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PwC Golden Age Index
The potential $2 trillion prize from longer working lives

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Contents

The potential $2 trillion prize from longer working lives

Between 2015 and 2050, the number of people aged 55 and above in OECD countries will grow by almost 50% to around 538 million. It is good news that we are living longer, but rapid population ageing is already putting significant financial pressure on health, social care and pension systems and this will only increase over time.

To offset these higher costs, we think older workers should be encouraged and supported to remain in the workforce for longer. This would increase GDP, consumer spending power and tax revenues. It could also help to improve the health and wellbeing of older people by keeping them mentally and physically active.

We have developed our Golden Age index to quantify how far different economies are harnessing the power of their older workers. The index captures a broad range of indicators relating to the participation of older people in employment and training. We find that Iceland, New Zealand, Israel and Sweden lead the OECD on this index, with large potential economic gains if employment rates for those over 55s could be raised to those of the top performers.

Specifically, across the OECD as a whole, we estimate that the potential long-term GDP gain from raising employment rates for the over 55s to Swedish levels could be around $2 trillion. Potential gains could rise as high as 16% of GDP for Greece and 13% for Belgium. For the US, they could be around 3% of GDP, or around 2% of GDP for Japan.

We also consider trends in the UK in more detail in this year's report. While progress has been made over time in boosting working lives, we estimate there could be a potential £80bn boost to UK GDP in the long run if it could match Swedish performance.

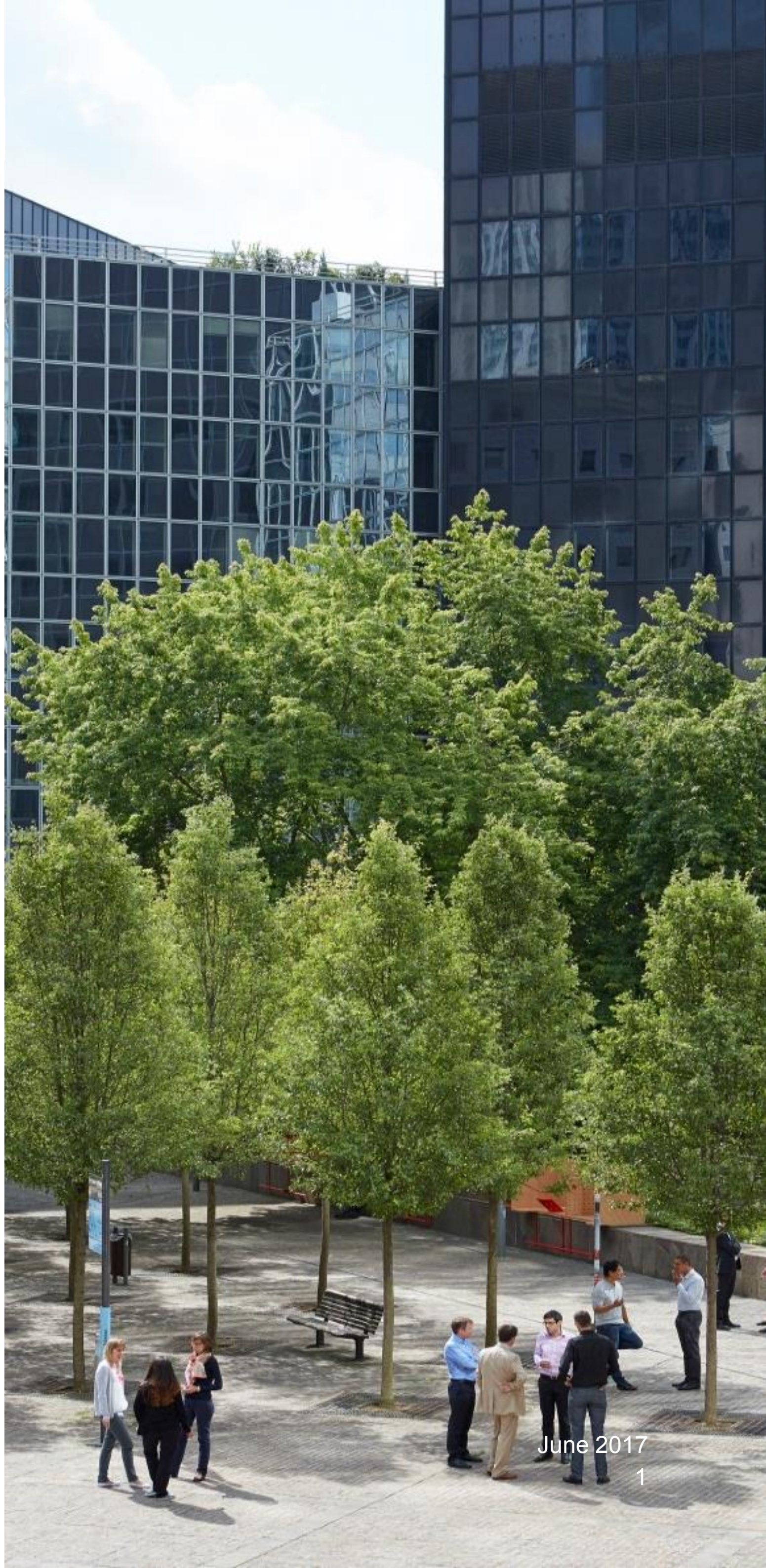
For governments across the OECD, the priorities include reforming pension systems and providing other financial incentives to encourage later retirement. Measures to support lifetime learning and training in the face of rapid technological progress, including automation, are also important. Our analysis suggests that policies to support older workers should not crowd out younger workers as this will boost demand as well as supply.

For employers, flexible working and partial retirement options can pay dividends, as can redesign of factories, offices and roles to meet the changing needs and preferences of older workers.

Reverse mentoring schemes on digital skills and extending apprenticeships to older workers also feature in the strategies of leading companies we have reviewed.

I hope you find our analysis useful as a contribution to this important area of debate. Please do come back to us if you would like a more in-depth discussion of how we can help you to harness the power of older workers in your own organisation.

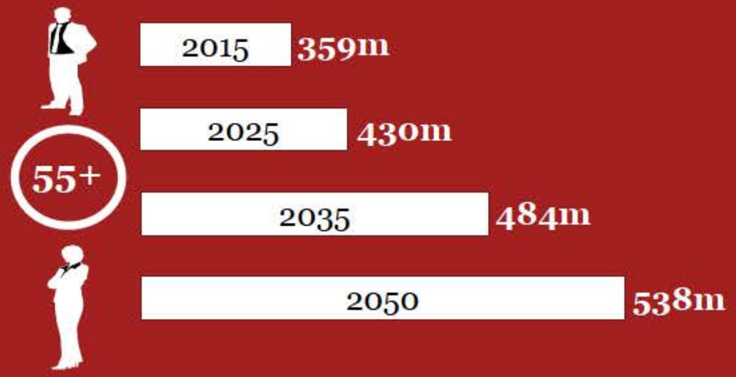
John Hawksworth
Chief Economist, PwC UK



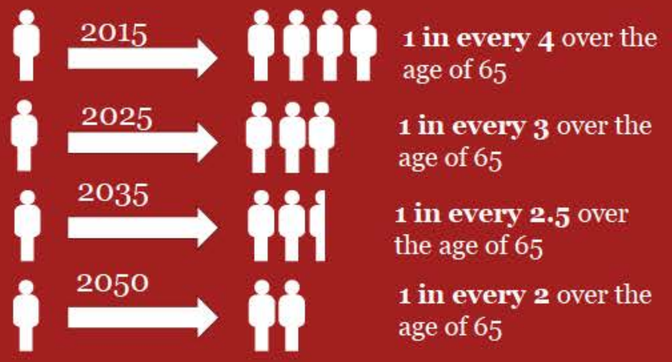
Executive summary

Ageing populations and pressures on health and social care are putting the issue of longer working lives at the forefront of public policy

By 2050, the number of people aged 55 and over will reach 538m across the OECD…



… and the number of people aged 65+ in the OECD relative to those age 15-64 is set to rise…



Incentivising older workers to extend their working lives can have significant financial benefits for both individuals and the OECD economy…

In the UK, an average male earner could increase their income by **£280,000** and their pension pot by **55%** if they retire at 65 instead of 55.

An average female earner in the UK that took a 10 year career break could increase their income by **£180,000** and their pension pot by **50%** if they retire at 63 instead of 55.

We estimate that if OECD countries raised their employment rates of 55-69 year olds to match that of high-performer Sweden they could boost GDP by around

$2 trillion

Working later in life can also improve health and wellbeing…

In the UK, for example, **2/5** of national health spending goes to those **aged over 65**

Engaging older people in work can improve the **physical and mental health** of older people, helping them to stay active and mentally stimulated.

Research from the IEA has found that retirement increases the **probability of having at least one diagnosed physical condition** by about **60%**

Sources: United Nations (2015), Population Division (2015), DWP (2017), OECD Stats (2015), Nuffield Trust (2016), IEA (2013)

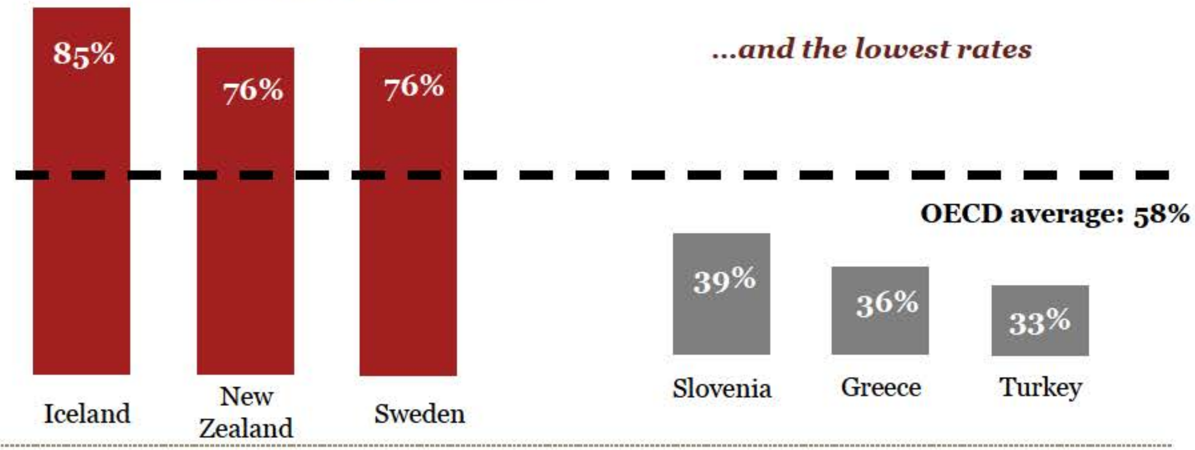
Increasing the employment rates of older workers in the OECD to Swedish levels could boost GDP by around $2 trillion in the long term

A geographically diverse group of relatively small economies occupy the top 3 places in our index

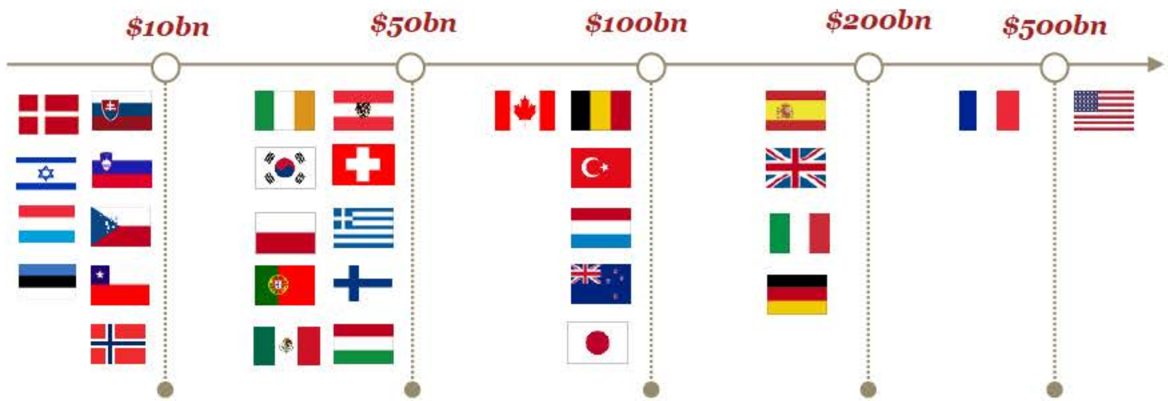
$2 trillion

Our analysis suggests the OECD could experience a potential long-run increase in GDP of c.$2 trillion by increasing older worker employment rates to Swedish levels

Countries with the highest older worker employment rates (55-64 year olds)...



If OECD countries raised their older worker employment rates to Swedish levels, they could experience a long-run boost to GDP of...



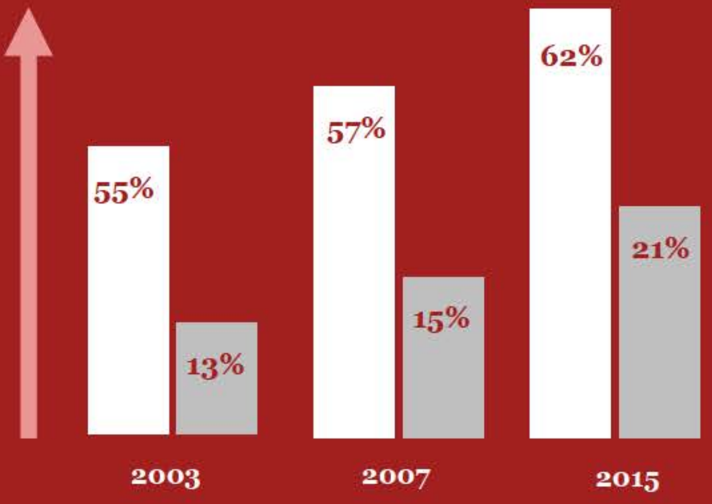
Sources: PwC analysis, OECD

The UK has gradually increased older worker employment over the past decade and further improvements could boost GDP by around £80bn in the long-run

= 19th The UK ranks 19th this year, continuing its stable middling performance on the index

The UK has seen a gradual improvement in its older worker labour market fundamentals over time…

Employment rate of ***55-64 year olds*** *and* ***65-69 year olds***



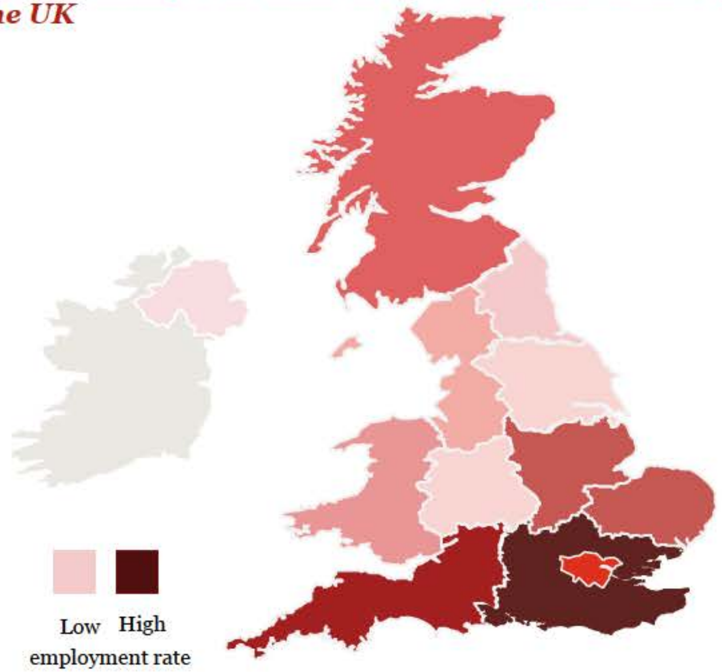
The UK lags behind high performers such as Sweden in terms of employment of 55-64 year olds (2016)

UK 63.4% < **75.5% Sweden**

£80 billion

Boost to long-run UK GDP, which is equivalent to around **£7,000** per 55-69 year old from boosting employment rates

There is a large variation in the employment rates of 50-64 year olds regionally in the UK



74.5%
South East

73.4%
South West

65.2%
North East

63.6%
Northern Ireland

Sources: PwC analysis, OECD, APS (2016)

A flexible labour market that encourages and supports older workers is a key feature of top performers on our Golden Age Index

Some of the biggest risers on the index since 2003 have implemented strong labour market reforms to encourage older workers…

+ 10 places – **Israel**

+ 10 places – **Germany**

+ 8 places – **Australia**

…Key policies include:

- **Increasing the retirement age**
- **Encouraging phased retirement**
- **Improving the flexibility of pensions**

In addition, successful policy measures of the top performers include:

- **Financial incentives for employers to hire older workers**
- **A focus on lifelong learning and training throughout working life in response to technological change**
- **Introducing strong anti-age discriminatory policies**

Sources: PwC analysis, OECD

Key results

Our Golden Age Index takes a holistic view of the labour market for older workers across the OECD, combining indicators into one comparable metric

Labour market indicators

The PwC Golden Age Index combines a broad range of labour market indicators as listed below with relative weights shown in brackets. Employment rates have the highest weights but other variables are included to present a more holistic picture:

- Employment rate 55–64 (40%)
- Employment rate 65–69 (20%)
- Gender gap in employment, 55–64: ratio women/men (10%)
- Incidence of part-time work 55–64 (10%)
- Full time earnings 55–64 relative to 25–54 (10%)
- Average effective exit age from the labour force (5%)
- Participation in training: ratio 55–64 to 25–54 (5%)

Process

These indicators are normalised, weighted and aggregated to generate index scores for each country.

The index scores are on a scale from 0 to 100, with the average OECD value in the base year of 2003 set to 50. However, the average index values for 2007, 2014 and 2015 can be higher or lower than this 2003 baseline.

We can therefore compare how each country's performance has evolved over time in absolute terms, as well as the relative performance of countries in a particular year.

See Annex for more details of the methodology.

Labour market indicators

All data are taken from the OECD.

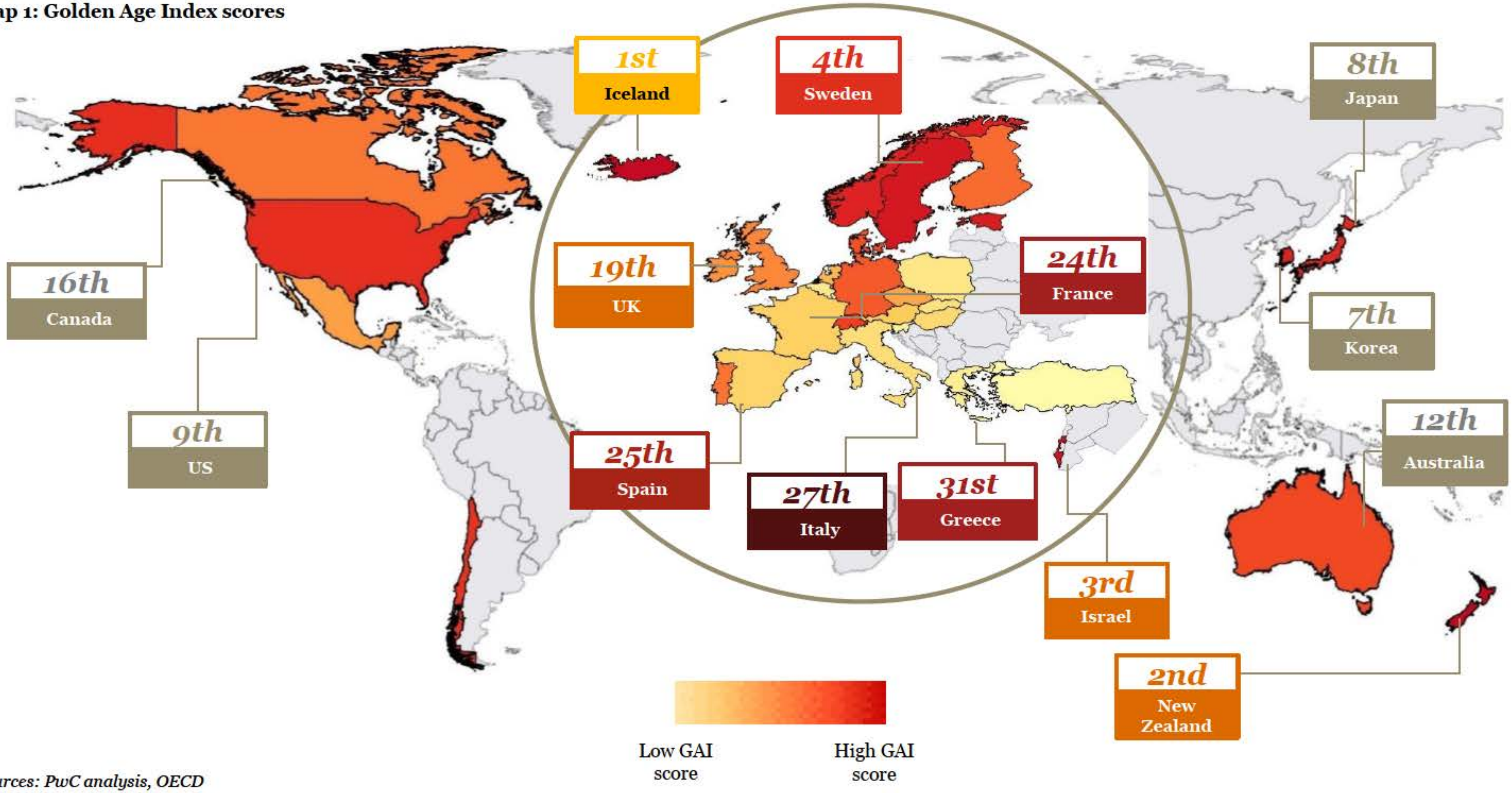
We focus mostly on the 55–64 age group for data reasons. We do, however, include total employment rates for 65–69 year olds in the index and look at all workers over 55 in calculating potential boosts to GDP from higher employment rates for older workers.

The latest data available across the broad range of countries covered are for 2015, so this is the final year covered by the index.

Our Golden Age Index explores the large variation in the economic prospects of older workers across 34 OECD countries over time

Iceland and New Zealand continue to occupy the top two places, with Israel taking the third spot over Sweden this year. The Southern European countries including Turkey, Greece and Italy perform less strongly on the index.

Map 1: Golden Age Index scores



Sources: PwC analysis, OECD

PwC Golden Age Index: Key results

Iceland, New Zealand, Israel and Sweden take the top four places

Ranking				Country	Raw index score			
2003	2007	2014	2015		2003	2007	2014	2015
1	1	1	1	Iceland	92.5	93.1	97.2	98.8
9	3	2	2	New Zealand	60.9	71.5	82.4	84.2
13	10	3	3	Israel	58.2	65.7	78.3	80.1
3	4	4	4	Sweden	68.1	71.2	78.2	79.6
8	2	5	5	Estonia	63.4	73.6	76.5	78.6
4	8	6	6	Norway	67.4	69.7	76.3	77.5
7	6	9	7	Korea	64.1	70.7	72.4	76.8
5	7	10	8	Japan	66.8	70.3	70.7	75.8
2	5	7	9	United States	68.7	70.7	74.8	74.6
14	11	8	10	Chile	57.3	65.7	74.2	71.8
10	13	11	11	Switzerland	60.7	62.7	67.9	70.8
20	17	16	12	Australia	45.7	54.8	62.9	69.3
11	14	12	13	Denmark	59.7	59.5	64.7	67.7
16	15	14	14	Finland	51.1	58.4	64.1	66.2
25	20	17	15	Germany	37.1	47.6	62.5	66.0
15	16	15	16	Canada	53.5	58.0	63.8	65.3
12	9	19	17	Portugal	59.3	66.6	55.3	62.5
6	12	13	18	Mexico	64.4	65.4	64.5	62.3
17	**19**	**18**	**19**	**United Kingdom**	**47.7**	**51.0**	**58.4**	**61.2**
18	18	23	20	Ireland	47.3	54.6	52.3	60.1
21	22	20	21	Czech Republic	43.5	45.8	54.5	59.1
27	26	21	22	Netherlands	34.8	42.6	53.7	56.4
30	25	24	23	Austria	32.5	43.3	51.2	54.8
23	24	22	24	France	42.8	44.9	52.4	53.2
24	21	25	25	Spain	42.6	46.5	49.9	52.5
29	30	27	26	Hungary	32.5	36.2	46.9	51.3
28	28	26	27	Italy	33.1	36.8	46.9	49.7
32	31	28	28	Slovak Republic	30.0	35.5	46.6	48.6
26	34	30	29	Poland	35.7	32.4	44.7	48.0
34	29	29	30	Belgium	29.0	36.7	45.4	47.7
19	23	32	31	Greece	46.2	45.2	42.0	46.4
33	27	33	32	Slovenia	29.7	37.4	41.9	44.7
31	32	31	33	Luxembourg	30.3	35.5	43.2	41.3
22	33	34	34	Turkey	43.5	34.2	37.8	36.8
				OECD Average	**50.0**	**54.5**	**60.4**	**62.9**

Israel continues to rise up the rankings, having gained 10 places since 2003.

The United States is now only the second highest G7 country in the list as Japan has seen a relatively strong increase in its score since 2014.

The UK's relative ranking has fallen slightly since 2003, despite a steady improvement in its absolute index score over time.

Turkey maintains its position at the bottom of the index, having fallen 12 places since 2003.

The Nordic countries continue to do very well as Iceland, Sweden and Norway all occupy a place in the top 10.

The East Asian countries in our index perform strongly, with both Korea and Japan making strong improvements in their absolute index scores.

Mexico has seen the biggest fall in the rankings this year, while Germany, Portugal and Ireland rise up the list.

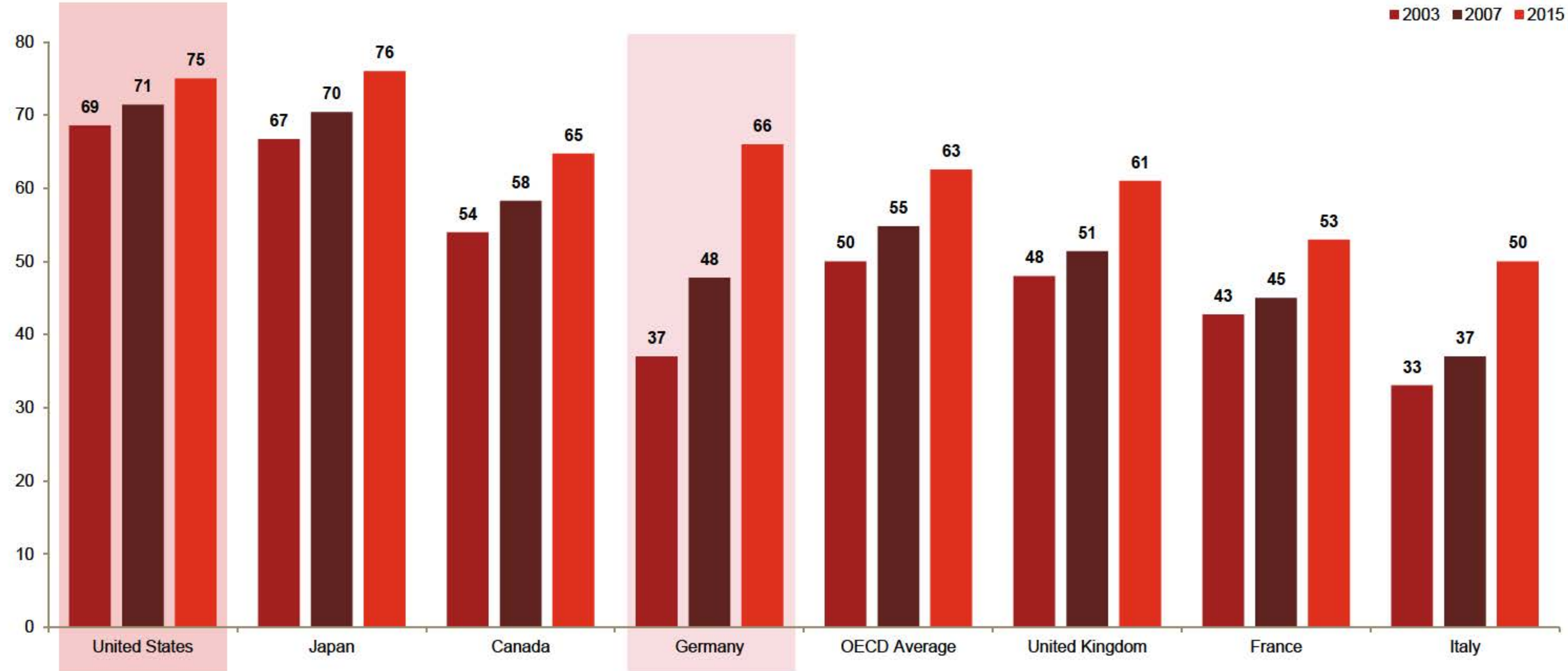
Sources: PwC analysis, OECD

[1] The PwC Golden Age Index 2017 edition uses 2015 data as the latest available data.

All G7 countries have seen a gradual increase in their absolute index scores since 2003, with Germany seeing the biggest improvement within the G7

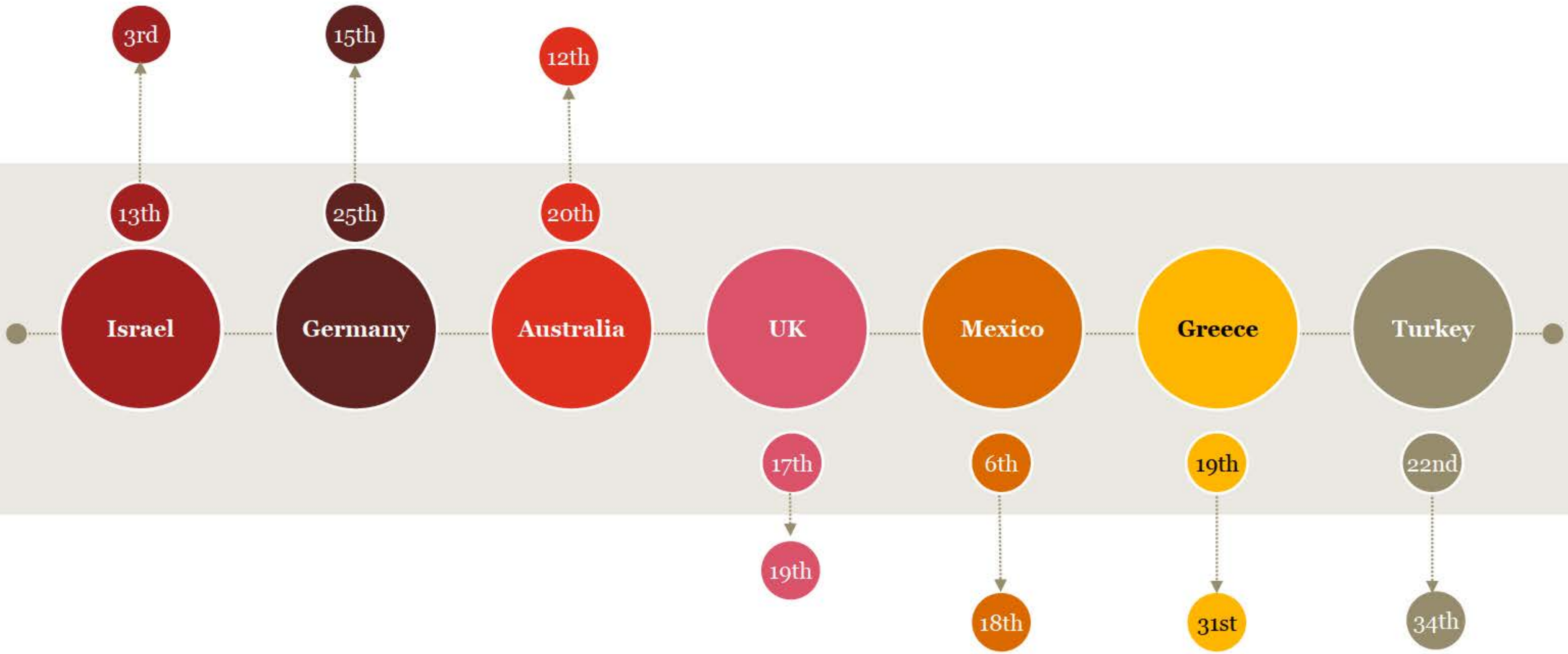
Germany has seen the largest improvement in their absolute index score since 2003. This is due to labour market and pension reforms which have improved the flexibility of the labour market and increased employment rates for those aged 55–64. In contrast, the United States has experienced slower growth in their index score, but this should be viewed in the context of starting from a relatively higher base.

Figure 1: G7 Index scores over time



Sources: PwC analysis, OECD

Israel, Germany and Australia have seen the biggest rise in the rankings between 2003 and 2015, while Mexico, Turkey and Greece have each fallen 12 places. Overall, the UK has seen relatively little change



Sources: PwC analysis, OECD

Enhancing incentives to remain in work longer and raising retirement ages have been key features of the biggest risers in our index

Israel
Index rank: 3

- The percentage of older people working has increased significantly over the past 10 years as the retirement age has gradually increased since 2004 from 64 to 67 for men and 60 to 62 for women.
- Recently, the Israeli government has proposed further **raising the state retirement age** of women to 65, or perhaps higher.
- To accommodate this potential change, new **training programmes** have been proposed which would teach women new skills or provide advice on how to start up a business, ensuring that women have the support required to remain in the workforce for longer.
- The higher state retirement age has helped to **raise the average incomes of older citizens**, as well as their pensions, and also played a role in Israel's economic growth over the past decade.
- Israel has seen an increase of 16.1% in it's employment rate for those aged 55–64 since 2003.

Germany
Index rank: 15

- The 'Hartz reforms' (2003–2006) aimed to **increase work incentives** for people with low earnings potential. Maximum entitlement periods for unemployment benefit were substantially reduced, especially for the older unemployed from a maximum of 32 months to 18 months.
- **Regional employment pacts** have been launched to ensure better employment for older workers. These have used a wide range of different policies and activities including profiling, assessments, special training measures, internships in companies, placement activities and publicity campaigns to raise **awareness of the benefits of working later in life**.
- As a result, the employment rate of those aged 55–64 has increased from 39% to 69% and by 9 percentage points for those aged 65–69.
- Looking forward, Germany should aim to strengthen financial incentives to remain in work for longer in order to compensate and offset the potential impact of a 2014 pension reform which saw employees who have worked for 45 years eligible for early retirement at 63, thus incentivising early exit from the labour market.

Australia
Index rank: 12

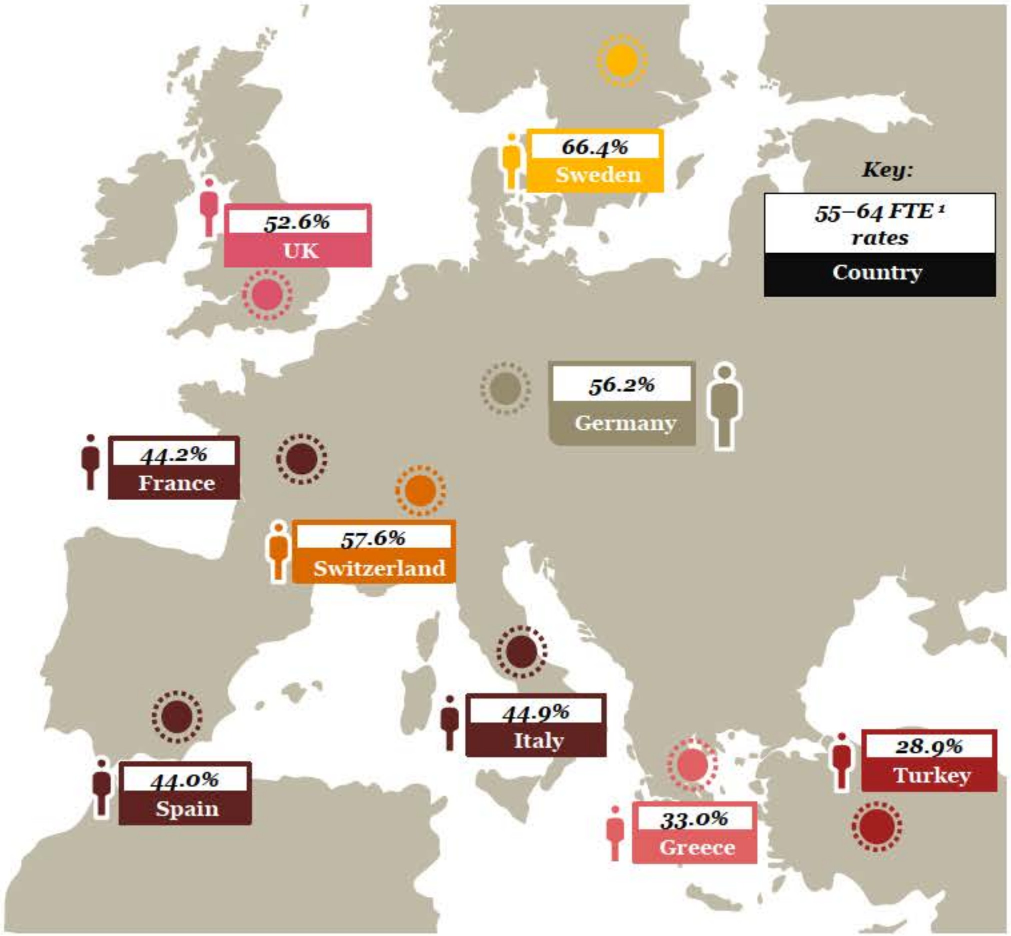
- Comprehensive pension reform was introduced in 2009, with the aim of improving the adequacy, sustainability and **flexibility of the pension system.**
- The **Work Bonus** was introduced in 2009 as part of this pension reform, which allows pensioners to earn up to AUD 250 every two weeks from employment, without that amount being assessed as income under the income test.
- Individuals can access their 'superannuation' (pension plan) benefits on retirement after reaching a specific age – this was 55 but is increasing to 60 on a phased basis between July 2015 and July 2024.
- The maximum age limit for superannuation guarantee contributions was removed in July 2013, effectively **increasing the incentive for people above the age of 70 to remain in the workforce.**
- In Australia, some of the main improvements in our Golden Age indicators have been employment rates (55–64), full time earnings (55–64) and participation in training.

Sources: Journal for Labour Mark Research (2015), OECD, Eurofound (2015)

Potential long-run boost to GDP from longer working lives

We estimate how much countries could gain from boosting the employment rates of older workers to levels in Sweden, one of the top performers

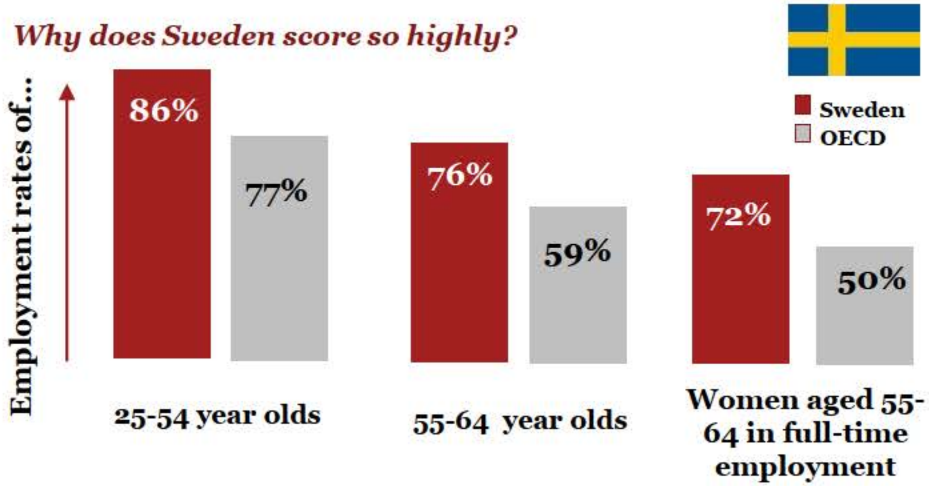
There is a large variation in the employment rates of older workers across the OECD countries, ranging from around 30–40% in many of the Southern European countries, to over 60% in many of the Nordic countries. Therefore, there is scope for many OECD countries to improve the economic prospects of their older workers.



Source: OECD

¹ We use the latest annual available data for full-time equivalent employment rates for 55–64 year olds across the OECD.

Why does Sweden score so highly?



Culture

Sweden's 'culture of inclusion' focuses on **adult education**, **equal opportunities** and high union membership. This boosts the employability of older workers, encouraging working later in life.

Public Services

Sweden typically has higher rates of taxes than other OECD countries, allowing the government to offer **high quality public services** including education and training.

Flexible working

Flexible working patterns are commonplace within Sweden. This incentivises workers to extend their working life and makes it easier for women to return to work after childcare.

Potential long-run boost to OECD GDP from increasing the employment of those aged over 55 could be around $2 trillion

The OECD could add around $2.1 trillion to total GDP if countries with lower employment rates [1] among those aged over 55 increased their rates to Swedish levels

- Our analysis provides an estimate of the broad order of magnitude of **potential gains from raising older worker employment rates** to match those of Sweden – the top ranking EU economy in our index [2].
- The potential GDP boost from increasing the employment rates of 55–64 year olds and people aged 65+ varies significantly across countries, from around 1% in Korea to around 16% in Greece.
- **Within the G7, the overall gain could be c.$1.4 trillion**, with Italy and France having the potential for long-run increases in GDP of c.10%.

Those who scored lower on the Golden Age Index have the most to gain in the long-run from increasing their employment rates

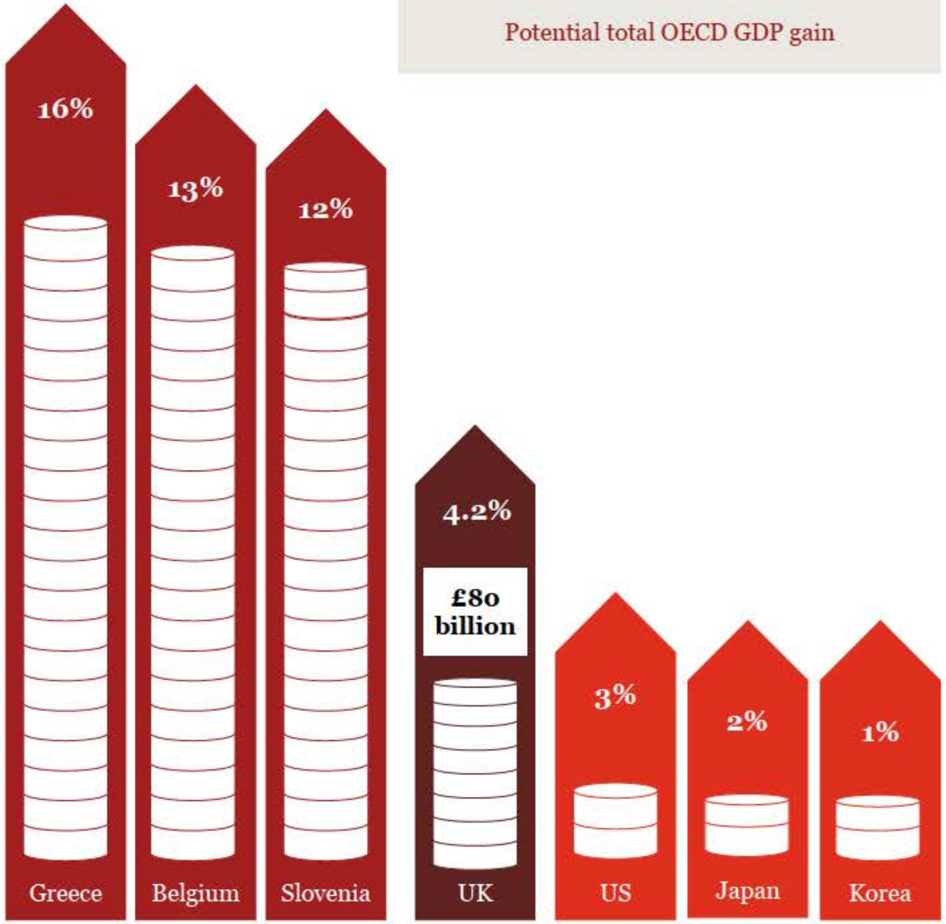
- **Greece** could experience the **largest increase in GDP** of around 16%.
- For top scorers the gains are lower as their employment rates are likely to be quite close to Swedish levels already.

The UK could achieve an increase in GDP of around 4.2%

- The UK has increased its employment rate among 55–64 year olds broadly in line with Sweden since 2003, but the gap between the two economies remains similar. For people aged 65+, the employment rates are closer together, though there is still room for improvement.
- By increasing its 55+ employment rates to Swedish levels, the UK could increase its **GDP by around £80 billion** (at 2016 values).

$2 trillion

Potential total OECD GDP gain

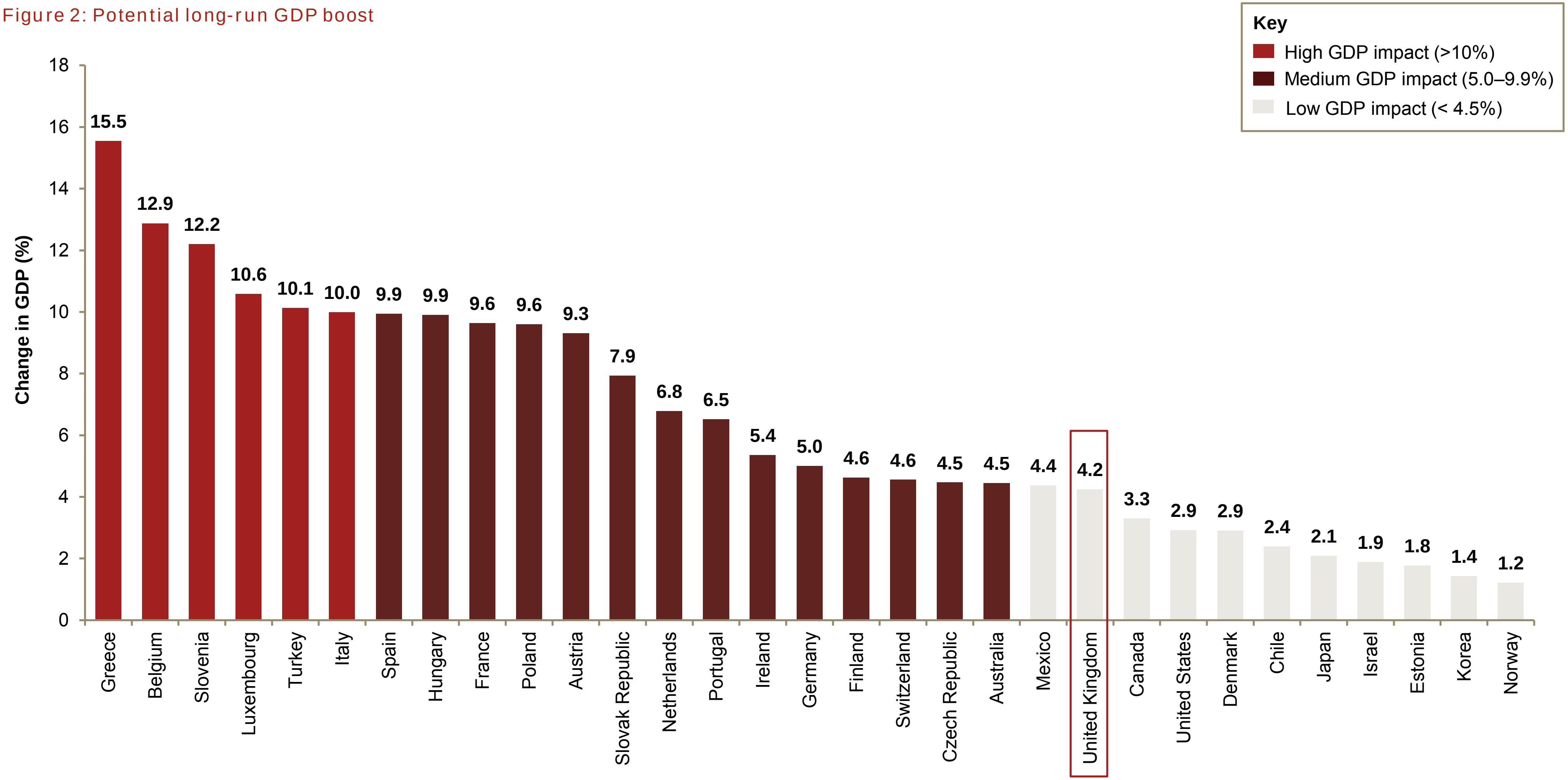


[1] We focus on employment rates as they are the most important indicators in our index (70% weight including part-time/full-time split) and the ones most readily related to GDP.

[2] Iceland, New Zealand and Israel rank higher than Sweden in our index, but are considered less relevant benchmarks as they are relatively small and/or island economies.

Countries scoring lower on our Golden Age Index have the most to gain from boosting employment rates for those aged over 55 to Swedish levels

Figure 2: Potential long-run GDP boost



Sources: PwC analysis, OECD

Note: Iceland and New Zealand are excluded from the analysis as they have higher employment rate of 55 + year olds than Sweden.

Implications for public policy and business

Improving employability and reducing barriers for older workers are key features of the top performers on the index

Iceland's lifelong learning centres

- The 2010 Adult Education Act focused on providing education **and training opportunities to adults** with shorter formal education and language lessons for immigrants.
- It provided funding for Iceland's numerous Lifelong Learning Centres, as well as **grants for innovation** and development projects in adult education.
- Iceland has historically placed a strong emphasis on lifelong learning. The 2003 pensions reform aimed to **encourage access to training for workers aged over 50** who were entitled to an 'individual training entitlement'.

__1 in 3__ women graduate from tertiary education __after the age of 30__ – compared to 1 in 10 on average in the OECD

New Zealand's anti-discrimination and flexible working policies

- New Zealand's Human Rights Act (1999) **prevented employers from discriminating on the basis of age** and banned the compulsory retirement age for employees.
- In 2015, changes were also made to the Employment Relations Act (2000) that granted all employees the **right to request a change to their working arrangement**.
- It also allowed an employee to **request flexible working arrangements** from their first day of employment and reduced the maximum time an employer has to respond to a request from three months to one month.

Out of all employers who had received requests for flexible working hours, __73%__ of businesses agreed to all requests

Sweden's 'New start jobs'

- In 2007 Sweden introduced the 'New start jobs' initiative.
- The aim of this initiative was to get more people into work by **encouraging employers to hire someone who had been unemployed for a long time.**
- From 2010 – 2012, the programme gave employers **financial compensation** equal to twice the payroll tax if they hired a person aged 55 and over who had been unemployed for at least 6 months.
- Employers also received financial support for twice as long if the employee was over the age of 55.

Sweden's labour force participation rate for those aged 55–64 increased by __2 percentage points__ from 2010-2012

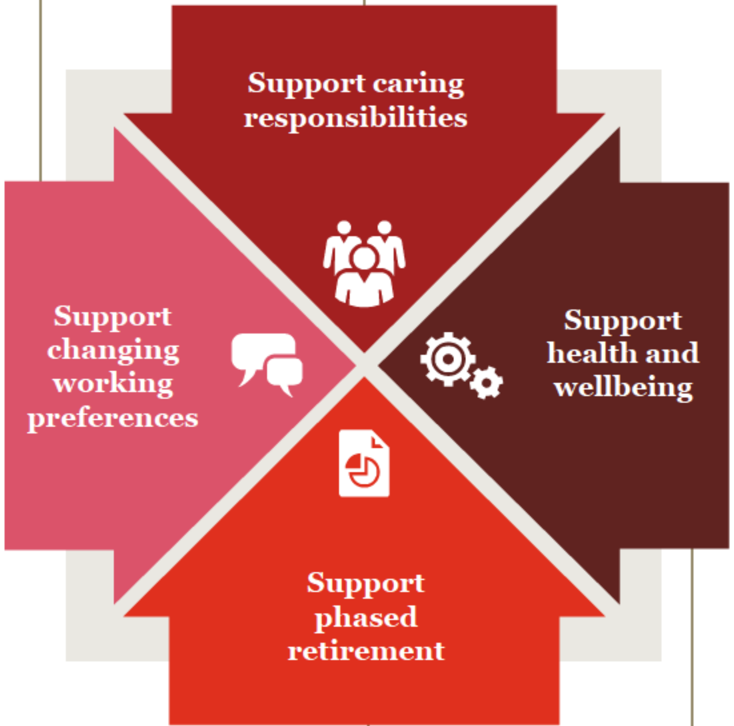
Sources: Ministry of Business (2017), Innovation and Employment (2015), Eurofound (2012, 2013)

A strong labour market for older workers should be underpinned by flexible working opportunities that accommodate caring responsibilities and changing working preferences

Flexible working is becoming more commonplace across OECD countries. Employers need to provide clear leadership support and foster an open environment in which workers can discuss their changing working preferences to support working later in life.

Older workers may experience a shift in their working preferences, for example they may prefer to do **less travelling or commuting** and **work shorter hours**. Businesses should be open to discussing these changes and foster an **open and transparent culture** around flexible working, ensuring older workers feel their job is secure.

Businesses should offer their older workers the opportunity to **gradually exit the workforce**, through reduced or part-time hours. This needs to be accompanied by a **phased retirement pension**. A gradual withdrawal from the workforce would bring many health, as well as financial, benefits.



Older workers tend to have **greater caring responsibilities**, be it for children or for their parents and other family members. To accommodate working later in life, employers should consider offering flexible working arrangements which allow for example, part-time or **flexible hours and working from home.**

Employers should consider the age-related health needs of their older employers, discussing the possibility of **job redesign**. For example, BMW implemented a number of changes to their production line, including job rotations across workstations to **balance the physical load** on workers (Harvard Business Review). Job redesign allows workers to remain in work for longer, which as studies have shown, further benefits both **physical and mental health**, keeping older people active, mentally stimulated and helps combat depression and loneliness (DWP).

Sources: Harvard Business Review (2010), DWP (2017)

Flexible working opportunities – not just for older workers – are key features of some of our top performers

In many of our top performing countries, flexible working opportunities are already in place supporting gradual retirement. Flexible working also needs to be extended throughout a worker's career to support, for example, working while caring for families.

Examples of flexible working for older workers…

Reduced working times in Belgium

Through national collective agreements between trade unions and employers, **work time reductions** were developed to incentivise work. Workers aged 45+ can be exempted from two, three of four hours of work. These hours are then paid by the employer, which means the older workers earn the same wage.

Extra holiday entitlement in the Netherlands

In the Netherlands, many collective agreements stipulate that **older workers are entitled to more days off**. For example in 2011, 58 agreements contained clauses for extra days off, with the maximum being 15 days per year.

Phased retirement in Norway

Since 2006, all employers are obliged to offer **occupational pension schemes** to their employees. A 2011 pension reform allowed the National Insurance Scheme (NIS) old-age pension to be drawn partially or fully between the ages of 62 and 70. The pension reform discouraged early retirement by increasing the flexibility of partial pensions.

…And for women

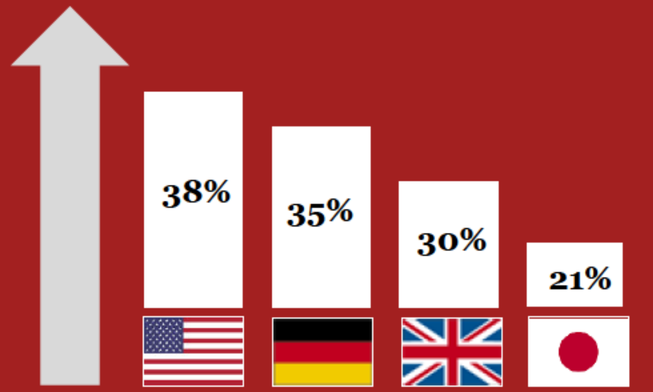
A number of the top performers also score well on our other labour market indices for women and young workers

- Offering flexible working opportunities for parents **throughout their careers** is a key aspect to ensuring women in particular continue to play a key part in the workforce in their later years.
- The Nordic countries, along with others, **also perform well on our other labour market indices** such as the *Women in Work* and *Young Workers*.
- In Sweden and Norway, **shared parental leave** has been a commonplace policy since the 1970s. **Access to affordable childcare** is another key feature of the Nordic countries which support women in returning to work.
- This means women typically do not take such a long break from work and **face less barriers when returning**, supporting their career development and their ability and desire to continue working later in life. As a result, a key feature of our top performers is a relatively smaller gender gap in the employment of those aged over 55.

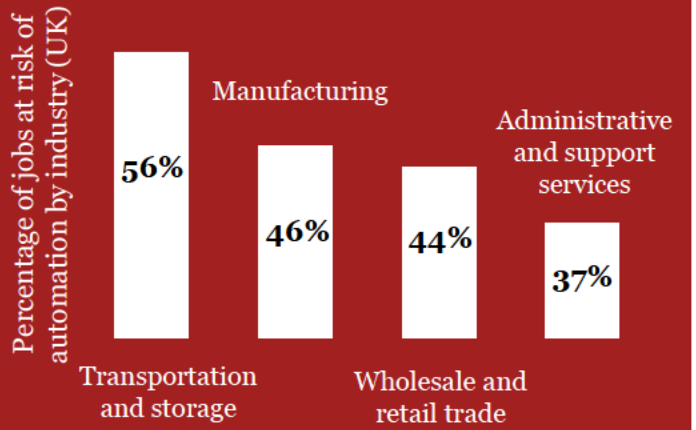
Source: Eurofound (2013)

Looking forward, automation is one of the biggest challenges facing older workers - governments and businesses should start taking action now

Our analysis suggests the rise of automation could put a high number of jobs at risk…



It will affect certain industries more than others…



What is the long term challenge posed by automation?

- **Recent technological developments in 'smart automation'** (AI, robotics, VR) have generated **fears over potential job losses**. Our recent analysis estimated the potential risks to jobs from automation.
- The risk of job losses at both an industry and individual level is dependent on a number of factors, primarily the composition of tasks that are conducted and the education and training levels of the individual worker.
- There are risks to jobs, although new technologies also have the **potential to create new jobs** in the digital area and, through productivity gains, generate additional wealth to support additional job creation.

Why are older workers particularly susceptible to job automation?

Education

- On an individual level, we find workers with **lower educational attainment are more at risk** of job automation. This is because workers with lower levels of education are typically clustered in industries with the highest estimated risk. For those with just GCSE-level education or lower, the estimated potential risk of automation is as high as 46% in the UK, but this falls to only around 12% for those with undergraduate degrees or higher.
- This suggests older workers could be more at risk because, in the UK, the percentage of those aged 50-64 who hold no qualifications is **double** that of those aged 25-49.
- Governments should therefore look to **promote lifelong learning opportunities** in order to improve the employability of older workers.

Training

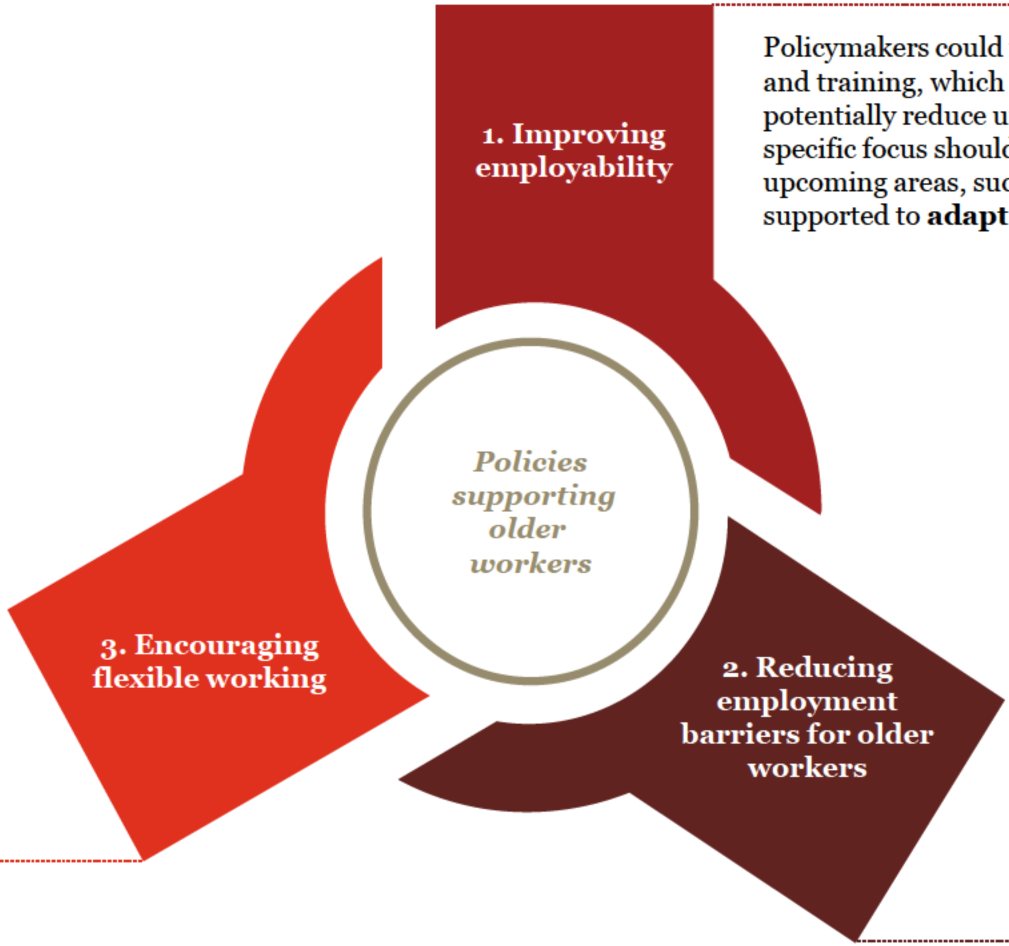
- Jobs that require less training are also at greater risk. Findings from the DWP reveal that older workers are less likely to receive training than younger workers.
- However, studies suggest that the gap in training performance can be reduced if training interventions are matched to meet the learning needs of older workers (IZA World of Labour). As a result, it is suggested that **employers adapt their training to suit older staff** and to maximise their return on investment.

Digital jobs

- The jobs that automation is likely to create will be related to new digital technologies.
- Whilst it is hard to understand what these new types of jobs will be in advance, it is possible to argue that they are more likely to be taken by younger workers, given that employers typically assume younger workers are more adept in technology (DWP).
- To combat a potential skills gap in the labour market, employers should **invest in technology training for older workers** so they have the necessary skills to deal with disruptive influences.

Sources: PwC analysis, DWP (2017), IZA World of Labour (2015)

Looking forward, policymakers and employers should focus on ensuring older workers have the relevant skills and incentives to remain in the workfore for longer, underpinned by a flexible labour market that supports their preferences



Policymakers could focus on promoting lifelong education and training, which could **upskill older workers** and thus potentially reduce unemployment of older workers. A specific focus should be placed on offering training in upcoming areas, such as technologies, so older workers are supported to **adapt to a changing workplace**.

Public policy could place an emphasis on **tightening regulation around labour market discrimination** against older workers and creating incentives for employers to hire and retain older workers.

Flexible working in terms of both hours and location will support older workers in carving out a role which suits their changing working preferences and lifestyle, encouraging them to work past state retirement age.

In depth: United Kingdom

Overall, the UK's relative performance on the Golden Age Index remains slightly below the OECD average, despite improvements in absolute terms

As with many other OECD countries, the UK has made improvements over time but many challenges still remain (which also apply to most other OECD countries).

1 We have chosen to focus on the UK as it has been a **median performer** on the Golden Age Index – with employment rates, average effective labour force exit age and participation in training relative to younger workers being close to the OECD average

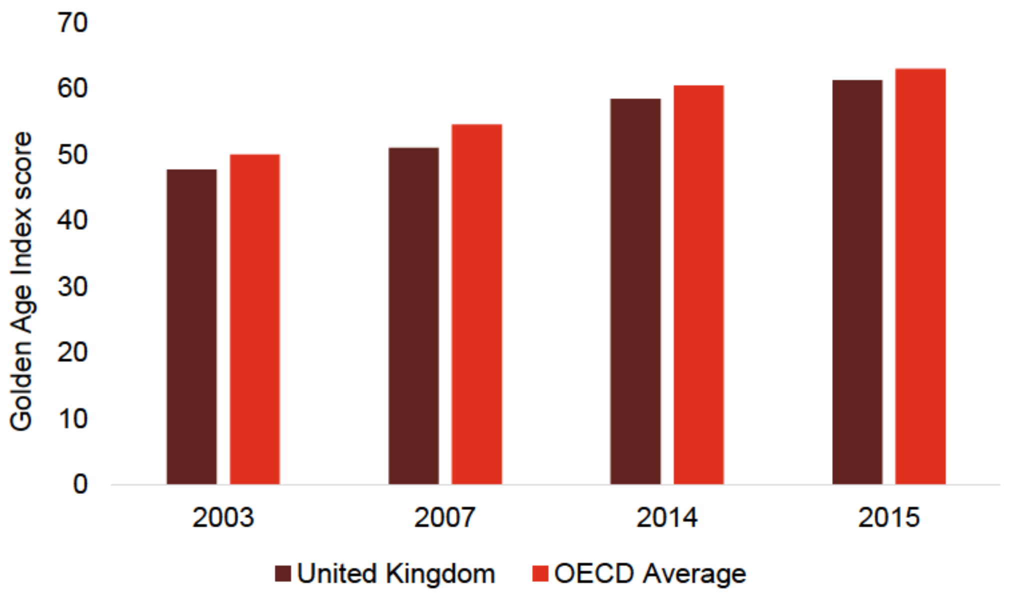
2 The UK, like most other OECD countries, has seen relative improvements in its absolute index score over time – largely driven by financial incentives to extend working life, the reduction of early retirement schemes and the ratification of age discrimination laws

3 The **key policy issues** facing the UK are applicable to many other countries, and the potential actions discussed in this section should also be considered by policymakers and employers across the OECD.

How has the UK performed?

- The **UK has scored slightly below the OECD average** on the Golden Age Index between 2003 and 2015.
- But the UK's **absolute performance on the index has improved over time**. This largely reflects a **significant improvement in the employment rate** of 55-64 and 65-69 year olds, which have both seen a respective increase of 8 percentage points. But in both age groups there are still many OECD countries that still outperform the UK, indicating the scope for further improvement in this area in future.

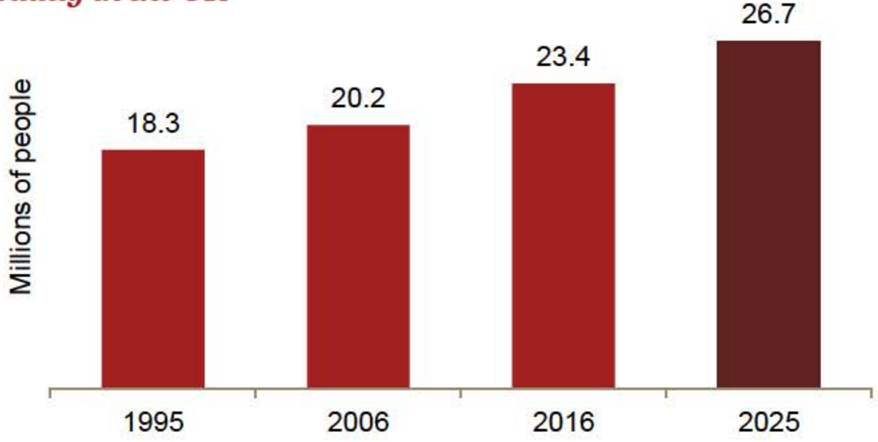
Figure 3: UK and average OECD index score over time



Sources: PwC analysis, OECD

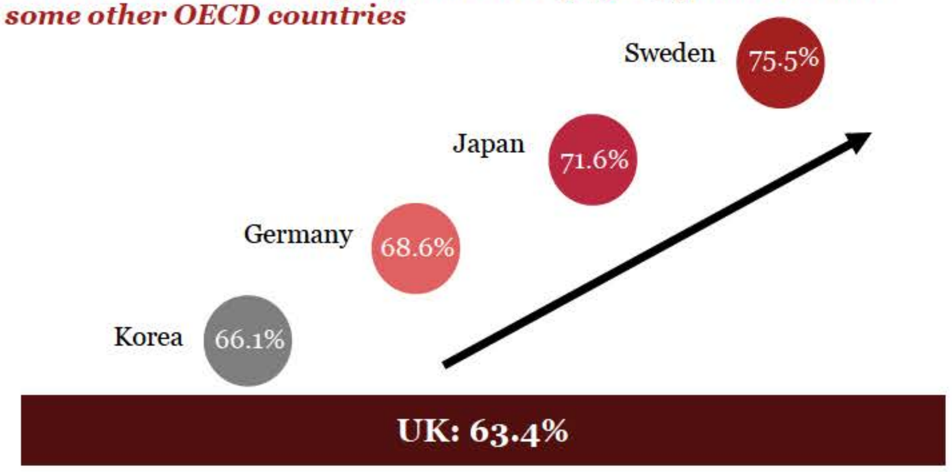
Employment of older workers in the UK has increased over time, but there is further room for improvement

The number of people aged over 50 is growing steadily in the UK



More people are working later in life, but improvements have not kept pace with life expectancy

The UK has a lower employment rate of 55-64 year olds than some other OECD countries



Surveys also suggest there is scope for further increases in employment rates of older workers

50%

of people **working past their SPA** cite **'not ready to stop work'** as their reason for continuing working

and

almost 1 million people aged 50-64 that are not in employment are **"willing and would like to work"**

Sources: United Nations (2015), ONS (2015), DWP (2017)

Regional variations in employment of older workers across the UK are related to variations in average educational attainment and gender disparities

In the UK, there are **considerable disparities in the employment** rates of older workers across the country, ranging from 74.5% in the South East, to 63.6% in Northern Ireland.

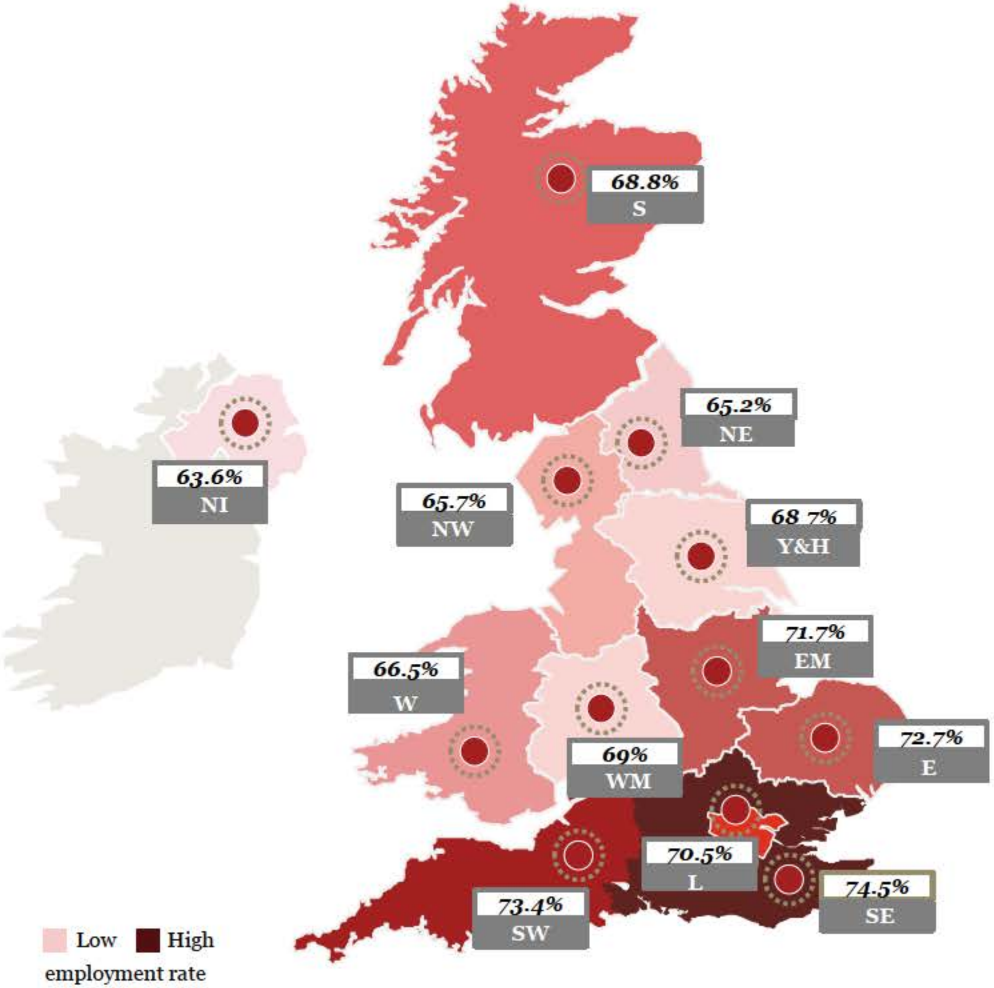
Our analysis suggests that there are three key reasons for these disparities. We discuss the latter two in more detail in the following slides.

1 **Economic performance**: regions with lower older worker employment rates tend to be the lower performing regions in terms of GVA per head and have lower overall employment rates too.

2 **Educational attainment**: regions with a greater proportion of older workers with degrees tend to have higher employment rates.

3 **Gender disparities**: lower older worker employment rates are often driven by lower female employment rates, with these low-performing regions tending to have a greater disparity between male and female older worker employment rates. For example, in Northern Ireland, the difference between female and male employment for over 50s is over 13.5 percentage points.

Map 2: Employment rate of 50–64 year olds



Sources: PwC analysis, APS (2016)

Work-life patterns and occupational segregation are two of the key drivers of disparities in older worker employment rates between men and women

- In the UK, **female older workers have a lower employment rate than their male counter-parts** at 64.9% for 50-64 year olds, compared to 75.4% for males. The gender pay gap also tends to increase with age.
- The data suggests that the labour market experience of older women is often characterised by **lower pay, more part-time work and higher barriers to entry than males of the same age**. These working characteristics are driven by two key factors: work-life patterns and occupational segregation.

Differences in work-life patterns

- Many women tend to spend more time out of the workforce than men to take care of families, meaning that they find it harder to return to work after having a child.
- The Resolution Foundation noted those with caring responsibilities are significantly less likely to be in employment over 50.

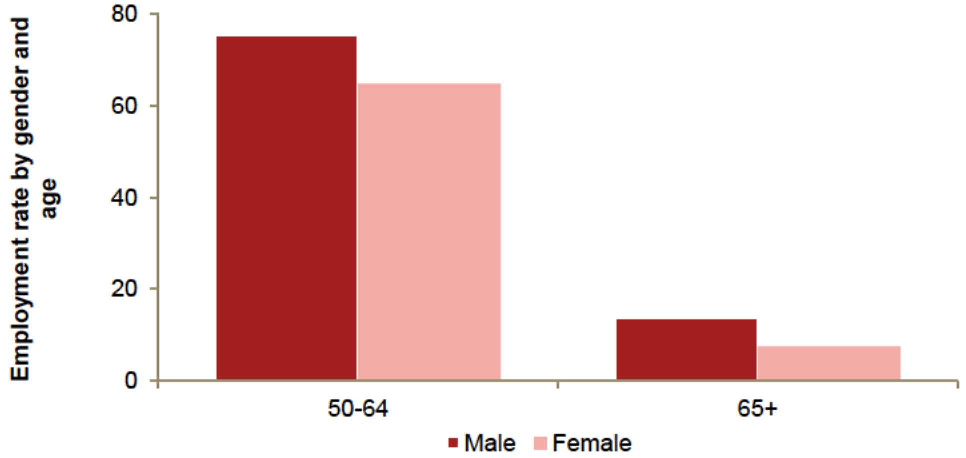
1

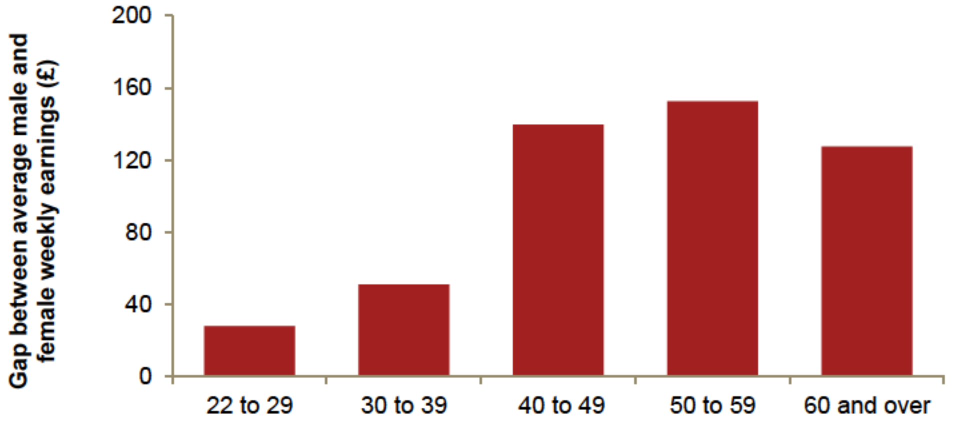
Occupational segregation

- Women are more likely to work in sectors and occupations that offer greater flexibility, for example administrative and secretarial roles. These tend on average to be lower paid occupations.
- This is because many women tend to be 'sandwich careers' providing care for ageing parents as well as younger generations. The peak age for caring duties is 50-64 and affects one quarter of older women.

2

Figures 4 and 5: UK employment rate and gender pay gaps by age



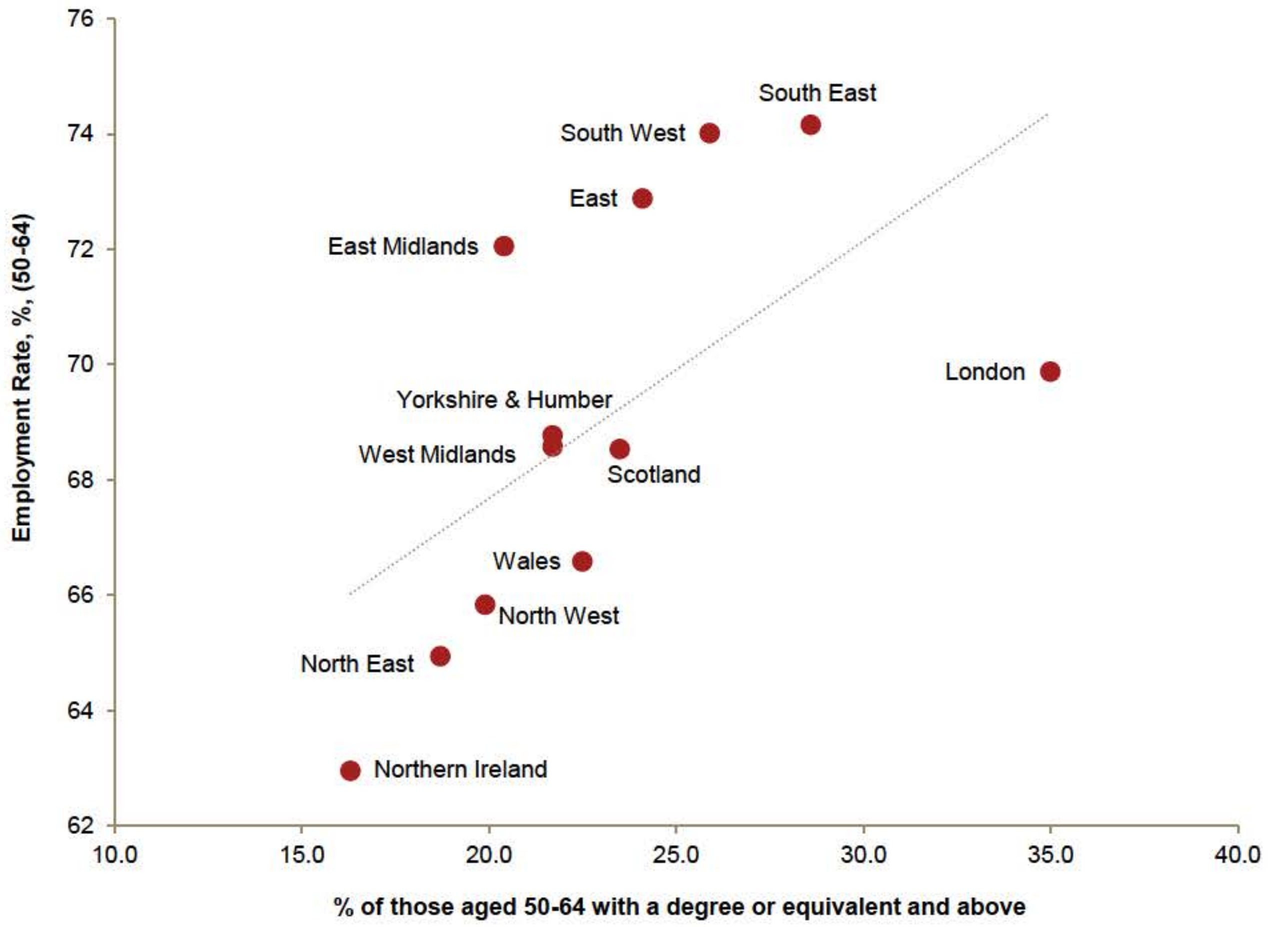


Sources: ASHE (2016), APS (2016), Resolution Foundation (2012)

Regions with higher educational attainment rates tend to have higher employment rates for older workers

- Our analysis shows that a **higher educational background is associated with working later into old age.**
- This could be because more qualified older workers are better able to compete against younger educated workers, or that the industries in which more qualified workers are employed are better suited to working later in life (e.g. self-employed professionals such as accountants, lawyers, business consultants and surveyors)
- In Northern Ireland, for example, there is a considerable difference in the qualifications of young and older workers: 26.7% of people aged between 50-64 have no GCSEs, compared to only 9.8% of people aged 20-49 (APS).
- The situation in London is relatively less clear. It has the highest educational attainment of any region but falls in the middle of the pack for employment rates. This is likely due to the disparity of male and female employment in London, caused perhaps by **higher barriers to mothers with young children returning to work due in particular to relatively high childcare and travel-to-work costs in the capital** (as compared to other UK regions).

Figure 6: Correlation between qualifications of older workers and the employment rate

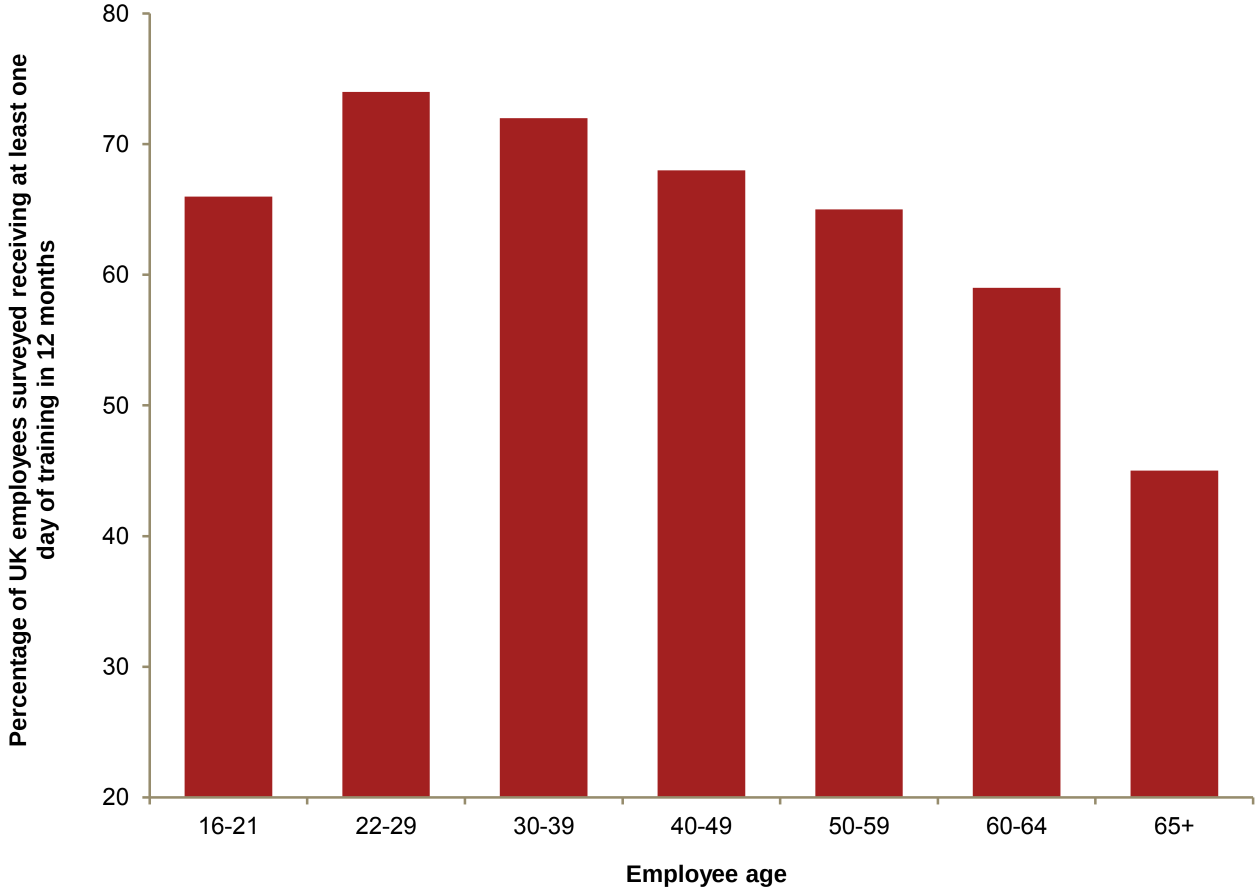


Sources: PwC Analysis, APS (2016)

Boosting training and lifelong learning is crucial to enabling older workers to **continue to have relevant and effective skills for today's** *workplace*

- Analysis of the UK Labour Force Survey suggests that older workers are less likely to receive training than younger employees, with only 45% of those aged 65 and over having received one day of training in the past 12 months.
- This might in part be due to negative stereotyping from employers, who are not prepared to invest in the training of older workers as they anticipate they will exit the workforce sooner than younger workers. But in fact, studies have shown that the risk of an employee leaving a company after receiving training is the same across all age groups.
- Further, survey evidence reveals that training satisfaction was higher for those aged 60+ compared to employees aged 22-49 (WERS).
- The difference is particularly pronounced for men, who are typically more concentrated in industries that receive less formalised training than women.
- Differences in the prevalence of training for older and younger workers might reflect variations in job and workplace characteristics, as younger employees with higher qualifications are more likely to work in industries that require more frequent training, such as banking and finance.

Figure 7: Incidence of training of UK employees by age



Sources: DWP (2017), LFS (2011) , WERS (2011)

The government has made progress in removing obstacles to employment for older workers, but challenges around training and recruitment remain

What are the policies needed to support older workers further?

- Despite there being more formal equal opportunities legislation passed in recent years, studies find that there is **considerable evidence of continued age discrimination in hiring practices** (Phillipson et al).
- This is likely due to **cultural perceptions** held by employers, as well as older workers having lower or less relevant qualification than younger workers entering the workforce.
- A recent initiative by UK companies including Boots, Aviva and the Co-op involves **publishing data on their recruitment by age** to promote awareness of the importance of employing older workers.
- To date, the emphasis has been on supply-side measures such as raising SPA and anti-age discrimination legislation, which have **increased the retention of older workers.**
- But interventions are also needed in order to improve the employability of older workers. This could include the development of **targeted training** for older workers, effective support for people with long-term health conditions, or **increasing the availability of 'returnships'** for people who have been caring for parents, partners and children.
- In 2017, the Government revised their *FWL* paper, and set out the need for employers to **Retain, Retrain and Recruit**; we discuss the benefits of each of these in turn.

Retain

- It is important to support older workers in their current role, as leaving their job may discourage them to find other work or they may struggle to compete against younger workers.
- Businesses will benefit from a fall in turnover costs from recruiting new staff.

Retrain

- Training for older workers tends to have a more narrow focus on their current role, as opposed to supporting wider development.
- Businesses should encourage older workers to learn new skills, such as those related to technology, in order to maintain their effectiveness in a rapidly evolving workplace.

Recruit

- Older workers can bring valuable seniority and experience to a role and businesses should look beyond assumptions of retirement at a certain age when selecting candidates, offering them flexible work to match their preferences to support longer working lives.

Sources: DWP (2017), Australian Journal of Social Issues (2016), Phillipson et al. (2016)

UK businesses ***are increasingly adopting policies in line with the government's*** *strategy to Retain, Retrain and Recruit*

Below are three examples of employers across a range of industries that have taken measures in line with government policy to benefit from the experience of their older workers. Such policies encourage more flexible working, the promotion of older age apprenticeships and lifelong learning. The examples covered here are just illustrative – many other UK companies will also be pursuing such initiatives.

UK Policy	Business	Policy in action
Retain	Jaguar Land Rover	• JLR launched a Retirement Transition Initiative (RTI) to equip people aged over 50 with the information, networks, resilience, and opportunities to enter later life with confidence and purpose. • The main programme is delivered via a two-day residential workshop to approximately 30 participants. A direct result of RTI participation was 63% began to plan their finances and 36% reconsidered when they would retire.
Retrain	Barclays	• Barclays has launched a number of initiatives to support the retraining of older workers. • Their 'Bolder Apprenticeships' scheme was introduced in 2015 with the intention of creating new employment routes for older people as well as reskilling those who have been out of work. • Barclay's 12 week 'Welcome Back' programme also helps to encourage senior-level women who've taken a multi-year career break return to work. • Barclays have also recently pledged to hire 12% more older workers by 2022.
Recruit	The Co-operative	• The Co-operative runs an apprenticeship scheme open to all ages (the oldest apprentice is currently 67) • To date, the Co-op has taken on almost 400 apprentices aged 50-59, and over 60 apprentices aged over 60. • The Co-op spend around £500,000 a year on top-up funding for its apprenticeship programme, as many older applicants are not eligible for government support.

Source: Business in the Community (2016)

Despite improvements in the labour market for older workers, employers must address challenges around training, recruitment and female labour force participation

The UK has made progress in improving the labour market prospects of older workers through legislation and the correct incentives

Removing barriers to entry

Legislation such as The Equality Act (2010) has made it illegal to discriminate against employees by age. Removing the mandatory retirement age (2011) has also allowed employees to continue working past 65.

Incentivising people to work longer

Reforms made to the State Pension and the right to request flexible working after six months of continuous service (2014) have encouraged older workers to extend their working lives.

Highlighting the economic benefits of older employees

The Government has appointed a Business Champion for Older Workers and is increasingly producing publications to raise employer awareness of the economic benefits of older workers.

But the UK still performs slightly below the OECD average on our index and needs to focus its attention on three key areas

Greater focus on education and training

A reform of the skills system and continued promotion of lifelong learning is needed to enable older workers to remain competitive in the labour market. Employers should be encouraged to provide training, especially in IT and communications throughout their workers' careers.

Incentivise the recruitment of older workers

Research indicates that just 3% of workplaces had specific procedures to encourage applications from older workers. The government should work with businesses to boost the employment of older workers through, for example, financial incentives.

Increasing labour force participation of older women.

Research suggests that only a third of employers have a formal, written policy or an informal, verbal policy to support caring in their workplace. Women still face significant barriers to entry after childcare (and elder care); both government and employers need to promote more flexible working policies to accommodate this.

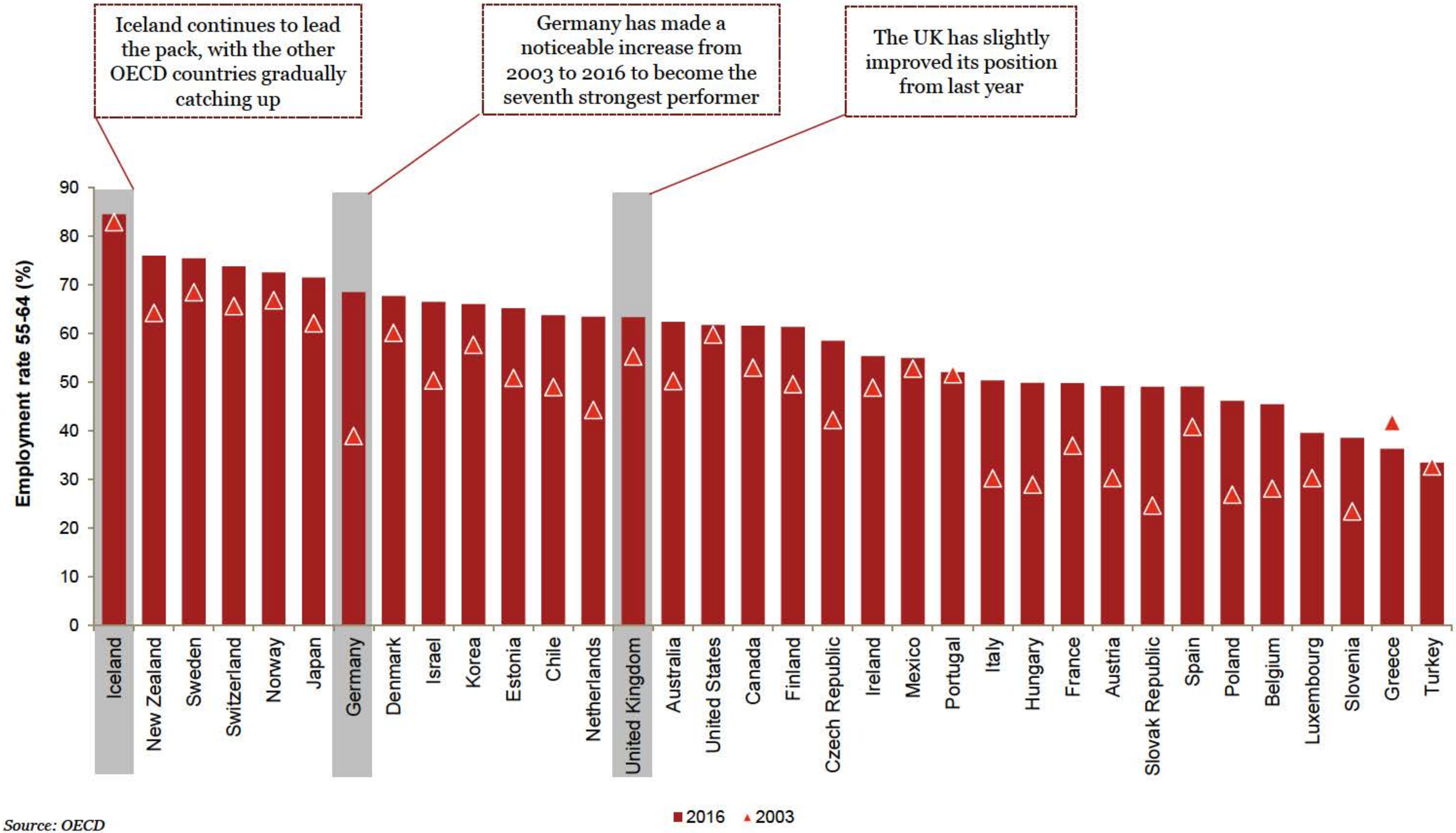
Source: DWP (2017)

Comparison of key labour market indicators across the OECD

Our Golden Age Index is constructed using 7 key labour market measures

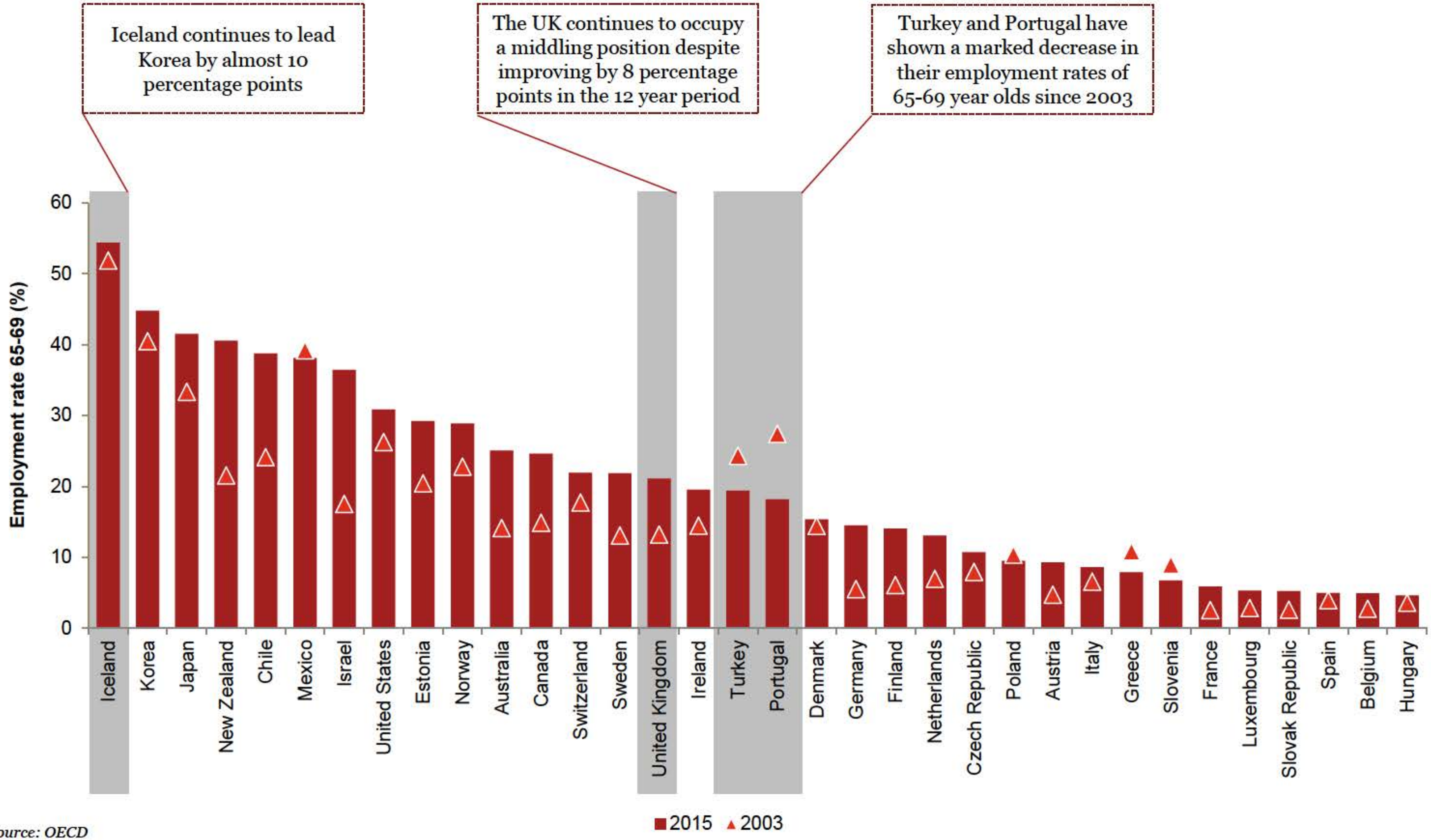
1. *Employment of 55-64 year olds*
2. *Employment of 65-69 year olds*
3. *Gender gap in employment*
4. *Incidence of part-time work*
5. *Full-time earnings*
6. *Effective labour force exit rate*
7. *Participation in training*

Employment rates of 55-64 year olds



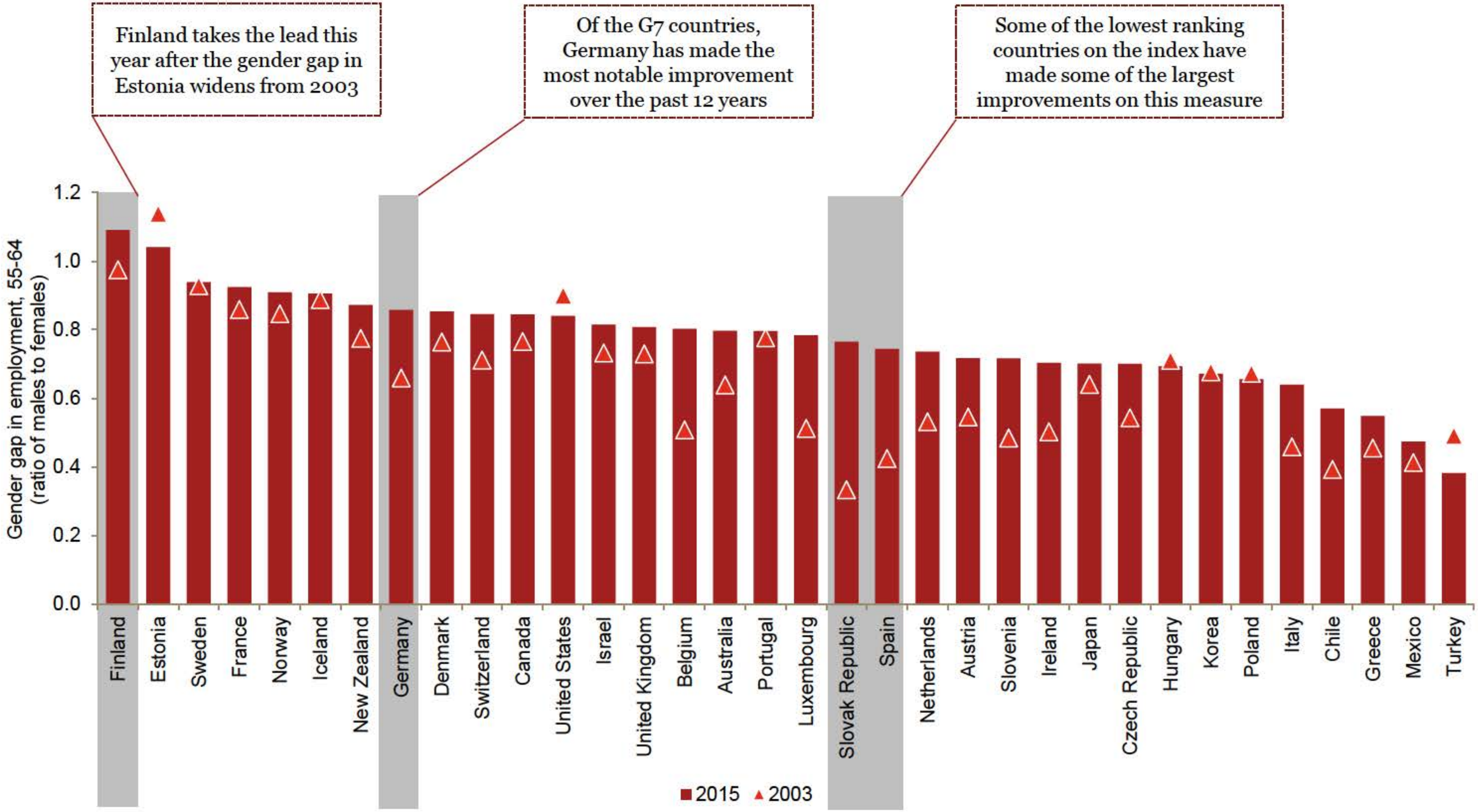
Source: OECD

Employment rates of 65-69 year olds



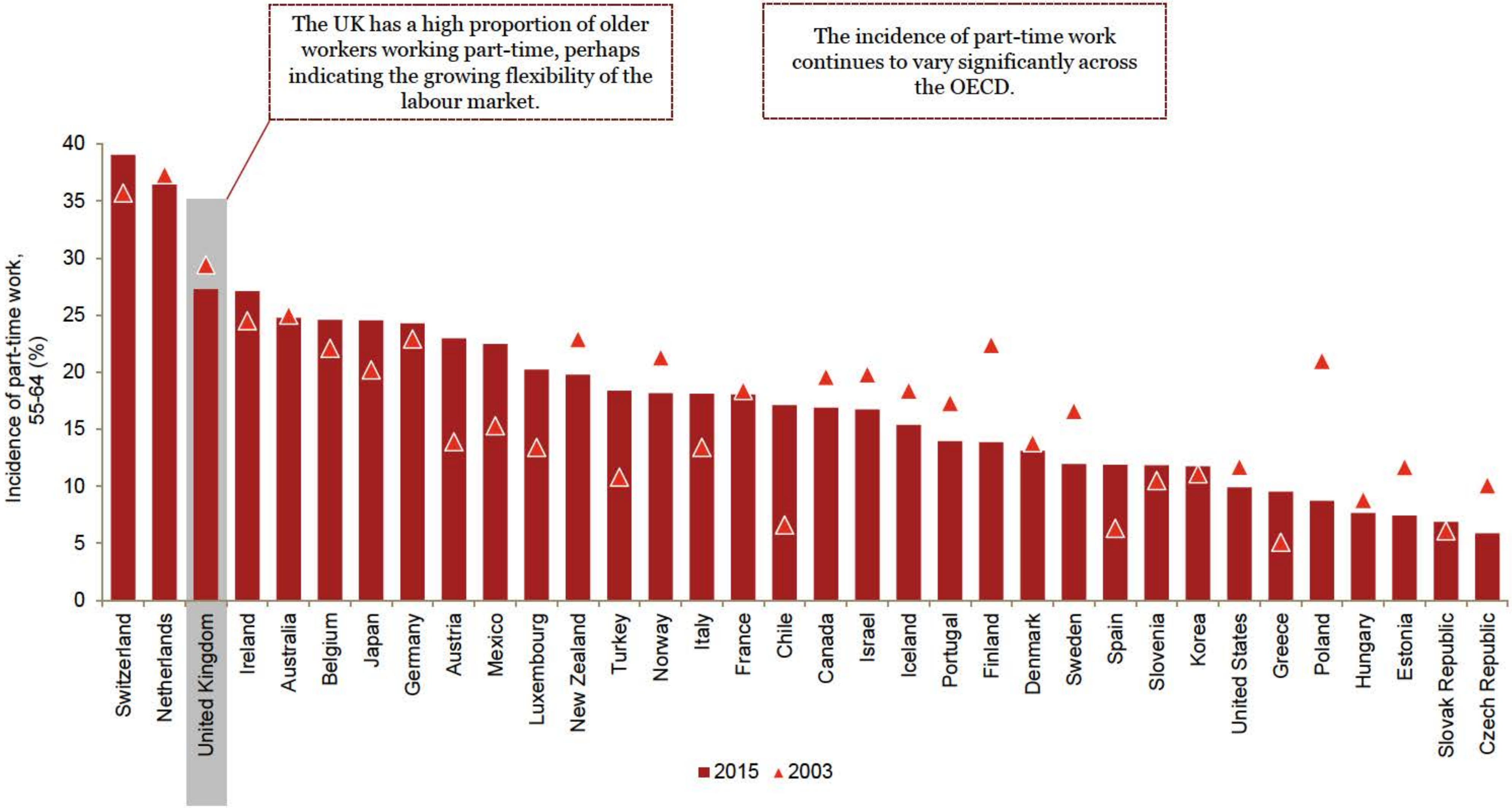
Source: OECD

Gender gap in employment for 55-64 year olds



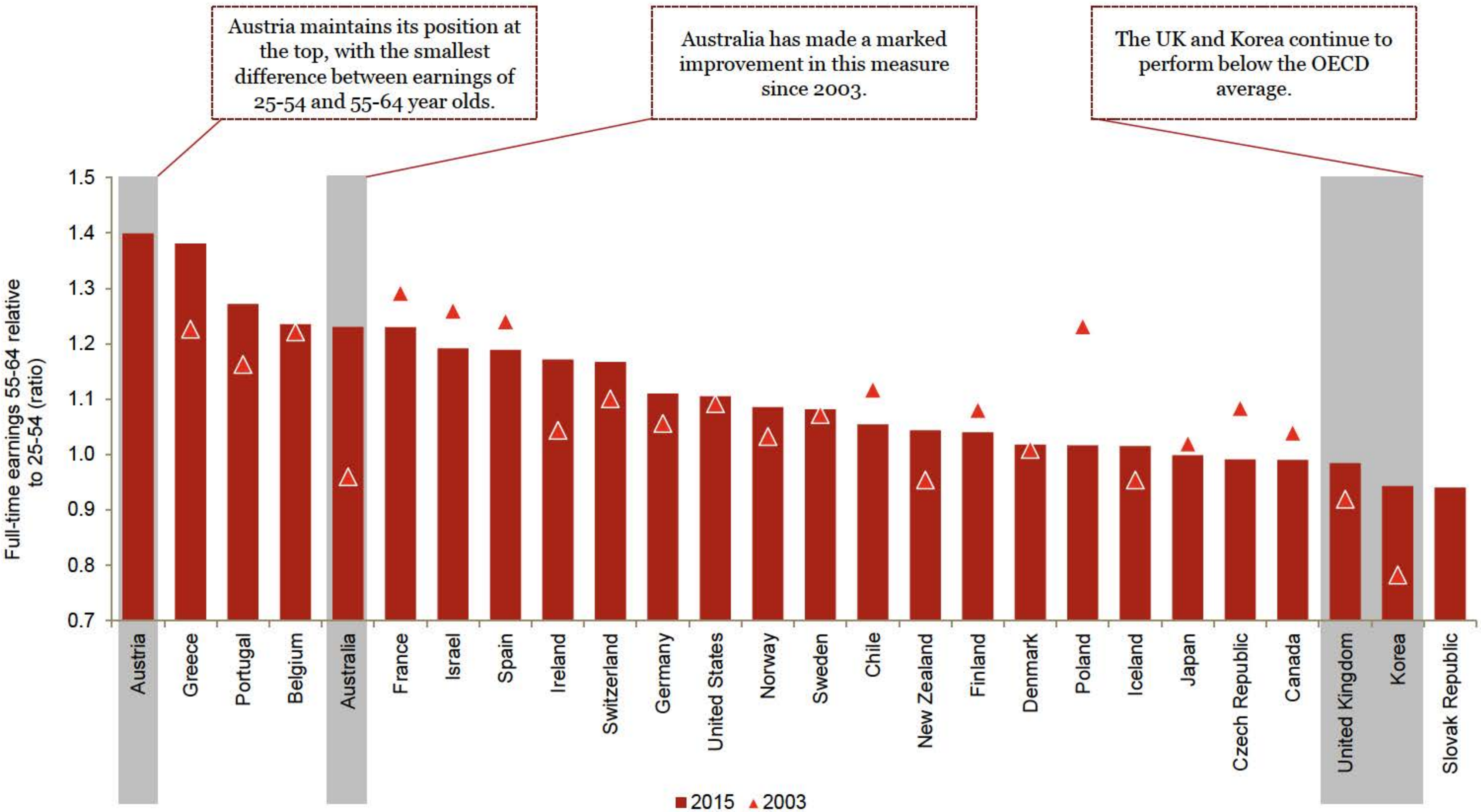
Source: OECD

Incidence of part-time work for 55-64 year olds



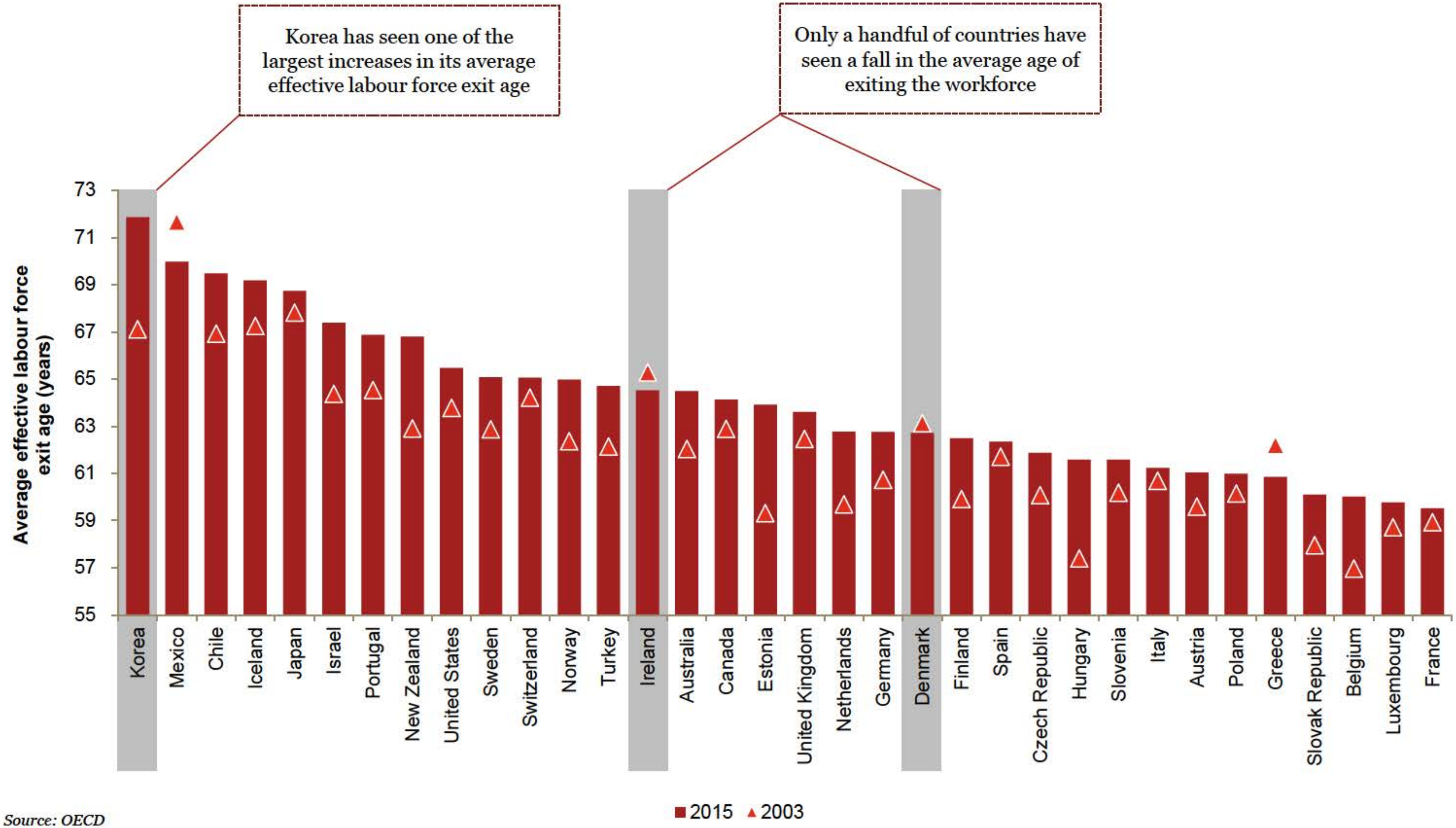
Source: OECD

Full-time earnings: ratio of 55-64 year olds relative to 25-54 year olds



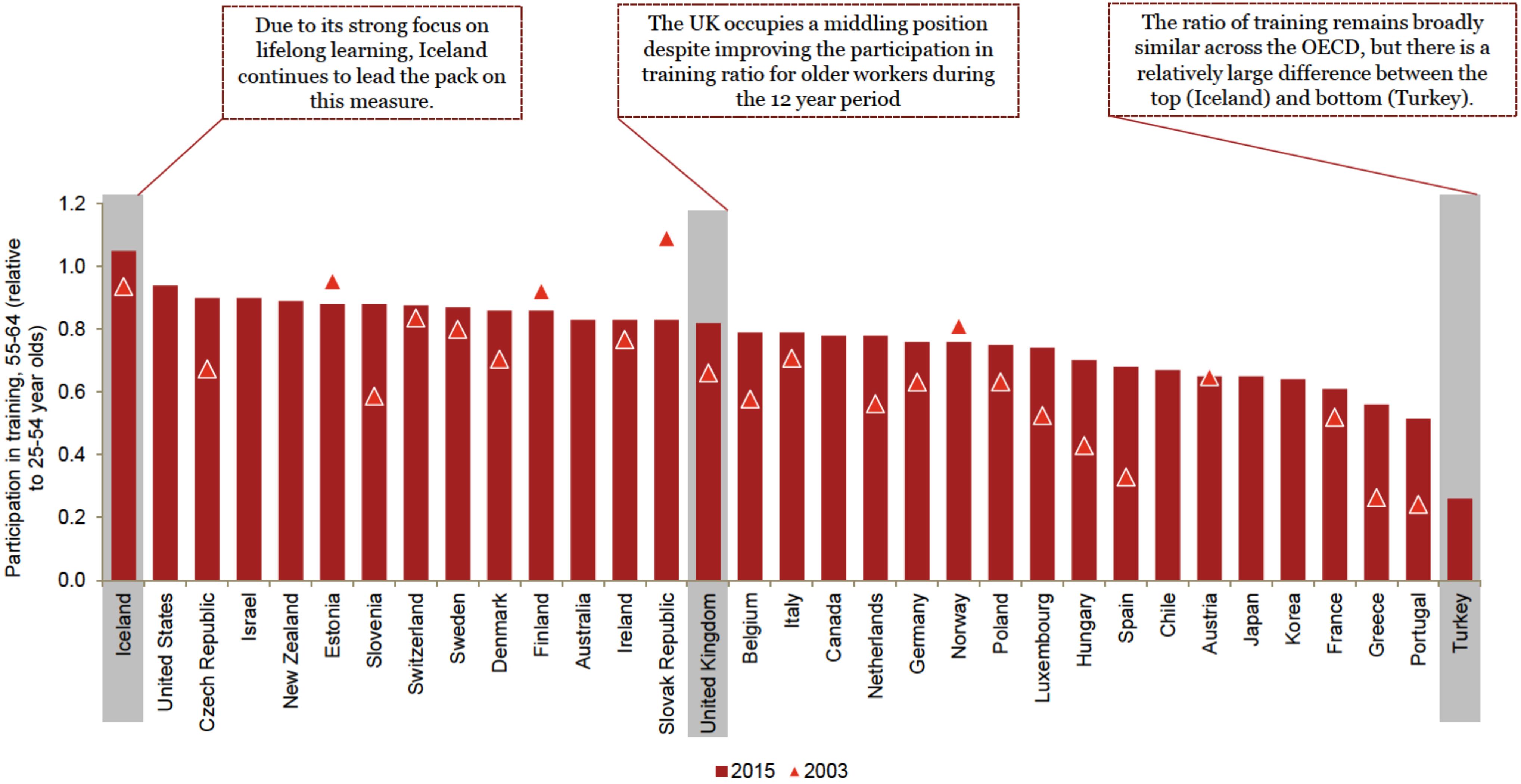
Source: OECD

Average effective labour force exit age (years)



Source: OECD

Participation in training for 55-64 year olds relative to 25-54 year olds

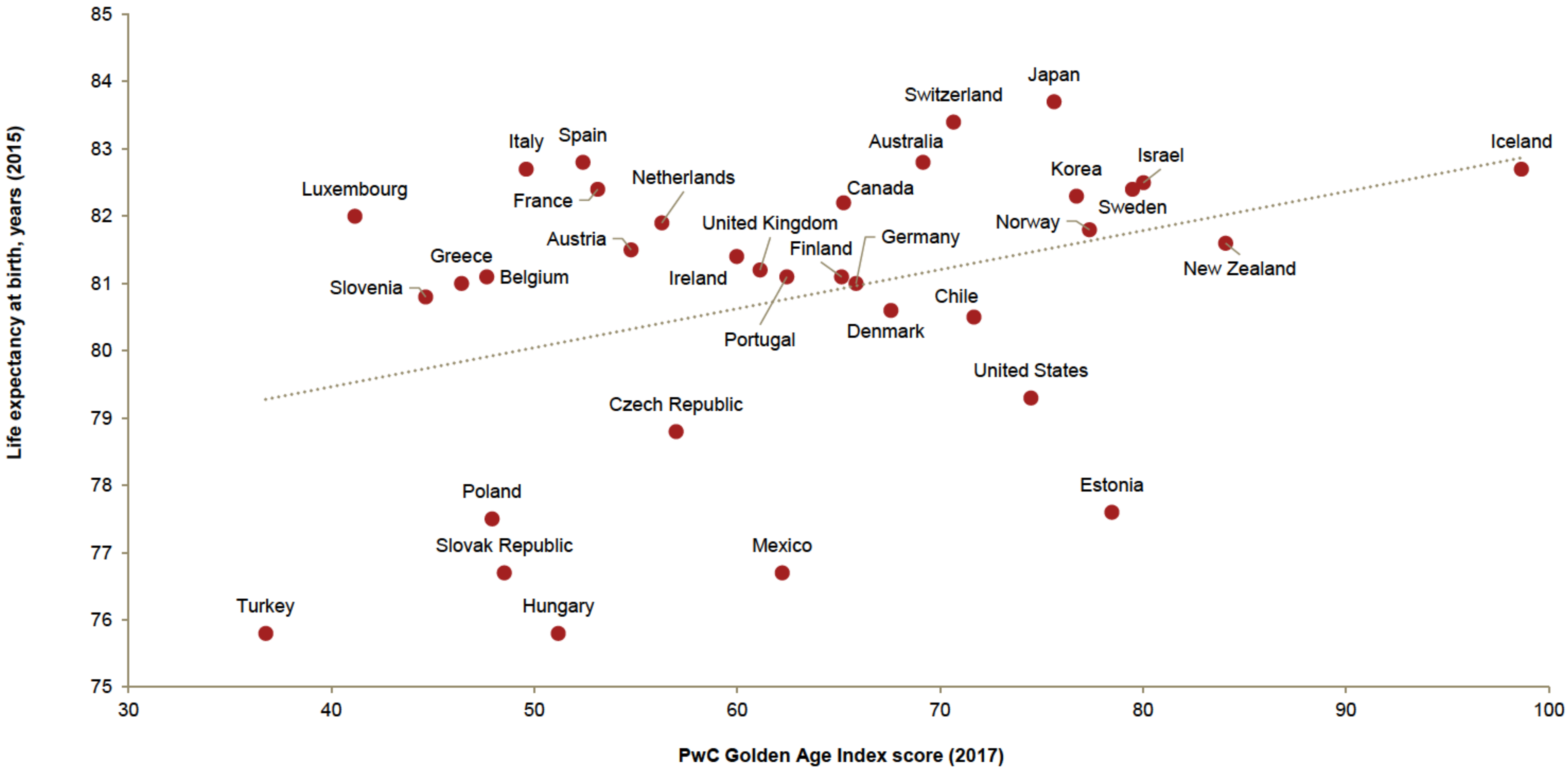


Source: OECD

[1] Note: The data from Iceland, Switzerland and Hungary is taken from 2014 as this was the latest data available.

Comparison of Golden Age index scores with other indicators

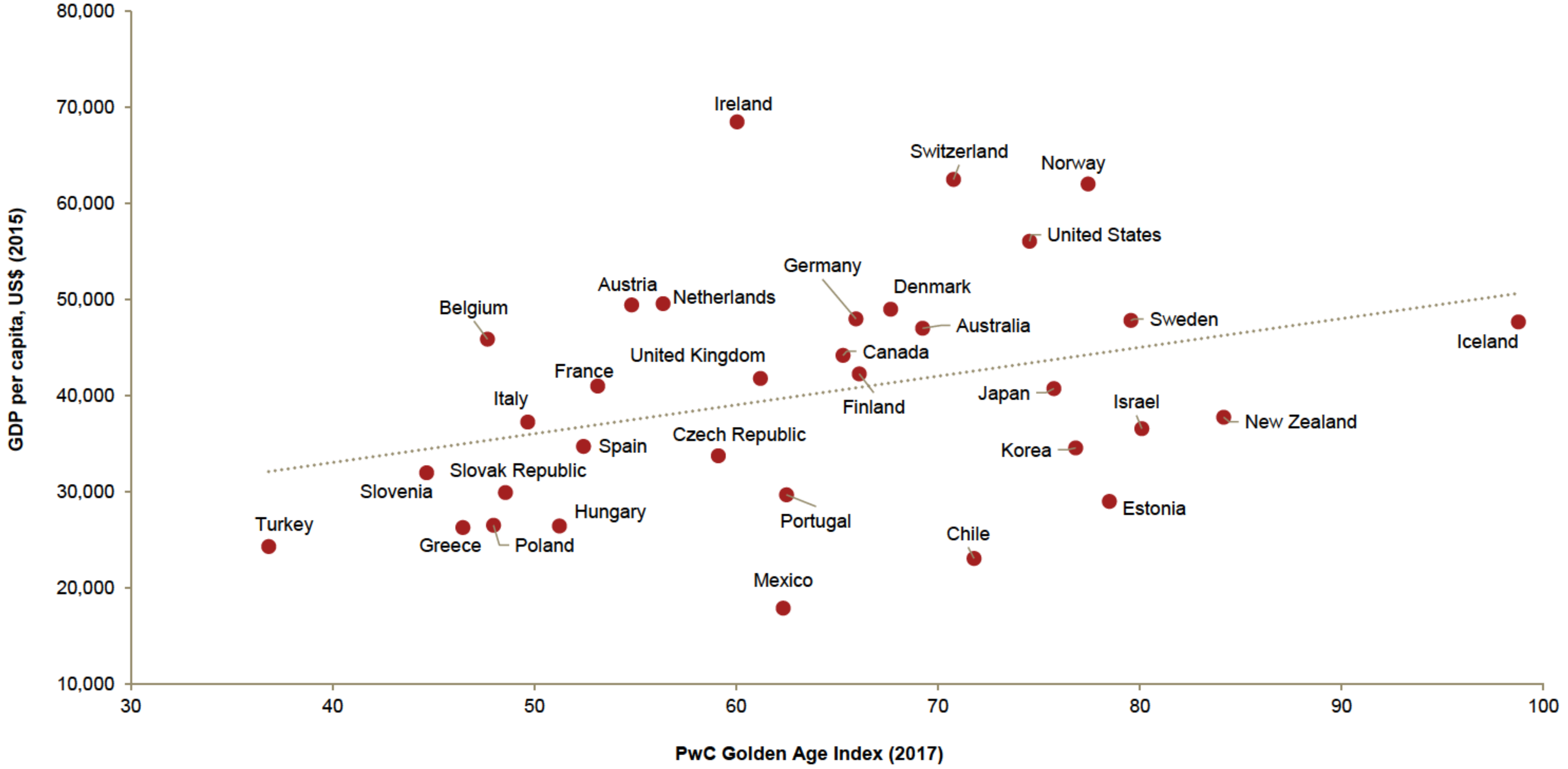
There is a correlation between life expectancy and the Golden Age Index, suggesting that countries with a higher life expectancy also have economies where older workers play a larger role



Sources: PwC analysis, OECD, World Health Organisation (2016)

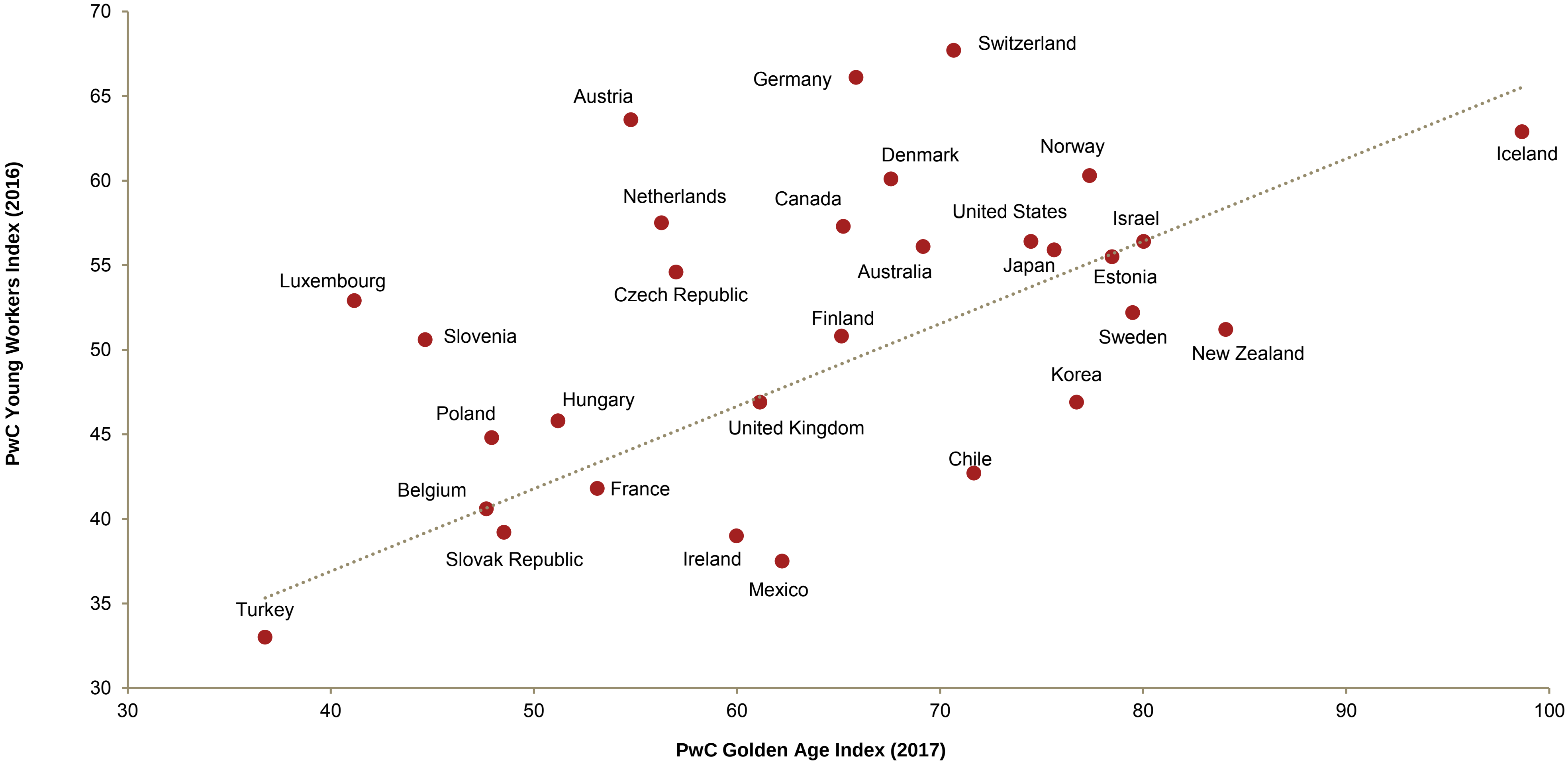
[1] Note: The Golden Age Index 2017 report primarily uses data from 2015, hence we have selected data from a comparable year for life expectancy.

There is a positive correlation between our Golden Age Index score and GDP per capita, but some countries outperform on our index relative to their income levels (e.g. Estonia, Chile, Mexico)



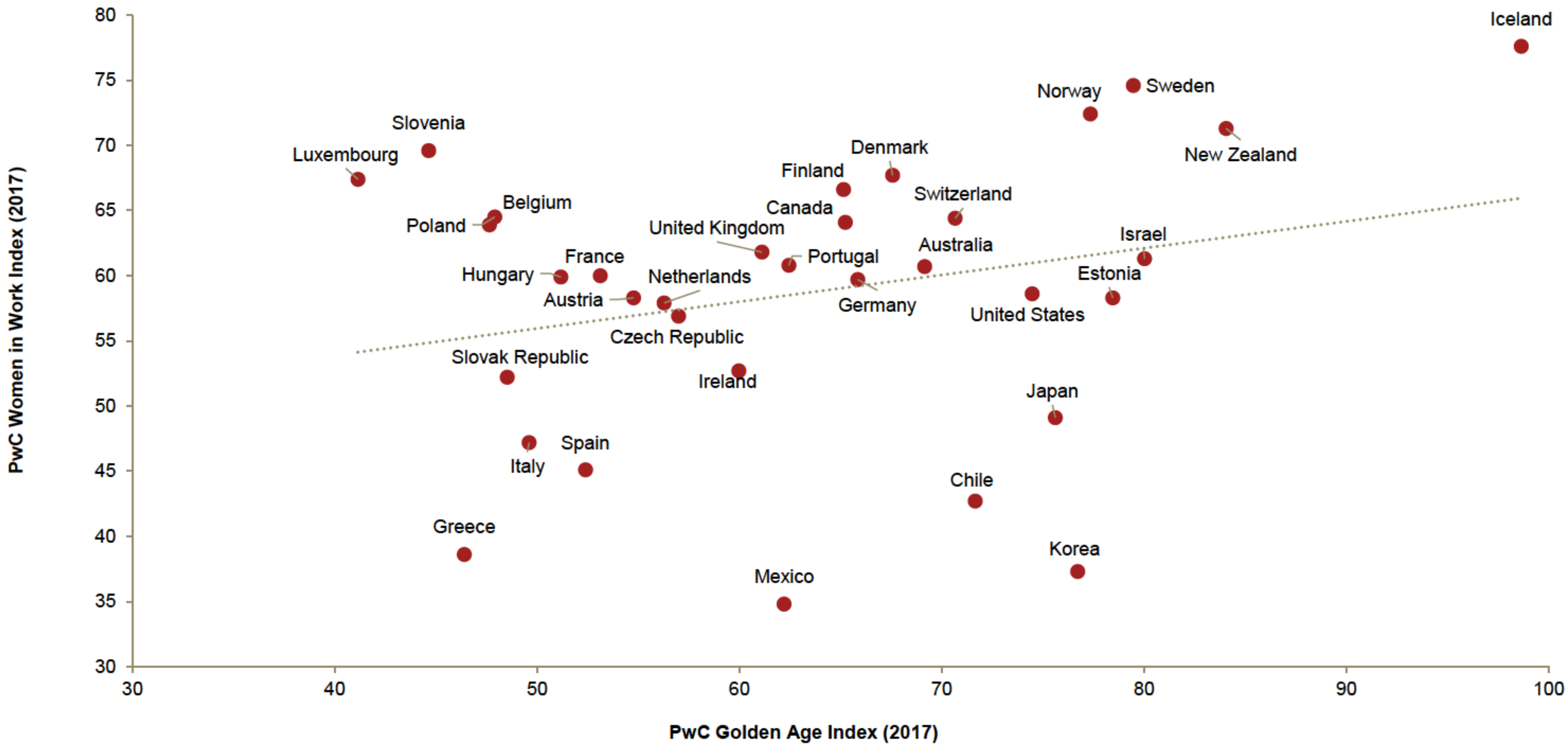
Sources: PwC analysis, OECD
[1] Note: We have excluded Luxembourg on the basis that it is an outlier in terms of its high GDP per capita.
[2]Note: The Golden Age Index 2017 report primarily uses data from 2015, hence we have selected data from a comparable year for GDP per capita.

The clear positive correlation between our Young Workers Index and the Golden Age Index suggests that the employment of older workers does not crowd out younger workers at the economy-wide level



Sources: PwC analysis, OECD

The positive correlation between our Women in Work Index and the Golden Age Index suggests that flexible working policies and better childcare also help women to remain in work for longer



Sources: PwC analysis, OECD

Summary of relationships with other measures

What can we learn?

We analysed the relationship between our Golden Age Index and other measures and found a positive correlation with all the variables considered. However, we note that a positive correlation might not necessarily be evidence of a causal link, as there may be other contributing factors and reverse causality may apply in some cases.

Life expectancy

Correlation (+0.34)

Countries that have longer lives also tend to have a higher proportion of older people in work.

1

GDP per capita

Correlation (+0.31)

Economies that invest more in older workers are more likely to have higher incomes, although many other factors will play a part here.

2

Young workers

Correlation (+0.52)

Contrary to the 'lump of labour fallacy' our analysis suggests that the employment of older workers does not 'crowd out' younger workers.

3

Women in work

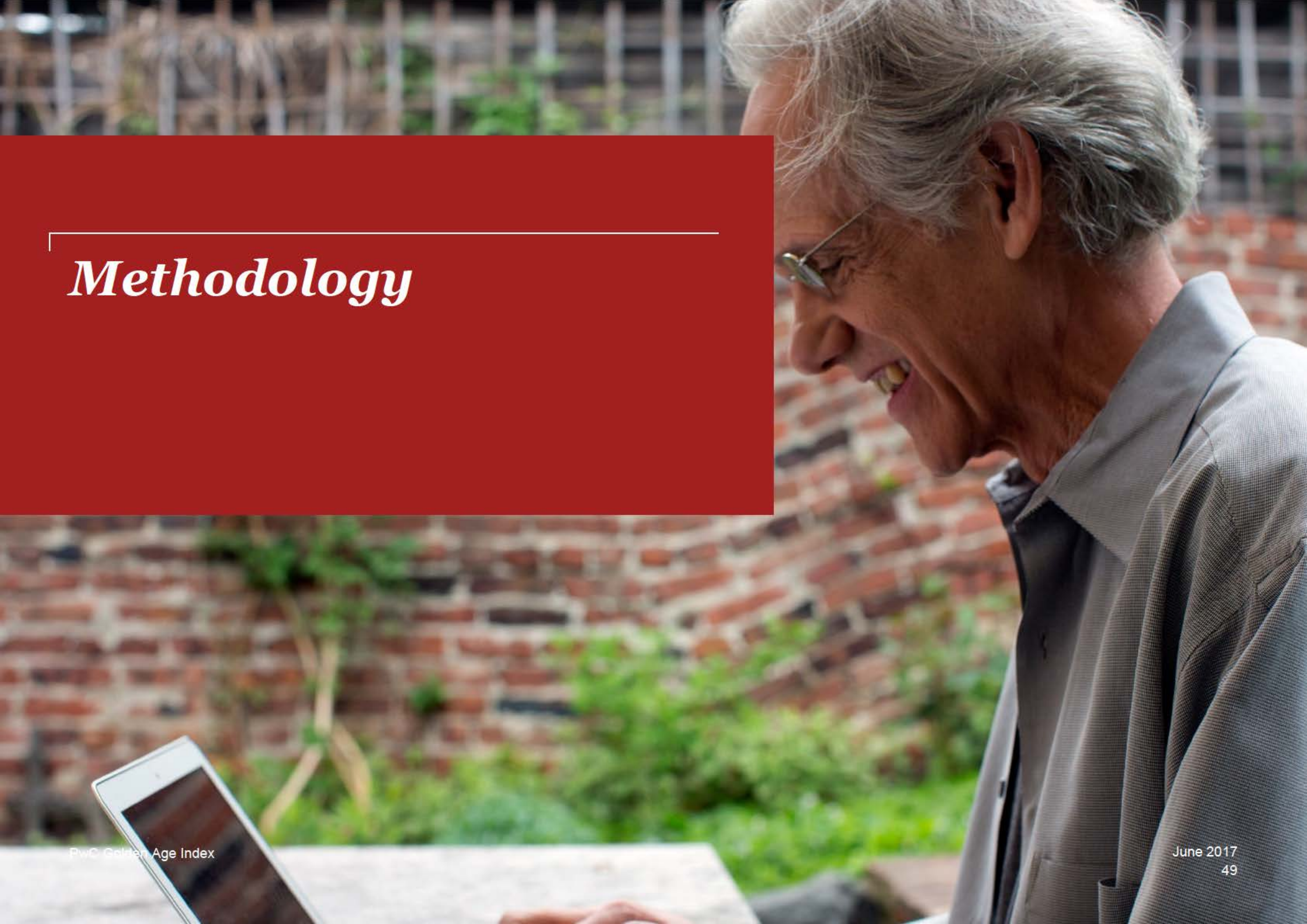
Correlation (+0.25)

Greater flexibility in the labour market and better childcare helps women to remain in and/or return to work after having children and to work for longer.

4

Source: PwC analysis

[1] Correlation coefficient ranges between -1, perfect negative correlation, and +1, perfectly positive correlation. Zero correlation implies that there is no statistical relationship between the two variables.



Methodology

PwC Golden age index methodology

Variables included in the index

Indicator	Weight	Factor	Rationale
Employment rate, 55-64 (% of the age group)	40%	1	The proportion of 55-64 year old workers in employment is the most important measure in our index and so has the highest weight of 40%.
Employment rate, 65-69 (% of the age group)	20%	1	The proportion of 65-69 year old workers has half the weighting of that of 55-64 year old workers assuming the 65-69 age group is roughly half as large in terms of population.
Gender gap in employment, 55-64 (ratio women/men)	10%	1	Gender equality in employment is included here as lower employment rates among older women tend to be a particular feature of many OECD countries.
Incidence of part-time work, 55-64 (% of total employment)	10%	-1	Part-time employment may adversely affect earnings, pensions and job security, but this is given a lower weight in the index since some older workers may prefer part-time work.
Full-time earnings, 55-64 relative to 25-54 (ratio)	10%	1	Earnings equality would represent equal pay across age groups and could also be an indicator of the relative labour productivity of older workers. But it has a lower weight in the index as higher relative earnings could also price some older workers out of jobs in certain cases.
Average effective labour force exit age (years)	5%	1	This measures the length of time a worker stays in the labour force before they become economically inactive. However, there is some overlap with other variables such as employment rates so we do not give it too high a weight in the index.
Participation in training of 55-64 age group (ratio, relative to employed persons aged 25-54)[1]	5%	1	This is an indication of how far older workers keep learning beyond age 55, which will be important in keeping them employable and renewing their skills. But data are lacking for several countries, so we do not give this too high a weight in the index.

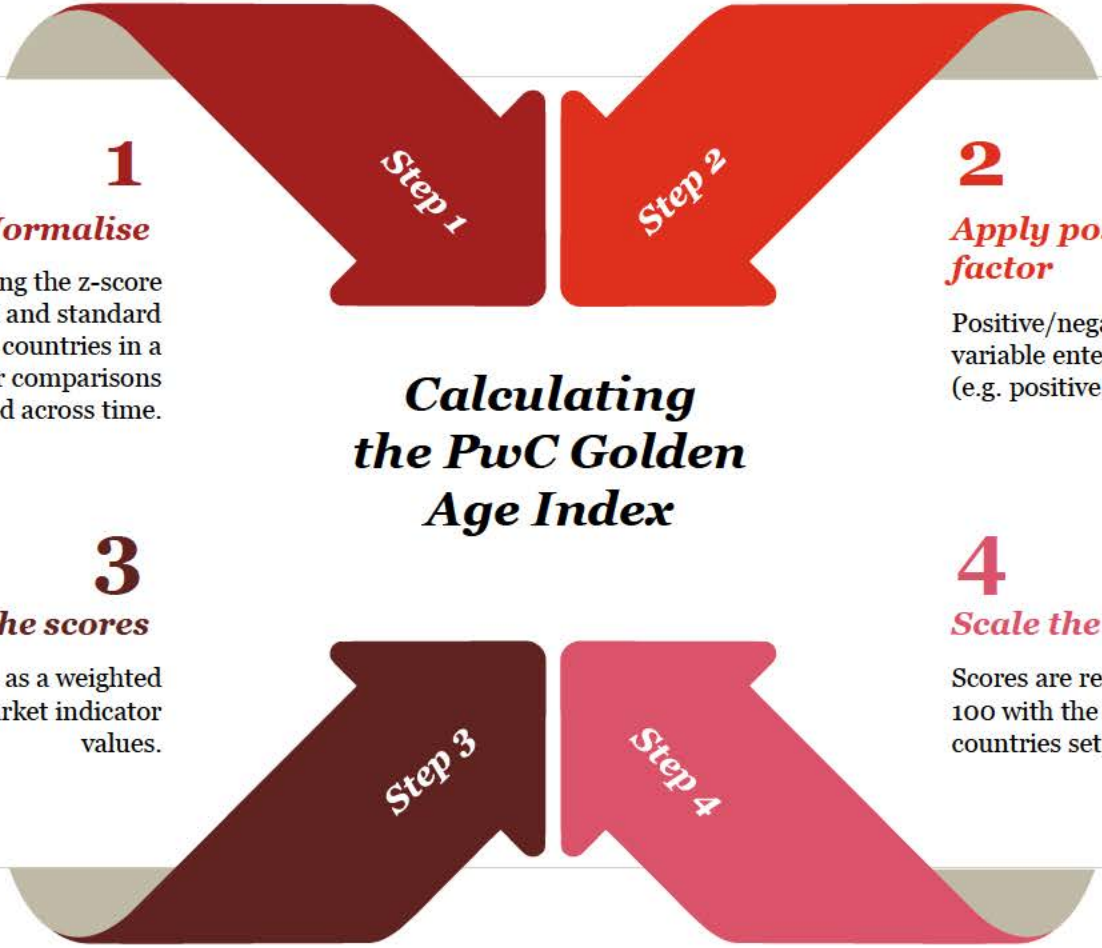
Note: The index scores reported in this 2017 release reflect the latest OECD data. Index scores for 2003, 2007 and 2014 may have changed relative to the results in our release last year (June 2016).

[1] This indicator was defined as the absolute number of 55-64 year olds in training in our previous June 2015 release, but we have had to change to this for data availability reasons. However, this does not have a major impact on the overall rankings relative to two years ago.

PwC Golden age index methodology

How does it work?

We used a standard method to construct this index, similar to the one used in the PwC Women in Work, Young Workers and ESCAPE indices, and by many other researchers constructing such indices.



Calculating the PwC Golden Age Index

1

Normalise

Indicators are standardised using the z-score method, based on the mean and standard deviation of the sample of 34 countries in a base year of 2003, to allow for comparisons both across countries and across time.

2

Apply positive/negative factor

Positive/negative factors are applied so each variable enters the index with the correct sign (e.g. positive for employment rates).

3

Calculate the scores

The scores are constructed as a weighted average of normalised labour market indicator values.

4

Scale the index

Scores are rescaled to values between 0 and 100 with the average value across all 34 countries set, by definition, to 50 in 2003.

PwC Golden Age index methodology

How did we calculate the potential long-term GDP increase?

We break down GDP in the following way:

*GDP = 15-54 FT * GDP per FT worker + 15-54 PT * GDP per PT worker + 55-64 FT * GDP per FT worker + 55-64 PT * GDP per PT worker + 65+ FT * GDP per FT worker + 65+ PT * GDP per PT worker*

Key assumptions

- Total employment in the economy is equal to the employment of 15 year olds and above.
- A full-time (FT) worker is twice as productive on average as a part-time (PT) worker, due to working twice as many hours on average.

We took Sweden as a benchmark country as it is the best performing in the EU (and one of the best in the OECD) and calculated the impact on GDP if countries raised their 55-64 and 65+ employment rates to Swedish levels. Sweden is a high performer in the 55-64 year old employment rates category and also performs relatively well in the 65+ employment category. However, if a country has a higher full-time equivalent employment rate than Sweden in either age category, as is the case, for example, in the US and Norway for the 65+ category, we did not assume any change to the employment rate currently experienced in that country.

Data

- Employment data by age and FT/PT split is sourced from the OECD.
- Due to data constraints for some countries with the employment data based on a common definition, we used FT/PT data employment based on national definitions.
- FT/PT employment data based on a national definition is only available for the 65+ age range, as opposed to 65-69 which is used within our index.
- For Korea, the OECD did not provide data based on a national definition, so we used the employment data based on an OECD common definition instead (which was an option in the case of Korea). There was also no data on the FT/PT breakdown of the 65+ age group so we estimated this by applying the average change in the distribution of FT/PT workers across the OECD economies as you move from the 55-64 age group to the 65+ age group to the overall employment estimate for 65+ years olds in Korea.

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