

The potential economic impacts of a flexible working culture

Report for Citrix

August 2019

Cebr

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Executive Summary

This is a report by the Centre for Economics and Business Research (Cebr), commissioned by Citrix, looking into the potential **value to the US economy of the adoption of a more widespread flexible working culture**. The present report follows on from a series of studies that Cebr carried out for Citrix in 2014 and 2015, aimed at analysing the **potential economic impacts of remote working** in France, Sweden, the UK and South Africa.

The study finds that a **large proportion of the US population** could **use working time more productively** (full-time workers), **work more hours** (part-time workers) or be **more willing to work** (if currently unemployed or economically inactive). This is contingent on workers being provided with the **right tools and technology to facilitate flexible working practices**.

The report identifies the current and potential rates of uptake of flexible working practices that provide individuals with an ability to work from various locations away from the office.

Economic impacts

The study reveals that the total potential **US economic gains from a flexible working culture could accrue to approximately \$2.36 trillion** (in Gross Value Added¹) per annum. The majority of these gains come from the individuals who fall into the unemployed or economically inactive bracket. This group is responsible for 88% of the total potential boost to GVA, equivalent to \$2.08 trillion annually, with the remainder contributed by productivity improvements of people currently in work.

The **\$2.08 trillion coming through the unemployed and economically inactive** alone would equate to a **10.2% boost to US GDP**. This estimate is based on a survey of **2,502 members of the US population and an extrapolation of the findings for each of the demographic groups represented in the sample to the US knowledge worker population**. As such, the findings most likely represent a 'best case scenario' in terms of the perceived benefits of a flexible working culture, but nonetheless reveal a potentially significant opportunity for businesses and government alike.

Further benefits of a more widespread flexible working culture include the potential **to reduce commuting costs** for working individuals while **increasing an individual's leisure time** by allowing them to better manage their work-life balance. If provided with the opportunity to work remotely, 95% of knowledge workers would opt to work from home, on average 2.4 days per working week. This would amount to **cost savings of \$44.4 billion on commuting spent on tickets** or gas, for example, while simultaneously reducing 5.8 billion hours a year commuting to and from work. The combined cost savings of the decline in time spent commuting and the actual expenditure on the means of commuting amount to \$107.6 billion in a year for the US population analysed. This welfare gain is not included in the **\$2.36 trillion US economic impact aforementioned**. Additionally, the report reveals the US demographic

¹ GVA or gross value added is a measure of the value from production in the national accounts and can be thought of as the value of gross output less intermediate consumption. That is, the value of what is produced less the value of the intermediate goods and services used as inputs to produce it. GVA is also commonly known as income from production and is distributed in three directions – to employees, to shareholders and to government. GVA is linked as a measurement to GDP – both being a measure of economic output. That relationship is (GVA + Taxes on products - Subsidies on products = GDP). Because taxes and subsidies on individual product categories are only available at the whole economy level (rather than at the sectoral or regional level), GVA tends to be used for measuring things like gross regional domestic product and other measures of economic output of entities that are smaller than the whole economy.

groups examined could potentially gain 11.9 billion hours in leisure time per year in total through the greater use of flexible working practices.

Other key findings

Other key findings include:

- 86% of respondents who do currently have the option to ‘work from anywhere’ utilise this opportunity.
- 69% of people who are currently unemployed or economically inactive (retired, full-time homemaker, carers) would be encouraged to start working if given the opportunity to work flexibly.
- Relative to other demographic groups, working remotely is most popular with respondents between the ages of 16 and 55 years and working with dependent children: 92% of these respondents indicated they would use flexible working if the facility was available at their place of work.
- 65% of part-time working respondents would be inclined to work more hours if given the opportunity to work remotely. This could potentially create \$72.3 billion in terms of extra GVA across the US economy.
- The estimated 10.2% boost to US GDP through the unemployed and economically inactive benefitting from a flexible working culture compares with a potential boost of 4.7% in the UK, 4.5% in South Africa, 7.1% in France and 4.6% in Sweden. The greater boost in the US is mostly explained by a higher average productivity of the American workforce.

Conclusions

As technology develops to become increasingly accessible and affordable, employers should recognise the value that technology-enabled remote working can offer. **These economic benefits are dependent on businesses adopting a flexible working culture and implementing technology that enables employees to work from anywhere effectively.** The US Government has a role to play by creating a **favourable environment**, through investment in infrastructure and policy developments, within which employers and employees can realise the potential benefits identified within this report.

1 Introduction

This is a report by the Centre for Economics and Business Research (Cebr), looking into the potential **value to the US economy of the adoption of a more widespread flexible working culture**. The study was commissioned by Citrix, a leading provider of digital workspace solutions that give people **new ways to work**, with seamless and secure access to the apps, files and services they need on any device.

1.1 Objective of the study

The aim of the study is to capture the potential productivity benefits of a more widespread ‘work from anywhere’ culture, largely driven by technological advances that make it possible to work seamlessly regardless of location i.e. between the office, home, client site, coffee shops, airports etc. Modern day technology allows employees to work remotely, as if in the office, from anywhere, on any device, at any time. This study seeks to identify the potential impact on US productivity of more widespread ‘work from anywhere’ practices.

The study heavily focuses on how individuals might utilise their time more productively if given the opportunity to ‘work from anywhere’. To obtain a comprehensive picture of those who might work remotely within the US, one needs to note that remote working technologies will have a different impact on different demographic groups. People already employed could be encouraged to use their time more productively, while people who are unemployed or inactive (not in the labour force²) could be motivated to enter the workforce. By accounting for these differences across US demographic groups, we demonstrate a range of effects that remote working technology has on different individuals.

The study bases its findings upon an online survey conducted by Opinium Research, which questioned 2,502 US individuals in July 2019. Respondents were screened to establish whether they are knowledge workers³ and/or in office-based roles. For those who did not classify themselves as such, the survey was discontinued, but progressed for respondents who could. The study was only interested in those who do not need to be in a specific place to perform their role. For instance, people working in sectors like communications, finance and insurance are much more likely to fall into this category than people working in construction, cleaning, driving or bartending, who need to be in a specific place to do their job.

To assess the potential gains to the US economy from the adoption of this more widespread flexible working culture, the current attitudes of the US population were examined. The survey was then able to establish a picture of current adoption rates and potential barriers to uptake by examining those currently employed with the ability to work from anywhere. Future potential adoption levels were revealed by respondents who want to work remotely but are currently unable to do so.

The survey results can be used to evaluate the potential benefits that flexible working practices could bring to the US economy. The study also identifies the extent to which an ability to ‘work from anywhere’ could enable workers to utilise their working time more effectively and to encourage people not currently working to re-enter the labour market. Finally, the report considers whether these changes

² People who are neither working nor looking for work are counted as “not in the labour force” according to the U.S. Bureau of Labour Statistics. Reasons for not being part of the labour force include the following categories: ill health or disabilities; retired; home responsibilities; going to school; could not find work; or other reasons (<https://www.bls.gov/opub/btn/volume-4/people-who-are-not-in-the-labor-force-why-arent-they-working.htm>).

³ Knowledge workers: those whose main capital is knowledge and, therefore, “think for a living”, e.g. architects, software engineers, lawyers, doctors, accountants, academics etc.

in the behaviour of individuals, as a result of being able to work from anywhere, would result in economy-wide benefits.

1.2 Definitional issues

The more widespread ‘work from anywhere’ philosophy or culture which this report is concerned with can be thought of as a form of ‘flexible working’. However, it is important to distinguish between this concept of flexible working and other notions, of which there are several. For instance, other common concepts of flexible working are listed below:

- **Part-time working:** employees working less than full-time hours.
- **Job-sharing:** two employees doing one job and splitting the hours between them.
- **Flexitime:** employees working certain ‘core’ hours every day can select the start and end times of their working day.
- **Compressed hours:** employees working full-time hours but over fewer days.
- **Annualised hours:** employees who are contracted to work a certain number of ‘core’ hours over the year, but with flexibility to choose the length of the working day or week.

These flexible working practices are derived from the different requirements of individuals. Parents may wish to work **part-time** to ensure they are able to look after their children outside of school hours. A person caring for an elderly or disabled relative may require **flexitime** to be able to attend hospital appointments.

These above notions are quite distinct from the ‘work from anywhere’ concept. The report focuses on the technological advances that make it possible to work remotely, as if employees were in the office, from anywhere, on any device, at any time. The other aforementioned concepts are, on the other hand, concerned with how employees structure their working days and weeks and when they undertake their work. **The report’s concept of flexible working is conducive to those that use the aforementioned types of ‘flexible working’ and also to those that do not.**

The report’s primary concern is flexibility in terms of working location and pertains specifically to the concept of ‘remote working’. Remote working is often also referred to as ‘mobile working’ or ‘teleworking’, all of which encompass the notion of an employee’s ability to spend all or part of their working day at a location remote from their employer’s office. This could involve working from home, at an airport or while travelling on a train, using technology such as high-speed broadband and digital workspace, as well as the requisite electronics such as tablets and smartphones, to communicate with those inside and outside of the workplace.

In the remainder of this report, therefore, **any reference to flexible or remote working means the specific concept of the ability to ‘work from anywhere’ regardless of whether or not individuals and their employers are utilising and supporting the other concepts of flexible working outlined above.**

1.3 Summary of the methodology

The study includes an online survey, carried out by Opinium Research, designed to identify current adoption rates for flexible working practices. Two broad groups were targeted: individuals currently working and individuals who are unemployed or inactive.

Current adoption levels were identified through responses from those who can currently take advantage of flexible working practices. Potential future uptake levels were identifiable through respondents who want to work remotely, but do not have the option to do so, as well as who do not currently work but would if remote working was an option.

The study also sought to understand the implications this would have in terms of extra earnings for each individual and extra economic value that could be produced through the use of flexible working practices. Potential average additional earnings and GVA per individual were estimated using the individual's identified industry of current or previous employment. Also taken in account was the status of individuals in employment (full or part-time) and their responses to questions identifying the additional hours that such individuals could devote to work tasks through the use of flexible working practices.

US national statistics on average wages and GVA per capita and by industry were used as the basis for the various valuations of the potential productive boost. The proportions of flexible working uptake and additional hours identified by the survey were projected to the representative US population of the demographic groups analysed, and then aggregated to establish the US economic impact.

The survey questions identified commuting costs and leisure time gains, which have also been projected for the US population groups analysed in this study. A detailed description of the methodology can be found in the Appendix.

2 Background and context

This section explores existing evidence of the potential benefits that could be unlocked through greater access to the flexible working practices that are the subject of this report (as per the previous section). The forces driving the trend towards more flexible working practices in general (including all flexible working concepts) are examined first. The opportunities they offer to both businesses and individuals are then explored. Previous research has examined the benefits of flexible working to the individual employee or employer. This research is distinct in its exclusive examination of the specific ‘work from anywhere’ concept of flexible working and in its objective of demonstrating the potential value to the US economy.

2.1 Key drivers of flexible working practices

The ability to work flexibly is becoming increasingly relevant in the workplace. This is driven by three main forces: Government policy, changes in the workforce and advances in technology. Each are addressed in turn, below.

Government policy and labour market

In the US, flexible working is not covered by the Fair Labor Standards Act (FLSA) i.e. the federal law establishing main workers’ rights such as minimum wage, overtime pay eligibility, recordkeeping and child labour standards affecting workers of both the public and private sectors. Some states have promoted flex-work policies mostly for government workers, but a national work policy applying to all workers does not exist in the US⁴.

Flexible working is nonetheless common in the US as flexible work schedules can be agreed between employers and employees. A 2017 analysis conducted by Global Workplace Analytics and FlexJobs⁵ found that the number of US employers offering flexible workplace options has grown by 40% over the last five years and that, in 2017, 3.9 million US employees worked from home at least half of the time (115% increase since 2005).

The demand for flexible working practices by employees can be traced to changes in the structure of the workforce and the demands of individuals’ personal lives.

The share of workers aged 55 or above has increased from 17% to 22% over the decade preceding 2016 and by 2026 it is expected to grow to 25%.⁶ Additionally, many US workers relocate out of the cities due to the high living costs incurring high costs/times travelling to and from work. The greater demand for flexible working practices that we see today is in part a reflection of these trends.

Advances in technology

Technology has acted as both a driver and a facilitator making remote working a natural extension of the office. Digital workspaces provide company employees with digital collaboration and communication tools, a digital space to find and share information and knowledge, and access to business applications. The diffusion of digital workspaces, intended as a virtual equivalent of the physical workspace, has

⁴ An updated list of US federal and state-level laws on work flexibility policies can be found at:

<https://www.workflexibility.org/policy/>

⁵ <https://www.flexjobs.com/2017-State-of-Telecommuting-US/#formstart>

⁶ Bureau of Economic Analysis, 2016

enabled seamless work from anywhere. A continuation of these advances can be expected to increase employers' willingness and ability to allow employees to 'work from anywhere' in a flexible manner.

2.2 Existing evidence on the impact of flexible working practices

This section outlines the **main benefits** that flexible working in general provides, as identified by previous research. These **include productivity impacts, cost savings, better staff retention and recruitment, reduced absenteeism and lower environmental impact.**

Higher productivity

The findings of many prior studies support the view that firms are able to achieve greater productivity and efficiency through flexible working practices. Employees are more likely to enjoy greater job satisfaction and motivation from attaining a better work-life balance. Additionally, remote workers may be more productive as they experience fewer interruptions and distractions than in an office environment.

A study conducted by Harvard Business School⁷ looked at the productivity effects of working from anywhere. Specifically, they examined the effects on productivity at the United States Patent and Trademark Office (USPTO), harnessing a natural experiment in which the implementation of working from home was driven by negotiations between managers and the patent examiners' union, leading to exogeneity in the timing of individual examiners' transition to working from anywhere. They concluded that examiners productivity increased by 4.4% after transitioning to working from home, while the quality of work didn't deteriorate.

A 2018 study commissioned by Regus⁸ and carried out by independent economists, analysed the impact of flexible working in 16 different countries, including the US. The study found that by 2030 flexible working could generate \$10.04 trillion in the 16 economies and the US could receive the greatest boost in terms of gross value added (GVA). According to the study, higher productivity, smaller office spaces and fewer commuting hours could add \$4.5 trillion annually to the US economy.

Another 2017 survey of 509 full-time remote workers⁹ in the US found that on average, remote workers are happier and feel more valued, although have fewer established relationships with their co-workers. Comparison benchmarks were calculated from over 200,000 employees across all work arrangements.

The 2017 State of the American Workplace annual report by Gallup¹⁰ found that workers with access to flexible work time (defined as flexible work time) are 1.4 times more likely to be more engaged, suggesting that they would also be more productive.

Cost savings

Flexible working can enable cost savings for both companies and employees.

From an organisational perspective, cost savings are accrued through the reduction in overheads, lower printing costs and the opening up of desk space within the office. Other factors contributing to cost

⁷ [https://www.hbs.edu/faculty/Publication%20Files/19-054%20\(2\)_0273776c-2cee-4617-8068-99b29d934457.pdf](https://www.hbs.edu/faculty/Publication%20Files/19-054%20(2)_0273776c-2cee-4617-8068-99b29d934457.pdf)

⁸ http://vastgoedberichten.nl/wp-content/uploads/2018/10/181017-Regus_FlexibleWorkingSolidFacts_SummaryReport.pdf

⁹ TINYpulse (2017). "What leaders need to know about remote workers"

¹⁰ <https://www.gallup.com/workplace/238085/state-american-workplace-report-2017.aspx>

reductions for employers are better recruitments, higher retention rates and reduced absenteeism, described in the section below.

Personal cost savings are primarily linked to less commuting travel. The 2018 Regus study referenced above found that commuting time could be reduced by 3.53 billion hours by 2030 in the 16 countries.

Better recruitment, higher retention and reduced absenteeism

The findings of previous studies suggest that flexible working leads to more motivation and job-satisfaction in employees. Remote working allows employees to manage their personal responsibilities (such as childcare, or care for a family member) and attend health and other routine appointments without losing an entire day of work, thereby reducing absenteeism. Moreover, working remotely allows those recovering from illness or new mothers, for example, to return to work more quickly by working from home, thus improving labour retention. This higher retention translates into cost savings, through lower induction and recruitment costs.

The annual report by Gallup consistently finds that flexible working heavily influences one's decision to take or leave a job. Flexible scheduling and working from home in particular play a significant role in an employee's decision to take or leave a job¹¹.

The US economy ranks first globally in terms of competitiveness according to the Global Competitiveness Report (2018) published by World Economic Forum¹². While competitiveness and dynamism can be seen as positive features of an economy, one potential consequence is high employee turnover, as workers don't encounter strong difficulties in finding new job opportunities. This, coupled with an increasing number of highly skilled jobs, can lead to companies facing difficulties in retaining workers.

Environmental impact

Remote working also has a positive impact on the environment by enabling companies and employees to reduce their carbon footprint e.g. smaller offices, fewer commuting hours. At a time when environmental impact is an increasing concern and organisations are under pressure to reduce their carbon emissions, remote working can be seen as a cost-effective and simple way of doing so. The 2018 Regus study (referenced above) finds that CO2 emissions could be reduced by 214 million tonnes annually thanks to greater adoption of flexible working practices.

Conclusions from existing research

Previous research points to numerous benefits associated with flexible working. Cebr's study is the first to additionally survey people who are currently out of work and economically inactive about their attitudes to flexible working. In contrast to this, the benefits that the prior research identifies are skewed towards current employees and employers.

¹¹ Gallup, "State of the American Workplace" (2017), page 168.

¹² <http://www3.weforum.org/docs/GCR2018/05FullReport/TheGlobalCompetitivenessReport2018.pdf>

3 Attitudes to remote working

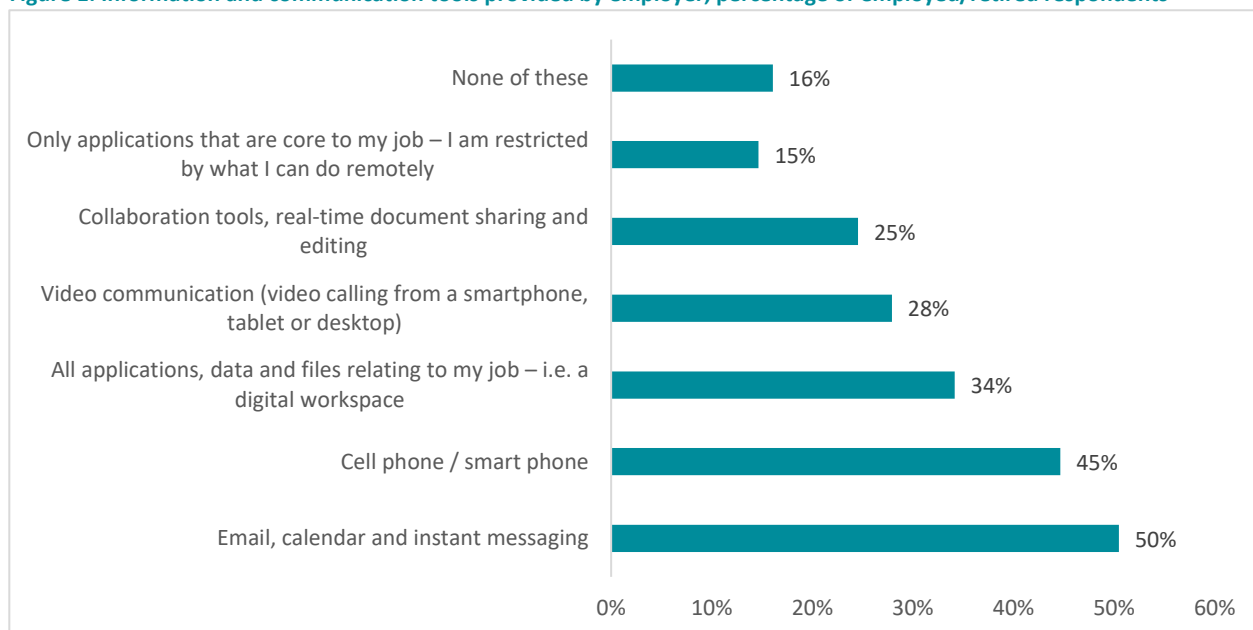
This section explores peoples' perceptions of the potential opportunities that the concept of flexible working offers. Drawing upon the survey responses of 2,502 people, the main reasons why people choose to work flexibly is explored first, before investigating where people would like to work and what benefits they expect to gain, given the opportunity to work flexibly (i.e., from anywhere). This is compared with the expected gains of those who currently do not have the facility to take advantage of remote working. Comparing the perceptions of various groups in society provides an insight into how different people view the numerous effects of flexible working.

3.1 Current prevalence of 'working from anywhere'

The definition of flexible working within this study refers to accessing a workplace IT network through some form of internet-enabled device, e.g., tablet, smartphone or computer. For this reason, it is important to first establish the extent of information and communication tools provided by employers to employees.

Figure 1 illustrates the prevalence of technologies that facilitate the type of flexible working practices that are of concern, as currently provided by employers. The most widely provided form of technology is email, calendar and instant messaging, with 50% of all respondents reporting that these are available in their workplace. Cell phone (or smart phone) follows as the second most commonly provided tool. A third (34%) of all respondents have access to a digital workspace which provides them with all the applications, data and files related to their job. However, 16% of respondents claim that none of these tools are currently provided. This amounts to a potential barrier in unlocking the gains that flexible working can facilitate for individuals.

Figure 1: Information and communication tools provided by employer, percentage of employed/retired respondents



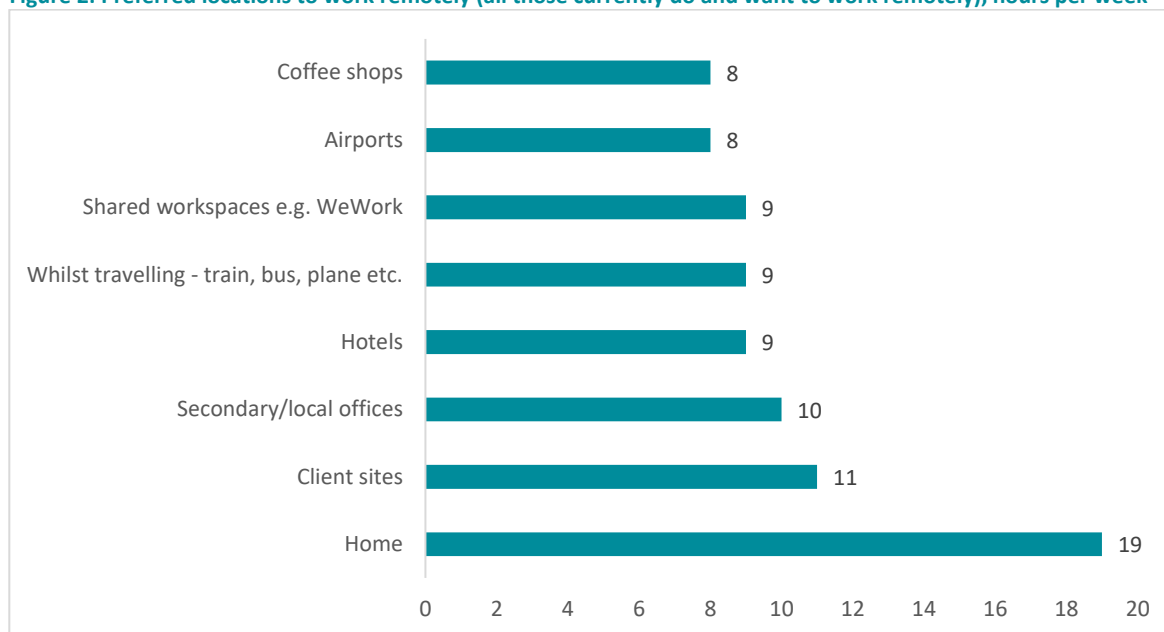
Source: Opinium, Cebr analysis (Base 1721)

3.2 Where is 'anywhere'?

Given the access to technology that employees have, it is also important to understand which locations (away from their employers' main site) they would work from. Given the opportunity to work flexibly,

the most popular location for remote working is at home, with 95% respondents suggesting they would, on average, work 2.4 days per week from home (Figure 2). Between 60 and 70% of respondents would work from any of the other locations, on average 1 to 1.3 days per week.

Figure 2: Preferred locations to work remotely (all those currently do and want to work remotely), hours per week

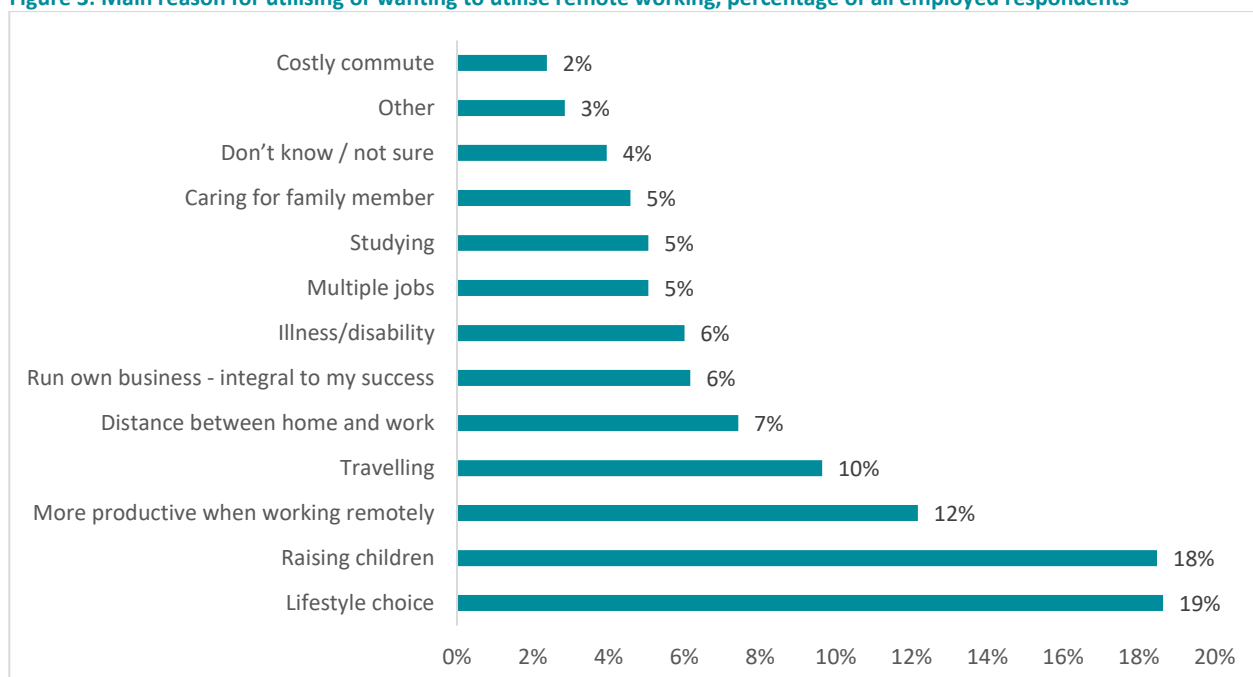


Source: *Opinium, Cebr analysis (Base 648)*

3.3 Reasons for ‘working from anywhere’

It is also important to know the various reasons why an individual would want to work remotely. Figure 3 below shows that 19% of respondents would work remotely as a lifestyle choice, making this the most popular reason for remote working. However, there are differences between groups in society. Unsurprisingly, 42% of respondents aged 16-55 with dependent children indicated raising children as the main motivation for them to work remotely. Overall, the main reasons that would encourage an individual to choose or utilise flexible working relate to lifestyle choices and the achievement of a better work / life balance.

Figure 3: Main reason for utilising or wanting to utilise remote working, percentage of all employed respondents

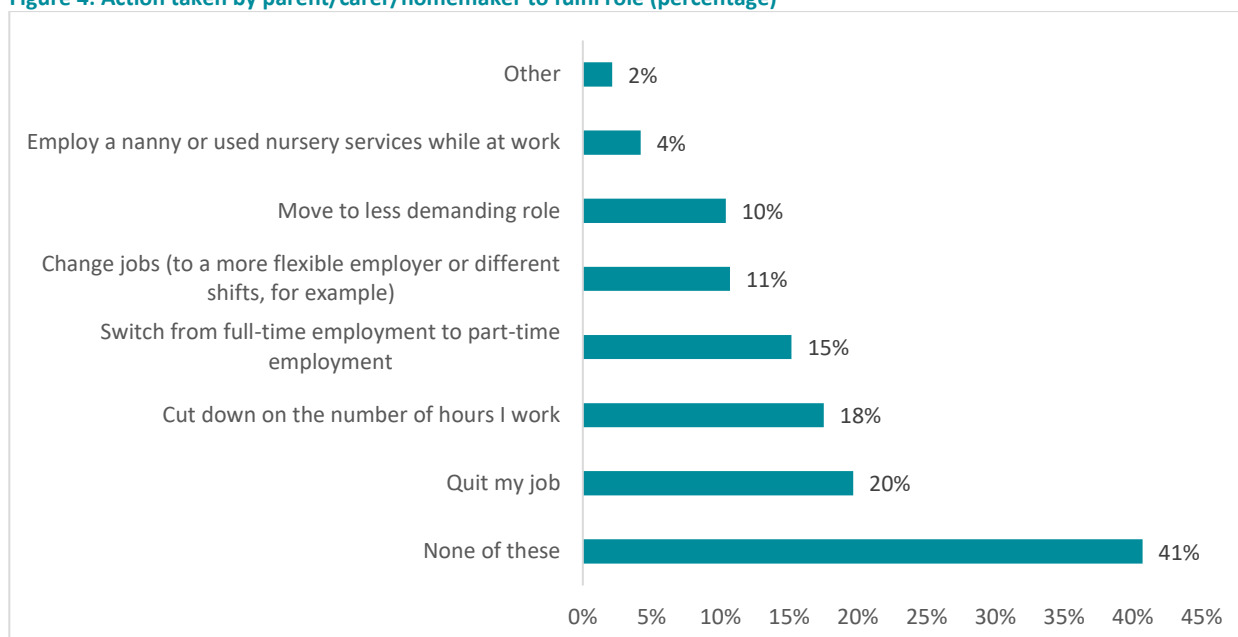


Source: *Opinium, Cebr analysis (Base 648)*

Some demographic groups might have had to make significant work-life changes in order to fulfil their personal duties and, in particular, family responsibilities. The survey asked all parents, carers and full-time homemakers if they have had to make changes to their work-life balance in order to fulfil their duties. Figure 4 shows that more than half of respondents had to quit, change or reduce their employment.

Flexible working offers some individuals the opportunity to better balance their personal commitments and responsibilities with the demands of working life. Understanding whether remote working could have enabled individuals to maintain their job is a part of this research.

Figure 4: Action taken by parent/carer/homemaker to fulfil role (percentage)



Source: *Opinium, Cebr analysis (Base 1877)*

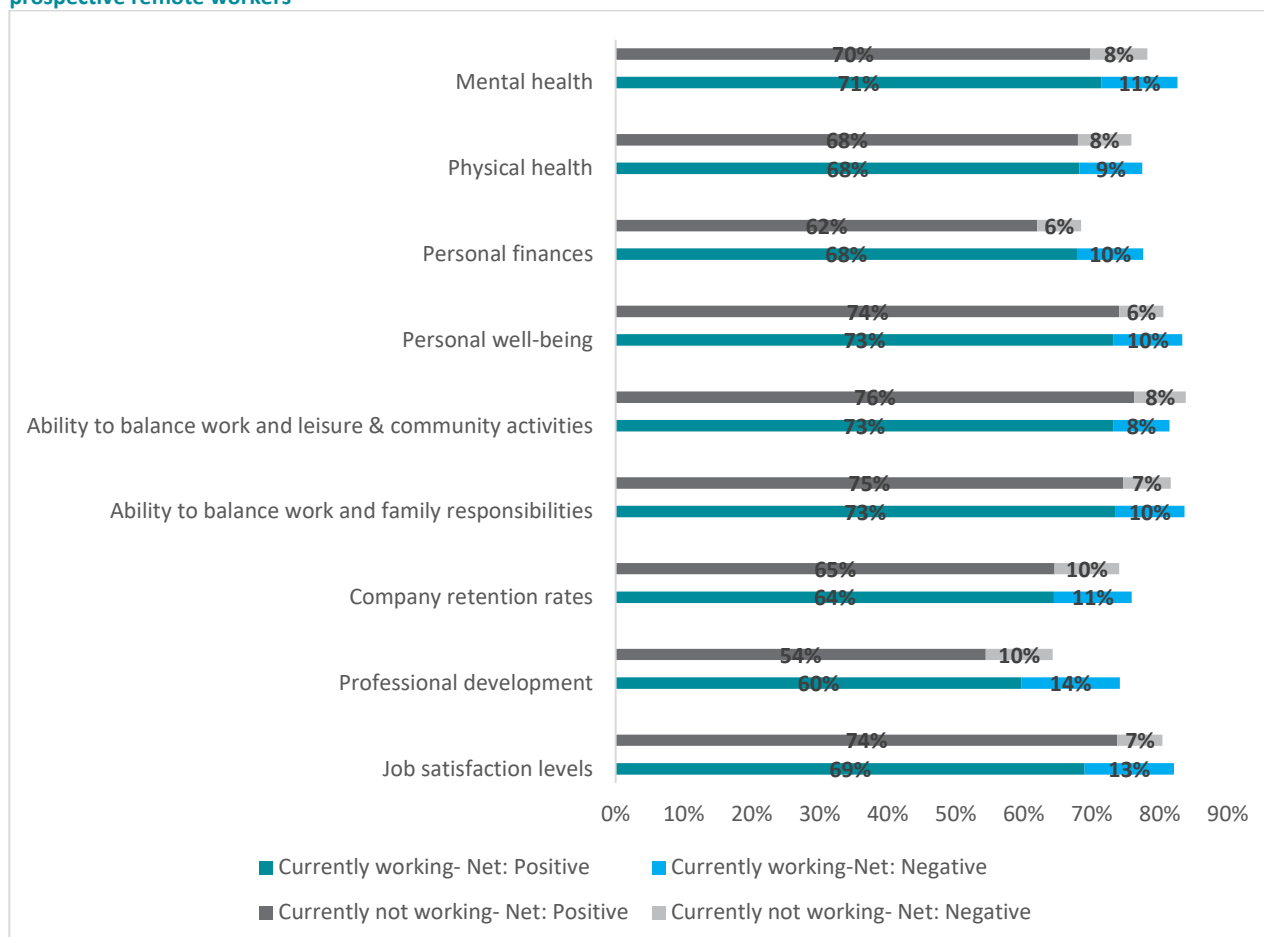
3.4 Impacts of ‘working from anywhere’ on people’s lives

The study also sought to understand the potential impacts of flexible working on various aspects of an individual’s life. The same survey question was posed to both current remote workers and prospective remote workers to explore whether any differences exist between the actual and anticipated impacts. The realised and expected impacts of remote working are reported in Figure 5 below.

Among current remote workers, 73% of respondents report that flexible working improves personal wellbeing and the ability to balance work with outside activities. A large proportion of respondents also believe that remote working has a positive impact on their professional situation either by improving their job satisfaction level (69%) or boosting their professional development (60%).

Similar results are recorded among prospective remote workers, suggesting that prospective users tend not to drastically over- or under-estimate the potential impacts.

Figure 5: Comparison of realised impacts of remote working among current remote workers; and expected impacts of prospective remote workers



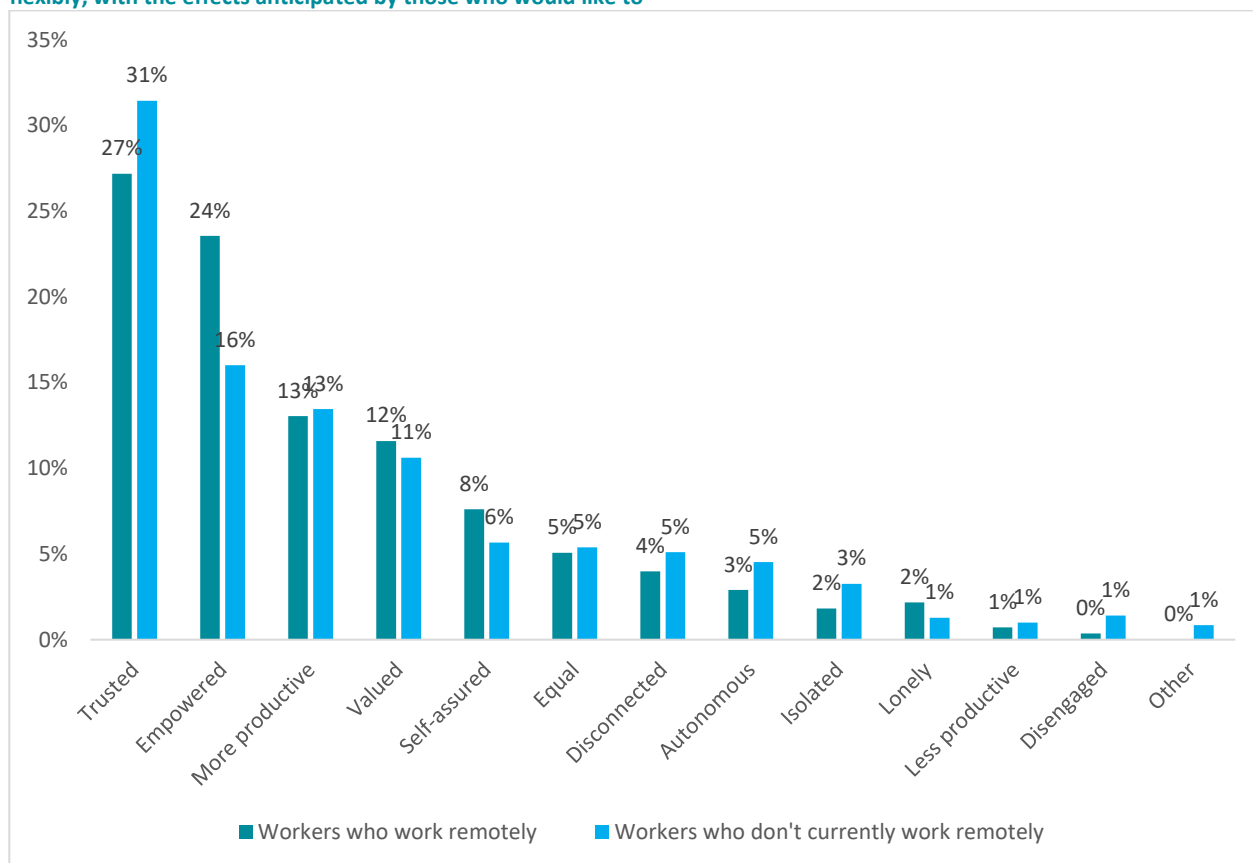
Source: *Opinium, Cebr analysis (Base 1317)*

Given these positive impacts, the research sought to understand how the availability of flexible working and working away from the office could impact the emotional and psychological lives of workers.

Realised and expected impacts are broadly similar. However, there are some differences in terms of the level of perceived entrustment and empowerment. While people who do not currently work remotely tend to overestimate the level of trust that they would perceive if they could work remotely, empowerment is better felt by current remote workers.

Overall, this analysis outlines the positive emotional and psychological effects that flexible working can provide. Very low proportions of respondents associate remote working with negative feelings, such as feeling disengaged, less productive or isolated.

Figure 6: “Remote working has/would make you feel...” – comparison between effects reported by those who currently work flexibly, with the effects anticipated by those who would like to



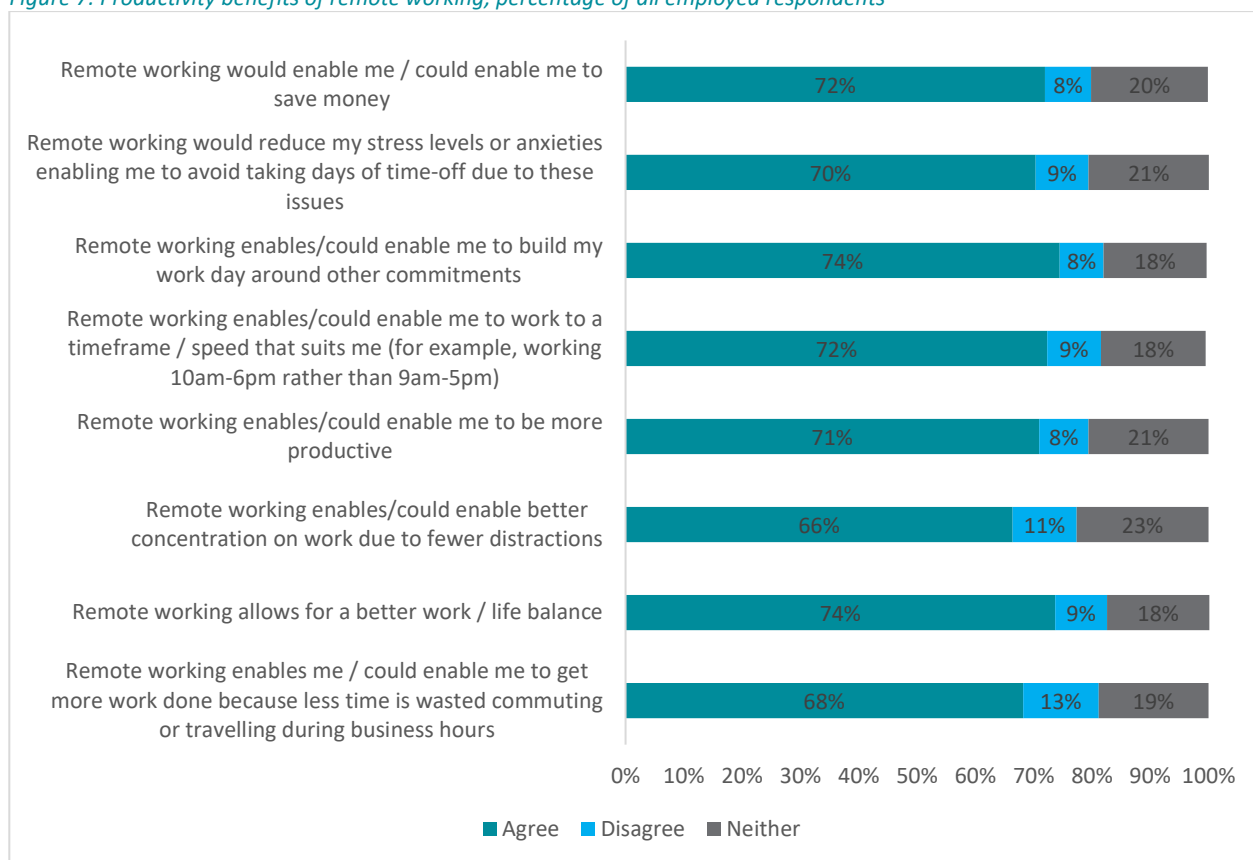
Source: *Opinium, Cebr analysis (Base 1317)*

3.5 How productivity is improved by ‘working from anywhere’

The study also sought to understand the impact flexible working can have upon productivity. Figure 7 below illustrates the perceived productivity benefits that remote working offers. The majority of respondents agreed that greater productivity would be delivered through all the listed channels. The two most cited benefits were the ability to build the working day around other commitments and a better work / life balance, confirming findings already highlighted in other parts of the report.

To those workers who said that remote working has a positive impact on their stress levels or anxieties (a view supported by 70% of respondents), the survey also asked how much time-off they take in a year due to these issues. The response was an average of 1.8 days each year. Arguably, this figure would be lower if workers were offered the opportunity of working remotely.

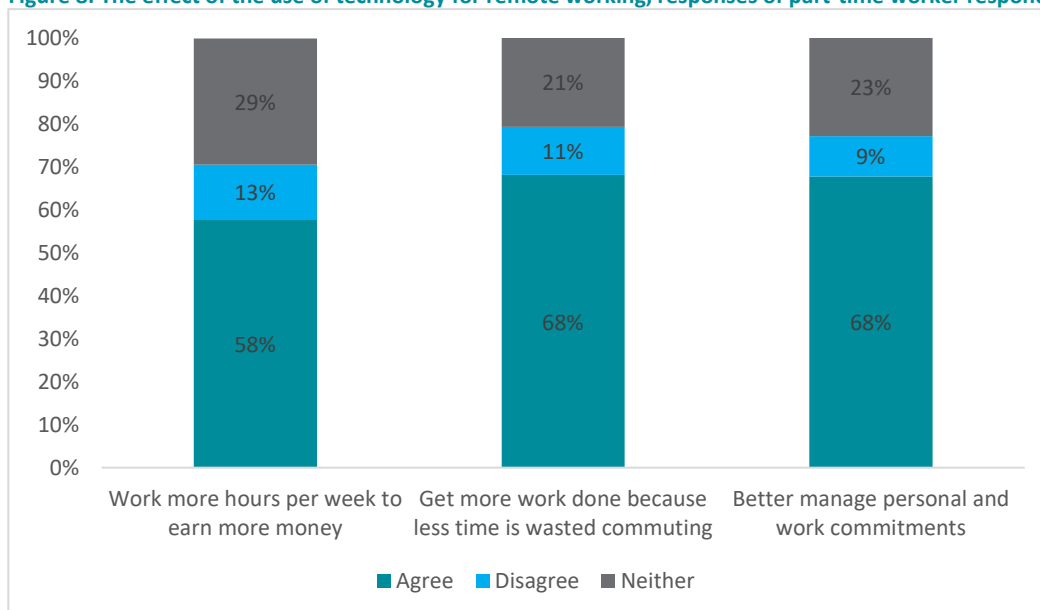
Figure 7: Productivity benefits of remote working, percentage of all employed respondents



Source: Opinium, Cebr analysis (Base 1317)

The research also sought to understand whether part-time employees in particular feel that remote working would impact upon certain aspects of their daily activities. Almost 68% of part-time respondents are better able to manage work and personal commitments, but also to get more work done because less time is wasted commuting (Figure 8). More than half of part-time workers (58%) think that they could work more hours per week to earn more money.

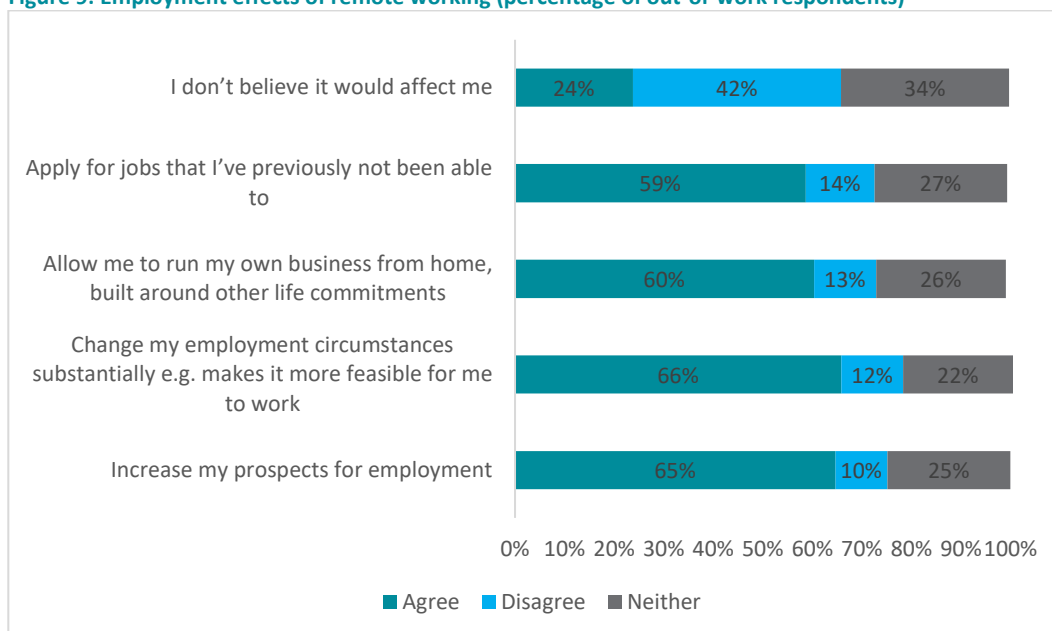
Figure 8: The effect of the use of technology for remote working, responses of part-time worker respondents (percentage)



Source: *Opinium, Cebr analysis (Base 287)*

To achieve a comprehensive understanding of perceptions, the views of unemployed and economically inactive persons were also surveyed. Figure 9 below shows the extent to which these out-of-work respondents *could* make use of remote working technology to start working.

Figure 9: Employment effects of remote working (percentage of out-of-work respondents)



Source: *Opinium, Cebr analysis (Base 1185)*

The majority of these respondents felt that remote working would help their professional situation, thus increasing their prospect of working. Only 24% did not believe that remote working would affect them. A substantial amount of people neither agreed nor disagreed with the statements, suggesting that it is difficult for them to assess a hypothetical situation.

3.6 Summary

To summarise, the attitudes towards flexible working among the groups examined appears to be extremely positive. The impacts reported by respondents regarding psychological and emotional effects, along with other domains such as health, wellbeing and job satisfaction, are illustrative of these broadly positive views towards flexible working. In almost all categories, the proportion of respondents citing positive impacts is greater than those reporting negative impacts.

Having identified these attitudes, the study then sought to understand how many individuals would use flexible working practices.

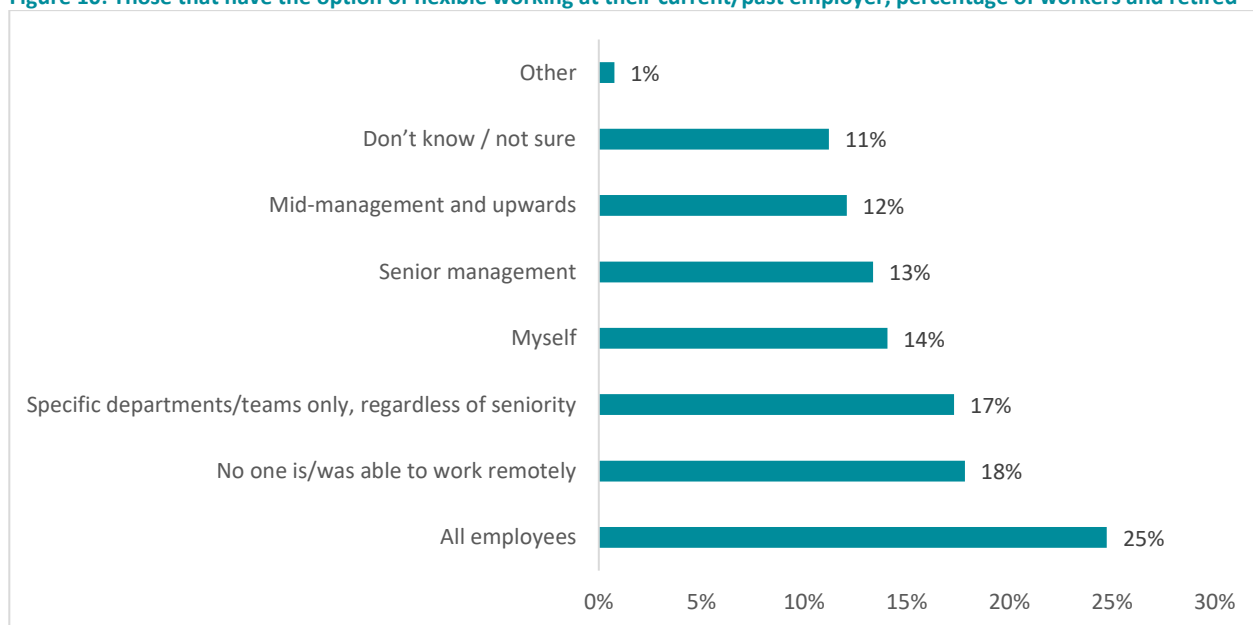
4 Adoption rates and barriers to entry

The extent of the benefits of flexible working depend upon two key issues: **firstly, the number of individuals that will choose to utilise flexible working practices when available and, secondly, the barriers that prevent individuals from adopting flexible working methods.** This section begins by evaluating the current adoption of flexible working practices by employees given the provision of such initiatives by employers. It then draws upon survey responses to investigate the perceived barriers to the flexible working practices of concern in this report, before exploring the potential usage of flexible working for those who do not currently have the opportunity to work in this way. Overall, this section aims to highlight how current and potential adoption rates of working remotely impact upon the size of the benefits that flexible working practices offer.

4.1 Current availability and adoption of flexible working practices

To understand access to flexible working practices, the survey asked individuals currently employed and retired whether their employers (or previous employer, if retired) provide the facility to utilise such practices. The results show that the majority of knowledge workers work (or worked, if retired) in a company that offers flexible working to at least a portion of its workforce. Only 18% of surveyed people work/have worked in a company where no one is/was able to work remotely and 11% are not sure about the response. Some companies offer flexible working only to senior management (13%) or specific teams (17%). Nonetheless, one in four of all respondents work in a company where flexible working is accessible to everyone. Within those companies that offered our notion of remote working, giving access to all employees is the most common practice.

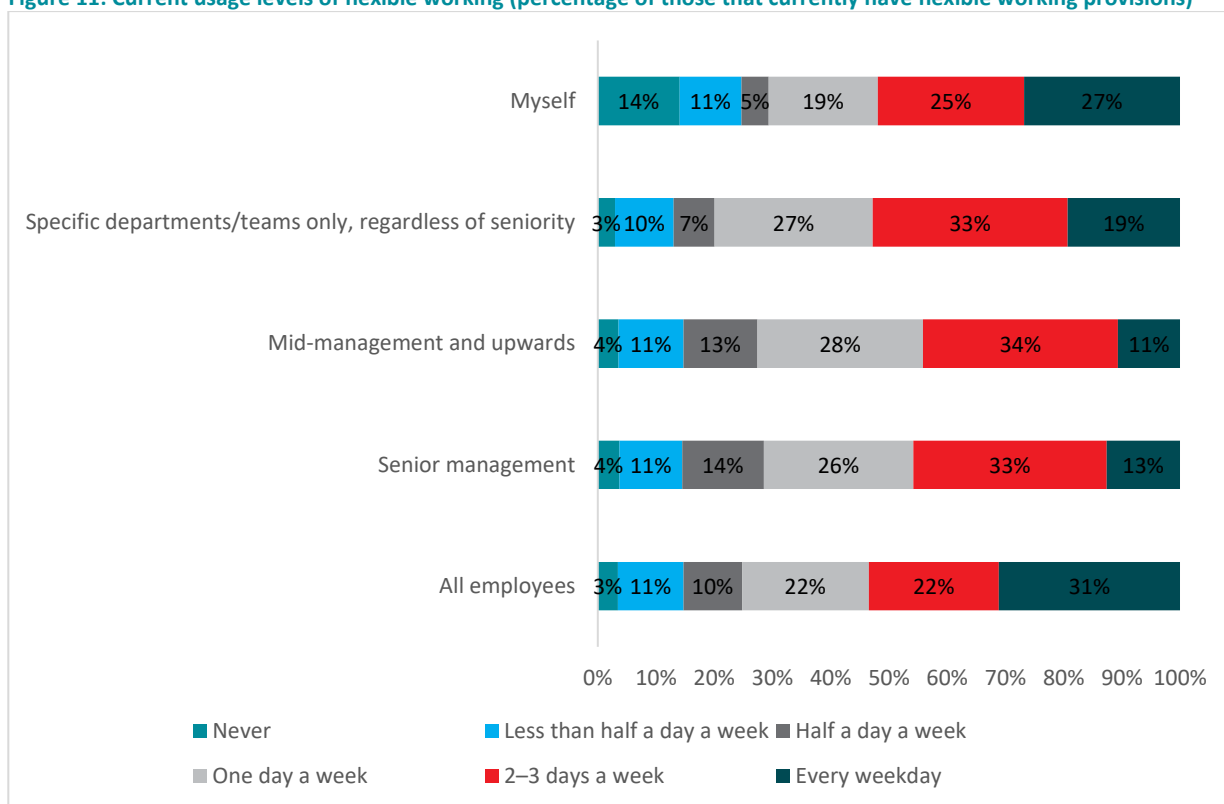
Figure 10: Those that have the option of flexible working at their current/past employer, percentage of workers and retired



Source: *Opinium, Cebr analysis (Base 1721)*

While understanding the current extent of flexible working on offer by employers is important, it is also informative to explore the adoption of these flexible working practices by employees. Continuing with those people surveyed whose companies offer flexible working to their employees, the various adoption rates for each section of the workforce offered remote working are illustrated in Figure 11.

Figure 11: Current usage levels of flexible working (percentage of those that currently have flexible working provisions)



Source: Opinium, Cebr analysis (Base 1417)

Across all workers who are offered flexible working, adoption rates are extremely high, with the lowest adoption rate of 86% reported by respondents themselves. This compares to 96-97% uptake of other categories.

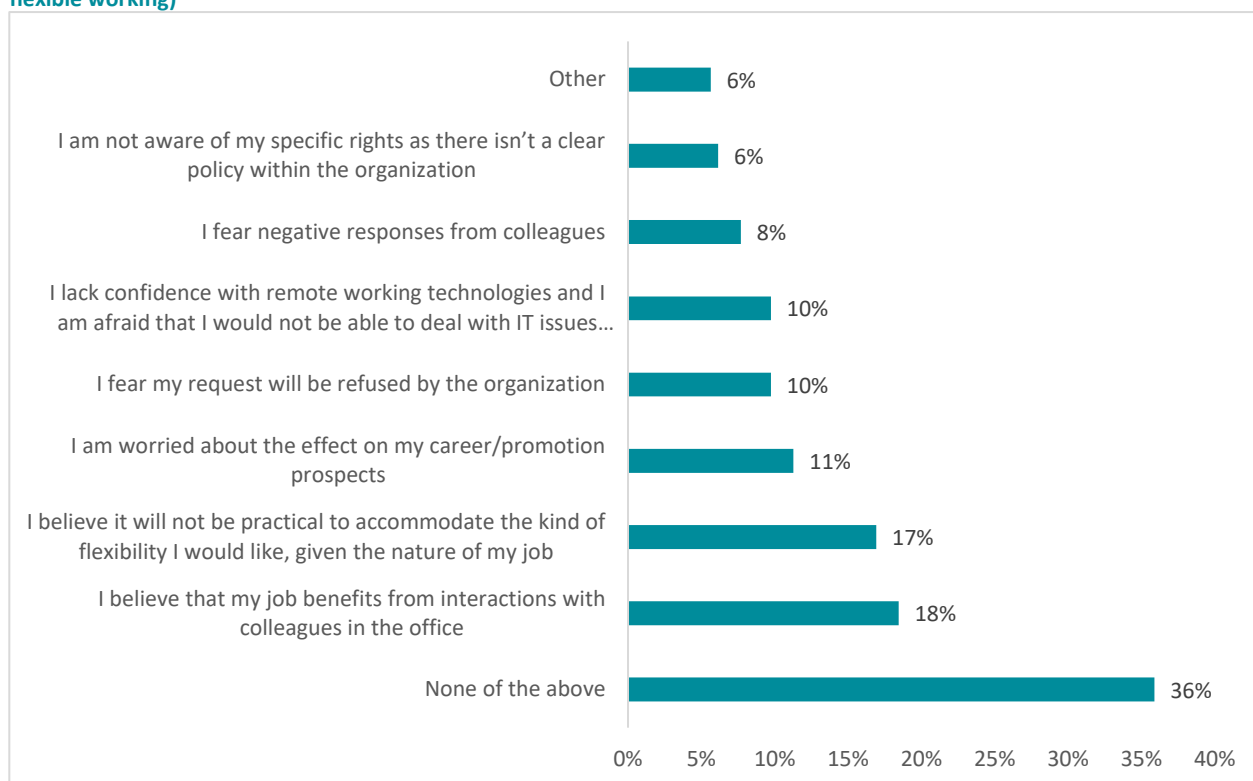
Among companies offering flexible working only to restricted groups of employees (based on seniority or specific functions), most people work remotely two to three days a week. In organisations where everyone has access to this facility, the highest percentage of people working remotely on a daily basis is registered (31%). Also, among respondents who reported having access to remote working themselves, most opt to make use of it every weekday.

4.2 Barriers to adoption of flexible working practices

To explore the barriers preventing the wider uptake of flexible working practices, Figure 12 illustrates respondent views of the main deterrents to using flexible working practices. Respondents indicate that they either would not like to use remote working facilities or do not like the thought of remote working. The main barrier relates to job-specific features, as demonstrated by 18% of responses, suggesting that they do not use flexible working because their jobs benefit from interactions with colleagues or because remote working would not accommodate the kind of flexibility needed by the nature of their jobs. This can be related to the presence of several innovation hubs in the US, where knowledge and technology spill-overs originating from direct and spontaneous communication are a significant source of benefit. Technology can also represent a barrier for some. The fear of encountering technical issues and not being able to deal with them deters people from working remotely in 10% of cases. Respondents' concerns around the potential impact of remote working on career prospects (11%) and colleagues' reaction (8%) are other important deterrents. Better communication from the company about employee

rights could increase the uptake of remote working in 6% of cases. A significant proportion of responses (36%) remain unexplained.

Figure 12: Reasons for deterring individuals from using flexible working practices (percentage of those that would not use flexible working)



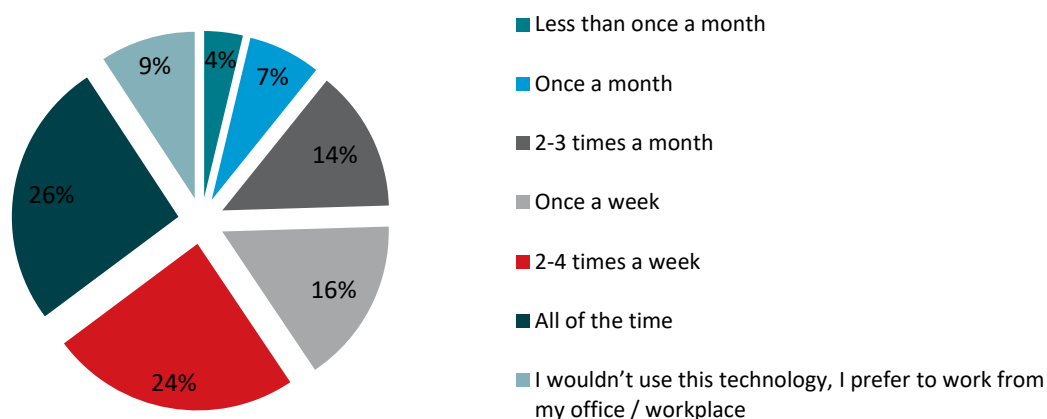
Source: *Opinium, Cebr analysis (Base 215)*

4.3 Prospective adoption by those for which flexible working is not available

Following the preceding analysis of flexible working adoption among people whose employers offer this, it is important to evaluate the appetite for remote working among individuals who are either not currently offered flexible working, or are currently unemployed or economically inactive. The results of this sub-section identify the demand that exists within different demographic groups for working flexibly in the manner of interest.

The survey asked respondents who are currently working and do not have access to flexible working, given the opportunity to work remotely, how often they would be inclined to utilise it. As illustrated in Figure 13, 91% of these respondents indicate they would use remote working technologies, revealing a high level of demand for flexible working practices. The most popular answer is “all of the time” (26%) followed by “2-4 times a week”. Overall, Figure 13 suggests a very high appetite for remote working among those who do not have access to this facility.

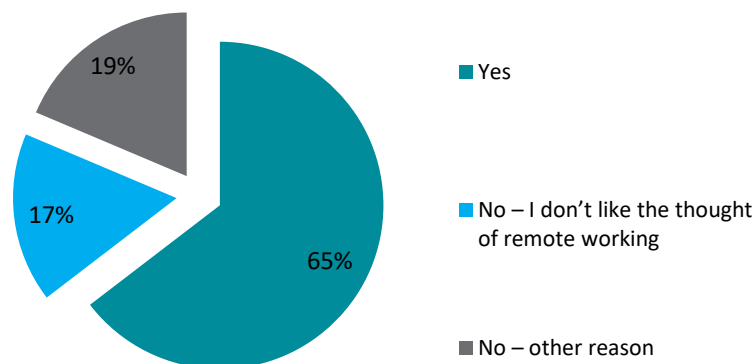
Figure 13: Adoption of flexible working routines of those currently working (retired) but do not (or did not) have the opportunity



Source: Opinionium, Cebr analysis (Base 1053)

The survey also asked respondents who are currently working part-time and do not have flexible working available to them if, given the opportunity to work flexibly/remotely, whether this would encourage or enable them to work longer hours. Figure 14 suggests that 65% of respondents would wish to work more hours than they currently do, illustrating the willingness of current part-time workers to work additional hours if provided with the right technological infrastructure.

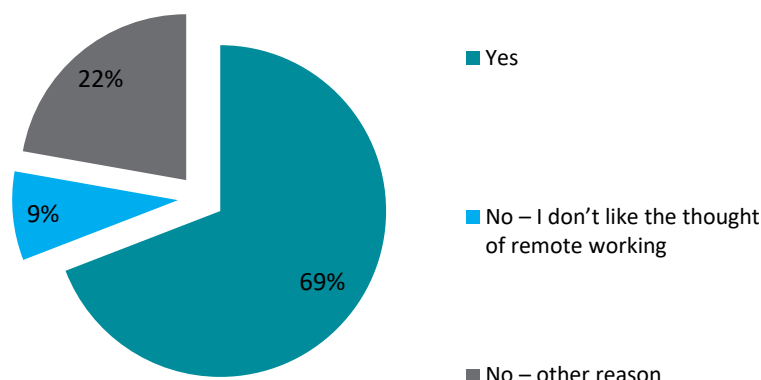
Figure 14: If remote working practices are available to part-time workers, would they work more hours than they currently do?



Source: Opinionium, Cebr analysis (Base 182)

Similarly, Figure 15 shows the proportion of people who are currently unemployed or economically inactive who would be more inclined to work if given the opportunity to work flexibly. The survey responses suggest that 69% of respondents would be inclined to start working if given the opportunity to work flexibly. This implies that the chance to work flexibly would encourage people to enter the workforce, come out of retirement or relinquish their full-time household commitments.

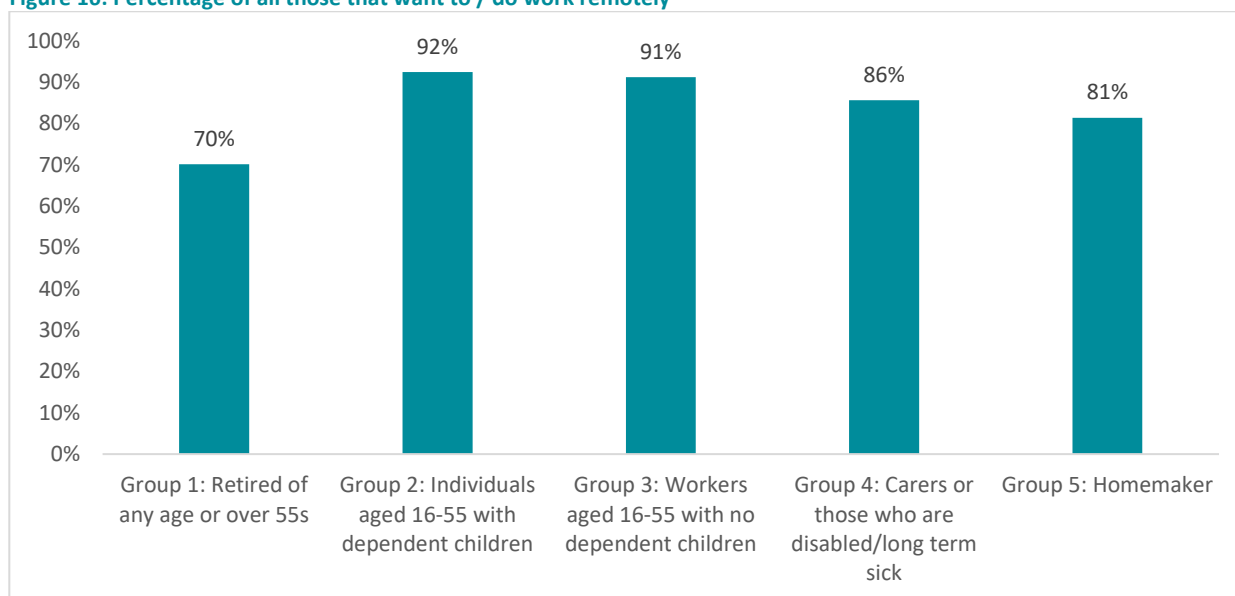
Figure 15: The percentage of unemployed or economically inactive that would be more inclined to work if provided with a suitable employment opportunity that offered remote working



Source: *Opinium, Cebr analysis (Base 1185)*

Pulling together the preceding analysis of current and potential adoption of flexible working practices, Figure 16 summarises the levels of interest in working remotely across different demographics of the population.

Figure 16: Percentage of all those that want to / do work remotely



Source: *Opinium, Cebr analysis (Base 2118)*

The chart illustrates the combined proportion of people who want to work remotely and the number of people who are currently in a position to do so. Relative to other demographic groups, working remotely is most popular with respondents between the ages of 16 and 55 and working with dependent children, with 92% either currently working remotely or wishing to do so. Working remotely is least popular with respondents who are retired.

5 Individual economic benefits of flexible working

This section draws upon the results set out in previous sections to analyse the potential impacts of a more widespread adoption of a ‘work from anywhere’ culture in the US. These benefits are evaluated in terms of:

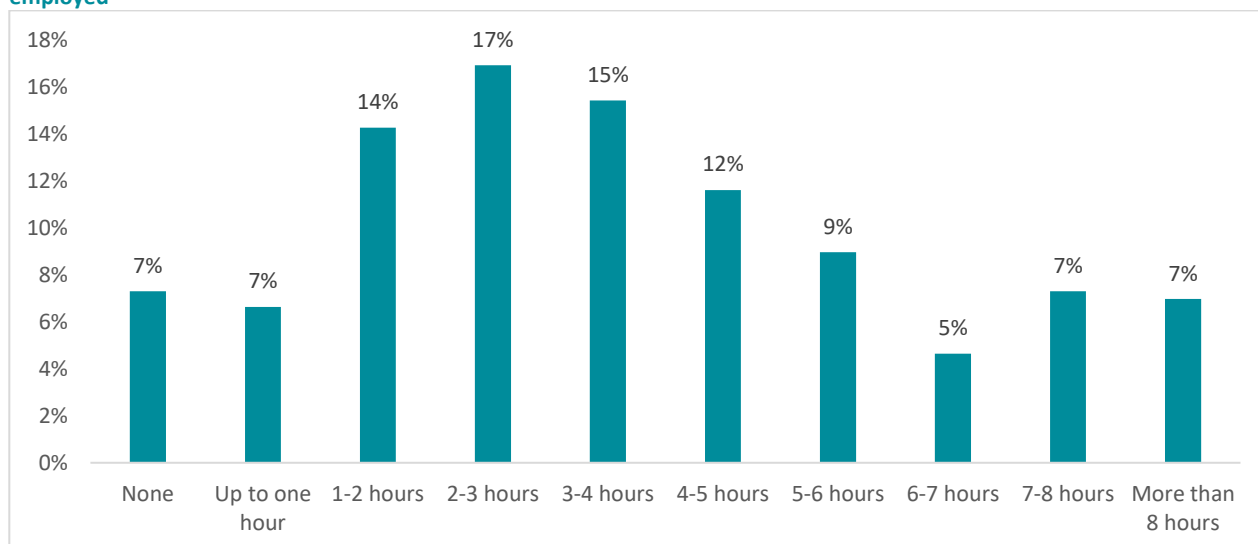
- **Increased employment opportunities for those who are unemployed, or economically inactive;**
- **Additional GVA¹³ (economic output) per capita; and**
- **Reductions in individual commuting costs and increases in leisure time.**

5.1 More productive use of time by full-time workers and part-time workers’ ability to work more hours

This section evaluates the extent to which flexible working practices can enable more productive working among those already employed. The survey results suggest that 93% of respondents who are currently working would be able to manage their time more effectively, thus allowing them to devote extra time to work tasks, if they had the flexibility to work from anywhere. For instance, flexible working could enable them to work at a client site after a meeting instead of travelling back to their own office from the meeting, and in other situations that necessitate downtime during the working week. Figure 17 shows that over half (55%) of respondents could devote three or more additional hours to work tasks if they were given the opportunity to work remotely.

¹³ GVA or gross value added is a measure of the value from production in the national accounts and can be thought of as the value of gross output less intermediate consumption. That is, the value of what is produced less the value of the intermediate goods and services used as inputs to produce it. GVA is also commonly known as income from production and is distributed in three directions – to employees, to shareholders and to government. GVA is linked as a measurement to GDP – both being a measure of economic output. That relationship is (GVA + Taxes on products - Subsidies on products = GDP). Because taxes and subsidies on individual product categories are only available at the whole economy level (rather than at the sectoral or regional level), GVA tends to be used for measuring things like gross regional domestic product and other measures of economic output of entities that are smaller than the whole economy.

Figure 17: Extra hours per week that could be devoted to work tasks if flexible working was available, percentage of employed



Source: Opinium, Cebr analysis (Base 639)

To quantify the benefits of this more productive use of time enabled by flexible working practices, this section sets out potential boost to Gross Value Added (GVA) per capita. This is summarised in Figure 18 below. The greatest potential additional GVA is accounted for by individuals with dependent children. Flexible working could allow a worker from this demographic group to generate \$410 additional GVA per working week. The potential contribution from the other demographic groups is of similar levels with the smallest contribution being \$335 extra GVA from workers aged 16-55 without dependent children.

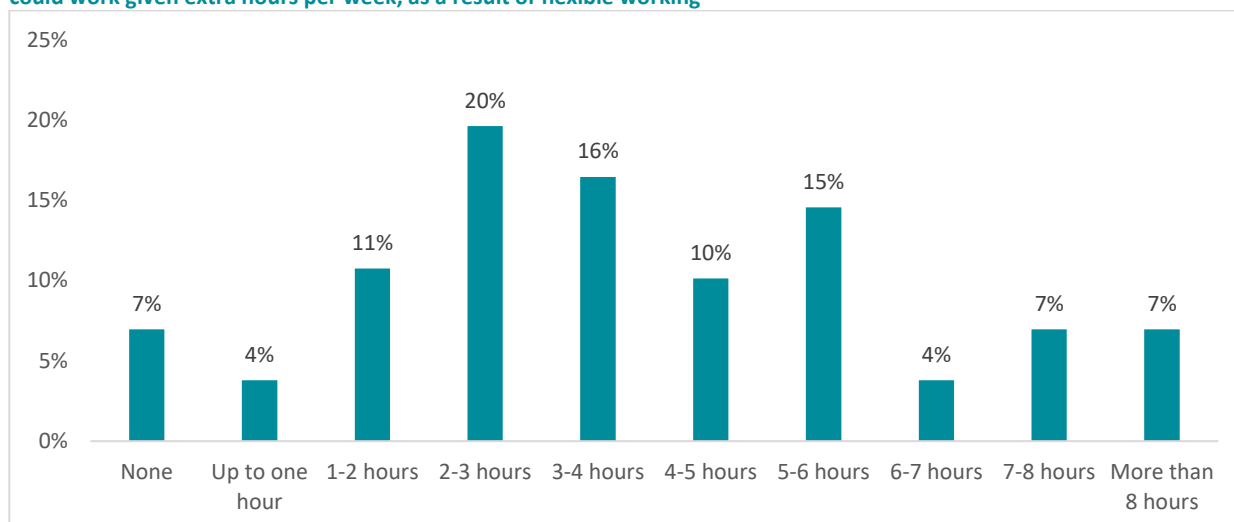
Figure 18: Potential extra GVA per week enabled through flexible working, per working respondent (\$)



Source: Opinium, Cebr analysis (Base 639)

The extent to which part-time workers (who currently do not have the option to work flexibly) would be inclined to work more hours, if given the opportunity to work remotely, was also assessed. Figure 19 shows that 93% of such part-time workers could work more hours under this scenario. The most commonly reported increment is 2 to 3 hours, with 20% of part-time workers indicating they would work this amount of extra hours. The analysis illustrates that remote working would enable the majority of part-time workers to work a significant number of extra hours.

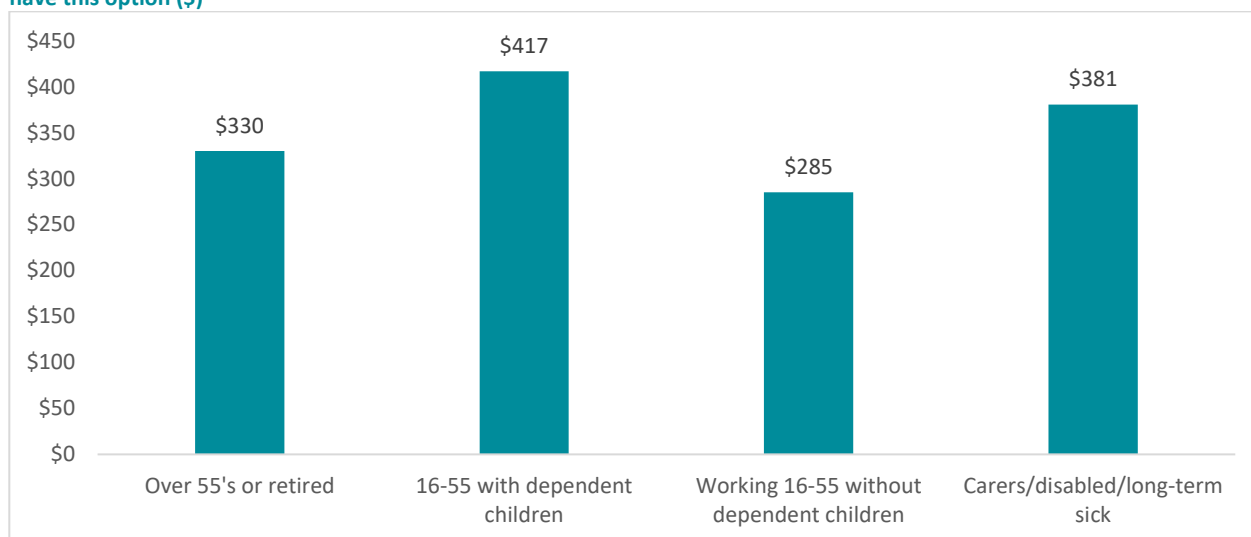
Figure 19: Percentage of part-time workers (who would like flexible working options but do not currently have them) who could work given extra hours per week, as a result of flexible working



Source: Opinium, Cebr analysis (Base 163)

Figure 20 shows the extra GVA these part-time workers could potentially generate, if given the opportunity to work remotely and thus to work more hours. Part-time workers aged between 16 and 55 and with dependent children would produce the greatest GVA increase (\$417). This might reflect the fact that these part-time workers tend to be concentrated in more productive industries and occupations.

Figure 20: Potential GVA per week of part-time workers¹⁴, who want the opportunity to work flexibly but currently do not have this option (\$)



Source: Opinium, Cebr analysis (Base 163)

5.2 Potential increases in ability and willingness of those currently unemployed or economically inactive to join the workforce

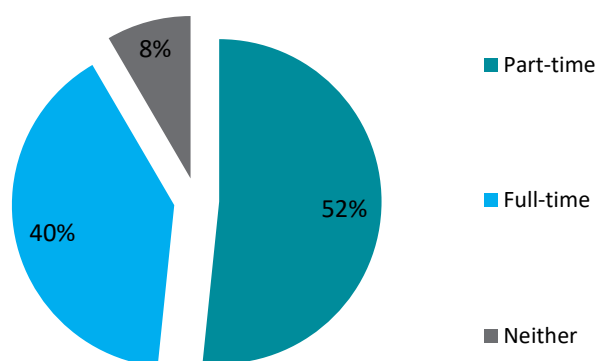
This sub-section assesses whether individuals who are unemployed or economically inactive (i.e. those who are retired, full-time homemakers, or are carers/disabled/long-term sick) would choose to enter the

¹⁴ This also includes the carers/disabled/long-term sick group – as some of these unpaid carers also have part-time jobs

workforce if offered the opportunity to take advantage of the report's concept of flexible or remote working.

Figure 21 below illustrates the extent to which these out-of-work respondents would be inclined to join the workforce if given the opportunity to do so flexibly. 52% of such respondents would work part-time, while 40% would be encouraged to take up full-time roles. Overall, Figure 21 illustrates the employment benefits that remote working offers, with only 8% of respondents indicating that flexible working arrangements would not encourage them to start working.

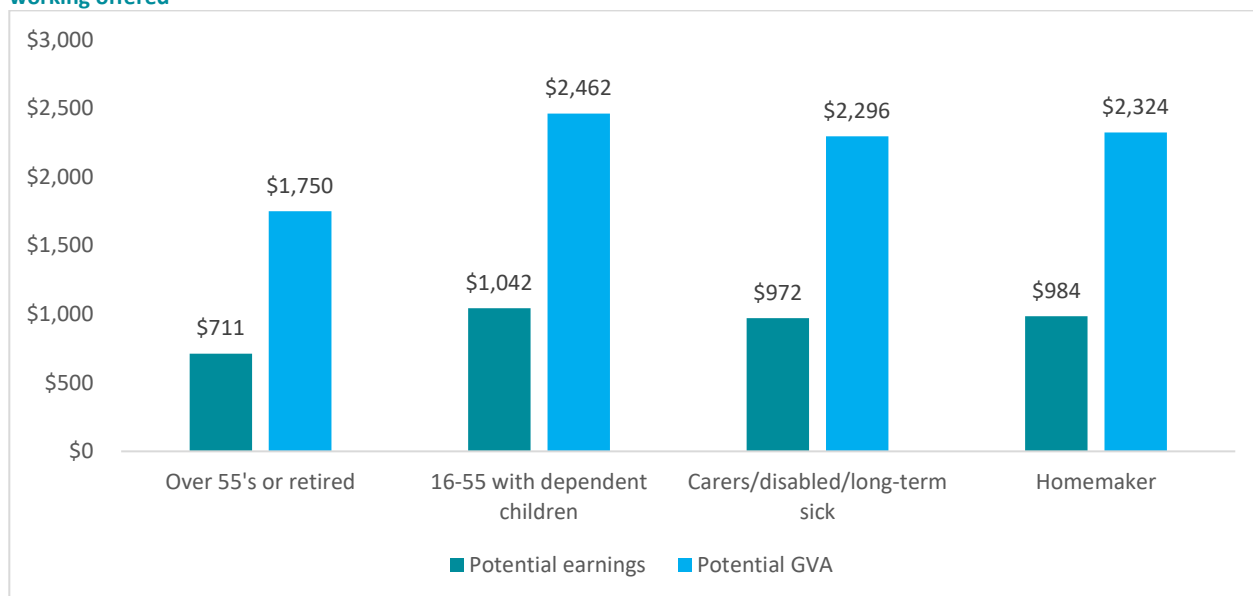
Figure 21: Percentage of out-of-work respondents who would be encouraged to take up employment, if flexible working offered



Source: Opinium, Cebr analysis (base 856)

Figure 22 illustrates the estimated potential additional earnings and GVA contributions that would result from this uptake of employment. Individuals aged between 16 and 55 with dependent children could produce the highest additional GVA per week, at \$2,462. Similar levels of weekly GVA per person could be generated by individuals who are carers, disabled or long-term sick, or those who are full-time homemakers.

Figure 22: Potential weekly earnings and GVA of those currently out of work, who would take up employment if flexible working offered

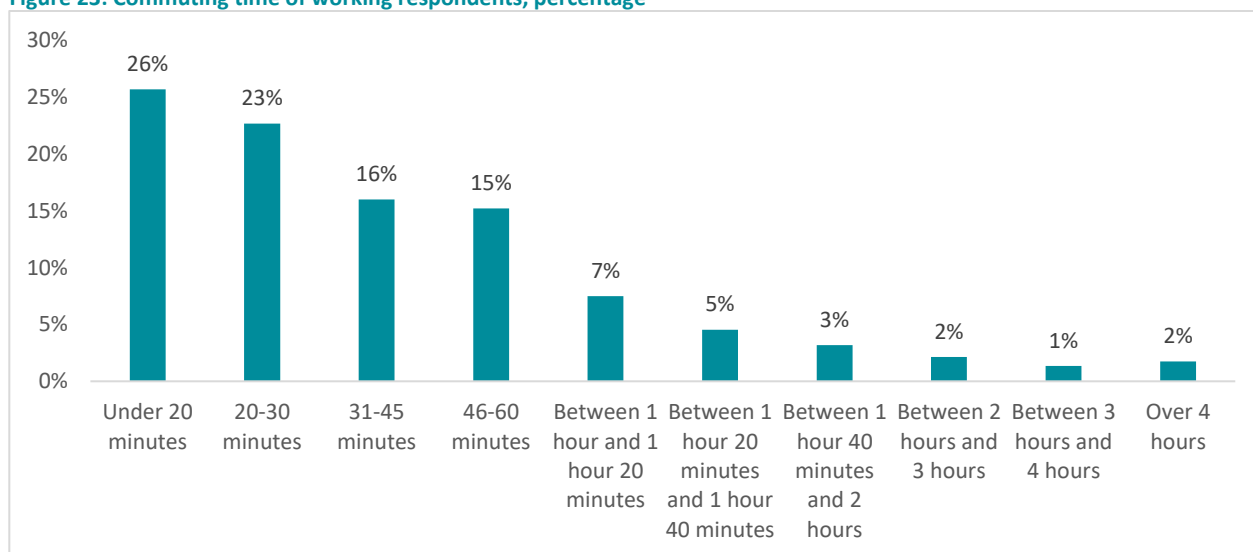


Source: *Opinium, Cebr analysis (Base 856)*

5.3 Impacts of flexible working on commuting and leisure time

This sub-section explores the time and cost savings that might accrue to individuals as a result of working remotely. The daily commuting time for working respondents is illustrated in Figure 23. Although about a quarter of respondents spend under 20 minutes commuting to work, 20% of them spend more than one hour. This reflects the fact that, in the US, many workers are forced to leave cities due to high living costs and then experience long commute times.

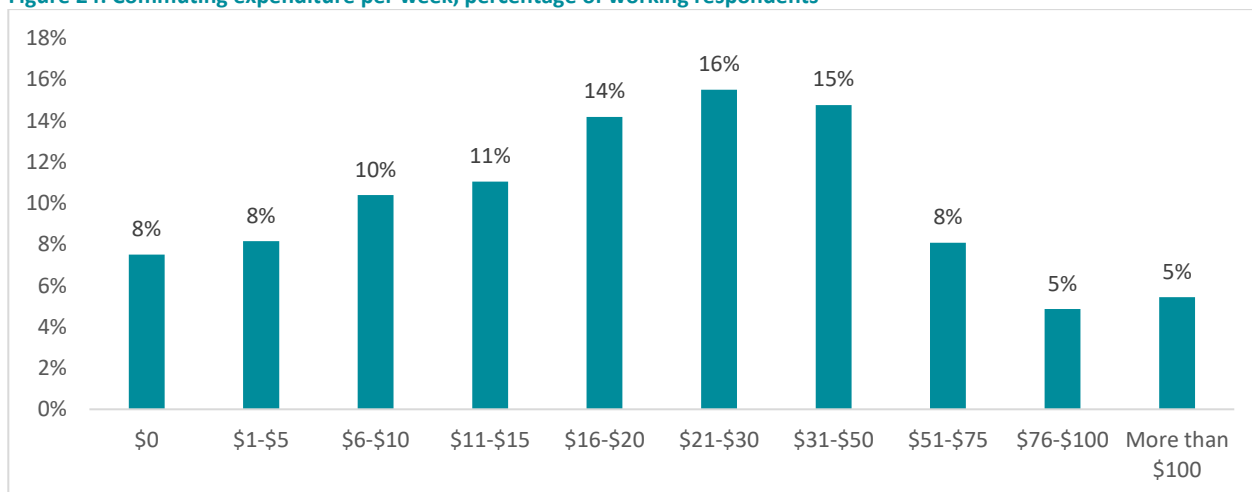
Figure 23: Commuting time of working respondents, percentage



Source: *Opinium, Cebr analysis (base 1257)*

The weekly costs faced by these workers in commuting to and from work – measured as expenditure on public transport and/or fuel – is summarised in Figure 24. More than 90% of respondents incur some commuting costs with the most common cost falling in between \$21 and \$30.

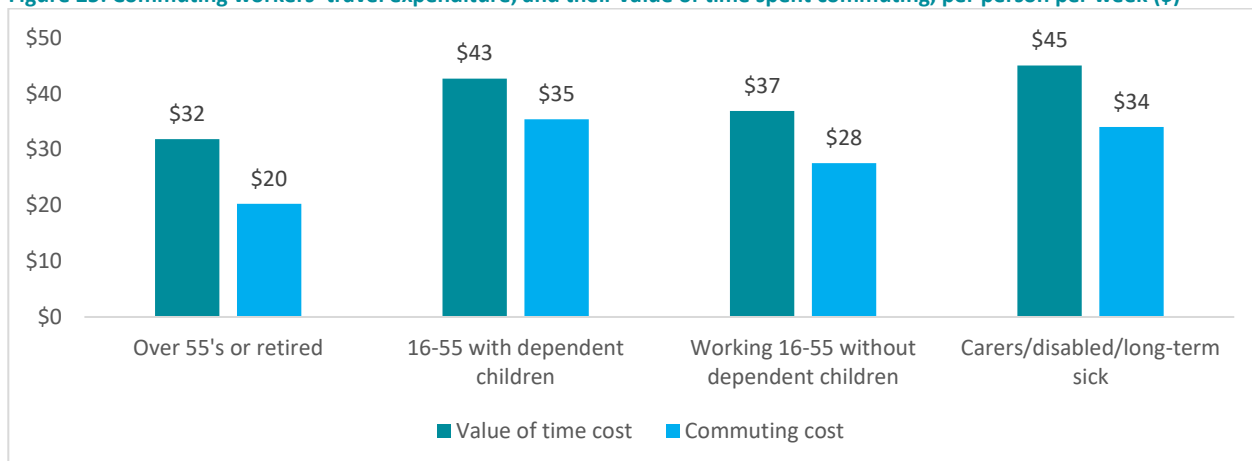
Figure 24: Commuting expenditure per week, percentage of working respondents



Source: Opinium, Cebr analysis (Base 1257)

It is important to consider not only this monetary cost, but also the value of the individual's time taken up by commuting. This is quantified in monetary terms through the value which the UK Department for Transport has placed on commuter time, known as the 'commuter value of time'.¹⁵ Values have been converted in 2018 US dollar prices. Estimates of the value of time in the US are available, but the studies are older and therefore less relevant. Also, using estimates from the UK Department for Transport enables the study to be consistent with the approach used in the 2014 and 2015 studies. On this basis, Figure 25 compares the monetary sums expended on transport (such as tickets for trains/buses and gas costs) with the associated value of time which is spent travelling each day.

Figure 25: Commuting workers' travel expenditure, and their value of time spent commuting, per person per week (\$)



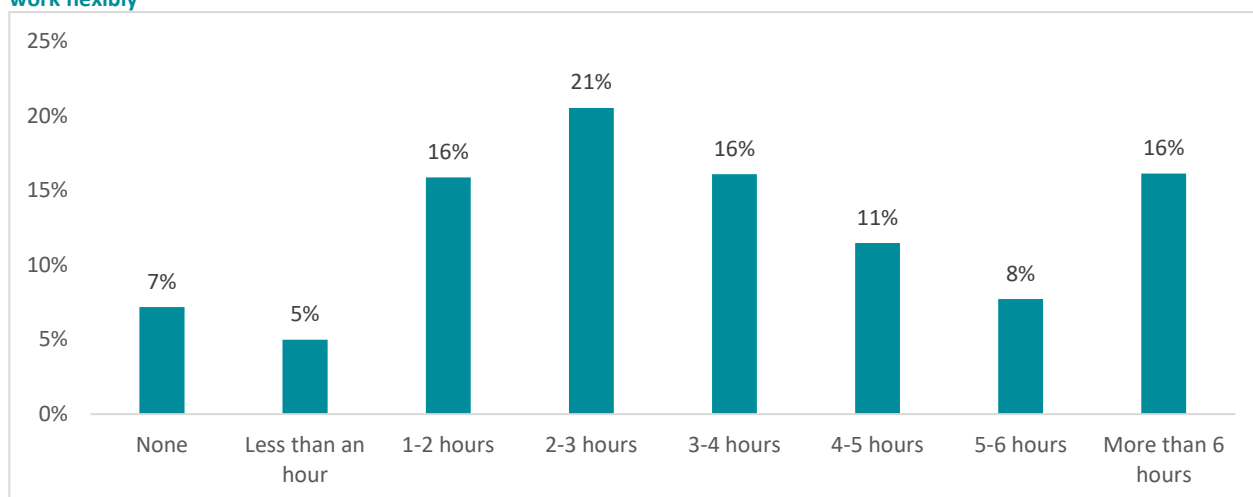
Source: Opinium, Cebr analysis (Base 1257)

The provision of flexible working conditions could enable workers to strike a more optimal work-life balance in arranging their daily activities. Respondents who would utilise flexible working (or already do) reported the extra leisure time they would gain (or have gained) through the report's concept of remote or flexible working. The distribution of such responses is set out in Figure 26 below. 93% of workers would

¹⁵ Department of Transport, 2013, WebTAG

gain (or have gained) some additional leisure time per week through flexible working being available to them.

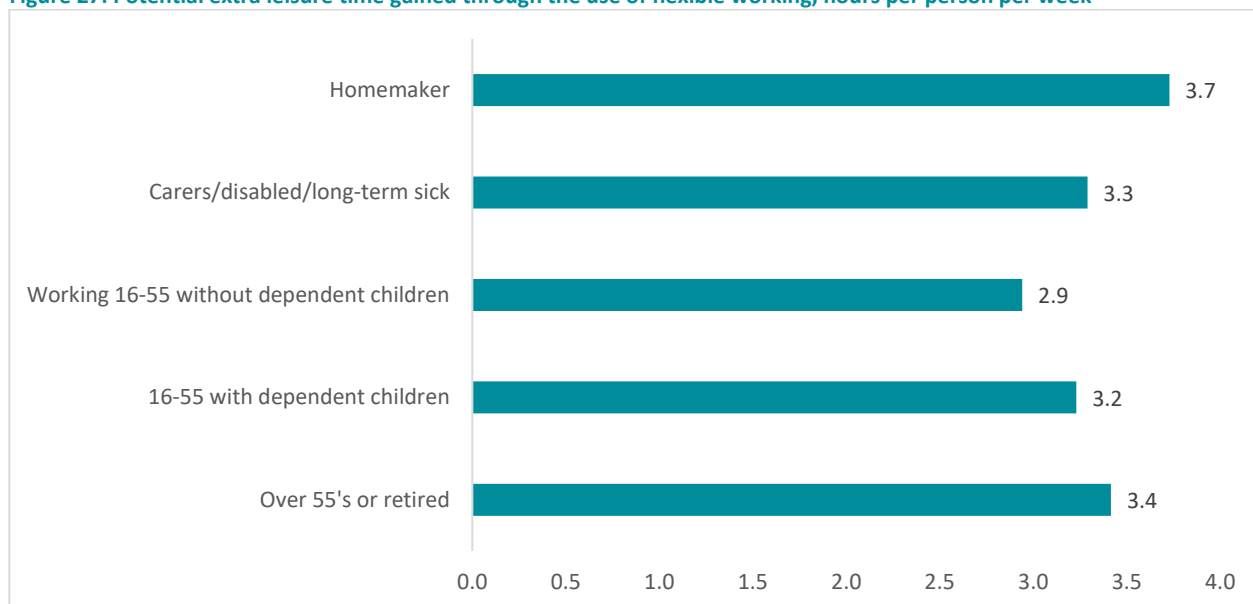
Figure 26: Extra leisure time gained per week as a result of flexible working, percentage of workers who do/would like to work flexibly



Source: Opinium, Cebr analysis (Base 2118)

This analysis was also segmented by type of respondent, as shown in Figure 27 below. Homemakers would gain (or have gained) the most additional leisure time, amounting to 3.7 hours per week.

Figure 27: Potential extra leisure time gained through the use of flexible working, hours per person per week



Source: Opinium, Cebr analysis (Base 2118)

6 The economy-wide benefits of a more widespread flexible working culture

This section outlines the **US-wide economic impact of adopting a more widespread 'work from anywhere' culture**. It draws upon the survey findings identified in sections 3, 4 and 5 and translates these into economic impacts through the greater earnings potential of individuals and the productivity gains accruing both to the US economy as a whole and specifically across the demographic groups considered. In each case the per person benefits calculated in section 5 are scaled up to the US level according to the relevant US population of the various demographics.¹⁶

6.1 Summary of US-wide benefits

The findings reveal that flexible working could allow the US population to add more than \$2.36¹⁷ trillion in GVA (economic output) annually (Table 1). The significant economic impact is mostly driven by individuals who are currently economically inactive and would be wanting to join the labour force if they were given the opportunity to work remotely. As the previous sections have highlighted, access to more flexible working practices would better cater for their specific needs in terms of balancing work and personal commitments, supporting a significant boost to their earnings potential and economic contribution.¹⁸

Table 1: Potential economic impact to the US economy through a more widespread 'work from anywhere' culture

	Currently working (part-time and full-time workers)	Currently inactive (i.e. unemployed/full-time homemakers/retired/carers/long-term sick or disabled)	Total US impact
Total potential extra productivity (GVA output) per year (\$'s millions)	280,176	2,083,813	2,363,989

Source: Cebr analysis

There are also potential savings in commuting costs for employees through flexible working, with estimates presented in Table 2. The current yearly total cost saving from reduced commuting, including the commuter value of time is estimated at \$107.6 billion. The leisure time gained through the greater adoption of flexible working - enabling individuals to better juggle their work and personal activities - accumulates to 11.9 billion additional hours per year, which is equivalent to 105 hours per person per year. These findings are explored further in the remainder of this section.

¹⁶ This is defined as those people within each demographic group who are both knowledge workers and have a desire to work remotely, as calculated from the Opinium survey and Central Intelligence Agency (CIA) data related to knowledge workers.

¹⁷ In 2018 prices.

¹⁸ Clearly this increased economic contribution is dependent upon the existence of demand from employers for these people's services. In other words, on the availability of jobs in which to employ these people. For the purposes of this analysis, we make the simplifying assumption that the anticipated income and economic output generated through the productive boost from those currently in employment and through this new employment is sufficient to support this new employment itself given the economic spill overs, particularly through additional demand and spending throughout the US economy, which are expected to occur as a consequence of greater economic activity.

Table 2: Total commuting cost savings and the gain in leisure hours

	Total US Impact
Potential savings of commuting costs per year (\$'s millions) (commuter value of time and the expenditure on travel e.g. tickets, petrol, tec.)	107,588
Potential gain in leisure hours per year (million of hours)	11,922

Source: Cebr analysis

6.2 Additional economic contributions of those currently working

Focusing on the economic benefits of flexible working to those people who are currently employed (both full-time and part-time), Table 3 illustrates the estimated additional GVA that could be generated by the ability of these people to devote more of their working time to productive tasks (the reduction of downtime) through more flexible working practices. When the effects are scaled up to the relevant US population (also outlined within the table), the potential increase in GVA from this more productive use of the time available to devote to work tasks translates to \$280.2 billion across the US economy within a given year. This would constitute a 1.4% boost to US GDP.

Table 3: Economic impact of those currently working and have the opportunity to work from anywhere¹⁹

	Over 55's or retired	16-55 with dependent children	Working 16-55 without dependent children	Carers/disabled/long-term sick	Total US impact
Total potential extra productivity (GVA output) per year (\$'s millions)	49,480	76,603	111,991	42,102	280,176
Representative US population (thousands)	4,369	5,811	10,416	3,416	24,013

Source: Cebr analysis

Such increases in the GVA contribution of workers can be expected, in reality, to be shared by employers with their employees through higher earnings for the latter. The extent to which this sharing would occur would depend on numerous factors, such as employee bargaining power, the calculation of which is outside the scope of this analysis. It is nevertheless expected that greater levels of hourly output from employees would translate into a rise in wages to reflect this increased productivity.

¹⁹ This is defined as those people within each demographic group who are both knowledge workers and have a desire to work remotely, as calculated from the Opinion survey and US data related to knowledge workers.

The US working population demographic aged between 16 and 55 without dependent children, would contribute the most in terms of additional GVA. This is in part explained by the fact that they represent the biggest share of the US population when compared to the other demographic groups.

Within the groups who are currently working, it is also possible to investigate the potential for increasing the economic contribution of part-time workers. Table 4 reports the potential contribution of those that are currently working part-time but do not have the option to adopt the 'work from anywhere' approach, even though they would like to. Table 4 is a subset of Table 3, reporting the contribution made by part-time workers.

Applying the survey results to each demographic group, it is possible to estimate that there are six million part-time workers within the US who would want to adopt working practices that enable them to work from various locations, therefore allowing them to work more hours either in their current job or an additional role. This could generate \$72.3 billion in GVA across the US economy. The workers aged between 16 and 55 without dependent children represent the largest population and so, upon aggregation, they also produce the largest additional contribution among part-time workers as a whole. The greater flexibility offered to part-time workers alone would result in a boost to US GDP of 0.35%.

Table 4: Economic contribution of part-time workers who want to adopt 'work from anywhere' culture but currently do not have the facilities to do so

	Over 55's or retired	16-55 with dependent children	Working 16-55 without dependent children	Carers/disabled/long-term sick	Total US impact
Total potential extra productivity (GVA output) per year (\$'s millions)	13,816	18,631	24,567	15,280	72,295
Representative US population (thousands)	1,303	1,391	2,682	1,249	6,625

Source: Cebr analysis

6.3 Additional economic contributions of those currently unemployed or economically inactive

As highlighted at the beginning of this section, applying the survey results to the US population as a whole means that the largest economic benefits of greater adoption of flexible working practices come through the increased engagement of the unemployed or economically inactive. Table 5 presents the estimated contribution of \$2.08 trillion that could be made by those currently unemployed or economically inactive joining the labour force if a suitable employment opportunity with flexible working practices was available. The survey findings (as described in section 5.2) are projected to the appropriate segments of the US population to calculate the potential economic impact.

Table 5: Potential economic contribution from those currently unemployed or economically inactive

	Over 55's or retired	16-55 with dependent children	Carers/disabled/long-term sick	Homemaker	Total US impact
Total potential extra earnings per year (\$'s millions)	465,942	106,003	203,587	87,035	862,566
Total potential extra productivity (GVA output) per year (\$'s millions)	1,147,023	250,368	480,854	205,568	2,083,813
Total representative US population (thousands)	20,391	3,165	6,517	2,752	32,825

Source: Cebr analysis

The group anticipated to contribute the most is over 55's or retired, whose GVA contribution could rise by as much as \$1.15 trillion. This is largely due to it being the largest economically inactive group. The individuals in this group identify a variety of reasons as to why they would utilise flexible working practices (as illustrated in Figure 3 section 3), which indicates that they have the largest to gain relative to the other demographic groups examined.

The estimate of the additional GVA contribution that could be made by the unemployed and economically inactive would constitute a 10.2% boost to US GDP. This estimate is based on taking the results of survey at face value and extrapolating from the sample to the population assuming the sample is representative. As such, the findings most likely represent a 'best case scenario' in terms of the perceived benefits of a flexible working culture but nonetheless reveal a potentially significant opportunity for business and government alike.

Furthermore, despite the fact that US unemployment is at its lowest level since 2008 at 3.7%²⁰, there is evidence to suggest that the economy is not yet at full employment. Therefore, once the economy achieves a path to sustainable growth, there should be adequate scope for the creation of new jobs for these unemployed and economically inactive individuals who might be induced into the workforce if there is the opportunity of working flexibly. There is still substantial underemployment in the labour market, as indicated by the share of people working part-time because they cannot find full-time work still elevated.

6.4 Commuting cost savings and potential gains in leisure time

This study also examines the cost savings from obviated commuting to and from work for those currently working within the five demographic groups surveyed. The findings show that workers aged between 16

²⁰ <https://www.bls.gov/news.release/psdf/empsit.pdf>

and 55 without dependent children travel the most, with this section of the US population spending an estimated 2,384 million hours a year commuting (Table 6) compared to the others.

The time spent while commuting is of value to an individual, as this time could be spent undertaking a different activity. Using the UK Department for Transport's estimates for commuter value of time²¹, the total cost savings (value of time) to the US population which fall within the report's demographic groups, translates to \$107.6 billion a year. Given the potential adoption rates of remote working, particularly the preference for working at home, a proportion of this total commuting cost could be avoided through the greater prevalence of a 'work from anywhere' culture.

Table 6: Commuting cost savings, (\$'s)²²

	Over 55's or retired	16-55 with dependent children	Working 16-55 without dependent children	Carers/disabled/long-term sick	Total US impact
Hours spent in travelling per year (millions of hours)	743	1,614	2,384	1,033	5,774
Total expenditure decline to and from work per year (\$'s millions)	4,790	13,603	18,059	7,914	44,366
Total commuting cost savings per year (expenditure on tickets and commuter value of time, \$'s millions)	12,295	31,281	44,161	19,221	107,588

Source: Cebr analysis

The survey also asked respondents about the number of hours that they think they could gain per week in leisure time, i.e. for dog walking, going to the gym, shopping, etc, given the opportunity to 'work from anywhere'. The over 55's or retired have the most to gain over the year, with an additional 4,937 million hours. Across all groups the total leisure hours gained per year through adoption of a 'work from anywhere' culture, amounts to 11.9 billion hours for the US population, which is 105 hours gained in leisure time per person per year (Table 7).

²¹ Department of Transport 2013 WebTAG

²² Commuting cost savings is expressed in 2018 prices.

Table 7: Potential leisure hours gained

	Over 55's or retired	16-55 with dependent children	Working 16-55 without dependent children	Carers/disabled/long-term sick	Homemaker	Total US impact
Total leisure hours gained per year (millions of hours) (millions of hours)	4,937	2,117	2,386	2,030	452	11,922

Source: Cebr analysis

7 Conclusions

The potential benefits accrued to the US economy through a more widespread ‘work from anywhere’ culture are estimated to reach **\$2.36 trillion annually. These comes through the GVA generated by productivity improvements.** There is scope for technology-enabled flexible working to encourage 32.8 million people in US, who are currently unemployed or economically inactive, to join the labour force.

One key factor contributing to this large potential impact upon the US economy is the willingness of individuals to work more effectively through the use of flexible working. This study has also identified a US-wide potential increase in economic performance (GVA) of **\$280 billion for those currently working, driven by their ability to use their working time more effectively** given the right tools to do so. This equates to a 1.4% GDP boost.

Additional potential output, as a consequence of **greater participation in employment from people who are currently unemployed or economically inactive, is estimated to reach \$2.08 trillion.** This alone would equate to a 10.2% boost to US GDP. This is based on taking the results of the 2,502 individuals surveyed at face value. As such, the findings most likely represent a ‘best case scenario’ in terms of the perceived benefits of a flexible working culture but nonetheless reveal a potentially significant opportunity for business and government alike.

This study highlights an opportunity for employers to work with remote-working technology providers, as part of ensuring that employees are in a strong position to engage in such flexible or remote working practices. There is a clear demand from individuals across the demographic groups to ‘work from anywhere’, with **93% of knowledge workers suggesting that they could make more productive use of their working day with these possibilities and 69% of those currently unemployed or economically inactive indicating they would enter the workforce.** The study also sheds light on the role of technology providers in bridging the gap between individual demands and an employer capacity to provide flexible working arrangements.

The study identifies the potential role that flexible working practices can have in obviating the need for so much commuting to and from work. The yearly savings in expenditure by workers on tickets or fuel costs incurred in commuting is estimated to be \$44.4 billion, with 5,774 million commuting hours saved. **The total savings, including the commuter value of time, is estimated to total \$107.6 billion.** The greater use of technology-enabled remote working practices has a substantial role to play in reducing commuting costs for knowledge workers, as 95% of knowledge workers would opt to work from home on average 2.4 days per working week or other remote locations.

The flexibility that working from anywhere provides in terms of time management is seen in findings that relate to the additional leisure hours individuals can gain. The survey suggests that the **US population would benefit from 11.9 billion hours of extra leisure time** if flexible working was more widespread across US workplaces.

As technology develops, employers should recognise the value that remote working can offer. These economic benefits are dependent on businesses adopting a ‘work from anywhere’ culture and implementing platforms that enable employees to work effectively. The US Government has a role to play by creating a favourable environment, through investment in infrastructure and policy developments, within which employers and employees can realise the potential benefits identified in this report.

Appendix: Approach and methodology

Survey outline

The survey data on which this research is based was collected by specialist market research company Opinium. The online survey was carried out between the 11th July and the 22th July 2019, questioning 2,502 individuals in the US.

The survey was limited to knowledge workers and/or those with office-based roles due to the greater likelihood that employees within these occupations do not need to be in a specific location all of the time to perform their role, and where they require the use of a computer and software or other information communication technologies. This allowed the survey to target those that would not be held back from remote working due to their job, to better understand the impact upon those that can utilise remote working.

The two key issues that needed to be addressed to allow inferences to be applied to the US population within the demographic groups examined are: firstly, that this survey is an online survey, which required us to constrain our analysis to representing only the proportion of the population that uses the internet, and secondly; the survey targets those who are knowledge-based workers, requiring some IT component to fulfil their job role and those that can acquire or access a computer with internet connection at least from home.

The first issue was addressed by making the US group population size reflect the proportion that have used the internet within each of the demographic groups. The second issue was addressed by increasing the base of the survey representing the US demographic population, by including the number of individuals that were filtered out before the main body of survey questions were asked.

Population groups examined

The survey examined the following five demographic groups:

1) Retired of any age or over 55's

This group was targeted to examine whether those currently retired would be encouraged to re-join the workforce if flexible working was available, and whether those closer to retirement would be able to better manage their time and devote more hours to work.

2) Individuals aged between 16-55 with dependent children

This group was targeted to gauge if remote working practices would better allow individuals to use their working time more effectively while being better able to balance their work and personal/family commitments.

3) Workers aged between 16-55 without dependent children

This group was targeted to understand if individuals who are working would use remote working and, if so, whether it would also enable them to use working time most productively, even though personal/family commitments means that the need to do so might not be as prevalent as the other groups observed.

4) Carers or those who are disabled/long term sick

This group was targeted to understand if remote working practices would allow those that are unable to be at a workplace might be enabled or more willing to work if they had the flexibility to choose their location of work.

5) Full-time homemakers

This group was targeted to better understand if full-time homemakers would enter the labour force if given the opportunity to better manage the household commitments.

Methodology used to quantify the individual economic benefits of remote working

Currently working (part-time and full-time workers)

The first step was to identify the industry the respondent currently works within and if they were working part-time or full-time hours. After establishing this, the average wage by industry from official US statistics was applied to the number of hours they identified that they could use more productively with the ability to work remotely. This provided us with the extra potential earnings and GVA contributions per capita per week.

GVA per hour worked was calculated using official US statistics, which were in turn applied to the individuals' identified extra hours that could be devoted to work if they had remote working facilities. This procedure provided us with estimates of the potential additional GVA per week for the respondent.

Expenditures on commuting to and from work was identified by the respondents from the survey question. The commuter value of time saved was calculated by applying the UK Department for Transport²³ figures to the time identified by the respondent from the question asked within the survey.

Unemployed or economically inactive

Once the survey had identified the attitudes to working remotely, a separate question was asked, designed to identify whether they would be more inclined to work if provided a suitable job opportunity with remote working facilities. The respondents had a choice of three options: Part-time; Full-time or Neither.

The extra potential earnings from this group was calculated through a combination of the national average number of hours per week of part-time and full-time employees and the median average wage of the industry they had identified to have worked in previously, as was the case for those that were retired, or became ill / disabled etc. For those that had not worked, the median industry wide wage was used to calculate their potential extra earnings.

The GVA for each individual was calculated in the same manner as was done for the currently working group, with an additional industry-wide median GVA output measure for those who did not identify an industry they had worked in.

Leisure time

The total leisure time gained was simply the respondent's answer to the question within the survey.

²³ Department of Transport 2013 WebTAG

Methodology used to reflect the impact on the wider US economy

The final step was to apply the proportions that were identified from the survey of those that would be able to use their work time more productively, to work more hours (part-time workers) or be more inclined to work, to the relevant groups of the US population. The potential GVA output figures were then aggregated to yearly figures, taking into account annual leave and public holidays in the US.