The Economic Value of Healthy Ageing and Working Longer

Notes based on the ILC-UK and Actuarial Profession joint debates

Supported by Prudential

April 2010

www.ilcuk.org.uk

The International Longevity Centre - UK (ILC-UK) is an independent, non-partisan think-tank dedicated to addressing issues of longevity, ageing and population change. It develops ideas, undertakes research and creates a forum for debate. The ILC-UK is a registered charity (no. 1080496) incorporated with limited liability in England and Wales (company no. 3798902).

ILC–UK
11 Tufton Street, London, SW1P 3QB
Tel. +44 (0)207 340 0440. www.ilcuk.org.uk
info@ilcuk.org.uk, www.twitter.com/ilcuk

Acknowledgements
ILC-UK is grateful to Prudential for sponsoring the debates. We are also grateful to the participants. Special thanks to Rhiannon Freeland of ILC-UK for organising the event.

The notes of this event were produced by David Sinclair and Craig Berry and may not necessarily represent the views of all participants

This report was first published in April 2010.

Introduction and background

With average life expectancy increasing at the rate of around two years every decade, and the state pension age increasing to 68 by 2046, addressing the costs of demographic change is high up the political agenda. Among the main challenges are, firstly, ensuring that healthy life expectancy (HLE) increases at the same rate as life expectancy, and enabling older people to work for longer.

ILC-UK and the Actuarial Profession hosted two events to debate these issues. The first was held at the Royal College of Physicians in Edinburgh on 17th February 2010 and the second on 3rd March 2010 at the Actuarial Institute in London. Both debates have been led by Les Mayhew of the Cass Business School at City University. Professor Mayhew presented findings from his study *Increasing Longevity and the Economic Value of Healthy Ageing and Working Longer*.

The panel for the debate on 17th February included:

- Stewart Ritchie, Actuary Faculty Council, Scotland (Chair)
- Duncan Macniven, Registrar General for Scotland
- John Storey,Older People and Age Team, Equality Unit, Scottish Government
- Tom Boardman, Director of Retirement Strategy and Innovation, Prudential
- David Manion, Age Concern and Help the Aged, Scotland

The panel for the debate on 3rd March included:

- Robert Laslett, Director of Private Pensions and Cross-cutting Analysis and Chief Economist for Pensions, Department of Work and Pensions
- Tom Boardman, Director of Retirement Strategy and Innovation, Prudential
- Emily Grundy, Professor of Demographic Gerontology, London School of Hygiene & Tropical Medicine.

Jemima Ayton introduced the debate on 3rd March on behalf of the Actuarial Profession. She noted that actuaries' work on longevity tended to focus on risks to the life and pensions industry rather than the wider social and economic implications.The debate on 3rd March was chaired by Baroness Greengross, Chief Executive of ILC-UK.

In both debates, the panel considered the questions set out below:

- Is increasing longevity being matched by increases in HLE?
- To what extent is poor health a barrier to working for longer?
- What role could prevention and health promotion play in securing a healthier future and improved economic prospects?
- Will planned increases in state pension age deliver the expected large savings in public expenditure, and are there are offsetting costs that need to be taken into account?
- What are the supply-side barriers to progress including socio-economic inequality, obesity and mental health?
- What is the role of wider demographic considerations, such as population size and immigration?

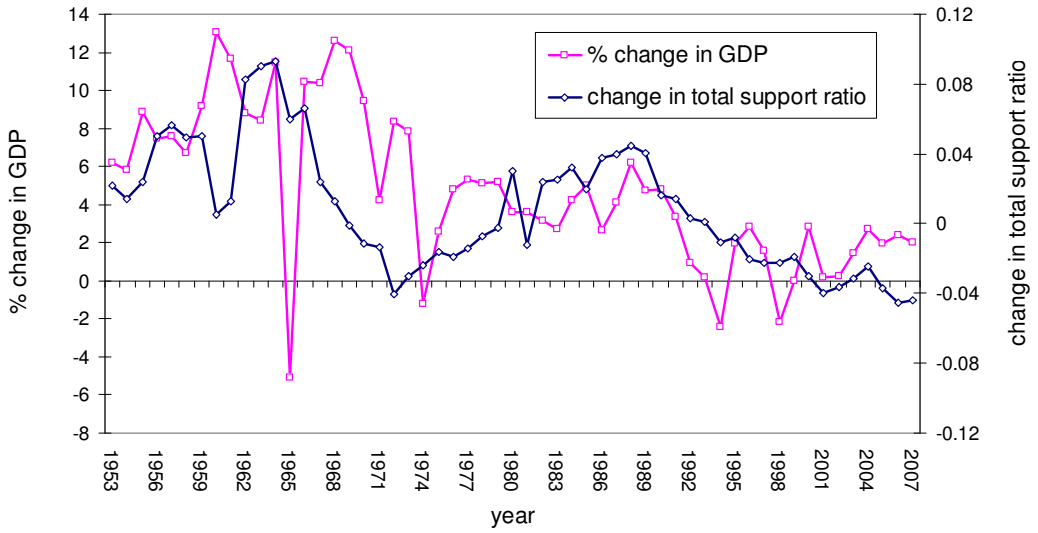
Prof Les Mayhew, Cass Business School

Background

Les began by outlining the nature of the problem. The ratio of working age to retirement age people peaked in 2007; it is now in decline, and set to fall rapidly as the population ages. This will create multiple social and economic challenges, compounded by several other factors:

- An increasing population (UK population set to reach 69 million by 2025).
- HLE is increasing at a slower rate to life expectancy.
- The average number of years spent in work has hardly increased since 1990.
- Older workers tend to be less productive – wage productivity peaks between the ages of 40 and 45.

He argued that when a society's total support ratio (which also includes children) decreases, economic growth tends to slow or stall, which impacts upon standards of living. The recent experience of Japan best demonstrates this relationship:



Source: Mayhew (2010)

Unless these problems are addressed, public expenditure on health, social security, pensions and long-term care will have to increase dramatically. And pressures to increase immigration will rise steadily in order to address the falling support ratio – although this compounds the challenge of an increasing population.

Research

Les' presentation was based on his study *Increasing Longevity and the Economic Value of Healthy Ageing and Working Longer*. Before presenting his analysis, he outlined the aims and approach of the research.

Using government expenditure figures, population projections (official statistics and his own model), survey data from sources such as the British Household Panel Survey and the English Longitudinal Study of Ageing, and data from the World Health Organisation and International Monetary Fund, he sought to quantify the impact of increasing longevity on a range of variables. These include:

- Welfare expenditure

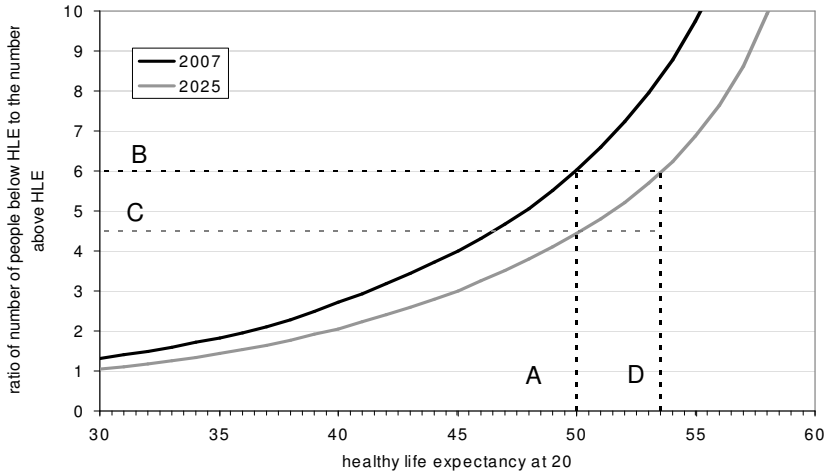
- Health and social care
- Labour markets
- Tax revenues
- GDP and productivity
- Migration

The research sought in particular to assess the impact of different policy levers on economic rates and extending working lives. Since health is one of the necessary conditions for work, the research also considered the health barriers to working longer, the impact of health inequalities on economic performance, and the impact of health policies aimed at changing lifestyles. The findings can be found in full at www.hmg.gov.uk/media/33715/economicsofageing.pdf.

Impact on public spending

Les' analysis shows that expenditure on social security (including pensions), social care, and health will increase significantly by 2025, without improvements in HLE. Even if HLE were to improve at the rate of '1 in 10' (i.e. the health of someone aged *x*+1 in ten years would be the same as someone aged *x* today), public expenditure in these areas will continue to rise.

The ratio of the number of people below HLE to the number of people above HLE is important to determining the public spending impact. Les presented the following chart to demonstrate the relationship between this ratio and HLE at aged 20:



Source: Mayhew (2010)

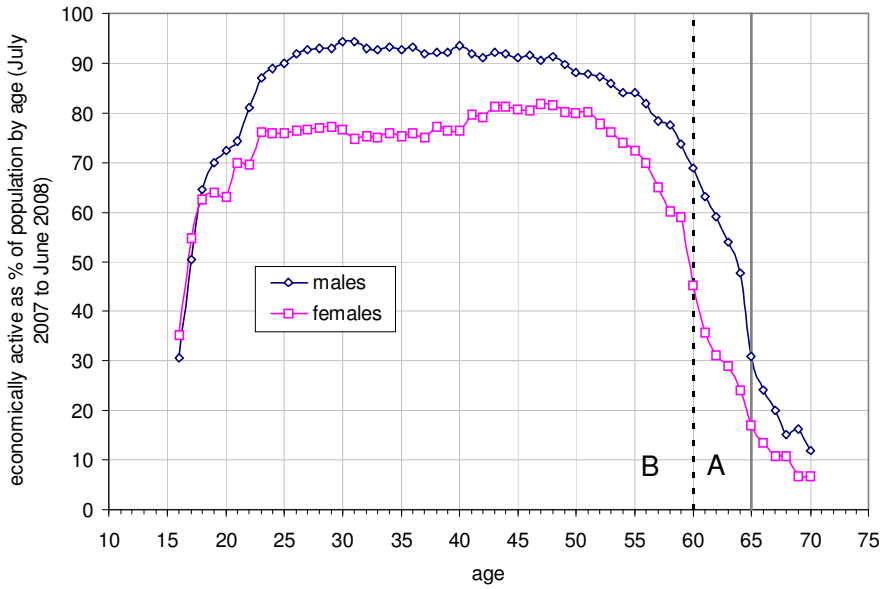
Point A represents HLE at 20 in 2007 (50.2 years), with point B indicating a ratio of 6. Without improvements in HLE, the ratio will slip to 4.5 by 2025 (point C). To restore the ratio of 6, HLE at 20 would need to rise to 53.7 years in 2025, that is, by 3.5 years above what is projected.

In a post-script to his presentation, Les estimated that a society-wide cessation of smoking would increase HLE by 1.5 years. He argued that to achieve the same improvement while smoking continues at the same rate would require an additional £50 billion per year in health spending.

Digging below figures on average HLE reveals stark inequalities in health. Using longitudinal data from the British Household Panel Survey, Les' research disaggregated the population according to gender, co-habitation status, and education. He found far more variability in HLE across the population than within life expectancy in general, and noted the impact of living alone and low educational attainment on HLE.

Working longer

Les presented data from the Labour Force Survey to show that although working after state pension age has increased slightly in recent years, economic activity falls sharply after 50 years of age, for both men and women:



Source: Mayhew (2010)

As such, the state pension age – 60 for women (although rising from April 2010) and 65 for men – seems to have little impact itself on people's propensity to remain economically active. However, the minimum age for early access to private pensions (currently 50) could be having an impact.

Using data from the English Longitudinal Study on Ageing, Les presented the factors that influence work status in the age group 50-59. For both men and women, high educational attainment and home ownership mean people are far more likely to be in work. In contrast, poor health and caring responsibilities mean people in this age group are far less likely to be in work.

Scenarios to 2025

On the basis of the macro-economic model employed in Les' research, he plotted three future scenarios based on different societal experiences of ageing between the present day and 2025:

- A – *Passive ageing* (current indicated trends): Trends in HLE and life expectancy continue, with health gains in pre- and post-retirement age, but years spent in disability widens to 11 years. Economic participation rate increase by 1% and wage productivity increases by 1% per year.

- B – *Health deterioration*: Health expectancy falls due to worsening health in pre-retirement age but life expectancy stays on track so that 14 years of life are spent in disability. Participation rates increase by 1% and wages fall 1% per year.
- C – *Active ageing*: HLE and life expectancy increase faster than trends, maintaining baseline gap of 10 years in disability. Pension age increases by 2 years. Participation rates increase by 3% and wages by 2% per year.

The impact on tax rates on GDP per capita in 2025 are shown in the following table:

scenario	LE @ 20	HLE @ 20	years in disability	participation rate	average wage (£000s)	tax rate %	GDP/head
baseline	60	50	10	0.64	23.0	29.4	9077
A	63	52	11	0.65	27.5	25.5	10786
B	63	49	14	0.63	19.2	45.3	6910
C	66	56	10	0.67	32.8	30.0	13005

Notes
-based on wage GDP
-ignores non-wage GDP (dividends, rents etc.)

Source: Mayhew (2010)

The passive scenario (A) will lead to increases in GDP per capita, but only if participation rates increase as forecast. The deterioration scenario (B) will lead to large reduction in GDP per capita, and therefore living standards. In the active scenario (C), the tax rate has slightly increased but take-home income is higher, and an increase in GDP per capita has raised living standards.

Conclusions

Les listed the main barriers to improving health as income inequalities, smoking, obesity, early onset of chronic disease, co-morbidity at older ages, growth in dementia, and the growth in mental illness. He listed the main barriers to working longer as ill-health and disability (arguing that the relationship between work and health should be our main concern), institutional factors such as pension ages, disincentives created by means-tested benefits, and unfavourable labour market conditions.

He argued that our main demographic challenge was the prospect of increased immigration. Higher levels of inward migration would be necessary to plug the labour gaps and mitigate public expenditure increases caused by the current model of ageing. However, this would out further pressure on the size of the population, which could mean a lower GDP per capita even if we experience economic growth. Raising the state pension age would be the main alternative, but depends on enabling more people to work for longer – which depends on overcoming the barriers to work and health.

Panel Speakers in Edinburgh and London

Duncan Macniven, Registrar General for Scotland (Edinburgh)
Duncan agreed with Les' prescription that to live longer and healthier, we should 'get an education, a good job, gym membership, and a partner, sign the pledge, and give up smoking'.

Duncan noted that the number of people aged over 75 in 2033 in Scotland would increase by 84% and that by 2033, over 75s would account for 13% of the population or three quarters of a million people out of a population of 5.5 million. Since we would continue to age by one year every year, that projection is not going to be significantly inaccurate. The challenges will not hit the UK equally: by 2033, Scotland and Wales will have a higher 65+ population than the rest of the UK (and also high in terms of European levels). That said, Duncan argued that we are not facing a 'crisis': these changes will happen slowly and we still have time to plan for them.

Duncan also noted that HLE in Scotland was lagging behind the increase in life expectancy. He pointed out that women can look forward to 5 years of unhealthy life and men two years of unhealthy (although they do not live as long in total). He also mentioned that there were huge inequalities in life expectancy and HLE within Scotland. There is, for example, eight years difference between life expectancy in Glasgow compared to East Dunbartonshire.

He stated that 55 year olds in 2001 were asked to say whether their health was good/fairly good/not good. The percentage of those unemployed living in good health was 4%. Those unemployed in poor health represented 11%.

Duncan argued that there were things individuals could do (such as eat healthily, take exercise, etc.). But there were also things the actuarial industry could do, such as sending price signals to encourage good behaviour (e.g. discounts for health insurance).

John Storey, Older People and Age Team, Equality Unit, Scottish Government (Edinburgh)
John noted that the King's Fund would shortly be updating on the 2006 Wanless Report on long-term care funding, an important development in the context of the debate on life expectancy and HLE. Clearly the issue of care will continue to be of concern

John drew attention to Les Mayhew's conclusion that dealing with health consequences of smoking cost £50bn a year. He pointed out that this is equivalent to about half the GDP of Scotland. At the same time the DWP provide about £90bn a year benefits/pensions across UK (equivalent to the entire GDP of Scotland). He argued that the emphasis on banning smoking in public places was right.

He also pointed out that over recent years governments have placed a strong emphasis on health promotion/health improvement. He argued that there may be lag

effect and in the long run the impact of these initiatives may be very positive in terms of the health of the older population.

John concluded by saying that more people will be living in their homes (rather than go into care homes) in the future and that we will be increasingly needing to provide care in peoples own home.

Tom Boardman, Prudential (Edinburgh and London)
Tom began by agreeing with Les Mayhew on the clear need to highlight the links between life expectancy, healthy life expectancy and working life expectancy. He responded to Robert Laslett by arguing that increasing GDP was important in itself, as it created a bigger pot from which to fund advances in health. He said that enabling working in later life was crucial to increasing GDP.

Tom's presentation introduced findings from Prudential Health's Vitality Index, which is based on a national survey conducted by Ipsos MORI in January 2009. Tom stated that it takes a long time for people to realise that they need to improve their health and fitness. Usually it is not until they are diagnosed with a health condition that they decide to take measures to improve their fitness, although diagnosis of friends or relatives can also act as a wake-up call.

According to the survey, the factors which may encourage people to improve their health are:

- Being diagnosed with a health condition (79% of people agreed with this)
- Rewards and incentives for improving health (55%)
- Close friend or relative being diagnosed with a health condition (46%)
- Change in financial situation (41%)
- Change in family circumstances (33%)
- Public health campaigns (22%)

Among the most interesting results are that public health campaigns seem to have a limited effect, but also that many people will respond positively to rewards and incentives to improve their health.

Tom noted that improving people's health is in the interests of insurance companies. For this reason, Prudential operates an incentive system whereby customers that improve their health can qualify for discounts with various partner companies. Tom argued that 70% of Prudential Health customers agreed that the Vitality programme had helped them to live a healthier lifestyle, and that 68% had changed their behaviour as a result of the Vitality programme. He concluded by saying that Prudential was keen to share best practice on rewarding health improvements with government. The findings presented by Tom can be read in full in *An In-Depth Study Examining the Nation's Wellbeing*, available at www.pruhealth.com/presales/zone/-employers/pdfs/pruhealth_vitality_index_2_spring_09.pdf.

David Manion, Director of Age Concern and Help the Aged Scotland (Edinburgh)
David began by welcoming Les' paper but expressed concern about the use of terms such as 'support ratio' and 'dependency ratio'. He pointed out that older

people are significant contributors to society as volunteers (contributing £30bn a year to the economy even before you take account of the value of grandparenting activities).

He noted that Les' study mentions that economic participation falls at 50 and argued that many of these people do want to continue to work. He mentioned that if you leave employment when you are over 50, you are likely to find it 8 times more difficult than younger people to re-enter the labour market. He felt that ageism was a major issue and the most serious 'ism' faced by society today.

David prescribed a healhy dose of optimism. He pondered what the impact of new drugs might be, for example, and how much better off we will be as a result of this. He noted a danger of being too pessimistic of the future, and pointed out that others argue that there has been a compression of morbidity.

Robert Laslett, Department of Work and Pensions (London)
Robert responded to Les Mayhew's presentation by saying that the Department of Work and Pensions (DWP) recognised the economic impact of people spending a greater proportion of their life in poor health. This was not integrated into its dynamic microsimulation modelling of pensions, and there would be value in an integrated approach to such modelling.

He argued that the Government is already active in the area of longevity and health. In employment policy, for example:

- The default retirement age is under review.
- Through Age Positive the Government is working to improve employers' attitudes to older workers.
- The Government has increased back-to-work support for the over-50s.

He argued that these kinds of policies are key to the UK's economic recovery, and noted that the employment of older workers had help up well during the recent recession, in comparison with other age cohorts, and with experience of the recessions in the 1980s and 1990s.

Robert concluded by raising two main discussion points in response to Les:

- GDP is not a complete measure of human welfare; as such economic growth alone does not necessarily increase well-being.
- There is not a full understanding of what drives the average retirement age, and more work is needed in this area.

Prof Emily Grundy, London School of Hygiene and Tropical Medicine (London)
Emily began by welcoming Les Mayhew's work, which drew together health and social considerations with micro- and macro-economic factors. She also pointed out that Les' research improves upon the Office for National Statistics' statistics on HLE, which are based on of self-reported measures of general health status and long-term illness which are known to be influenced by factors other than health status so problematic for measuring trends over time.

She argued that Les' research demonstrates that health is very important to improving the prospects of extending working lives. However, the example of Japan – where older employment rates are high – shows that health is not the only factor.

In addition, we also need to consider the effect of work on health. The growth in mental health problems, for instance, may be due partly to work conditions.

Emily stated that we need to consider how older workers can develop wider skills, as enabling moves between professions may be key to extending working lives. She also argued that increasing fertility rates may be an alternative to immigration in combating the costs of longevity – and recently the UK fertility rate has shown signs of increasing. However, she added that when considering immigration, we have to acknowledge that migrant labour is a major part of the growing social care workforce.

Finally, she said that we need to consider what we actually want firms to do at the micro-level: should they stop recruiting young people in order to keep older employees for longer?

Audience discussion with panel of speakers

In both Edinburgh and London, the audience and panel took part in a lively debate after the presentations, and there were many interesting comments made and questions posed. These notes below represent comments from both Edinburgh and London. They are not intended to be comprehensive notes but represent some of the main issues raised.

Default Retirement Age (DRA)

Participants in Edinburgh raised the issue of the role of the DRA. Les Mayhew pointed out that as an institutional barrier, the DRA was easier to remove than it would be to tackle health inequalities. He pointed out however that increases in the State Pension Age without investment to tackle health inequalities may not save significant amounts of money as people may move to Incapacity Benefit in the absence of being eligible for State Pension.

David Manion argued that the DRA was a major issue and that most people want to work longer. John Storey noted that there was a general expectation that the DRA will will rise

Stuart Richie pointed out that in the future there would be fewer people in defined benefit pension schemes. This is likely to mean that the next generation would be unlikely to be able to to take early retirement in way this generation has.

International comparisons

Sally Greengross opened the London discussion by saying that international comparisons would be helpful. She noted that the structure of Japanese industry and work patterns are very different to the UK. Les Mayhew added that Japan is a low immigration country, which compelled it to encourage longer working lives and greater levels of economic participation more generally.

Sally also said that we need to look at how US productivity rates compare to the UK, given that the US does not have a default retirement age, and has had stronger age

discrimination rules in place since the 1960s. A member of the audience replied that the government had in the past conducted research on how US productivity rates were affected by age discrimination laws, but found that they had very little effect, if any, on productivity. Tom Boardman added that people were more likely to work for longer in the US because employment usually entitles people to health insurance.

Working-age inactivity

One contributor in London questioned why working-age males are now less likely to be in employment than at any point since 1831. Les Mayhew suggested that the state pension age and the 5-day working week, both relatively recent introductions, were part of the explanation, but agreed that it was a problem. Robert Laslett added that industrial restructuring had contributed to this phenomenon by encouraging more women into the workplace, so the trend could be seen as gender rebalancing. However, Emily Grundy replied that there is some evidence that apparently increasing or stable female participation rates reflect cohort differences in proportions of women participating in the labour market, and that within cohorts there may be a tendency towards earlier retirement, as for men.

Health technology

A member of the audience in London asked Les to comment on health technology as an additional variable that could have been included in his study, adding that there had been huge improvements in health technology in recent decades.
Les replied that the impact was mixed. Ostensibly health technology improve people's health so had a positive impact on HLE. However, advances in health technology have also kept unhealthy people alive longer so may impact negatively on the relationship between HLE and life expectancy.

Long-term analysis

Sally Greengross argued in London that we need cost-benefit analyses that look beyond the short-term, adding that the Department of Health should undertake a long-term cost-benefit analysis for social care. Robert Laslett noted that DWP does undertake long-term analysis for areas such as pensions reform.

Les Mayhew agreed with Sally. He gave the example of the onset of chronic disease: we know that the average age for onset is mid-50s, but we do not know whether this average is increasing or decreasing. At the end of the debate Les returned to this theme, arguing that social care has been debated in a destructive way due to the short-term nature of the political cycle.

Benefits of older workers

One contributor in London argued that firms could benefit more from older workers. There needs to be more systematic age management so that the ageing process is managed within firms from recruitment to exit. There also needs to be better knowledge management, so that the tacit knowledge held by older workers is not lost.

On age management, Emily Grundy said there was anecdotal evidence that mentoring schemes whereby older employees provide guidance to young recruits are effective. Sally Greengross said large employers like the civil service need to get better at moving people around within organisations to age-appropriate jobs.

Jemima Ayton argued in London that workers with the greatest levels of tacit knowledge and greatest capacity to contribute towards funding the increased costs of an ageing population are highly paid professionals. We need these kind of people to work for longer – but often they are the people that can afford to retire earlier, and the costs of employing them are higher. Les Mayhew added that any consideration of the costs of older workers needed to be measured against the large costs to society of worklessness. Robert Laslett said that things like fixed retirement ages may create a self-fulfilling idea among older people that they are 'past it' when they reach a certain age.

Younger people and the employment market

One participant in Edinburgh expressed concern that more older workers would create problems for the next generation of younger people. However the panel argued that young people will become a scarcer commodity in future and therefore likely to be in demand. This would be particularly the case in certain professions. Another panel member mentioned that there was not a fixed number of jobs in the economy and that the debate was not about young versus old. It is up to Government to ensure the economy creates enough jobs.

Pension age

One contributor in London asked whether the UK state pension age will be decided by the UK government, or in fact by the Chinese and Indian economies. They argued that China and India are likely to increase their state pension ages, which will force the UK to do the same.

Emily Grundy replied that China and India will eventually face the same longevity dilemmas as the UK. Les Mayhew said the rise of China and India has had a positive economic impact on the UK, but that this will decline over time.

Tom Boardman argued that people retiring today are the lucky generation. The original state pension benefits were more like today's incapacity benefits. Due to the competition from China and India, we may need to move back in this direction.

Definitions of healthy and unhealthy

A member of the audience in London questioned the tipping point between who is classified as healthy and unhealthy, adding that the fairly low average HLE may be skewed by the severely disabled. Another contributor commented that health is a continuum. Also, often people feel healthier than they are – actual functionality should be the key to defining health.

Emily Grundy replied that functionality always depends on one's environment, in particular the type of work one is employed to do, so may be equally subjective. Jemima Ayton said that it will always be difficult to objectively measure health because people perceive the same things in different ways.

Carers

Participants in Edinburgh also debated the role of older carers and whether financial recognition for careering responsibilities should be considered.

Flexible working

One contributor in London noted that the New Economics Foundation had recently called for a 21-hour working week. This idea was part of a general move towards encouraging flexible working over the lifecourse. Sally Greengross commented that the Equality and Human Rights Commission had always promoted flexible working. Robert Laslett added that the notion of retirement is quite a poor way of maximising one's life satisfaction, so we should consider how to enable people to balance work and leisure more flexibly over their life course.

Individual circumstances

Tom Boardman commented in London that different individual circumstances must not be discounted when considering how to improve health and encourage working longer. This was a theme taken up by several contributors. Les Mayhew, for instance, argued that people age in very different ways.

Another contributor argued that people living in rural areas had very different experiences. Geographical factors meant they may not be able to work for longer, and they may also have less access to health facilities. Les replied that the growing prevalence of home working may help to combat the former. In a similar vein, Tom added that the role of a person's family is important to how they experience ageing. This will differ according to the individual, but in general family structures in the UK are not as strong as in other countries.

References

Mayhew, L (2009) *Increasing Longevity and the Economic Value of Healthy Ageing and Working Longer*, available at www.hmg.gov.uk/media/33715/economicsofageing.pdf.

PruHealth (2009) *An In-Depth Study Examining the Nation's Wellbeing*, available at www.pruhealth.com/presales/zone/employers/pdfs/pruhealth_vitality_index_2_spring_09.pdf.

ILC–UK
11 Tufton Street
London
SW1P 3QB
Tel. +44 (0)20 7340 0440

info@ilcuk.org.uk

www.ilcuk.org.uk
www.twitter.com/ilcuk