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How stalling life expectancy is impacting the UK economy

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Summary – life expectancy for over 50s is stalling

- The number of over 50s increased by 18% from 21.6m in 2010 to 25.5m in 2020 and changes to their health and longevity matter to the whole economy. This group was particularly impacted by the COVID-19 pandemic.
- After 60 years of almost continuous improvement and well before the COVID-19 pandemic, life expectancy in the UK began to stall threatening people's health and livelihoods.
- Life expectancy of people 50+ is now 2.3 years lower than anticipated according to long-term trend
- This new piece of analysis looks at the life expectancy of people age 50+, how much the economy is affected and what needs to happen next.

Recent UK trends in life expectancy for adults in middle age

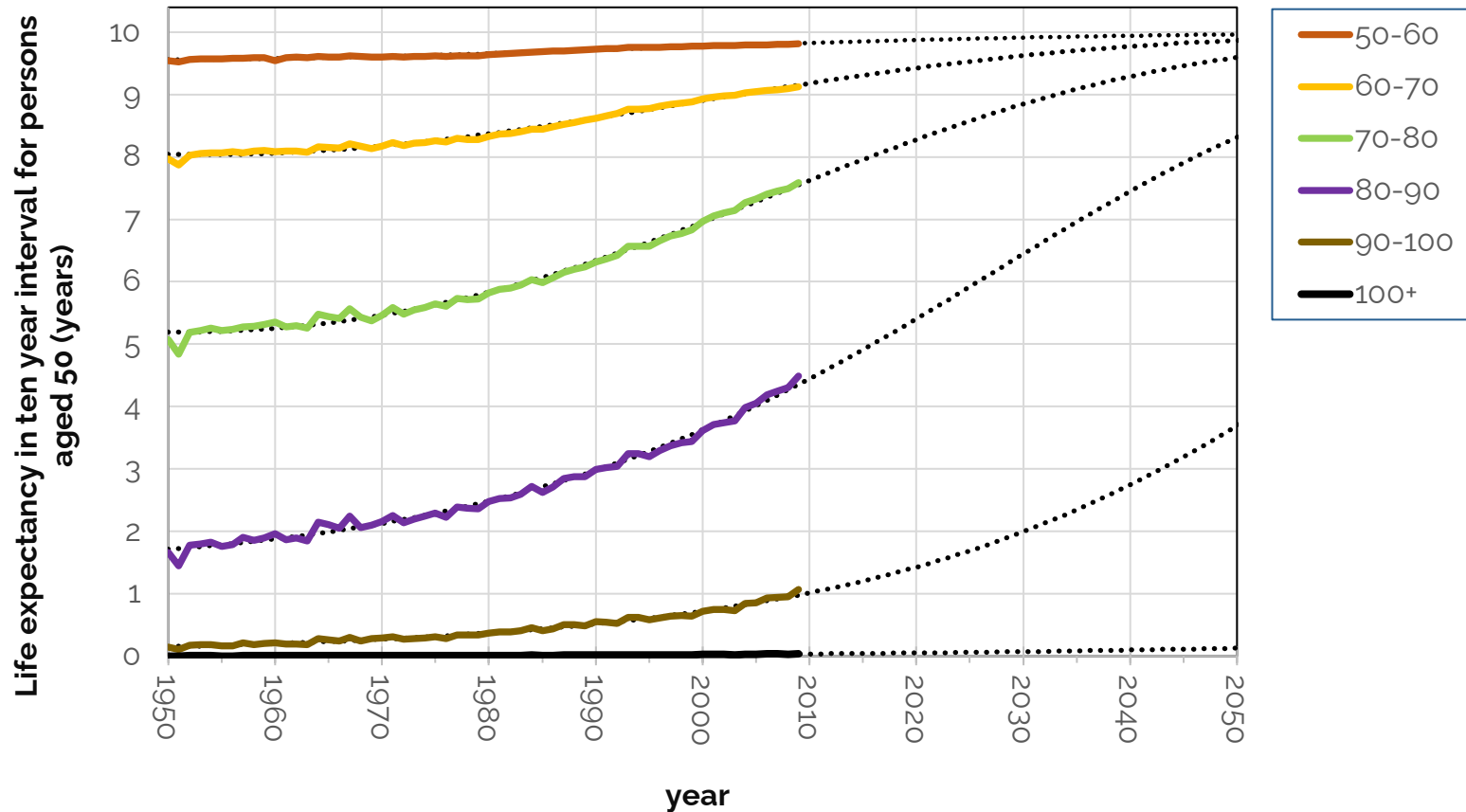
- Life expectancy in the UK began to stall after 2010 after 60 years of almost continuous improvement.
- In 2020 the pandemic led to large increases in mortality which has exacerbated the problem causing life expectancy to fall further.
- The majority of deaths occur in middle and older age, so the focus of our attention is the population aged 50 and older.
- The number of people over 50 increased by 18% in a decade – from 21.6m in 2010 to 25.5m in 2020
- People over 50 make up 38% of the population. Changes to longevity in this crucial age group matter to the whole economy

A different way of looking at life expectancy

- As we age the probability of surviving the next ten years declines. For example, a partial life expectancy (PLE) of 5 years means you are only expected to live half of the next ten years. ⁽¹⁾
- For a 50-year-old in 2010 the probability of living to age 60 is 98% nearly 10 extra years, but for someone aged 70 the probability of living to 80 is only 76% or 7.6 extra years.
- We split life expectancy into ten-year steps for people aged 50, 60, 70, 80, 90 and 100 and compared trends at each age in PLE since 1950.
- We then measured how many years of life had been lost or gained in each decade of life.
- Finally, we estimated how combined changes to life expectancy from age 50 since 2010 have filtered down and impacted UK economic activity and health.

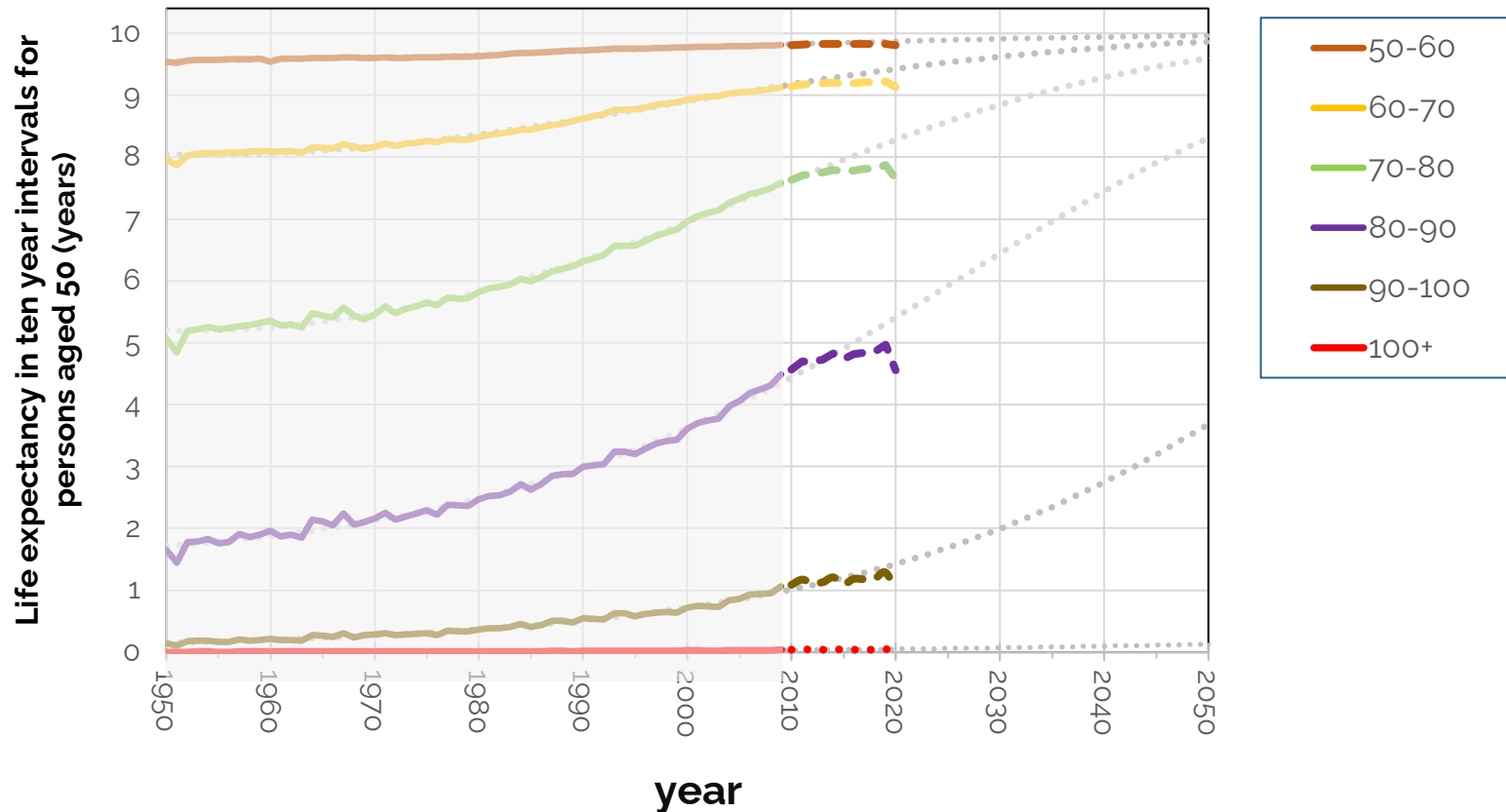
(1) For derivation see 'On the decomposition of life expectancy and limits to life', Mayhew and Smith, Population Studies. Vol 69, 1 (2015)

There has been almost continuous improvement in life expectancy among people aged 50+ between 1950 and 2010



- Between 1950 and 2010 UK life expectancy at age 50 increased 8.8yrs to 32.7yrs
- At age 50 you could expect to live 9.8yrs of the next 10yrs, up 0.3yrs compared with 1950 (red line)
- At age 60 you could expect to live 9.1yrs of the next 10yrs, 1.2yrs more than in 1950 (orange line)
- At age 70 it is 7.6yrs (+2.6yrs) (green line) and at age 80 it is 4.6yrs (+2.9yrs) (mauve line)
- At age 90 it is 1.1yrs (+0.9yrs) (brown line). From 100 your prospects are only fractionally higher (black line)

UK data show a decline in life expectancy from 2010 onwards compared with the long-term trend



- To understand what has changed since 2010, we compare latest life expectancy data with what would have happened if the long-established trend had continued
- We then measured the difference between actual life expectancy and trend from 2010 to 2020 – shown here as coloured hatched lines

The dotted black lines show the long-term trend in life expectancy of UK 50-year-olds. Thicker hatched lines show the deviation from trend in actual life expectancy from 2010.

Change in life expectancy by decade of age starting in 2013 (in years)

Age/year	50-60	60-70	70-80	80-90	90-100	100+	Total Gain(+)/ Loss(-)
2013	0.0	-0.1	-0.1	0.0	0.0	0.0	-0.1
2014	0.0	-0.1	-0.1	0.0	0.1	0.0	-0.1
2015	0.0	-0.1	-0.2	-0.2	-0.1	0.0	-0.6
2016	0.0	-0.1	-0.2	-0.2	-0.1	0.0	-0.7
2017	0.0	-0.1	-0.3	-0.3	-0.1	0.0	-0.8
2018	0.0	-0.2	-0.3	-0.3	-0.1	0.0	-1.0
2019	0.0	-0.2	-0.3	-0.3	-0.1	0.0	-1.0
2020	-0.1	-0.3	-0.6	-0.8	-0.4	0.0	-2.3

Summary

- Life expectancy began noticeably to stall in 2013; declines initially affected 60, 70 and 80-year-olds; 80 to 90-year-olds were next in line.
- By 2018 life expectancy among all those aged 50+ was 1.0 years lower than trend but also lower in absolute terms.
- When the pandemic struck 70-80 and 80-90-year-olds suffered most resulting in a combined fall in life expectancy of 2.3 years over the period in all age groups (bottom right corner of table).

Impact on economic activity

- A fall in life expectancy is generally preceded by a period of ill health which can vary in time according to pre-existing health conditions, age and other factors.
- A decline in life expectancy takes years off healthy lives. We estimate that a one-year loss in life expectancy equates on average to a 2.6-year loss in healthy years⁽²⁾
- A UK male dying at age 80 could expect to spend on average 64.5 years in good health, but if his life expectancy is only 78, he will spend less than 60 years in good health.
- Downward changes in life expectancy are a warning sign of shortened working lives with dire implications for the UK workforce.
- We don't know if the decline in life expectancy is a temporary blip or a transition to a new norm – if the former it is likely to take years to get back to trend.
- Whatever the case we need bold action to address the challenges faced by a growing, ageing and unhealthier population to ensure a more sustainable public purse and sustained economic growth

(2) See: 'Levelling up – the great health challenge', Mayhew, Chan, Cairns, 2023. Forthcoming Geneva Papers on Risk and Insurance and ILC

...and on health

- Life expectancy started its relative decline long before COVID exposed deep-rooted problems in population health.
- Falling life expectancy affects the demand for healthcare by bringing forward in time when health interventions are needed.
- This applies especially to older people who are growing in number and much more likely to use health services.
- Perhaps the easiest and most telling statistic is the rise in NHS waiting lists. Numbers waiting increased from 2.5m in 2010 to 5m in 2020 and now stand at 7.5m.

What happens next?

- We need to know how much of the life expectancy decline is due to unhealthy lifestyles, how much has been driven by a lack of healthcare resources and how much by political distraction.
- We know that unhealthy lifestyles are a major contributor to declining life spans and health spans and that a greater focus on prevention in the health economy will pay financial as well as social dividends.
- The ILC's report [*One hundred not out: A route map for long lives*](#) expands on this analysis, setting out the challenges faced by a growing and ageing population and what solutions are needed to ensure healthier and productive longer lives.

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