businesses to negotiate and plan. A particular issue is the disruption that can be caused by constantly creating new institutions. It is far better to

work with and reform organisations that already exist. For instance, the Catapults created to be akin to the German Fraunhofer Institutes need to be given a long time to reach the level of impact and credibility of their German counterparts. Problems that have longstanding origins (such as poor relative UK productivity performance) need long term and sustained responses.

3) Ensure the **right scale** of interventions. As well as being long lasting it is important interventions are of the right scale. This applies specially to funding pots and support for organisations. Hyper-localised and micro interventions will not drive economic growth or recovery. Economic policy flows from departments across Whitehall and often requires weaving together to provide maximum value at various spatial levels. Delivery partners such as businesses, skills providers and utilities operating on different spatial footprints welcome coordination and simplification of the support available from government.

Q2: *What are the causes of the gap in the UK's level of productivity compared to other advanced economies, and why has productivity growth been persistently weak in the aftermath of the 2007-09 financial crisis?*

1.10 The Select Committee will doubtless receive many contributions on this topic which is sometimes called the "productivity puzzle". Although the UK has been very successful at creating new jobs since the financial crisis, real wages and productivity have been stagnant.

1.11 Some of the key explanatory factors (which are interlinked) are:[1]

1) There is a **'long tail' of unproductive companies**. A widely held core reason for Britain's low productivity growth is a large group of companies with relatively poor levels of output per hour worked for their sector. This point was made very clearly by Andy Haldane the Bank of England's Chief Economist[2] and it was a key strand that featured in the business productivity review conducted by BEIS in 2018 and 2019. This is undoubtedly the practical experience of LEPs, we all have some excellent businesses in our area that are engaged and focussed on innovation, however they tend to represent the minority in all sectors.

2) The **best industries** in the UK are performing less well than they did. A paper by the Economic Statistics Centre of Excellence found that between 1999 and 2007, the UK's productivity growth was heavily concentrated in industries such as computing, finance and professional services. But the performance of these sectors dropped sharply after 2008.

3) Also, the most **productive companies** have lost momentum. According to Bank of England research in 2018 since the financial crisis, the most productive companies have not been improving productivity as fast as they were in the past: "*the most productive firms are failing to improve on each other at the same rate as their predecessors did*".

4) There is a **gap in many regions** in the density of higher productivity export-focused companies (that export beyond their local area/region). There is some evidence that such 'export' companies based outside the greater south-east of England were more often productivity underperformers.

5) Finally, a common explanation is the **skills composition** of the UK workforce and lack of consistent skills development[3].

[1] Helpfully drawn from "Britain's productivity crisis in eight charts", FT, August 13th, 2018

[2] https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/the-uks-productivity-problem-hub-no-spokes-speech-by-andy-haldane

1.12 The evidence of strong growth in the number of jobs but poor productivity growth[4] since the financial crisis, suggests that the conditions in the UK for investment in people and the matching of skills and jobs have not worked.

***Q3:** How successful has the Government's pandemic response been in protecting jobs to date, and how can it help reduce and mitigate the economic scarring effects of the pandemic going forward?*

1.13 The use of the CJRS since the onset of Covid-19 in the UK has undoubtedly been a very successful tool **at protecting employment and avoiding unemployment.** This is evidenced by the relatively modest increase in unemployment that has occurred in the last year despite the intense impact of Covid-19 on many sectors of the economy. Overall unemployment (as measured by the claimant count) rose by around 1.5 million from 1.2 million to 2.7 million[5]. By extending the CJRS as the economy has been shut down on different occasions, the Government has ensured the UK labour market has avoided experiencing some of the previous dire predictions for increases in unemployment. The Office for Budgetary Responsibility and the Bank of England both predicted severe rises in unemployment towards the end of 2020 and into 2021 last year. These have not materialised, in large part due to CJRS.

Economic scarring effects

1.14 Economic scarring occurs when the short-term impacts of an economic shock have longer term effects. A Bank of England Monetary Policy report in 2020[6] discussed these in detail. The potential scarring effects can be summarised as:

Reductions in **business R&D and other investment** (e.g. in workforce development, which is not made up as the economy recovers, as firms focus on shorter term investment activity – reducing longer term productivity growth.

Reductions in the rate of **formation of new firms** - which could reduce productivity growth, as there is some evidence that younger firms tend to be more productive and innovative.

Firm **failures** that could lead to a permanent loss of output if it is not possible to reallocate capital to another firm, and if intangible capital, such as established supply chains, are lost.

Labour market effects as workers that are laid off could lose skills and become detached from the labour market, lowering labour productivity; whilst people who experience periods of unemployment (e.g. new entrants) are likely to have lower future earnings. Others are choosing to stay in the sectors to which they have moved during lockdown, often citing better work/life balance and leaving some sectors, such as hospitality, suffering the double whammy of lockdown and losing experienced staff.

Time bomb for our young people

1.15 The **national evidence** is that the great bulk of the labour market effects to date have been borne by young people[7]. They have been disproportionately likely to have been made redundant and work in

[3] See for instance "Skills Studies Building Skills For All: A Review Of England. Policy Insights From The Survey Of Adult Skills, OECD, 2016 https://www.oecd.org/unitedkingdom/building-skills-for-all-review-of-england.pdf

[4] See for instance the summary in https://commonslibrary.parliament.uk/slowing-economic-growth-brexit-and-the-productivity-challenge/

[5] Although other measure of unemployment show different changes.

[6] Monetary Policy Report, Bank of England, May 2020, see Section 3 "In focus the economic effects of Covid-19"

[7] Very well explained by the Resolution Foundation's

sectors that have been hardest hit by Covid-19 (e.g. hospitality). Also the contraction in vacancies impacts most heavily on those not in a job and seeking to enter the labour market (primarily school, college and university leavers).

1.16 A second issue is that **education and skills** development have been severely disrupted by Covid-19 (across all ages). This disruption ranges from: lost school time; to less satisfactory education (as colleges, school and universities got to grips with on-line learning); to the loss of face-to-face learning with colleagues at work. The furlough scheme has been particularly important for young people and helped maintain incomes, but also means that whilst on furlough there has been limited or no skills development.

1.17 Finally, it is fair to say that the social restrictions brought by Covid-19 have impacted particularly severely on **younger people**. Data released by the Office for National Statistics[8] identified that younger adults and women were more likely to experience some form of depression, with over 4 in 10 (43%) women aged 16 to 29 years experiencing depressive symptoms, compared with 26% of men of the same age. In comparison, only 10% of adults aged 70 years and over experienced some form of depression in early 2021, compared with 5% before the pandemic. The potential impact of this on productivity and growth should not be underestimated.

1.18 LEPs consider that taking a **longer term perspective** will be essential to avoid the dangers of scarring and that a sustained and concerted effort must be made to make up and address these challenges facing our young people. This is both for their personal well-being, but also because they are our employees, managers and leaders of the future. This means a sustained response to deal with young people:

1) **Still in school** – to aim to gradually over time make up the lost ground at school so that when they leave school they have the educational development level of their former peers (in school subjects but also other attributes). We welcome DfE's commitment to dealing with the impacts of Covid-19 and the emphasis in the Skills for Jobs White Paper on strengthened careers support in schools, but would also emphasise the importance of tasking a long-term approach[9]. Of particular concern and widely reported is the impact of Covid-19 falling hardest on disadvantaged pupils with emerging evidence from the Education Endowment Foundation confirming this.

2) The group that gets less attention, largely because they are hidden, are the **most recent labour market entrants** (whether at 18 or later). Recent ONS data has shown an upturn in the number of NEETS. Data on youth unemployment is mixed but an important indicator is the number of young people in employment, which has fallen significantly[10].

1.19 Dealing with this 'time bomb' requires a sustained approach at a national and local level. It is important that there is **active, local engagement** in developing relevant place-based responses that effectively link employment opportunities with the workforce. LEPs can play an important role in connecting

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https://www.resolutionfoundation.org/app/uploads/2021/04/Uneven-steps.pdf *"Since the pandemic began, young people have been more likely than their middle-aged counterparts to have lost working hours, experienced lower pay, been put on furlough or have lost their job. In fact, young workers (those aged 16-24) have accounted for nearly two-thirds of the total fall in payrolled employment that occurred in the year to February"*

[8] Office for National Statistics Coronavirus and depression in adults, Great Britain: January to March 2021

[9] See for instance the OECD's paper on this https://www.oecd.org/coronavirus/policy-responses/education-and-covid-19-focusing-on-the-long-term-impact-of-school-closures-2cea926e/

[10] Comparing the latest quarter, December 2020-February 2021, with the pre-pandemic quarter of January-March 2020, the number of young people in employment has fallen by 336,000, an 9% fall. The fall for men has been larger, with employment levels falling by 11% for men and by 7% for women. Source: https://commonslibrary.parliament.uk/research-briefings/sn05871/

opportunity and need in the labour market and through its delivery of the Career and Enterprise programmes shape the economic future of young people. The results of the Careers Hub pilots that LEPs are running with the Careers and Enterprise Company are clear: together we are driving up the quality of careers education and inspiration in our future workforce.

Plus the overhang of debt and so of businesses ability to invest

1.20 The evidence reaching LEPs from our businesses is that although firms are delighted that restrictions are being removed and the economy is starting to open up and grow many business enter this period burdened by **much higher levels of debt** than as of March 2020. Businesses have reduced reserves, taken on new debt and found other means to retain their solvency. There are two consequences:

> **First**, the focus on many firms will be repaying this debt (whether CIBLs or Bounce Back Loans or other forms of finance) rather than investing in their workforces, technology or equipment. LEPs have many examples of our local businesses who have stated that this will be their corporate strategy for the next few years, (particularly in the very hard hit hospitality sector).
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> **Second**, that there could be a significant uptick in business insolvencies (and consequences for suppliers) as businesses reach cashflow pinch points as they expand operations once again.

1.21 We very much welcome the recent announcement by the Government that the 1.4 million businesses who borrowed Bounce Back Loans can extend repayment flexibly under Pay as You Grow. This removes or at least diminishes one of the factors weighing on indebted businesses ability to investment.

1.22 LEPs would very much welcome similar flexibilities being made available for CBILs.

1.23 The super deduction provides an important opportunity to incentivise investment by business. However, for many businesses, particularly those most affected by the pandemic, further longer-term investment incentives are likely to be required. It is therefore proposed that catalytic capital grants are also made available to encourage businesses to invest in the recovery priorities in Build Back Better, particularly innovation and net zero.

Q4: *Do economic statistics adequately capture growth in the modern economy, and what lessons can be learned from the pandemic about the measurement of economic activity?*

1.24 This is a complex question, which might require some tailoring in the short term, given the priority that needs to be placed on job retention. Historically, our focus on economic growth has been largely on Gross Value Added (GVA) and jobs. These have been the measures that our sponsor department (BEIS) and other parts of government are most interested in. There are key limitations with these measures:

> **Firstly**, the **use of jobs** as a measure of success is, although simple to understand at one level, a poor and misleading measure. Prior to the pandemic many LEPs were focussing on the **quality** of jobs in our areas (in terms of hours, conditions, wages rates and longevity).
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> **Secondly**, the pandemic has highlighted how much of our modern economy involves or can involve **virtual** transactions and that the location of where economic activity takes place in the service sector is difficult to pin down.
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> **Thirdly**, GVA does not have built into it any measure of the effect on **natural capital**. Other parts of government, most notably Defra, have been interested in understanding how the actions of LEPs and other impact on natural capital. The recent Dasgupta Report on biodiversity commissioned by the Treasury, highlights how we measure success drives decisions and the need to "change our measures of economic success to guide us on a more

sustainable path", including that "introducing natural capital into national accounting systems would be a critical step towards making".

Fourthly, LEPs have worked closely with the NHS during the pandemic, for instance on considering the impact of lockdown on mental health in the workforce. The capacity and capability of the NHS to understand in real time and forecast future health impacts is truly outstanding. No comparable capacity or capability exists in the economic development arena. **Investment in data analytics, including the use of AI and machine learning**, to help us understand close-to-real-time economic activity and to forecast future trends and needs will be vital if the UK economy is to keep up with international competitors.

1.25 We do not consider the pandemic has itself altered the importance of these issues. It has however highlighted the importance of other proxy measure for economic activity such as movement data on people or goods, which are good leading or real time indicators of economic change. However, these are not measures that add value to understanding longer term growth without investing a wider suite of real time data such as bank transaction, mobile wireless activity, transport patronage and online bookings, and using them to build a picture of local economic activity and intentions

1.26 A related issue is that governments have not traditionally invested enough time in understanding the lessons learnt from previous economic interventions. For example, the Opportunity Areas programme did not build on lessons from Education Action Zones or Neighbourhood Renewal Fund; the current Kickstart programme was clearly inspired by te Future Jobs Fund but little work appears to have been don to understand how FJF was administered, leading to delayed implementation of the programme. It would be helpful if all new economic policy developments include a commitment to learning lessons from what has gone before.

***Q5:** What policies are effective in helping people to reskill, move between occupations and sectors and take advantage of new opportunities? How could these be best implemented in the aftermath of the pandemic, and as technological developments such as artificial intelligence change the nature of work?*

1.27 As the question implies, the nature of many jobs and work is changing, a process that has been accelerated by Covid-19. The Plan for Jobs highlights the deficiencies in technical skills, basic skills and the looming deficiency of digital skills. It is difficult to plan and anticipate the precise skills that will be needed in the future; however the broad shape of skills and the need for people to be agile and adaptable are clear.

1.28 At a local level, LEPs deal with the array of interventions that are developed by government in response to particular skills issues. At the last count at a local level we were dealing many initiatives (at last 15 strands). These initiatives are not being developed and rolled out as part of a coherent, joined up and comprehensive skills strategy (nationally or sectorally). This issue pre-dated Covid-19 but has been exacerbated by the range of short-term initiatives for employment and skills development that have been introduced in response to Covid-19. Some local authorities are reporting that they are struggling to cope with the added bureaucracy of the numerous well-intentioned support schemes they are having to administer.

1.29 It may be that developing a coherent approach to skills is difficult to achieve at national level. However it certainly needs stitching together locally as this is the level where it most impacts on businesses. This requires:

Good local **labour market information** on local skills issues and needs.

The ability to **flex and plan for skills investment** at a local level (which might be at the level of a LEP, sub-LEP areas or in some cases across LEP areas for some skills) working with the skills infrastructure such as FE Colleges and within a national framework (for instance around the broad areas for new skills development).

A **local interface** between national policy/funding (which is often designed for larger firms) to SME businesses. The administrative challenges of government skills programmes can be high and off-putting for SMEs this means local skills partnerships and management organisation are an essential part of the solution.

1.30 The level of local integration required needs to knit together these priorities, with LEPs and their effective business relationships being well placed to effectively deliver this.

***Q6**: Does the Government have the right mix of policies and a coherent strategy to promote long-term productivity growth and create new high-quality jobs? and Q8: Is the "Plan for Growth" an adequate replacement for the "Industrial Strategy"?*

1.31 We have addressed these two questions together as they overlap to a large degree.

1.32 LEPs found the **Industrial Strategy** (IS) a helpful focus on key opportunities, it had intellectual coherence and provided a clear sense of priorities. It was a long-term plan supported by range of investment and support and focused on five foundations which included "place". It provided the framework in which we have developed or were developing our own local industrial strategies. Therefore these was a clear thread running from national to local.

1.33 The Plan for Growth[11] states "*much has changed since 2017* [when the IS was published]" and so "*it is right that we create a new framework for how we will build back* better".

1.34 LEPs agree that the short term need to support economic recovery from Covid-19 and this is a new factor that must have greater prominence, we also can see that there is, rightly, greater emphasis than four years ago on the transition to a **net zero carbon economy**. Therefore, the need for the Plan for Growth is fully recognised.

1.35 It highlights the ambition and intentions across a wide range of topics and has many welcome initiatives and actions that will help address some of the key economic and societal challenges of the UK. The strong focus on Net Zero and the **Green Industrial Revolution** is very welcome. The recent clarification of guidance on the Treasury's Green Book to stress the weight that can be given to carbon reduction as a key metric for public sector investment is also very helpful, as is the proposal for PLCs to report on their carbon reduction. These could be made more powerful if supported by a national strategy to unlock the power of institutional investors, particularly public sector pension funds, to invest in green growth.

1.36 However, there are two **significant areas** in the Plan for Growth that we feel need consideration as we move to implementation:

The **lack of focus on place**. Whilst the focus on levelling up is important, place is a key factor for economic success across the <u>whole</u> of UK/England. Although, the Plan states "place matters", there is now no real framework for local areas led by LEPs or other bodies to develop strategies and action plans that together across England/UK will be more than the sum of their parts. The policies highlighted to deal with levelling-up are a mixture of separate infrastructure investment pots (e.g. town deals), which will need to be integrated to create a comprehensive approach to economic growth. Therefore, greater explanation is required on how the UK

[11] Build Back Better, our plan for growth, HM Treasury, March 2021

Shared Prosperity Fund (UKSPF) will be used in a systematic way to address not only levelling up but placed based growth. Not least how the UKSPF will be allocated and managed locally.

Interventions in relation to the **business environment** and the mechanisms to address the issues underlying poor productivity we have outlined. Currently, the focus is on regulatory reform, but there is limited evidence that this is major barrier to business success. Interestingly, this was not raised as a constraint on UK productivity in the **2019 Business Productivity Review** conducted by BEIS. Again, there is no mention as to how the **UKSPF** will be used to support programmes to work with businesses, which was an important element of ERDF.

1.37 These issues can be effectively addressed by **translating the national plan into local delivery plans** and providing the necessary tools to effectively deliver these. A role, which we believe **evolved LEPs are ideally placed to undertake**, given our strong track record in developing and delivering strategic economic Plans and Local Industrial Strategies. In doing so, these local plans need to address recovery issues and major policy priorities such as net zero but importantly also address the underlying challenges of anaemic productivity growth.

Q7: Is the Government doing enough to encourage corporate investment?

No specific view from the LEP Network on this.

Q8: *Is the 'Plan for Growth' an adequate replacement for the industrial strategy?*

1.38 Through their Local Industrial Strategies LEPs were able to **translate the objectives** of the industrial strategy into tangible local delivery.

1.39 As referenced above, the Plan for Growth doesn't have the same mechanisms in place to enable a similar local delivery, but LEPs are ready and **ideally positioned** to ensure that the national Plan for Growth translates into local direct action.

1.40 LEPs are the only organisations bringing together business, Local Government, FE and HE in one joined up apolitical partnership, **operating across an economic not political geography.**

1.41 LEPs are **evolving along with policy** as part of the 2021 LEP Review and are enthusiastic for the future. We believe they hold the key to delivery of the Plan for Growth and are proven partners where it matters most – locally.

Q9: *Are we in a period characterised by long-term low economic growth (secular stagnation), and if so, what are the implications for Government economic policy?*

1.42 The LEP Network has **not seen evidence** that this shift is necessarily the case; it is difficult to reach any firm conclusions given the impact of major events over the past 15 years such as the global financial crisis and then coronavirus.

1.43 The OBR's current long term central forecast for average UK productivity growth is now 1.5% pa (and with just 0.05% pa workforce growth this gives overall 1.5% pa real GDP growth)[12]. The OBR revised down their earlier long-term forecasts of productivity growth (which was 2.2% pa in 2015, then 2.0% in

[12] See Annex B of "*Economic and fiscal outlook*", OBR, March 2020

2017) as they now consider the period of low productivity growth since 2008 reflects **a "new normal"** for the UK (and to some extent other advanced economies)[13].

1.44 If, however, the UK's rate of economic growth (whether measured by total GDP or GDP per head) over the next 10 to 15 years is going to be at a lower rate historically then this has some **important broad implications**.

1.45 **Firstly**, it emphasises the importance of **inclusive growth** to ensure that there are fair shares of the smaller future level of growth. In other words, if the proceeds of growth will be smaller the share of these becomes arguably all the more important.

1.46 **Secondly**, at one level it might make it easier to achieve a net zero carbon economy in the future. However, it still means that we need **smarter economic growth** and a smarter economy in the sense of dramatically changing the trade-off between the size of the economy and carbon emissions.

1.47 **Thirdly,** it will have important economic implications for the **pool of tax revenues** that would be generated by growth available to support a wide range of policy objectives (including de-carbonising the economy).

Q10 *Is the UK well placed to take advantage of future technological breakthroughs and translate them into economic opportunities?*

1.48 It is almost a truism that the UK has had world-leading science and research, but has been less successful in translating this into productivity and economic growth. Conceptually, there are three key elements to this process:

> **Firstly**, being a **first mover** in finding technological breakthroughs that can have economic value (e.g. graphene discovered by the University of Manchester). This is where the investment by the Science Funding Councils and the proposed new Advanced Research and Invention Agency (ARIA) make a difference (as well as of course our major technology focussed businesses).
>
> Secondly, having **good interaction** between the business base and these technology developments, here Innovate UK is important as are the Catapults.
>
> **Thirdly**, being excellent in the **diffusion** of these (and other) technology.

1.49 Much **innovation** is about the diffusion of the effective use of existing (often not that pioneering) technology. We noted elsewhere in our response the key issue around the long tail of less productive businesses. This existence of a long tail is closely correlated with the long tail in the use and diffusion of technology and the evidence is that in some respects UK firms lag behind.

1.50 The focus of thinking in innovation is around the first and second strands, not least because the bulk of government's innovation investments and incentives to the Higher Education System focus on innovation rather than deployment of new technologies and systems. The extent to which these impact in the wider business base is often limited and is not normally a key metric for government funding.There is little focus on the third strand and there is a strong case for looking at the overall balance of support, more explicitly tying government support to real-world economic outcomes. The effective diffusion of technology take place, primarily, at a local or sectoral level. At a local level healthy and all-encompassing innovation ecosystems are particularly important.

1.51 In summary, it is right we should be seeking to **carve out UK leadership in key technology areas**. However, arguably a bigger prize is to improve innovation across a broader spectrum of businesses and

[13] The OBR note that over the past 250 years growth in UK GDP per hour has averaged 1.3% pa in peacetime, but since WWII up until 2008 it had consistently average over 2% pa.

increase the adoption of **existing** technologies as they evolve (so taking advantage of 2nd mover opportunities). This requires **financial support for local-led approaches** and delivery to enhancing innovation as part of addressing the productivity puzzle.

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