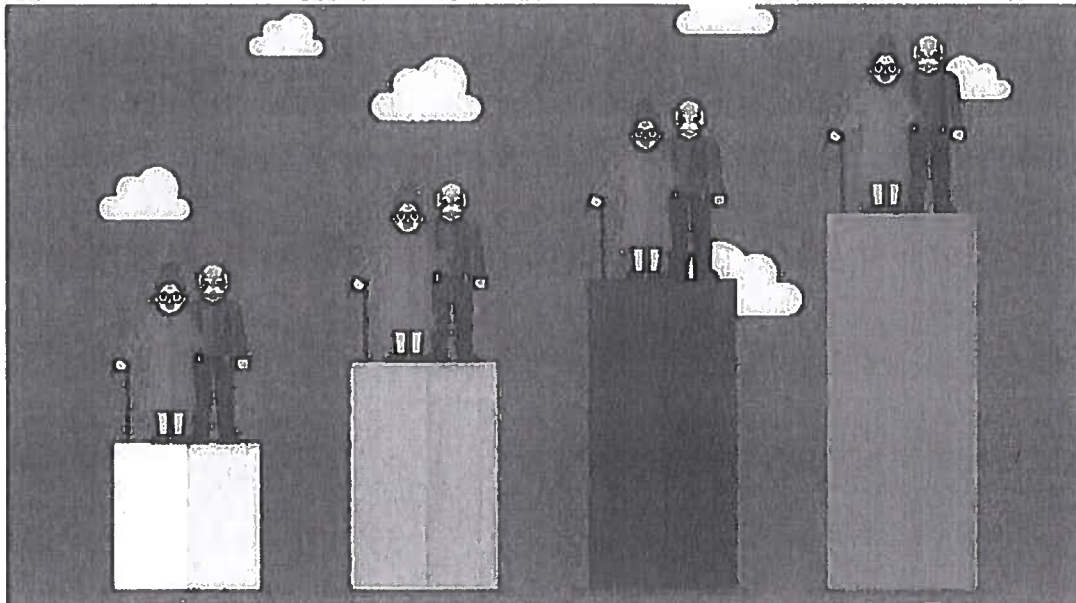




Economics Advanced Higher: Project

Candidate evidence

How an Aging Population is Shaping the UK's Economy: Exploring the Impact



Word Count: 4,391

Contents

Introduction:	Page 3
Chapter 1: Government spending on health/NHS	Page 4
Chapter 2: Pension crisis	Page 7
Chapter 3: Effects on the labour market	Page 11
Chapter 4: Social care	Page 15
Conclusions and Recommendations	Page 18

Introduction

A significant demographic shift, experienced by many economically developed countries at the moment is an increasing aging population. Driven by increased life expectancy and declining birth rates¹, this situation creates complex economic challenges and opportunities that need careful consideration and demand policy consideration. This shift in demographic is taking its toll on the economy and presented itself as the root of many issues. Recent figures show the magnitude in which this nation is fading into an extreme elderly population. As of 2021, 18% of the total population standing at 65 years old or older, with an increase from 9.2 million over 65's in 2011 to 11 million in 2021² is evidence of the projection of a rise in coming years.

The aging population of the UK is a very real issue and shows no signs of slowing down due to medical advances. This is a problem that may make it harder for younger generations as there is an ever-increasing number of loved ones to look after as they get old. Also retirement ages are rising. Between 2010 and 2018 the state pension age for women rose from 60 to 65, so that it became the same as that for men. Between 2018 and 2020 it then rose from age 65 to 66 for both men and women. Between 2026 and 2028 it is due to rise to 67.³

This assignment will explore how the demographic shift leads to strains on public finances due to rapidly increasing demand for healthcare, a growing need for social care, the effects on the labour market, growth and productivity and challenges to the state pension's sustainability. This assignment will assess the impact of these issues on the UK economy.

¹ Aging - Office for National Statistics (ons.gov.uk)

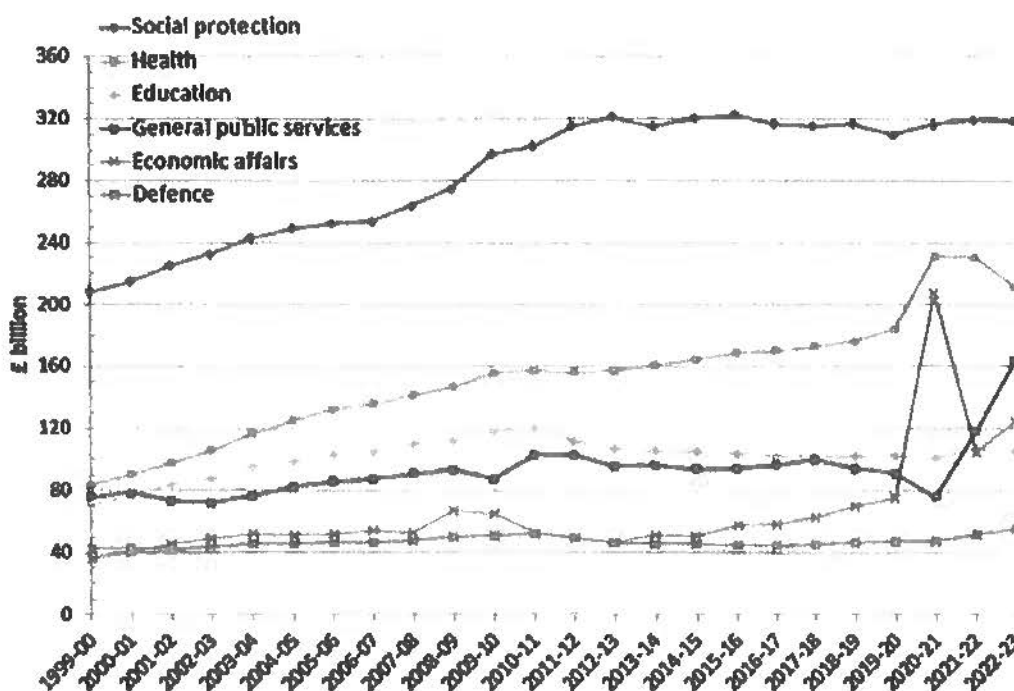
² <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/aging/articles/profileoftheolderpopulationlivinginenglandandwalesin2021andchangessince2011/2023-04-03#:~:text=2..from%2016.4%25%20to%2018.6%25>.

³ <https://ifs.org.uk/articles/planned-increase-state-pension-age-67-68#:~:text=Between%202010%20and%202018%20the,dueto%20rise%20to%2067.>

Chapter 1 – Impact on Health/NHS

Public Finance and Opportunity Cost

The UK's current aging population situation is significantly affecting public finances, in particular expenditure on healthcare. A steep increase in demand for medicines and general doctor visits from the elderly population is reported by The Office for Budget Responsibility⁴, suggesting that in turn, the government spending on which will increase. Arising from this shift in demographic is the fiscal challenge of opportunity cost; the resources allocated to OAP's healthcare may be diverted from other key public services⁵. Analysing the graph below, in 2022-23 the UK spent over £200 billion on health and social care compared to education receiving roughly half the funding (around £110 billion) whereas in 1999-00, funding for both services was very similar (around £80 billion)⁶



showing that there has been a significant increase in healthcare spending compared to education and other public services. The IFS recognises struggles the government faces when deciding what

⁴ <https://obr.uk/frs/fiscal-risks-and-sustainability-july-2023/>

⁵ <https://obr.uk/frs/fiscal-risks-and-sustainability-july-2023/>

⁶ <https://www.gov.uk/government/statistics/public-spending-statistics-release-july-2023/public-spending-statistics-july-2023>

issues need funding in the diverse needs of the population and reiterates that the aging population significantly affects the sway of government spending on different sectors⁷.

A trend that may worsen this budget issue is that over 85s require a more than proportionate amount of NHS spending to deal with health issues that come with old age. A study conducted by Nuffield Trust reveals a significant increase in NHS expenditure per individual once they reach the age of 50. However, those over 85 need significantly more health spending, reaching an average annual spend of £7,000 for those in the '85 and above' age bracket⁸. The report adds that "medical care for men in the 85+ group costs about seven times more than for the late 30s cohort". This demonstrates that with an aging population and better health provision, more people will enter this age bracket so NHS costs in the future will need to rise significantly to provide healthcare for these people.

Impact on patients

The aging population's increasing demand on healthcare directly affects patients and potential patients due to the struggles of resource allocation and overall patient experience⁹. The statistics have already proven this, with the latest ONS survey revealing the snowball effect of increased elderly population taking up the NHS time and money. 'Among respondents seeking an NHS appointment, 65% had been waiting for up to six months, another 12% for up to 11 months, and 17% longer than a year. Around 70% of adults waiting for NHS treatment said the delays had a negative impact on their lives'¹⁰.

Strain on the NHS caused by this surge in demand significantly worsens waiting times for essential treatments and negatively impacts on the quality of care¹¹. The implications that these increased waiting times have on older patients who are still working is great, leading to further economic strains such as, absence from work. One fifth of all employees have had to reduce their working hours as a result of being unable to go to work due to illness that they have had to wait longer than

⁷ https://ifs.org.uk/sites/default/files/output_url_files/B143-Chapter3-new.pdf

⁸ [More people are living longer: how much will it cost? | ICAEW](#)

⁹ [InsightsReport_WEB.pdf \(health.org.uk\)](#)

¹⁰ <https://www.icaew.com/insights/insights-specials/the-future-of-tax-and-public-spending/more-people-are-living-longer-how-much-will-it-cost>

¹¹ [More than one million employees' work impacted by NHS waiting lists, official data shows \(peoplemanagement.co.uk\)](#)

expected to get treatment¹². This may directly affect UK productivity. Taking sick leave results in reduced business productivity, as well as affects service delivery, leads to client dissatisfaction, diminishes mental health, and elevates stress levels. Without proper management or support, the associated risks, costs, and disruptions become 'even more pronounced'¹¹.

An aging population has also caused a trend of longer hospital stays with a very limited bed capacity¹³. Due to this, a reduced number of beds strains healthcare resources, impacting NHS's overall efficiency. Average length of stay in hospital increased from 7.3 days in 2019 to 8.3 days in 2022 (13%)¹⁴. This adds to the financial burden associated with prolonged hospital stays. The combination of an increase of demand for both specialised care and specific needs of an aging population forms predicaments for the UK budget management⁹. To put it simply, there is a greater need for hospital beds, which have halved over the past 30 years in England due to improvements in technologies and methods reducing the need for longer hospital stays¹⁵. Another reason for this reduction is a shift in focus of the NHS in recent years, with more and more resources being spent on mental health and disabilities¹⁵. However, the current lack of beds may slowly improve as the government made a commitment of building 40 new hospitals by 2030¹⁶, a strategy that would reduce the shortage significantly.

¹² [More than one million employees' work impacted by NHS waiting lists, official data shows \(peoplemanagement.co.uk\)](https://peoplemanagement.co.uk)

¹³ <https://www.health.org.uk/publications/long-reads/longer-hospital-stays-and-fewer-admissions>

¹⁴ <https://www.health.org.uk/publications/long-reads/longer-hospital-stays-and-fewer-admissions>

¹⁵ <https://www.kingsfund.org.uk/insight-and-analysis/data-and-charts/number-hospital-beds>

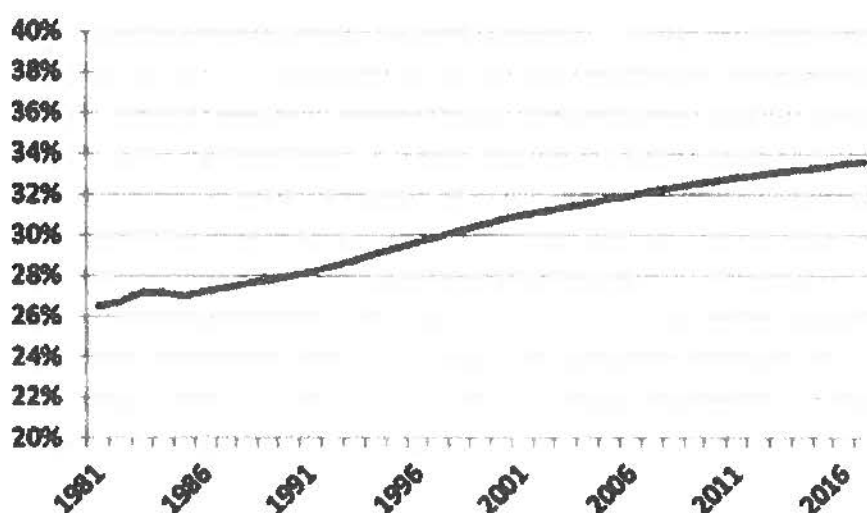
¹⁶ <https://commonslibrary.parliament.uk/hospital-building-in-england-plans-and-progress/>

Chapter 2 – Pension Crisis

State pensions were introduced in 1948, but with constant increasing life expectancy they have increased significantly as a percentage of GDP¹⁷. This has raised concerns about the sustainability of our pension system as our increasing aging population shows no sign of stopping.

In 1948, workers could expect a 13.5-year state pension, starting at the age of 65, equivalent to 23% of their adult life. The pension age stayed at 65, but in 2017 people could expect to have it for 22.8 years, accounting for 33.6% of their adult life¹⁸.

Figure 1.2: Proportion of adult life over 65, UK, 1981–2017²⁸



State Pension Provision as a percentage of GDP rose from 3.6%-4.6% of between 1997-2016, with current public spending on state pension now hovering around 12%¹⁹. Although the population may not be happy about having to work for longer, funding the pensions of an aging population has meant huge increases in costs for the government, and a decision to reform the state pension in 2018, changing SPA to 66 for both men and women²⁰. Reports from the Government Actuary state

¹⁷ <https://www.gov.uk/government/publications/state-pension-age-review-2023-government-report/state-pension-age-review-2023#:~:text=The%20Office%20for%20Budget%20Responsibility,of%20GDP%20in%202071%2F72>.

¹⁸ <https://assets.publishing.service.gov.uk/media/5a82dd6740f0b6230269d1c0/print-ready-state-pension-age-review-final-report.pdf>

¹⁹ <https://obr.uk/forecasts-in-depth/tax-by-tax-spend-by-spend/welfare-spending-pensioner-benefits/>

²⁰ <https://www.theguardian.com/money/2020/oct/06/uk-state-pension-age-66-rise-men-women#:~:text=Men%20and%20women%20in%20the,qualifying%20age%20for%20the%20benefit>.

that the SPA will remain unchanged for the time being, however, will increase from 66-67 in 2028 and then again to 68 in 2046²¹.

This aging population will worsen the UK's dependency ratio. In economic theory the dependency ratio is the ratio of those who are not working, inactive and dependant to those who are in active and employed. This is found by a formula comparing the number of under 15's and over 64's to the rest of the working age population (between the ages of 15 and 64) using the ratio $\frac{\text{population 0-15} + \text{population 65+}}{\text{population 15-64}}$.

In theory, a low dependency ratio is desirable because it indicates that there are proportionally more adults of working age who can support the young and the elderly of the population.

Although recent reforms maintain short-term stability in the dependency ratio, there are major concerns about what may happen after 2046 if there are no more SPA adjustments²². It is essential for government finances for workers to work longer to be able to fund the state pension due to the rising costs due to the aging population. Without an increase in SPA, pensions would be unaffordable for the government to maintain²³. This could cause increasing inequalities with low income workers having to work longer as they can't afford to take early retirement whereas increasing the SPA wouldn't have the same effect on "richer" pensioners as they have private pensions and other income.

Every year the State Pension goes up with the 'Triple Lock' mechanism which is a commitment that state pensions will rise by the highest of CPI, 2.5% or average earnings growth. This has raised basic state pensions provision to 18.8% of earnings in 2022²⁴ up by 2% from when the triple lock was introduced in 2016. The economic consequences of this are evident with a huge rise in public spending on state pensions costing around £11 billion a year more than it would if the pension rose in line with earnings or prices since 2010²⁵. This is a huge squeeze on public finances and means huge opportunity cost in terms of spending on other important services. If the government were unwilling to cut other budgets, then it means that they have to borrow more to fund state pensions, and this means higher national debt and debt interest payments which could mean the government have even less money to fund pensions. Despite this, pensioners are still struggling, questioning the future

²¹ <https://www.gov.uk/government/news/state-pension-age-review>

²² <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/aging/articles/livinglongerandoldagedependencywhatdoesthefuturehold/2019-06-24>

²³ <https://www.pensionsage.com/pa/increasing-SPA-is-not-enough-to-tackle-UK-pension-crisis-CSFI.php>

²⁴ [The triple lock: How will State Pensions be updated in future? \(parliament.uk\)](#)

²⁵ [The triple lock creates uncertainty for pension incomes and savers, as well as the public finances | Institute for Fiscal Studies \(ifs.org.uk\)](#)

of this policy. It may be the whole pension system needs to be changed, especially with a likely change of government and therefore new ideas on how to fund the state pension in the future.

Our aging population also increases the strain on private pension pots, potentially leading to rising premiums. Two thirds of people who retired in 2021 did not have enough savings to last their lifetime, with the average pension saving of £366,000 in their pot and planning to spend around £21,000 a year²⁶. To combat this, the government put in place schemes like NEST, with auto enrolment initiatives which boost the number of people that have work pensions²⁷. Introduced in 2011, NEST has successfully boosted the number of work pensions in Scotland, with an increase from 46.5% in 2012²⁸ to 79% in 2021²⁹. However, a savings gap still exists as workers are not putting enough into their pension savings³⁰, especially with people from minority ethnic backgrounds. White British savers accumulating an average of £114,941 compared to a saver with ethnic background with, £52,333³¹, neither of which reach the recommended £400,000 for comfortable, and easy lifestyle³². Not having enough pension provision could lead to a greater increase in pensioner poverty in the future which has implications for future growth and inequality in the UK. Pensioner's standards of living will worsen because they will be living longer with not enough in their pension to cover their costs of living.

This lack pension provision is even worse in the gig economy where it has been uncovered that more than two thirds of self-employed workers (69%) have no pension provision³³ compared to around 79% of employed workers³⁴. As the gig-economy has boomed over the past years and continuing to rise, future large-scale inequality may occur. According to the ONS, one tenth of the UK's population holds the majority of private pension wealth (63%) than the rest of the population combined. It was also stated that the top half of this 10% has a mean pension wealth of £637,500 compared to the bottom 5% who accumulated less than 1% of the combined top 10%³⁵. These statistics show the huge pension inequalities that exist currently and with the gig economy rising, then it will only get

²⁶ <https://www.insider.co.uk/news/two-thirds-years-retirees-wont-23952632>

²⁷ <https://assets.publishing.service.gov.uk/media/5a7c7576e5274a559005a01c/nest-automatic-enrolment-call-for-evidence-response.pdf>

²⁸ <https://www.pensionsscotland.org/blog/pensions-coverage-wont-be-sustained-without-system-reform>

²⁹ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/workplacepensions>

³⁰ <https://www.grayside.co.uk/factsheets20/PensionTimeBomb.pdf>

³¹ <https://www.theguardian.com/money/2023/oct/29/huge-ethnicity-pension-gap-revealed-in-uk-figures>

³² <https://blog.moneyfarm.com/en/pensions/what-is-a-good-pension-amount-how-much-is-a-good-pension-pot/>

³³ <https://getpenfold.com/pension-guides/do-the-self-employed-get-a-pension>

³⁴ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/workplacepensions>

³⁵ <https://www.ftadviser.com/pensions/2022/06/20/ons-data-exposes-shocking-pensions-inequality/>

worse. Nearly half this sector of workers may have to rely on just State Pension as they have not saved for a better retirement³⁶

Many would argue that increasing pension provision would solve all problems, however, higher pensions may reduce capital investment and improvements in the UK's infrastructure. If society is putting a higher percentage of income into pension funds, it could reduce the amount of savings available for more productive investment, leading to lower rates of economic growth.

³⁶ <https://www.unbiased.co.uk/news/financial-advice/the-self-employed-pension-problem>

Chapter 3 – Effects on the labour market

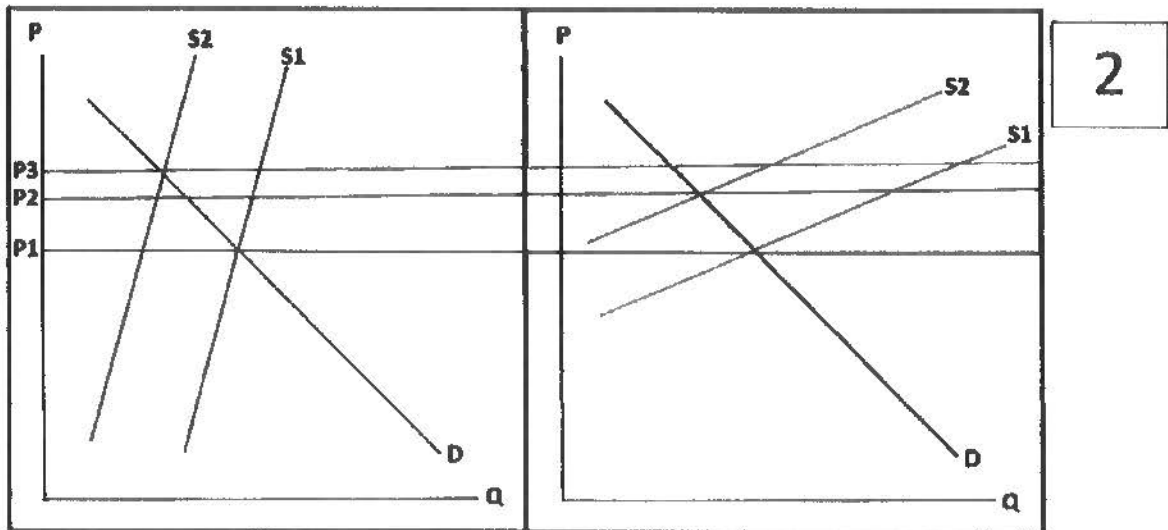
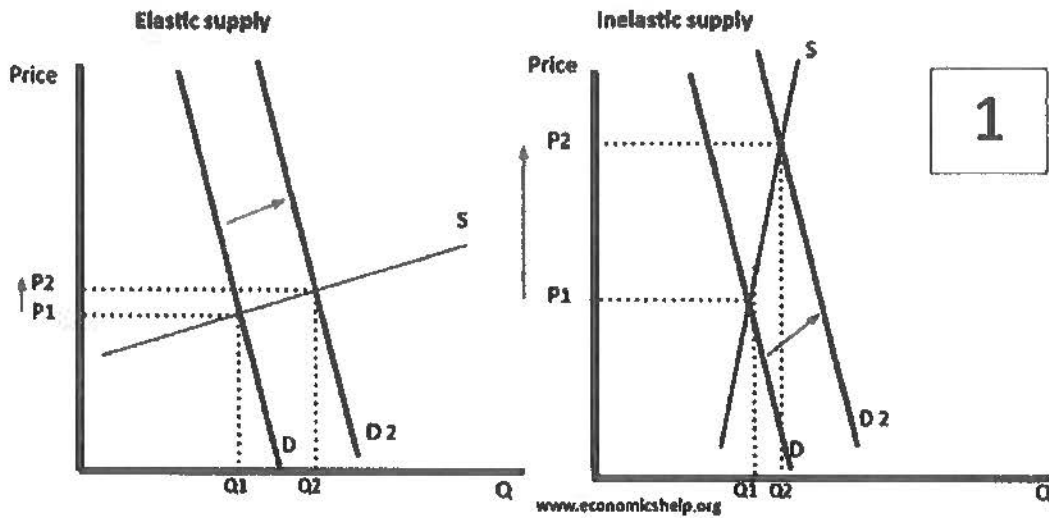
With the working age population already facing a decline due to tightening immigration from Brexit³⁷, an aging population will only exacerbate the loss of the UK's work force. According to ONS, regardless of the migration rate, population aging will occur at a twice the rate under scenarios with zero migration compared to those with high migration³⁸.

Many over 50's left the workforce during Covid and was magnified by the huge number of this age demographic due to the aging population³⁹. This age group are highly skilled and have many years of experience which cannot be replaced easily, creating an inelastic supply of said workers in an already inelastic supply of workers. In economic theory, an increase in demand for high skilled workers when the supply of workers is inelastic would cause a more than proportionate increase in wage prices (diagram1). Similarly, a reduction in inelastic supply would lead to higher prices compared to elastic supply (diagram2). Both scenarios would lead to higher wage push inflation due to the inelastic nature of the supply of labour. John Lewis' boss says that the larger numbers of workers leaving the labour market due to their age is already contributing to inflation and that the government must work hard to get these workers back into the labour market³⁹. This is because the aging population is pushing more workers into the 50+ age bracket and more of them are retiring early.

³⁷ <https://www.theguardian.com/politics/2023/jan/17/shortfall-of-330000-workers-in-uk-due-to-brex-it-say-thinktanks#:~:text=Brexit%20has%20led%20to%20a,bv%20leading%20researchers%20has%20found.>

³⁸ <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/aging/articles/livinglongerandolddagedependencywhatdoesthefuturehold/2019-06-24>

³⁹ [John Lewis boss: Over-50s quitting the workforce fuels inflation - BBC News](#)



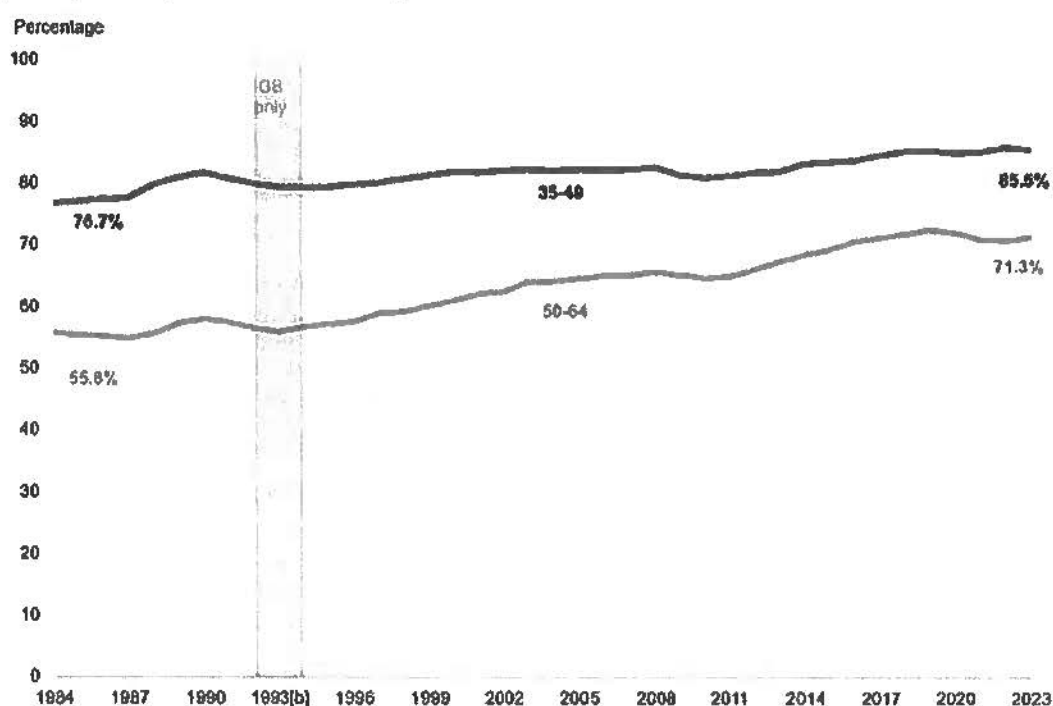
An aging population is contributing to labour shortages in many sectors as more start to retire at SPA or take early retirement. For example, in the UK's agriculture and real estate sector, over 40% of workers are over the age of 50. Such a large proportion of highly skilled and experienced workers will be very hard to replace once they reach retirement, posing huge recruitment and training challenges for the next 20 years⁴⁰. As there is a higher percentage of workers of an older demographic who are now retiring, a skill and experience shortage emerge within the workforce. These individuals hold

⁴⁰ https://www.cipd.org/globalassets/media/knowledge/knowledge-hub/reports/avoiding-the-demographic-crunch-labour-supply-and-aging-workforce_tcm18-10235.pdf

valuable expertise, skills, and knowledge crucial for various industries, particularly in specialised sectors. Replacing them poses a significant challenge due to their unique skill set and time spent in industry⁴¹. More of these experienced workers working alongside younger generations can be used to harness useful skills and experience to address labour shortages and enhance overall productivity.

As employment rate of 55–64-year-olds in the OECD reaching a record 64% in the second quarter of 2023, almost 8% higher than a decade ago, evidencing the success of this policy⁴². In the UK, employment rates for similar ages (50-64) have increased more than proportionately when compared to the middle aged population, showing that the government is trying to keep this experience in the labour market⁴³.

Employment rates of people aged 35 to 49 years and people aged 50 to 64 years, UK



⁴¹ <https://www.accurate.com/blog/how-the-retirement-boom-has-impacted-hr-and-recruiting/>

⁴² <https://www.oecd.org/newsroom/improving-opportunities-and-working-conditions-for-older-workers-can-bolster-pension-system-sustainability-and-address-labour-market-shortages.htm>

⁴³ [https://www.gov.uk/government/statistics/economic-labour-market-status-of-individuals-aged-50-and-over-trends-over-time-september-2023#:~:text=The%20employment%20rate%20for%20people,year%20to%2070.7%25%20in%202022.](https://www.gov.uk/government/statistics/economic-labour-market-status-of-individuals-aged-50-and-over-trends-over-time-september-2023/economic-labour-market-status-of-individuals-aged-50-and-over-trends-over-time-september-2023#:~:text=The%20employment%20rate%20for%20people,year%20to%2070.7%25%20in%202022.)

With this increase in older workers comes an increase in the need to retrain to adapt to modern technology and techniques, costing resources and time. Although there are economic advantages to hiring older workers, a report by revealed that 39% of employers are less likely to recruit people over 50 with only 35% prepared to retrain staff of that age⁴⁴. This is worrying for the UK economy due to the change in demographic meaning that these unskilled elderly people, looking for employment is constantly increasing, resulting in a hugely inefficient use of potential labour, and therefore stunting growth. The Government also back this up stating that over 50s are less likely to take part in workplace training⁴⁵, which is what elderly workers need most to adapt in the modern labour market.

These factors contribute to a decline in economic growth and are all caused by the aging population. Aging reduces economic growth both through a reduction in the labour force and, in equal or greater measure, by causing lower productivity⁴⁶. IMF research papers show how an aging population negatively effects productivity because not only is the overall population aging, but so is the workforce and therefore holding down productivity⁴⁷. Findings from the US National Bureau of Economic Research state that a 10% increase in population aged 60 and over, reduces GDP per capita by 5.5%, with an estimate of 0.3% loss in GDP per year due to this shift in demographic⁴⁸. Although this evidence was gathered abroad, the principles still lie true as the UK's economy is affected in the same way, with a growing percentage of the population becoming 60 plus and therefore reducing potential economic growth.

As the aging population start retiring and leaving labour and skill gaps in the market, there is increased demand for advancements in technology to fill this hole. This forces industries to seek innovative solutions to maintain and/or improve productivity and efficiency through development and increased automation, artificial intelligence, and robotics. Research conducted by Confederation of British Industry suggests that 78% of business in the UK are investing in automation technology to address labour shortages and improve productivity⁴⁹. Not only do these technologies solve the labour shortages but also offer the opportunity to grow and gain efficiency⁵⁰. Overall, this could

⁴⁴ <https://www.personneltoday.com/hr/older-workforce-skills-shortages/>

⁴⁵ <https://assets.publishing.service.gov.uk/media/5d273adce5274a5862768ff9/future-of-an-aging-population.pdf>

⁴⁶ <https://www.caixabankresearch.com/en/economics-markets/labour-market-demographics/impact-aging-labour-force-and-productivity-six-one>

⁴⁷ <https://www.imf.org/en/Blogs/Articles/2016/12/09/why-productivity-growth-is-faltering-in-aging-europe-and-japan>

⁴⁸ https://www.nber.org/system/files/working_papers/w22452/w22452.pdf

⁴⁹ <https://www.cbi.org.uk/media-centre/articles/38-of-business-report-labour-shortages-holding-back-growth-cbipertemps-employment-trends-survey-1/>

⁵⁰ <https://www.pwc.co.uk/economic-services/assets/ai-uk-report-v2.pdf>

better productivity and efficiency, improving the nation's economy as a whole, while allowing our elderly generation to retire at a reasonable age without increasing worries of the SPA increasing indefinitely.

Chapter 4 - Social Care

The UK's aging population imposes huge challenges for the social care sector due to the constant increase in demand for the services, leaving implications on both individuals and the economy, and will inevitably worsen over time. People aged 85 and over, who are most likely to need health and social care services, is expected to rise rapidly, increasing by 8.2% in the next five years and by 62.7% by 2043⁵¹, placing unprecedented pressure on the social care sector. The UK now has the most pressure to care for our elderly with the lowest capability of doing so, resulting in a large-scale deterioration of provision with shortages in the workforce limiting the supply of care with around 165,000 vacancies in the sector (2021/22)⁵². These social sector issues started pre Covid-19 and are long term, made significantly worse by Covid, workforce shortages due to government immigration policy, and a lack of access to quality care services due to the high costs⁵³.

Social care resources are put under huge amounts of pressure by the UK's aging population, raising concerns about how resilient our current system is. Research by the Health Foundation show that there is more than proportionate growth in demand of social care than funding for provision. The UK needs 3.4% growth in funding each year until 2032/33 to keep up with the rise in demand – we are currently at 2.6%⁵⁴. Moreover, the growing need for tailored health services, combined with a lack of funding creates huge backlogs for waiting lists with one in five over 80s having unmet social care needs⁵⁵ - the elderly still need to be cared for while waiting to be accommodated. This places huge amounts of pressure on carers who may not have enough qualifications or experience to deal with accumulation health issues that come with age. It is also becoming increasingly harder to access

⁵¹ <https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/health-wellbeing/age-uk-briefing-state-of-health-and-care-july-2023-abridged-version.pdf>

⁵² <https://www.nuffieldtrust.org.uk/resource/the-decline-of-publicly-funded-social-care-for-older-adults#:~:text=Social%20care%20services%20in%20England,limit%20the%20supply%20of%20care>.

⁵³ <https://www.nhsconfed.org/publications/adult-social-care-and-nhs#:~:text=However%2C%20nationally%2C%20rather%20than%20expanding,funding%20access%20to%20care%20services>.

⁵⁴ <https://www.health.org.uk/publications/long-reads/adult-social-care-funding-pressure>

⁵⁵ <https://www.ageuk.org.uk/latest-press/articles/2023/the-crisis-in-the-nhs-is-largely-a-crisis-in-older-peoples-preventive-care-and-if-were-to-avoid-another-catastrophic-winter-in-nine-months-time-we-need-to-act-now-to-fix-it-warns-age-uk/>

these care resources in the first-place dependant on what you can afford and where you live instead of the type of care you need⁵⁶.

Social care provision is exacerbated by the staffing crisis amid an aging population, with reduced quality and closures resulting from lack in supply of social care workers. One in three nursing homes in England are underperforming, deemed inadequate and needing improvements, with staffing issues being the leading factor⁵⁷. With an average salary of £23,510 for a care worker in the UK⁵⁸, it is below the threshold for entrance into the UK, the minimum salary for immigrants to work here is £26,200, with increases to £38,000 starting on 4th April 2024⁵⁹. This will significantly worsen staff shortages in the sector and therefore worsen care quality, pushing up prices for services needed by our ever-growing elderly population.

The effect of the aging population for individuals and families is huge, placing a financial burden on those who are caring for loved ones or themselves, and is magnified for those who already struggle financially. IFS research shows that the average cost for residential care has skyrocketed over recent years, overtaking inflation and harming household budgets⁶⁰. Due to this, many older individuals are forced to sell assets such as their own homes or use up savings⁶¹, raising concerns about intergenerational wealth inequality as well as depleting end of life happiness due to this stressful financial burden.

Due to the lack of availability of social care much of the burden of caring for the aging population is left to the 'sandwich generation'. These are sons/daughters who are not paid, many of which are also caring for their own children. There are approximately 1.3 million currently in this situation, resulting in issues such as decline in mental health, fatigue and huge financial burdens⁶². This caring at home saves the government £162 billion a year and masks the full extent of the problem⁶³. The UK's social care system relies on these 4 million informal caregivers and would collapse without them, with only

⁵⁶ <https://www.kingsfund.org.uk/insight-and-analysis/reports/social-care-older-people-home-truths#:~:text=Key%20findings,than%20on%20what%20they%20need.>

⁵⁷ <https://www.ft.com/content/fb2b38ac-6235-11e7-8814-0ac7eb84e5f1>

⁵⁸ <https://uk.talent.com/salary?job=care+worker#:~:text=How%20much%20does%20a%20Care%20worker%20make%20in%20United%20Kingdom%3F&text=The%20average%20care%20worker%20salary%20in%20the%20United%20Kingdom%20is,to%20%2C%2A338%2C874%20per%20year.>

⁵⁹ <https://commonslibrary.parliament.uk/research-briefings/cbp-9920/#:~:text=The%20Skilled%20Worker%20minimum%20salary,recommendation%20for%20the%20new%20Ist.>

⁶⁰ https://ifs.org.uk/sites/default/files/output_url_files/R143-Chapter3-new.pdf

⁶¹ <https://www.express.co.uk/news/uk/1742660/cap-social-care-costs-care-homes-ages-pensioners>

⁶² <https://www.journalism.co.uk/press-releases/sandwich-generation-parenting-elderly-care-and-burnout/s66/a1090521/>

⁶³ <https://socialcare.blog.gov.uk/2023/06/08/carers-week-a-personal-perspective-from-fatima-khan-shah/>

27% receiving support from the government and organisations⁶⁴. The time taken out of work to care for elderly results in half of working age carers losing £12,000 of income per year⁶⁵, contributing to a reduction in the nations productivity and lower standards of living for these home carers.

⁶⁴ <https://news.sky.com/story/social-care-system-would-collapse-without-4m-unpaid-carers-report-warns-12889569>

⁶⁵ <https://www.alliance-scotland.org.uk/blog/news/state-of-caring-report-juggling-paid-employment-and-unpaid-care/>

Conclusions and recommendations

To conclude, the UK's aging population is placing public finances under significant pressure, particularly in terms of healthcare expenditure. The demographic shift has driven an increase in demand for healthcare services and is expected to further increase government spending in this sector. Our elderly population therefore poses a huge fiscal challenge to the government, in terms of opportunity cost, as other essential public services may lose out due to the majority of resources are being allocated to elderly healthcare. My research shows this is especially true for over 85's, who cost three times more to treat. Strained NHS resources, due to this surge in demand, has resulted in longer waiting times for critical treatments, increased hospital stays, and a decline in patient experience, all of which negatively impact the nation's economic productivity.

The increase in elderly has also worsened the dependency ratio, putting pressure on policymakers to address future funding needs, and managing public finances. The UK's state and private pension provisions have struggled to cope under the aging population, leading to significant adjustments in the state pension system. State pension ages have already increased and will continue to increase leading to inequalities as those on lower incomes who cannot afford to retire early will have to work longer. Moreover, the rise of the gig economy may make the situation worse as it was found the majority working in it have no private pension provision. The UK still sees significant saving gaps, however the government have recognised this and put in place initiatives like compulsory pensions (NEST) to help address this.

The aging population in the UK presents both challenges and opportunities for the labour market. Workforce shortages, already a problem after Brexit's reduced immigration, are getting significantly worse due to longer life expectancies and increased number of elderly, therefore worsening the dependency ratio. More are taking retirement early and leaving the labour market short of supply and the lack of workers drives up wages due to inelastic nature of highly skilled older workers, contributing to inflationary pressures. As the skill and labour shortages worsen, firms are treating modern problems with modern solutions, introducing AI, automation and robotics to replace the missing workers enhancing productivity and efficiency.

The UK's social care sector has been put under immense pressure due to the nation's aging population, with a lack of resources and workforce shortages. The surge in demand due to an increased number of elderly highlights the critical need for increased government funding and retaining the workforce. The research shows that current funding needs to catch up if they want to match demand. The urgent need to increase funding and support for informal caregivers is

highlighted in financial hardship for families who struggle to pay for social care and the increasing numbers who are having to give informal care to their elderly relatives.

I recommend that the UK government create a reformed pensions system that tackles the issues of a growing percentage of elderly and longer life expectancies. In this reform I would suggest that the state pension age is increased to a level so that the proportionate time spent in retirement remains the same as in years gone by, so it is fair. This means the SPA will adjust in line with life expectancy. Additionally, I recommend that it features the removal of the triple lock as it exposes public finances leading to higher pension costs as well as its forecasting difficulty. I also recommend that the government means-tests pensions as there are many rich pensioners that don't need the state pension and this could free up funds to help those who rely on it.

I also recommend that the government allocate more resources into the elderly workforce to keep highly skilled, experienced workers in the labour market to boost the proven productivity and efficiency gains they bring. This may include allocating more money in incentives given to firms to train or re-train older workers for modern jobs and/or methods to make it easier to contribute their economic benefits. Another way to do this is to incentivise and adopt flexible work arrangements to encourage older workers to stay in the workforce. This could include policies such as phased retirement programmes, flexible schedules, and job-sharing opportunities.