PwC Women In Work Index

Closing the gender pay gap

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Contents

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The potential $2 trillion prize from closing the gender pay gap

Foreword

This year's update of the Women in Work Index shows that the OECD has continued its gradual progress towards greater female economic empowerment. The Nordic countries, particularly **Iceland, Sweden and Norway, continue to occupy the top positions on the Index**. But many other countries still lag well behind.

The Netherlands fell slightly, moving from 21th to 23rd position, due to a slightly increased female unemployment and because other countries improved their position more.

The gender pay gap takes centre stage in this year's edition. In this day and age, it seems unconscionable that women are still paid relatively less than men. **Inequality starts at a young age**: a Nibud survey shows that boys get 13% more pocket money and clothing allowance than girls. Today the average working woman in the OECD still earns 16% less than her male counterpart, despite becoming better qualified.

We also take an illustrative look at how long it could take for the gap to close at current rates of progress. A simple extrapolation of historic trends suggests that **the gender pay gap in the Netherlands, currently at 16%, might not close until around 2050,** meaning that we are still a long way away from achieving pay parity. For some countries where the pace of progress has been slow, this might not be achieved for at least another two centuries if historic trends continue!

A number of structural factors drive the gender pay gap. To examine these in more detail, we use the Netherlands as a case study, making use of more detailed employment data to inform our analysis. Job segregation between men and women, both across industries and occupations, is a major factor explaining the pay gap.

The gains from closing the gap are substantial: **achieving pay parity in the OECD could increase total female earnings by US$2 trillion**. We also estimate that **increasing female employment to match Sweden's could increase GDP across the OECD by almost US$6 trillion.**

There is much more that businesses and governments could do to address the causes of the pay gap, which are deep-rooted. Policy levers that improve access to affordable childcare and shared parental leave have been shown to get more women in work. Businesses can also make flexible opportunities more widely available, enabling their employees to manage their family commitments around work.

Please do get in touch to discuss how we can help your organisation address these issues.

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Fully closing the gender pay gap across the OECD could increase female earnings by $2 trillion

The Nordic countries occupy the top 3 positions on the Women in Work Index

$6 trillion

Boost to OECD GDP from increasing female employment rates to match Sweden's

23rd The Netherlands fell to 23rd place this year

OECD gender pay gap

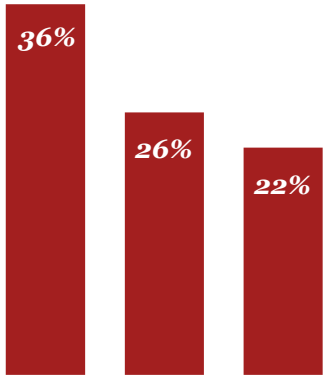
OECD average time to close the pay gap at current rates of progress

95 years

Boost to OECD female earnings from closing the gender pay gap

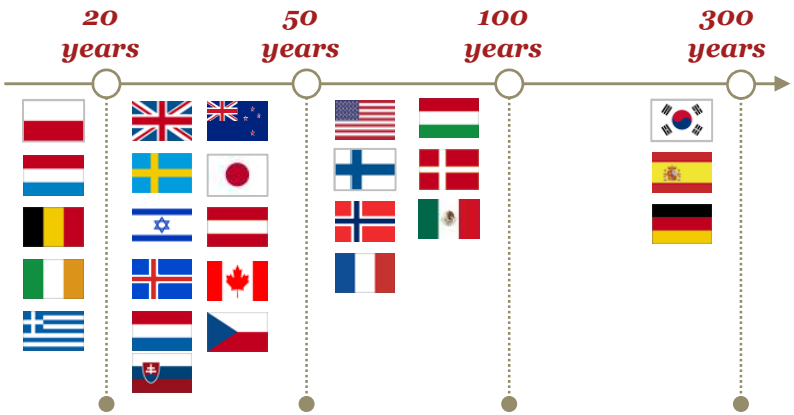
$2 trillion

Countries with the largest...



...and smallest pay gaps

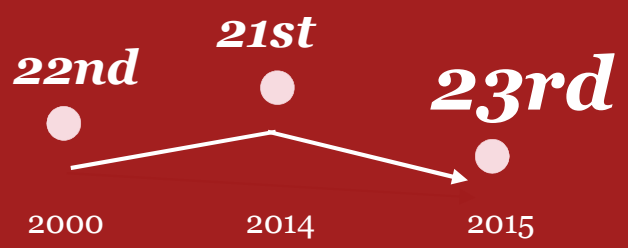
If historic trends continue, the pay gap would close...



Source: PwC analysis, OECD, Eurostat.

Fully closing the gender pay gap in the Netherlands could increase female earnings by €30 billion

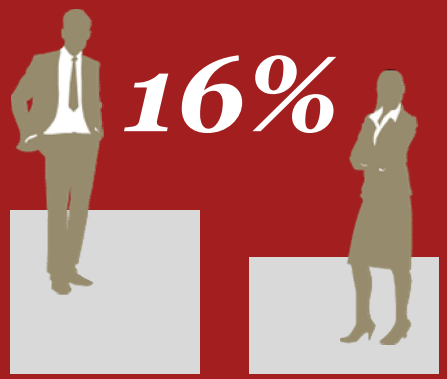
The Netherlands' performance on the Women in Work Index



€ 108 billion

Boost to Dutch GDP from increasing female employment rates to match Sweden's

Dutch gender pay gap



€30 billion

Boost to Dutch female earnings

€8,000 per woman

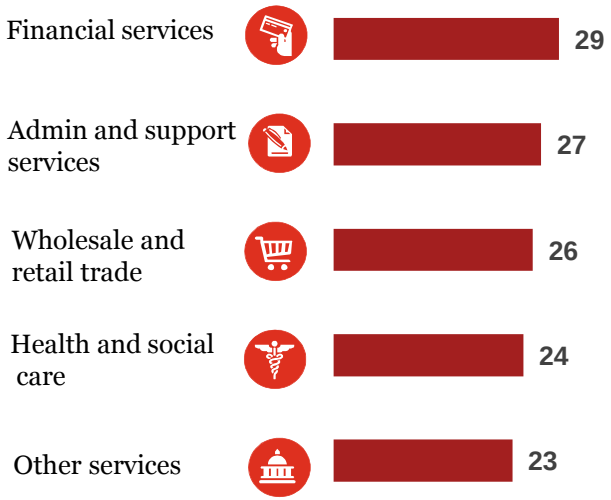
from closing the gender pay gap

35 *years*

Time to close the Netherlands' pay gap at current rate of progress

The financial services sector has the largest pay gap across the Dutch industry sectors.

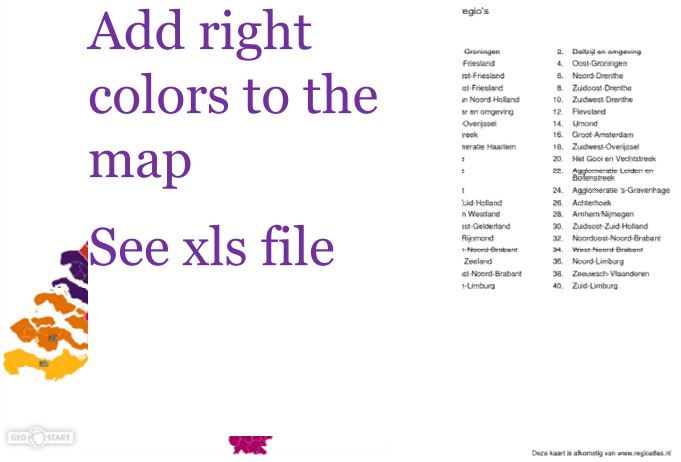
Gap between female wages and male wages



Amsterdam, Groningen and The Hague have the smallest gender pay gap, and Zeeland the highest.

Add right colors to the map

See xls file



Low (2%) Gender pay gap High (30%)

http://www.regioatlas.nl/kaarten#_coropregios

Source: PwC analysis, OECD, Eurostat, Regioatlas, CBS.

1 Executive summary– Key results

PwC Women in Work Index
Key findings from our analysis

The fifth update of the Women in Work Index provides our assessment of female economic empowerment across 33 OECD countries. The index is a weighted average of five indicators that reflect female participation in the labour market and equality in the workplace (see Annex for more details of the methodology).

In this edition, we have made slight revisions to our previous methodology: the OECD has been used as the source for gender pay gap data for several countries where previously Eurostat data has been used. Past analysis of the WIW Index has been updated to reflect this change in methodology for consistency, although the impact on country rankings is not significant.

Country rankings and trends

- Iceland, Sweden and Norway remain the top 3 performing OECD countries.
- Half of the countries on the Index continue to hold their positions. Poland stands out for achieving the largest annual improvement, rising from 12th to 9th due to fall in female unemployment and an increase in the full-time employment rate. The Slovak and Czech Republics have also achieved notable improvements on their index scores.
- Over the longer term there have been more significant movements in country rankings. Israel and Poland stand out for improving by more than 10 positions since 2000, while the US and Portugal have lost ground.

Potential long-term economic gains

- Our analysis shows significant economic benefits in the long-term from increasing the female employment rate to match that of Sweden. The GDP gains across the OECD could be around US$6 trillion.
- Across the OECD, fully closing the gender pay gap could increase total female earnings by US$2 trillion.

The Netherlands' performance

- The Netherlands experienced a small decline in its performance, falling from 21st to 23rd position in 2015. This is largely due to bigger improvements in other countries relative to the Netherlands, as well as a slight increase in female unemployment.
- Despite women becoming more qualified, the labour market position of Dutch women is weaker then that of men. Labour participation of Dutch women is lower than male labour participation, and Dutch women are the least likely among the OECD countries to work full-time

Closing the gender pay gap

- We take an illustrative look at the time it could take for the gender pay gap to close, by using a simple extrapolation of historical trends in different countries.
- Some countries, such as Poland, Luxembourg and Belgium, could see the gap fully close within two decades if historical trends continue.
- Much slower progress historically in Germany and Spain means that their gap might not close for over two centuries unless underlying structural factors are addressed to change trends in future.

Policy and business implications

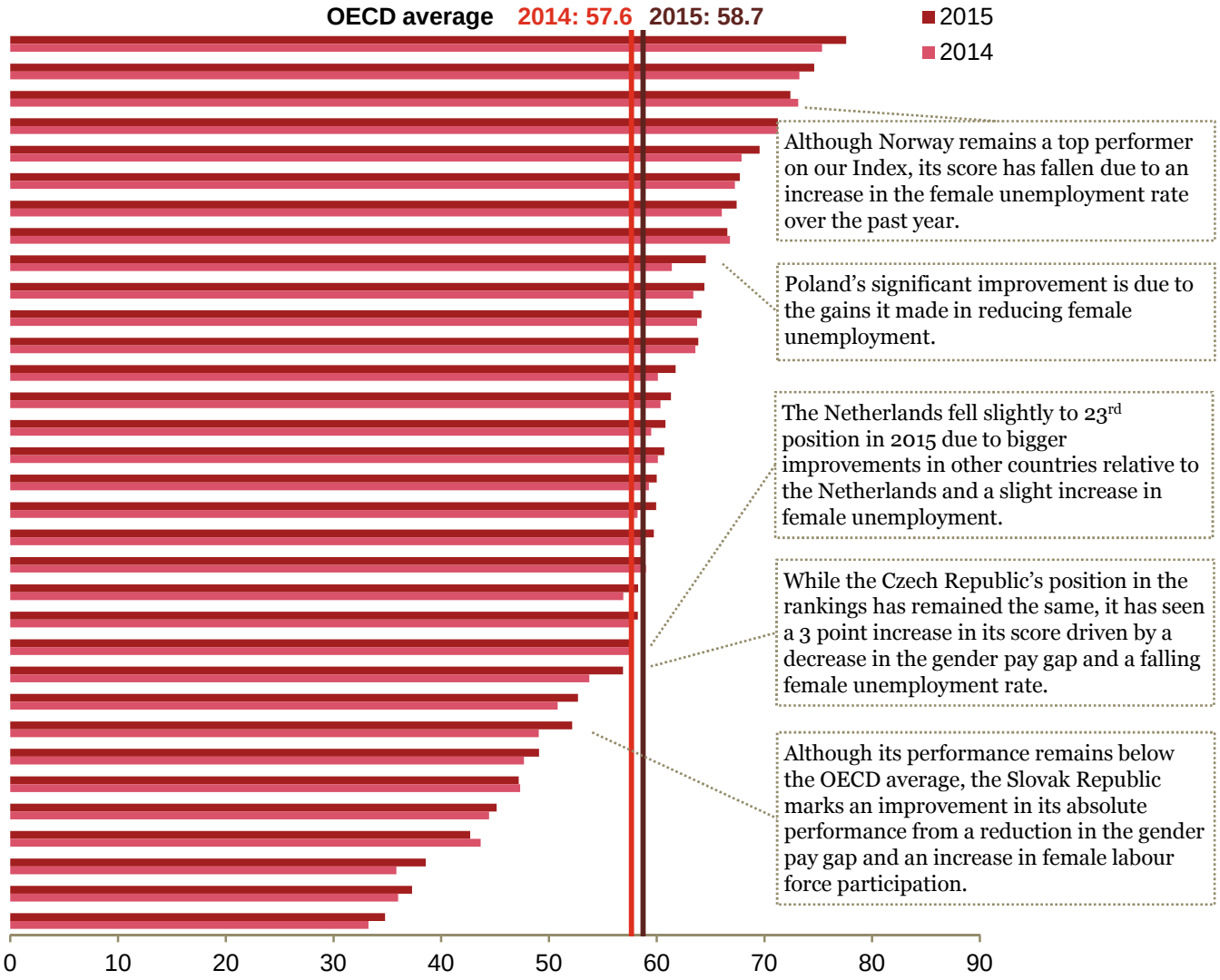
- We use the Netherlands as a case study, making use of more detailed employment data, to examine the causes of the gender pay gap.
- Our analysis of the Netherlands suggests that job segregation between men and women, both across industries and occupations, is a major factor explaining the pay gap.
- Another factor is differences in work-life patterns. Dutch women tend to spend even more time out of the workforce than women from other countries. Cultural and economic factors contribute to this.
- There is much more that businesses and governments can do to help in closing the gender pay gap and to fully harness female talent. Potential policies to support women returning to work and reduce the amount of time spent out of work include improving access to affordable and quality childcare, as well as introducing stronger incentives to encourage take-up of shared parental leave. Stimulating women to participate in studies and jobs in STEM would also help reducing the gender gap.
- Businesses should ensure that all employees are fairly remunerated and support women's career advancement to develop a pipeline of female leaders. Promoting flexible working options is also an opportunity for businesses to fully leverage the talent of its female employees and access a wider talent pool.

The OECD has seen a small improvement overall in its performance on female economic empowerment

Figure 1: PwC Women in Work Index, 2015 vs. 2014

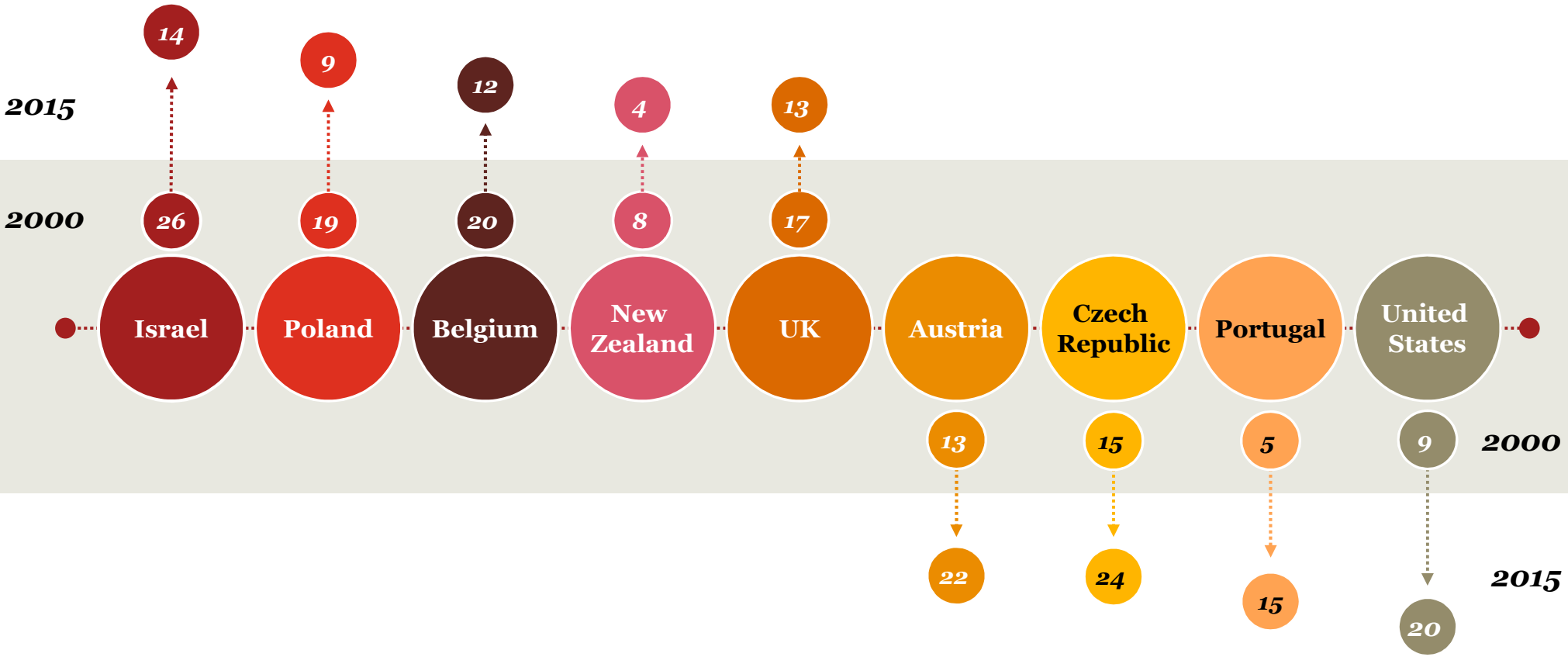
Rank (2014)		Rank (2015)	
1	=	1	Iceland
2	=	2	Sweden
3	=	3	Norway
4	=	4	New Zealand
5	=	5	Slovenia
6	=	6	Denmark
8	↑	7	Luxembourg
7	↓	8	Finland
12	↑	9	Poland
11	↑	10	Switzerland
9	↓	11	Canada
10	↓	12	Belgium
14	↑	13	United Kingdom
13	↓	14	Israel
16	↑	15	Portugal
15	↓	16	Australia
17	=	17	France
20	↑	18	Hungary
19	=	19	Germany
18	↓	20	United States
23	↑	21	Estonia
22	=	22	Austria
21	↓	23	Netherlands
24	=	24	Czech Republic
25	=	25	Ireland
26	=	26	Slovak Republic
27	=	27	Japan
28	=	28	Italy
29	=	29	Spain
30	=	30	Chile
32	↑	31	Greece
31	↓	32	Korea
33	=	33	Mexico

Source: PwC analysis using data from OECD and Eurostat.



Israel has seen the most significant positive movement in its rank over the long-term, while the US has seen the largest negative movement

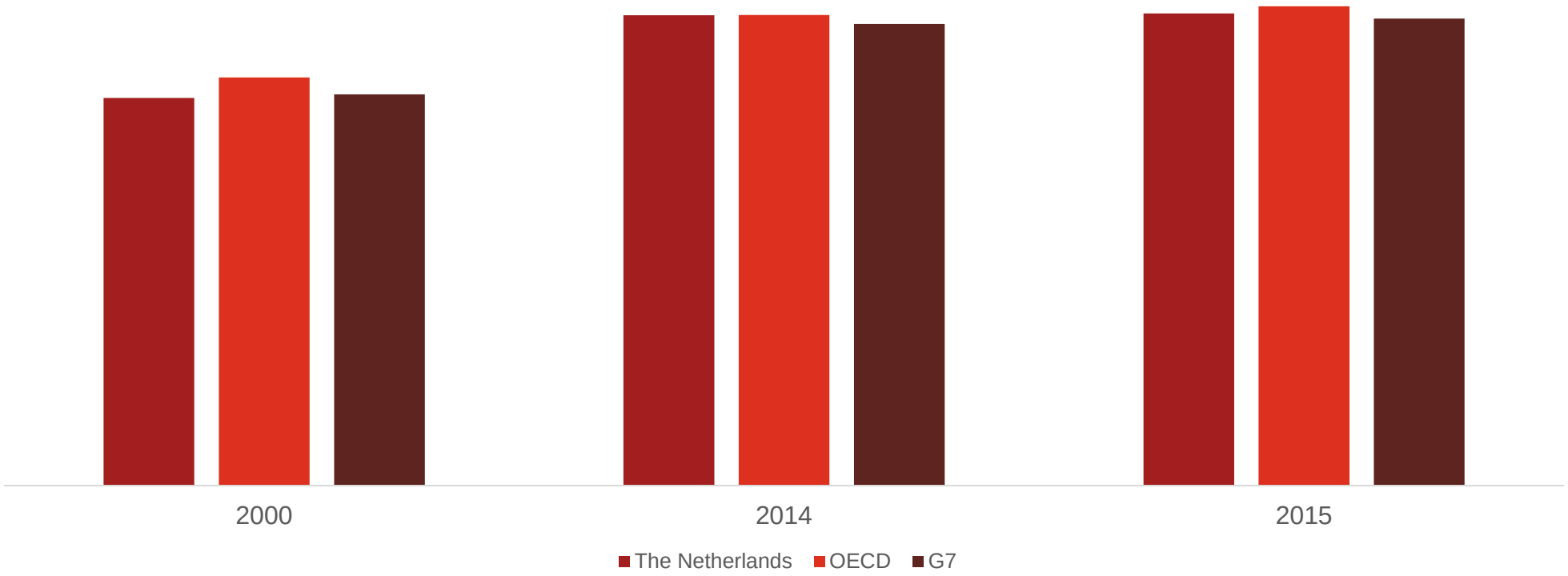
Figure 2: Biggest movers in the PwC Women in Work Index ranking between 2000 and 2015



In recent years, the Netherlands' performance has surpassed the average performance of the G7 economies

While in 2000, the Netherlands' score on the index was behind that of the OECD and G7, it has seen an improvement in 2014 and 2015 compared to the G7 economies. However, the OECD average is still higher than the performance of the Netherlands.

Figure 3: Comparison of the Netherlands' performance against the G7 and OECD average



Source: PwC analysis, OECD, Eurostat.

2

Potential economic gains from getting more women into work and closing the pay gap

The gains from getting more women into work and closing the gender pay gap could be significant

How much are the gains from improving female employment?

- Our analysis provides estimates of the broad order of magnitude of potential gains for each country from increasing employment rates to match those of Sweden – a consistently top performer in our Index.
- The potential long-term economic gains across the OECD from an increase in women in work boosts GDP by almost US$6 trillion.
- The largest potential gains are likely to accrue to countries with relatively low female employment rates, such as Greece, Mexico and Italy. These countries could boost their GDP by close to 30% by increasing the rate of female employment to match that of Sweden's.
- The economic benefit to the Netherlands from increasing the level of female employment to match that of Sweden's could be in the order of 16% of GDP. Austria and Hungary could see gains of a similar magnitude.
- Countries that are already close to the frontier would see lower potential gains; this includes the other Nordic countries and Estonia.
- Iceland, whose performance is already above that of Sweden's, is excluded from Figure 4.

How much are the gains from closing the gender pay gap?

- The gains to female labour earnings from closing the gender pay gap could be in the order of US$2 trillion across the OECD.
- The largest gains in percentage terms could be found for countries with the largest gender pay gaps, notably Korea, Estonia and Japan. Closing the gap in these countries could increase female labour earnings by between one-third to one-half in these countries.
- The gains to the Netherlands from closing the gender pay gap – which currently stands at 16% – could amount to approximately €30 billion.
- We assume that the counteracting effects of the wage and employment effects broadly cancel out, meaning that an increase in wages does not lead to a net employment effect. This takes into account the counteracting effects of labour supply and demand elasticities: an increase in wages makes it more expensive for employers to hire more workers, however higher earnings also incentivise potential workers to seek employment.

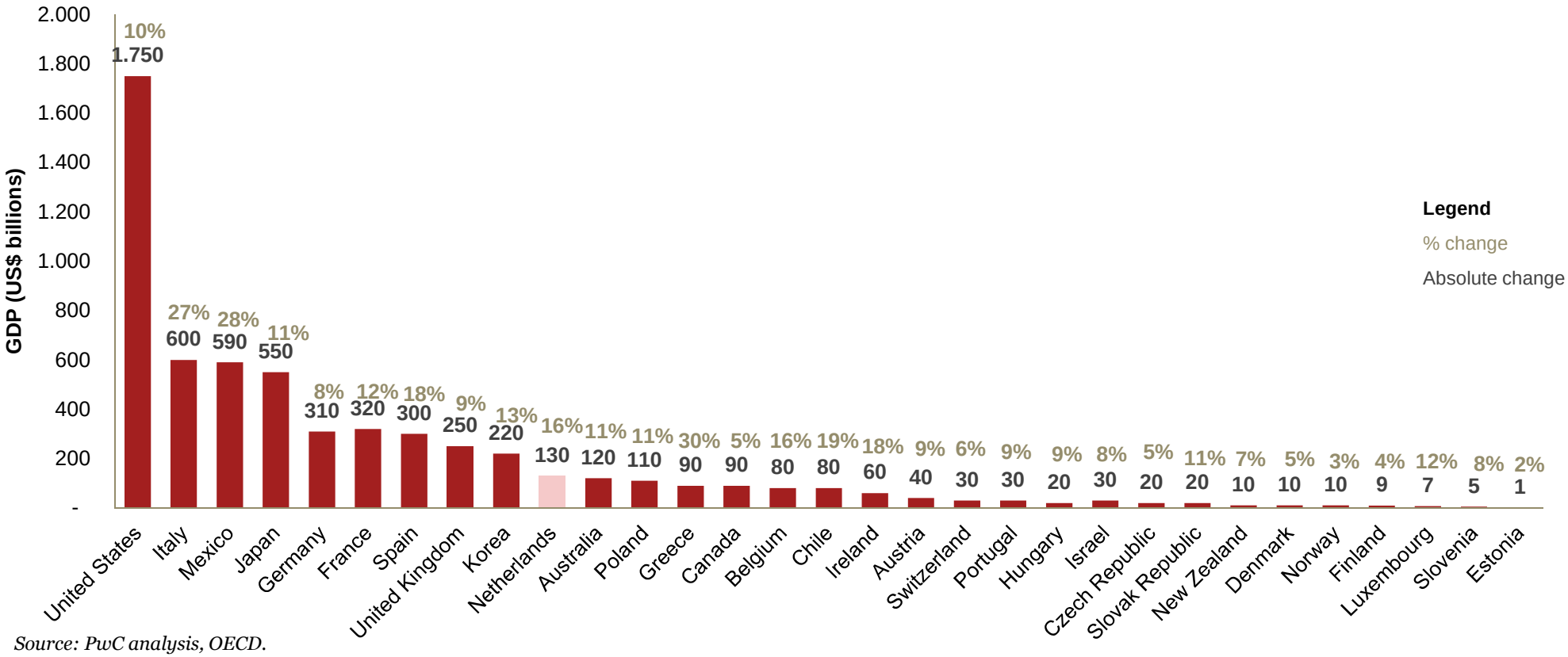
How long will it take to close the pay gap?

- We assess how long it could take for the gender pay gap to close based on a continuation of historic trends. These are not projections, but rather just illustrative estimates based on a simple extrapolation of historic trends.
- Countries that are close to the frontier or that are rapidly improving, may be able to realise the gains from closing the gender pay gap in the medium-term. Poland, Luxembourg and Belgium could close the gap in two decades, for example. The Netherlands will need around 35 years to close the gap.
- Other lower performing countries may require more fundamental policy and cultural changes by businesses and government, which will require more time, perhaps decades or more, in order to fully realise the gains from closing the pay gap.
- However, it does provide aspirational targets for OECD countries to achieve.
- In the following section we explore the factors that drive the pay gap in more detail, using the Netherlands as a case study.

Increasing the number of women in work to the Swedish level could increase GDP across the OECD by nearly US$6 trillion, an increase of 12%

We have estimated the potential GDP gains from increasing female employment rates across OECD countries to match Sweden's – which has one of the highest female employment rates within the OECD. In absolute terms, the US is expected to gain the most, as much as $1.8 trillion. Greece, Mexico and Italy stand to see the greatest increases in percentage terms. For the Netherlands, the expected gain from increasing female employment is approximately €108 billion ($130 billion at average 2015 exchange rates) or 16% of 2015 GDP.

Figure 4: Potential GDP boost from increasing female employment rates to rates in Sweden, 2015

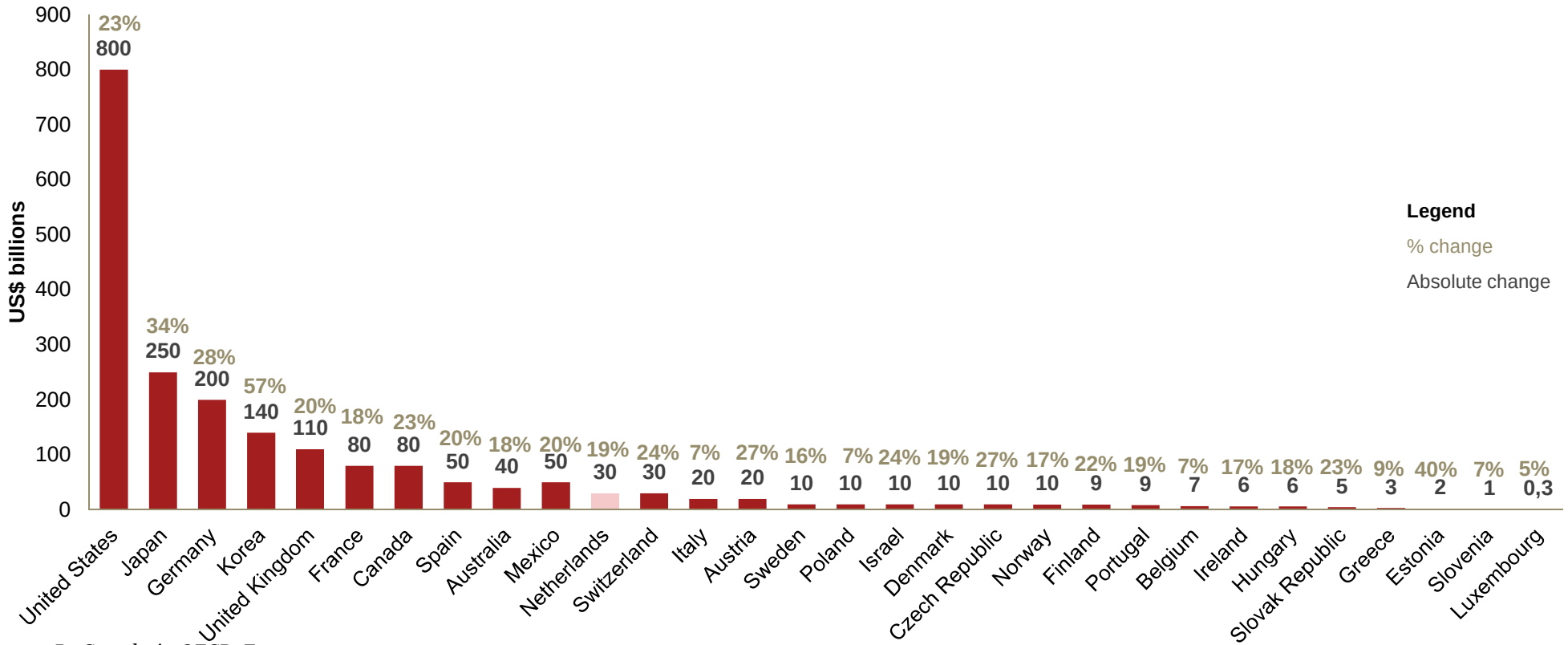


Source: PwC analysis, OECD.

Closing the gender pay gap could boost female earnings across the OECD by over US$2 trillion, an increase of 23%

Of the OECD countries, the United States is expected to gain the most in absolute terms from closing the gender pay gap by increasing the wages of female workers to those of male workers; the estimated increase in total female earnings in the US is around $810 billion. In percentage terms, Korea is expected to see the greatest percentage increase in female earnings i.e. 57%. Closing the gender pay gap in the Netherlands would increase total female earnings by around €30 billion (c.$33 billion at 2015 average exchange rates), an increase of 19%.

Figure 5: Potential increase in total female earnings from closing the gender pay gap, 2015



Source: PwC analysis, OECD, Eurostat.

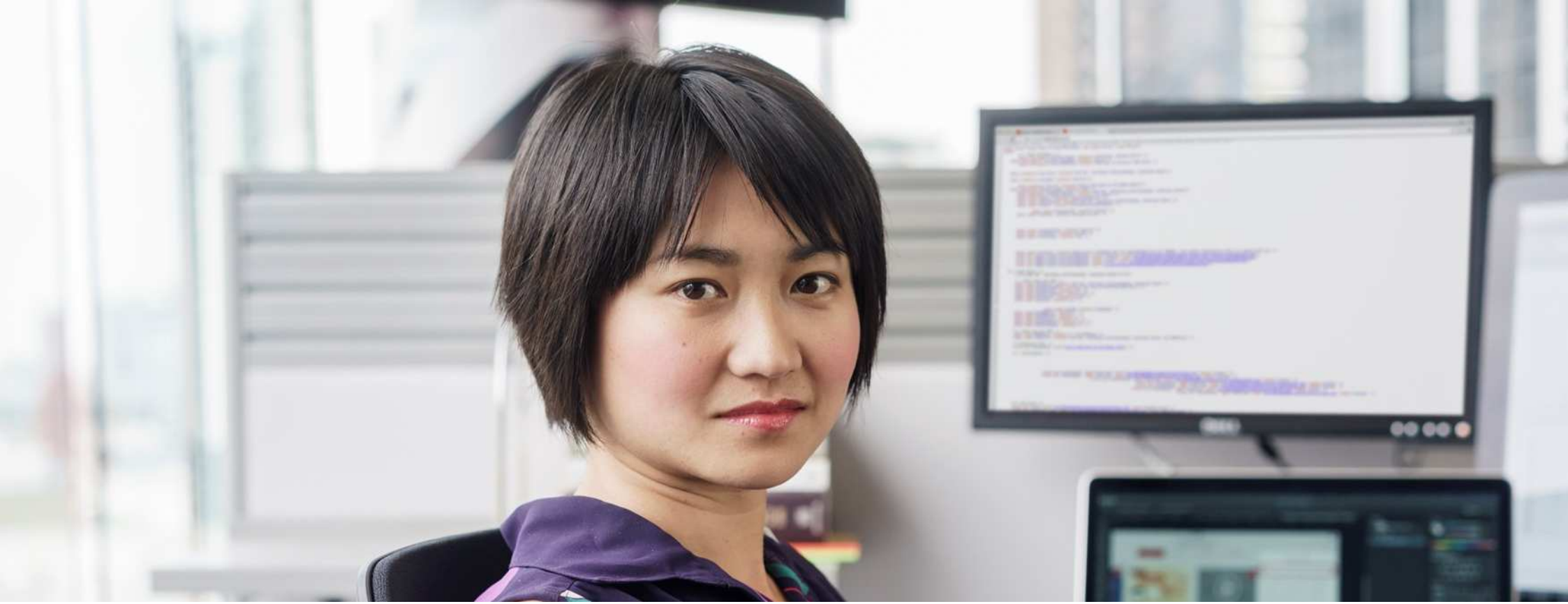
At current rates of progress, most OECD countries could close the pay gap within the next 50 years

Based on the current rate of convergence in the pay gap, we estimate how long it will take for the gender pay gap to close across the OECD. The gap in Poland, already at a low 7% and rapidly closing, could close within the next decade. Countries that have charted fairly rapid progress historically, such as Belgium and Luxembourg may see the gap close in under two decades. Much slower progress in Germany means that the gap may not close for over two centuries if historic trends continue (though there is clearly scope to accelerate this if it was a policy priority).

Figure 6: Time to close the gender pay gap

Source: PwC analysis, OECD, Eurostat.

Note: We have excluded other OECD countries where the historic data does not reveal a clear trend of convergence. The rate of current convergence has been estimated using a simple regression of the historical gender pay gap data for each country to produce a linear line of best fit. This has then been extrapolated to estimate how long it will take for the gap to close at current rates.



3

Case study: The gender pay gap in the Netherlands

Effective policies and business action is required to help close the gender pay gap in the Netherlands, which is largely driven by segregation in the labour market

Where does it start?

- **The gender pay gap in the Netherlands remains significant, with female workers earning on average 16% less than men.**
- In the Netherlands, since the 1990's **girls and women perform better at school** than boys and men. Girls and women have better grades and participate more often in higher education. Girls and women are less likely to leave school early and they graduate faster, compared to boys and men. The educational level of women under 45 is higher then the educational level of men of the same age group.
- The Dutch **educational system is preferential** to girls and women, as language becomes more important in even the beta subjects .
- Despite these excellent educational results, the **labour market position of Dutch women is weaker** then that of men. Dutch women are the least likely among the OECD countries to work full-time.
- The evidence suggests that the key factors that explain the gender pay gap in the Netherlands are **differences in work-life patterns** between men and women, and the **incidence of occupational segregation**.

What are the main factors behind the gender pay gap in the Netherlands?

- **Differences in work-life patterns:** Dutch women tend to spend even more time out of the workforce than women from other countries. Working part time has been the norm in the Netherlands for decades, especially the one-and-a-half earners model.
- Contributing to the part time work culture, is the relatively low housing expenditure of household gross adjusted disposable income. With 19 percent, this is relatively low compared to many other OECD countries. The necessity for both partners to work full time to be able to afford housing is relatively low.
- As wages of women generally are lower then those of their partners, Dutch women are more likely to reduce their working hours in order to care for children or family members. By doing this, they lose out on pay progression over the long-term. Studies suggest that the pay gap widens with the arrival of children.
- **Incidence of occupational segregation:** Women are more likely to work in sectors and occupations that are lower-paying, partly because these offer greater job flexibility. These sectors and occupations are more likely to prefer part time workers.

What are the policies to help address the pay gap?

- The gender pay gap matters, not only because inequalities between men and women are of interest in their own right, but also because this has serious implications for a woman's lifetime earnings and her ability to support her family and to save for retirement.
- Both policymakers and businesses play an important role in taking proactive action to address the root causes of the gender pay gap, e.g. reducing the amount of time women spend outside work, or supporting them in returning to work more effectively.
- Potential policies to help close the pay gap include **strengthening existing provisions for shared parental leave, increasing the availability of affordable childcare** and **stimulating women to study in and apply for jobs in STEM sectors.**
- Businesses can support female employees when returning to work post-motherhood in providing opportunities for ***flexible and part-time working*** and ***adopt diversity policies*** to change their business culture into a more female-friendly one. Businesses could also adopt ***skills recognition*** and change their ***performance review process*** into fairly recognising the skills and experience of its female employees.

Although the Netherlands still has the largest proportion of one-and-a-half earners, more Dutch women have started working full time

Figure 7 Patterns of employment in couples with children, 2014

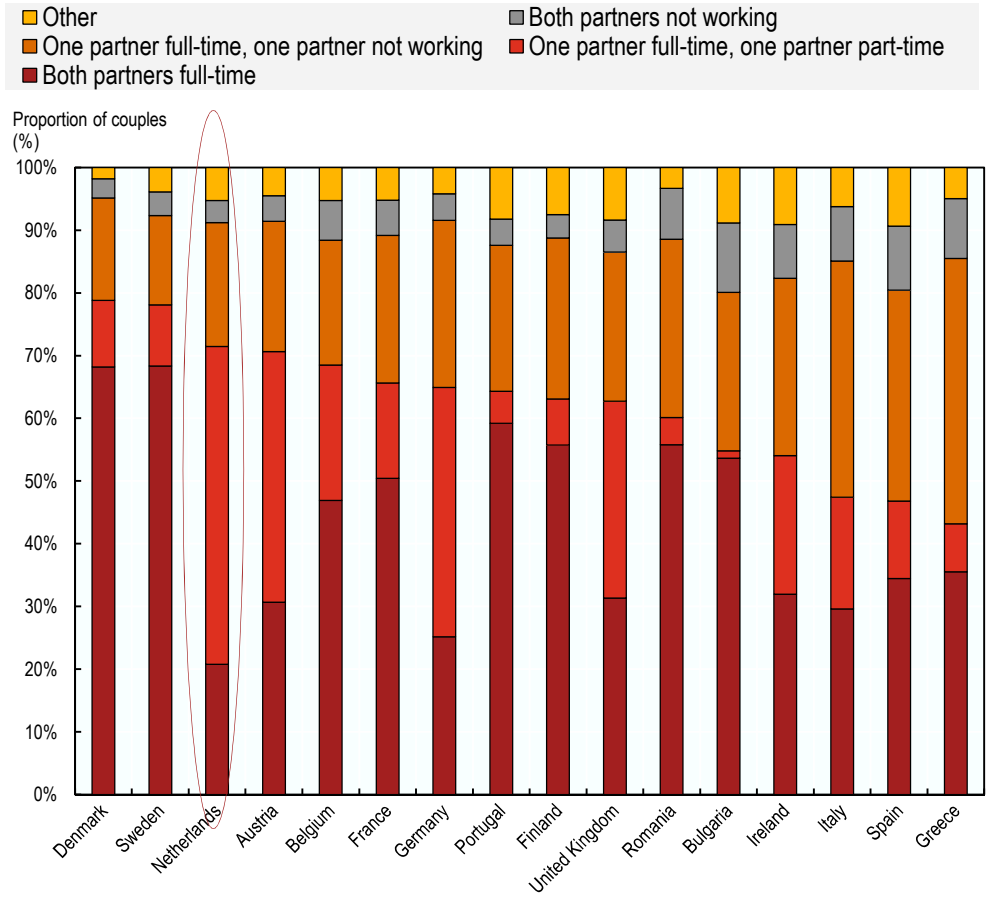
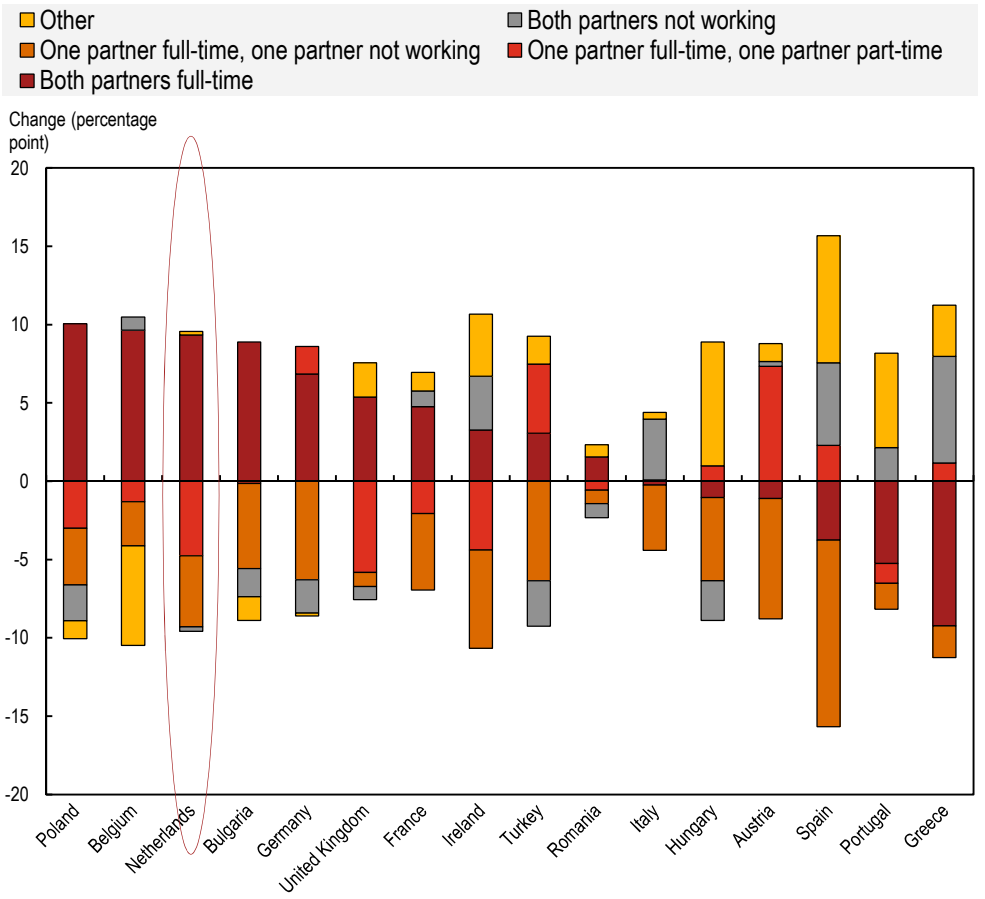


Figure 8 Changes in patterns of employment in couples with children, 2004-2014



Source: OECD

The pay gap is predominantly driven by occupational segregation and differences in work-life patterns, causing women to cluster in lower-paying sectors and occupations

Differences in work-life patterns

- Many women spend more time out of the workforce than men to have children or care for their family, either via career breaks, or by working part-time or fewer hours. Spending time out of work means that they miss out on pay progression. A study by the IFS (2016) shows that the gender pay gap tends to widen after the arrival of children, which coincides with career breaks.
- Olsen and Walby (2006) show that differences in work-life patterns explain more than a third of the gender pay gap.
- Working part-time or fewer hours is associated with slower pay progression (Connolly and Gregory, 2008).
- The desire or need to work part-time or flexibly also means that women are often forced into lower-paying sectors or occupations that can accommodate these preferences. Even those who are willing to return to work on a full-time basis face the challenge of overcoming biases against the "CV gap" which make it difficult for them to return to highly-competitive senior roles.

Incidence of occupational segregation

- Studies show that labour market rigidities, such as occupational segregation, is an important driver of the pay gap. Olsen and Walby (2006) show that this factor explains 18% of the pay gap in the UK.
- Segregation occurs when women cluster in sectors that tend to be lower-paying, for example in social care or education. Even within sectors, women are more likely to take up lower-paying or lower-skilled roles, such as administrative roles rather than senior or managerial roles.
- Sectors where many women work, are more likely to prefer part time workers. For example, in childcare and home care there are hardly any full time jobs in the Netherlands.
- Almost 75% of recently graduated women from vocational education work part time. As research from SCP (2017) indicates, a large part of these women are less positive about their salary and the number of hours they work. These women work possibly less hours that they would prefer.
- The reasons why women tend to work in specific sectors are complex. Part of this is due to social and cultural factors that children adopt from a young age, which influence their perspectives on "suitable" occupations for women.
- These perceptions are changing as more women enter traditionally male-dominated sectors. However, this has yet to translate fully into labour market outcomes: data from the Centraal Bureau voor de Statistiek shows that although 24% of STEM freshmen are female, women only account for 13% of the engineering workforce.
- Differences in work-life patterns, coupled with the lack of affordable childcare, exacerbates the degree of occupational segregation, as women become even more likely to cluster in lower-paying part-time occupations or sectors that offer greater job flexibility but at lower pay scales.

Occupational segregation explains part of the gender pay gap in the Netherlands

Horizontal segregation is where the workforce of a specific industry or sector mostly consists of a particular gender. Vertical segregation refers to a situation where career progression for a particular gender is limited. Figure 9 shows that Dutch women are more likely to cluster in lower-paying services sectors such as health and social care activities and household activities. Figure 10 shows that a little over half of the working Dutch women work in higher-skilled occupations. Horizontal segregation seems to be more of an issue for the Netherlands than vertical segregation.

Figure 9: Female workers as a % of total workers in each sector, 2015

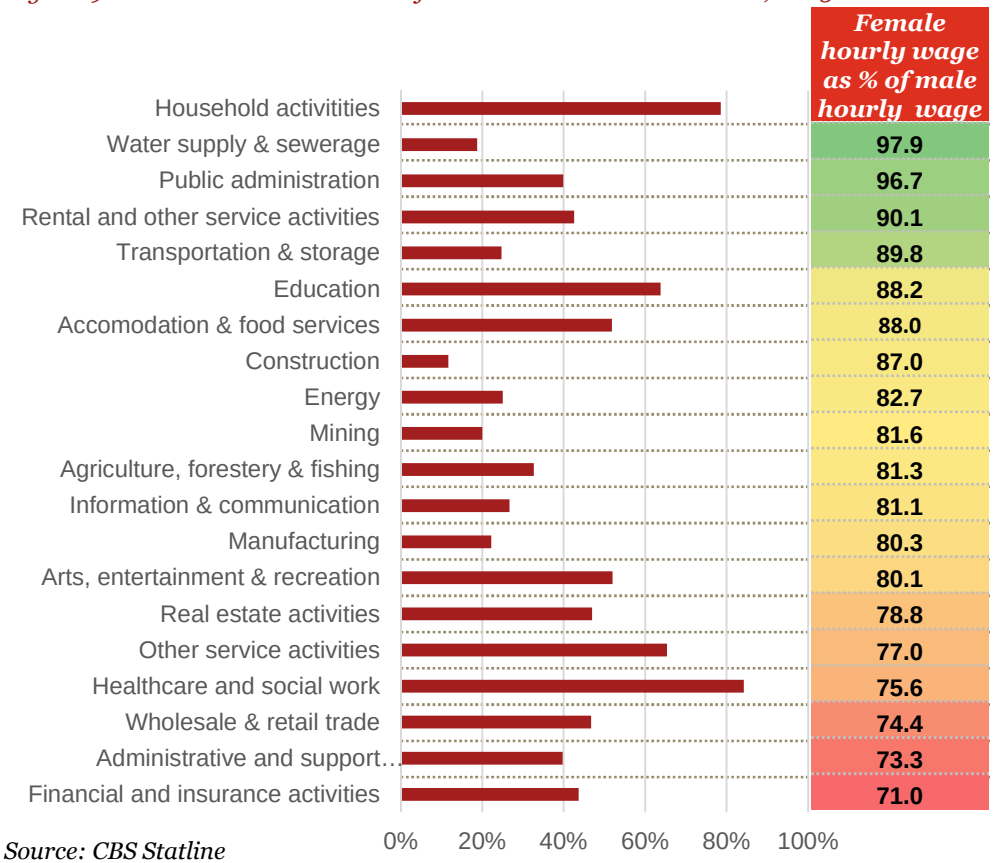
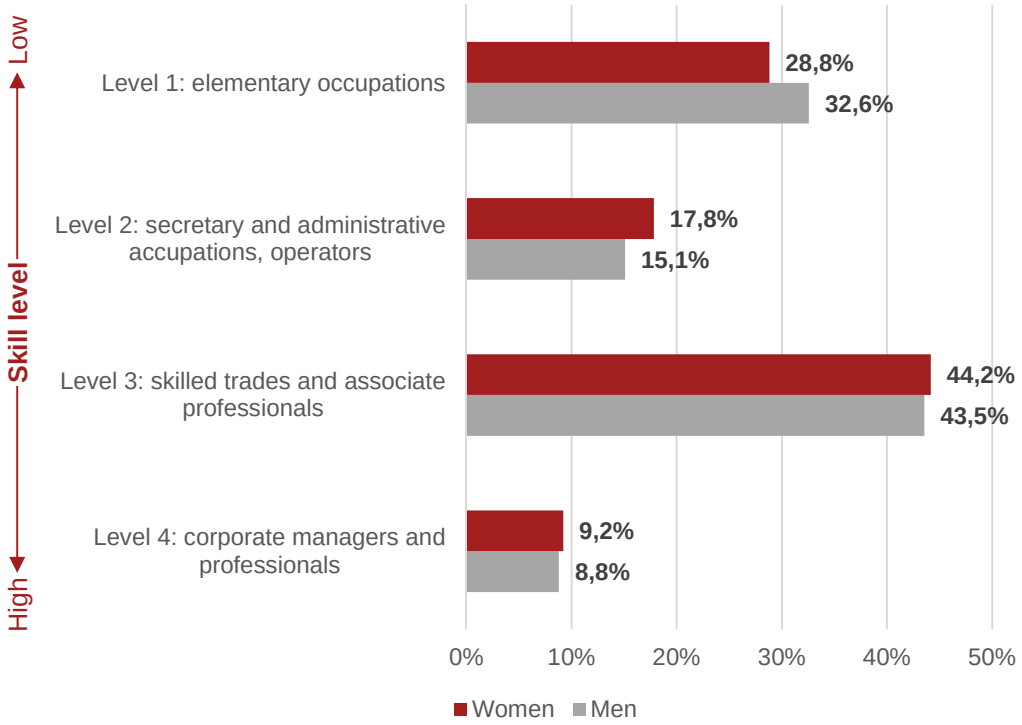


Figure 10: Share of employed women by occupation skill levels, 2015



Source: CBS Statline

The gender pay gap is expressed as the average hourly wage of women as percentage of the average hourly wage of men.

The largest gender pay gap in the Netherlands is observed in Zeeland while the gap is smallest in Amsterdam

We also explore regional differences in the gender pay gap across the Netherlands. We use an approach to measure the pay gap at the regional level that is consistent with the CBS's methodology to calculate the gender pay gap at the national level.

- Of the Corop regions within the Netherlands, the metropolitan area of Amsterdam has the lowest pay gap. Female wages as percentage of male wages are 68%. Amsterdam is closely followed by the regions Groningen City and The Hague.
- The low gender gap in Amsterdam is partly driven by relatively high number of higher educated women working in the metropolitan area of Amsterdam and the number of headquarters in this area.
- The city of Groningen region also has a large number of higher educated women, working in higher educated occupations in health care and education, where in The Hague a lot of women work in public administration. In public administration, the pay gap is relatively small.
- The largest gap is observed in Zeeland, where female wages as percentage of male wages are 53%. This is largely driven by occupational segregation: women in this region are employed in low-paying sectors such as wholesale and retail trade and health services.

Figure 11: Gender pay gap across the Netherlands: female yearly wage as % of male yearly wage

Source: PwC analysis, CBS

Note: 2016 gender pay gap results are based on 2014 data published by CBS. The gender pay gap has been calculated the average yearly wages of women as the percentage of the average yearly wages for men. This method is consistently with the CBS methodology to calculate the gender wage gap.

Public policies that increase the availability of affordable childcare, a more equal share in caring responsibilities and more non-traditional occupation can help narrow the gender pay gap

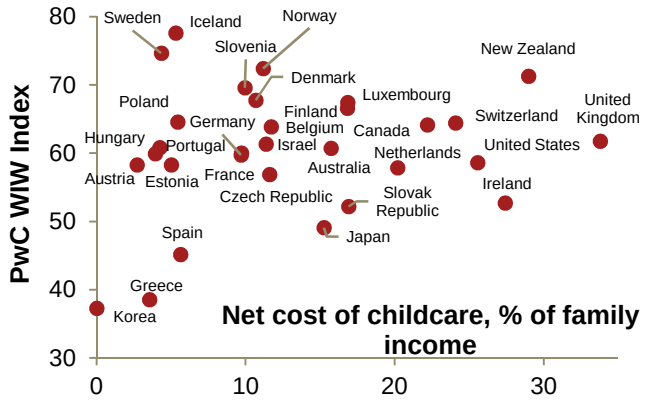
The gender pay gap matters, not only because inequalities between men and women are of interest in its own right, but also because the pay gap has serious implications for a woman's lifetime earnings and her ability to support her family and to save for retirement.

Introducing policies or incentives that address the root causes of the pay gap in the Netherlands could help narrow the gender pay gap.

Affordable childcare

- Another factor supporting women returning to work following motherhood is the availability of affordable and quality childcare.
- As our analysis shows, one of the key drivers of the gender pay gap is the differences in work-life patterns for men and women, which is exacerbated by the cost of childcare. As shown in Figure 12, childcare costs are positively correlated with the gender pay gap.
- Increasing the availability of affordable childcare could reduce the need for women to make the trade-off between work and childcare, thus enabling greater participation in the workforce.

Figure 12: Correlation between PwC WIW Index and childcare costs



Source: PwC analysis, OECD.

Shared parental leave

- Women who return to work following a career break to care for their families often face a 'motherhood penalty'; a systematic difference in pay for working mothers in comparison to women without children.
- One way of addressing this is by introducing policies which allow parents to share the burden of childcare.
- An increase in take-up of parental leave by the father is associated with an increase in the mother's earnings, as well as more equitable distribution of household tasks including childcare, which encourages female employment.

Non-traditional occupations

- Female participation in non-traditional occupations, such as science, engineering, technology and mechanics (STEM), is still relatively low. However, employee demand is high, as are salaries. The Dutch government should further increase their efforts in stimulating women to study in and apply for jobs in STEM.

Businesses can help address the gender pay gap and improve their own pipeline of female leaders by providing greater support to women in developing their careers

The implications of the gender pay gap are also important to businesses. The pay gap is symptomatic of skills shortages faced by businesses and the lack of diversity in leadership pipelines. For example, the average female boardroom membership across the OECD was only 17%.

Businesses that take actions which help to tackle the root causes of the pay gap could benefit from an increase in the pool of talent that they can access and greater diversity, as well as improving employee retention and engagement.

Supporting women returning to work post-motherhood

- Many women intend to return to the workforce after having children. However, they face the stigma associated with working part-time. Many women still experience that working part-time reduces their career opportunities. Businesses could also ensure that they establish an organisational culture that fairly recognises the skills and experience of its female employees and that reduces sticky floors and glass ceilings.

Providing opportunities for flexible and part-time working

- The undersupply of part-time or flexible opportunities in higher skilled and professional roles is an important contributing factor to the occupational downgrading women face. A survey in the UK conducted by Timewise in 2015 showed that only 6% of advertised roles with a salary of over £20,000 are available on a flexible basis; this shrinks to 2% for roles with a salary of over £100,000.
- Flexible working can take different forms; generally, it means greater autonomy for workers to determine their own work patterns and where they choose to work.
- Increasing the availability of quality part-time or flexible roles can help address this demand gap. It would also help mitigate the risk of occupational downgrading, while widening the pool of talent that businesses can access.

Supporting women's career advancement

- As more businesses adopt the concept of self-managing teams and employees carry more responsibilities, client orientation and collaboration skills become more important. As businesses change, they need to move away from monitoring employee performance based on inputs such as working hours, towards recognizing skills and measuring outcomes instead.
- Businesses could also ensure that they establish a performance review process that fairly recognises the skills and experience of its female employees. Using data analystics in the performance management process could identify the hidden gems in the workforce.

Attracting talent using employee value proposition

- Millennials expect their employer to offer varied and challenging jobs. The mission and purpose of the company are important to them. Flexibility and a healthy work-life balance are also must-haves in their job. To be able to attract and retain both male and female millennials, businesses would need to adapt their employee value proposition to become more millennial and female-friendly.

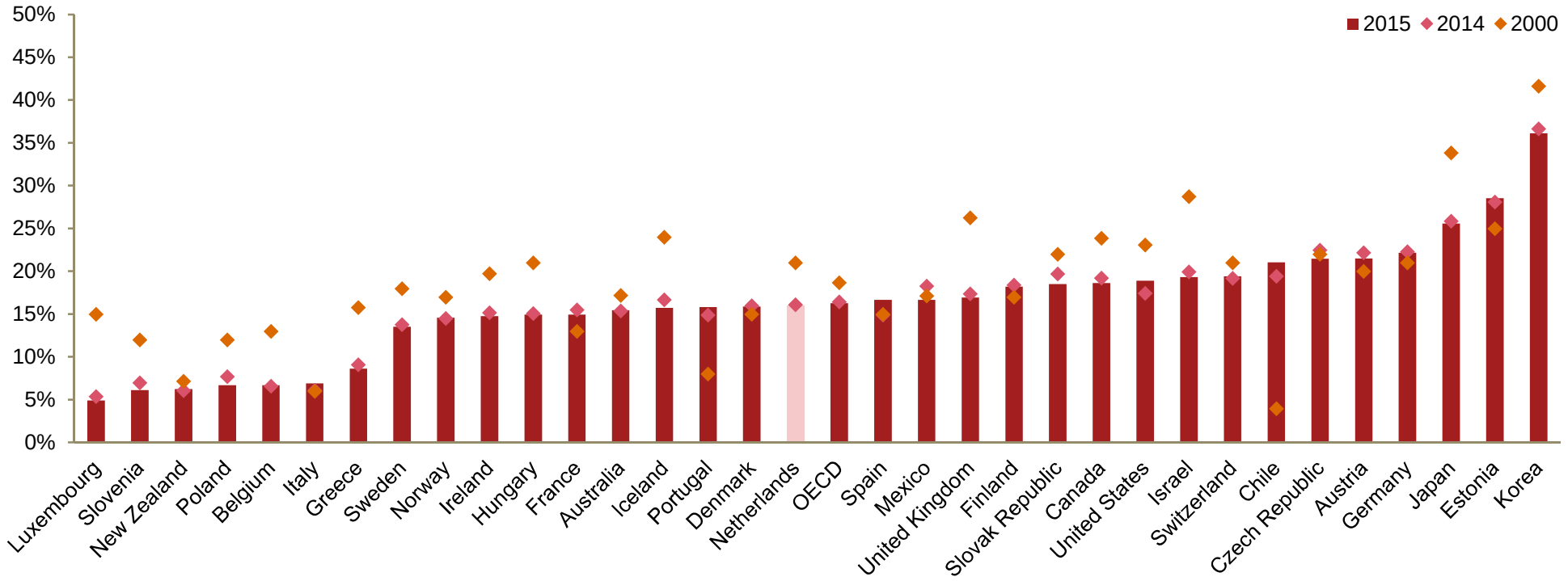
4

Appendix: Long term trends in female economic empowerment indicators

The gender pay gap

The average gender pay gap across OECD countries remains unchanged between 2014 and 2015. This masks the worsening gap in countries such as Chile and the US where the gap widened by 2pp. A few countries have also seen a gradual worsening over the longer-term, such as Chile and Portugal. The Netherlands has seen a narrowing of its gender pay gap from 21% in 2000 to 16% in 2015. Similarly, the gap in Luxembourg has closed by 10pp between 2000 and 2014.

Figure 13: Gender pay gap, 2000 – 2015

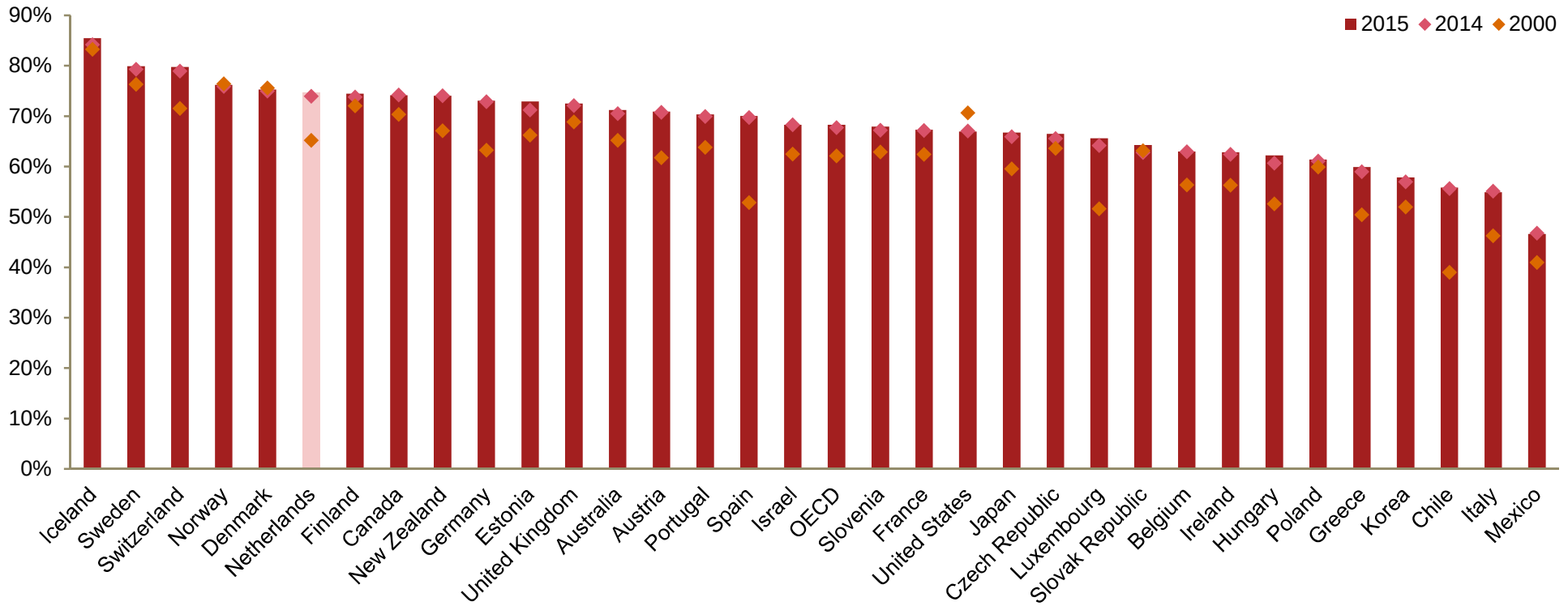


Source: OECD, Eurostat. OECD data refers to the difference in the median earnings for all full-time employees, while Eurostat compares the mean earnings. Data extrapolated using linear interpolation where data unavailable.

Female labour force participation

Overall female labour force participation rates remained fairly constant on average across the OECD from 2014 to 2015. The biggest short-term gains were observed in Luxembourg and Estonia. Over the longer term, Spain has seen the most improvement: female participation rates rose from 53% in 2000 to 70% in 2015. Conversely, participation rates in the United States fell from 71% to 67% over the same period. The Netherlands saw a small increase in the participation rate between 2014 and 2015, continuing a longer-term trend of improvement.

Figure 14: Female labour force participation rate, 2000 – 2015

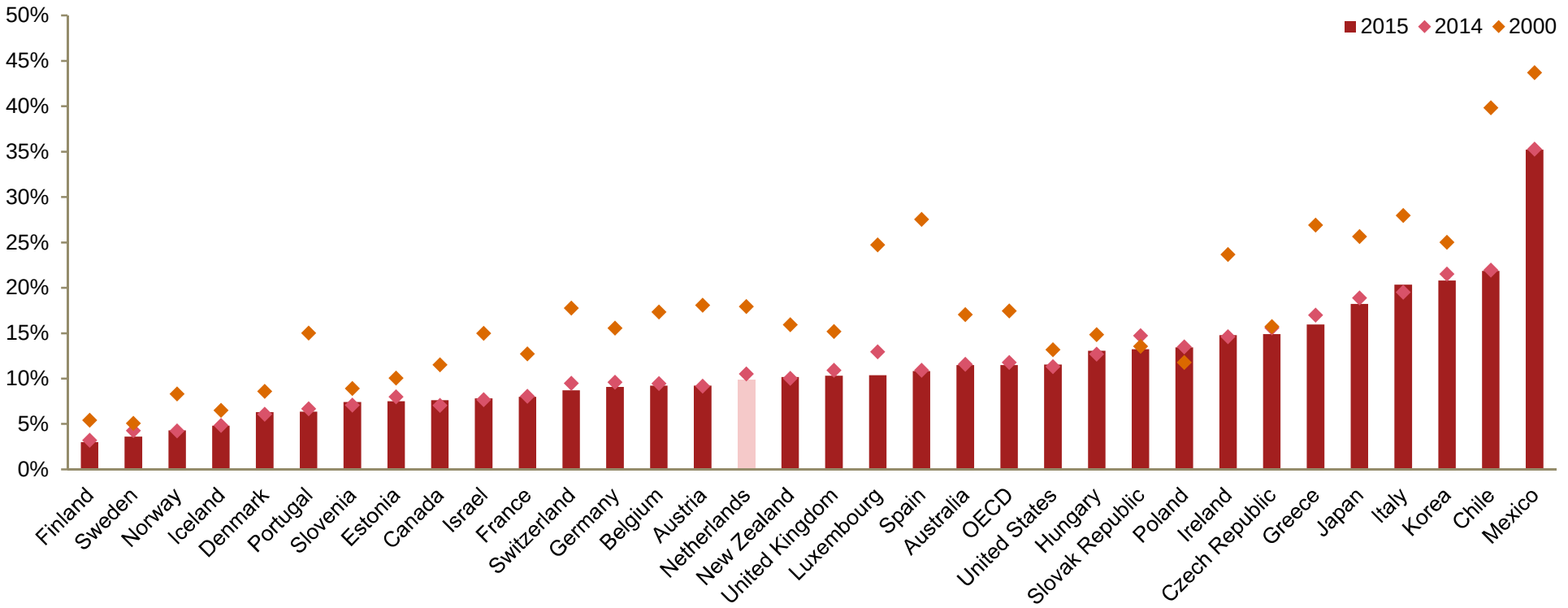


Source: OECD, BLS.

Gap between male and female labour force participation

The gap in participation rates decreased slightly (by 1pp) on average across OECD countries between 2014 and 2015. Luxembourg saw the largest improvement, while Finland maintained its position as the OECD country with the smallest male/female participation gap. Over the longer term, the gap in labour force participation rates between males and female has narrowed across the majority of OECD countries; the biggest improvement has been seen in Spain and Chile where the gap has closed by 17pp and 18pp respectively.

Figure 15: Gap between the male and female labour force participation rate, 2000 – 2015

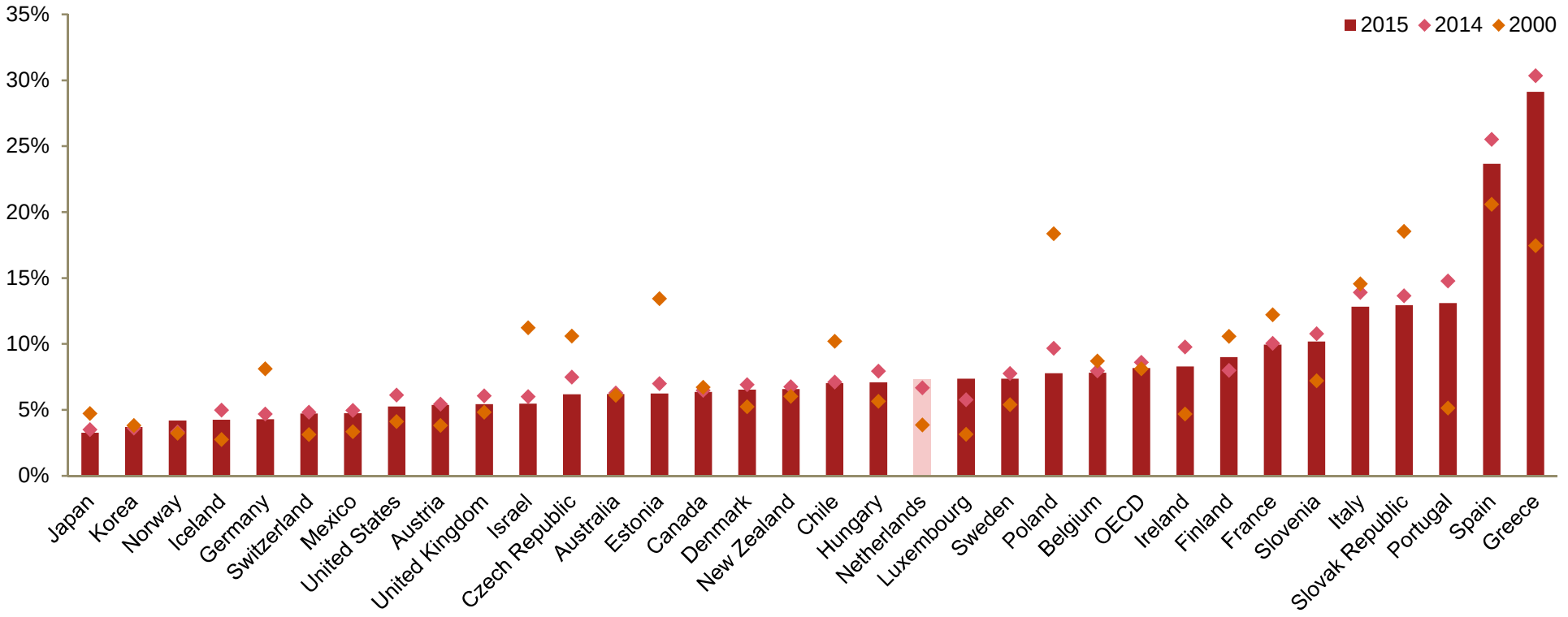


Source: OECD.

Female unemployment

Female unemployment fell by 1pp on average across the OECD. The largest improvements were observed in Ireland, Spain and Portugal, driven by improving economic conditions. Since 2000, Poland has seen the most significant reduction in female unemployment, which has fallen from 18% to 8% in 2015. On the other hand, female unemployment in Greece increased from 17% to 29% over the same period. The Netherlands however actually saw an increase from 6.7% to 7.3% in female unemployment in 2015.

Figure 16: Female unemployment rate, 2000 – 2015

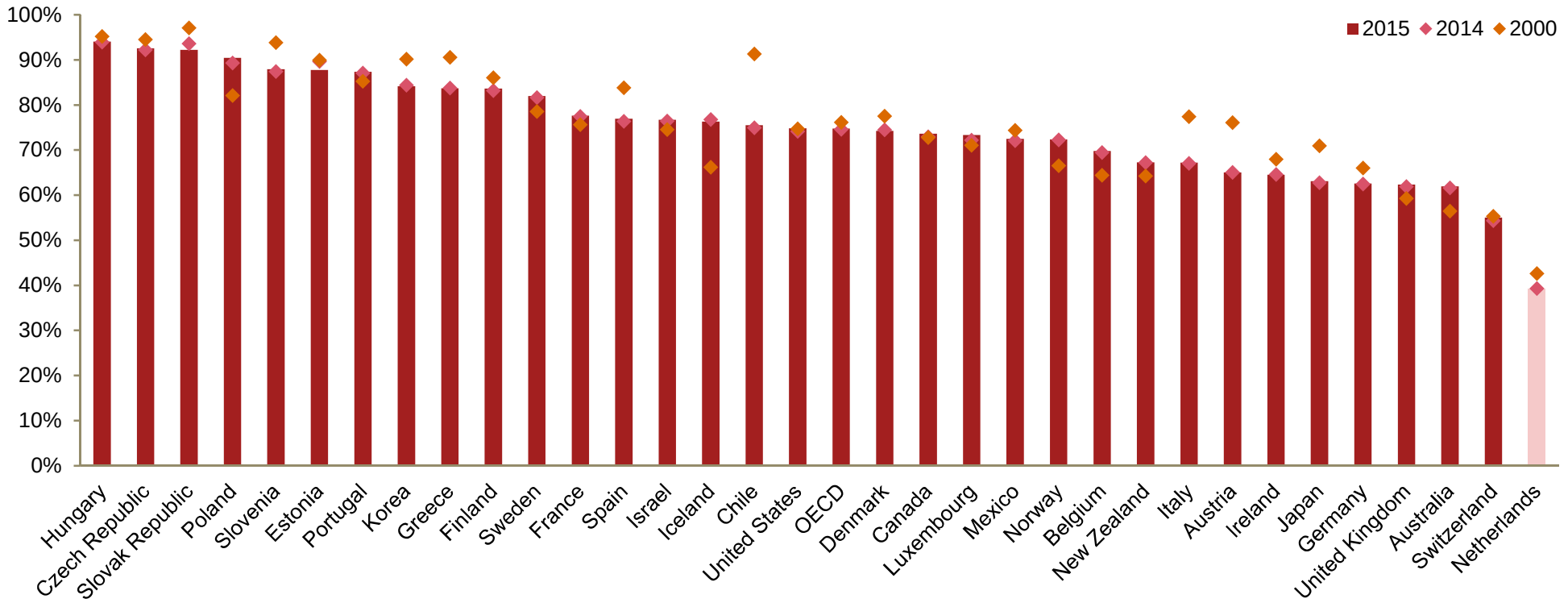


Source: OECD.

Female full-time employment rate

The share of women in full-time employment has remained largely constant between 2014 and 2015 across the majority of OECD countries. Since 2000, the female full-time employment rate has increased in countries such as Poland and Iceland while in others, particularly Chile, Italy and Austria, the share of women in part-time employment has risen. The Netherlands continues to lag behind on this indicator, even decreasing since 2000.

Figure 17: Female full-time employment rate, 2000 – 2015



Source: OECD.

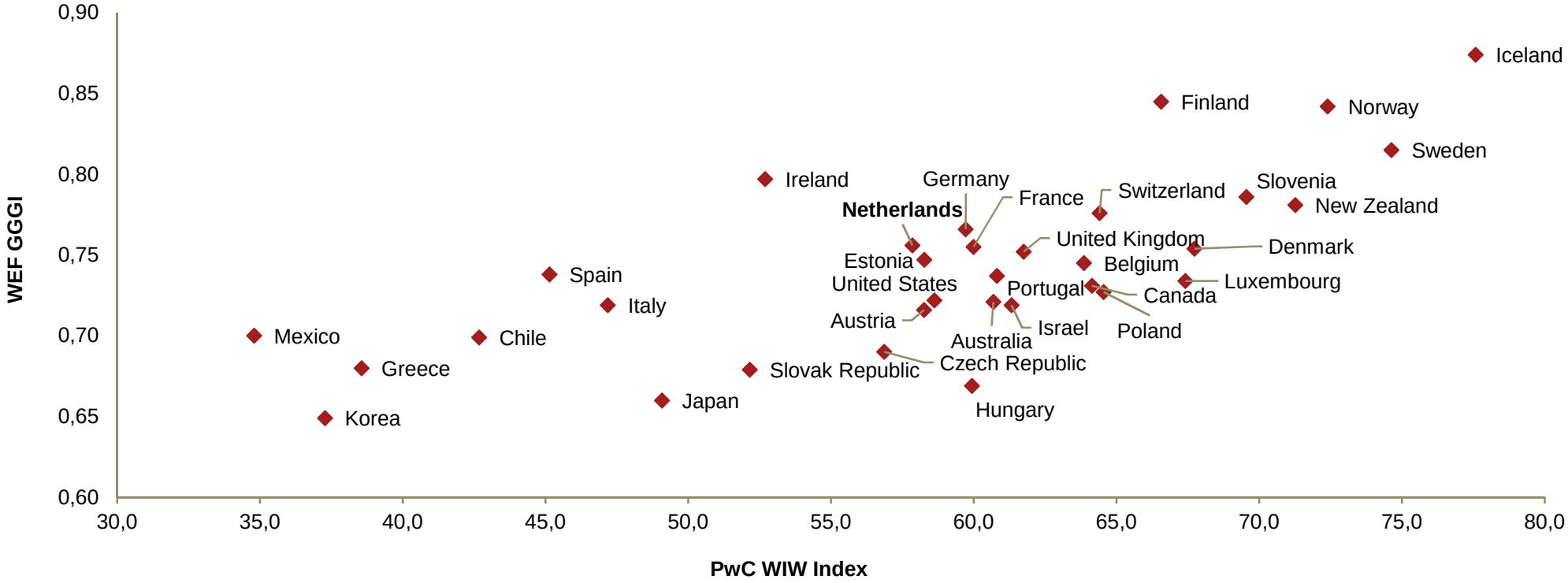
5

Appendix: Comparisons with other measures

Comparing PwC WIW Index performance against the WEF Global Gender Gap Index for 2016

The WEF GGG Index provides a measure of the gap between men and women across countries. It is composed of 4 sub-indices: Economic participation and opportunity, education attainment, health and survival and political empowerment. The index is highly correlated with the PwC WIW Index with a correlation coefficient of 0.72.

Figure 18: PwC WIW Index performance vs the WEF Global Gender Gap Index 2016

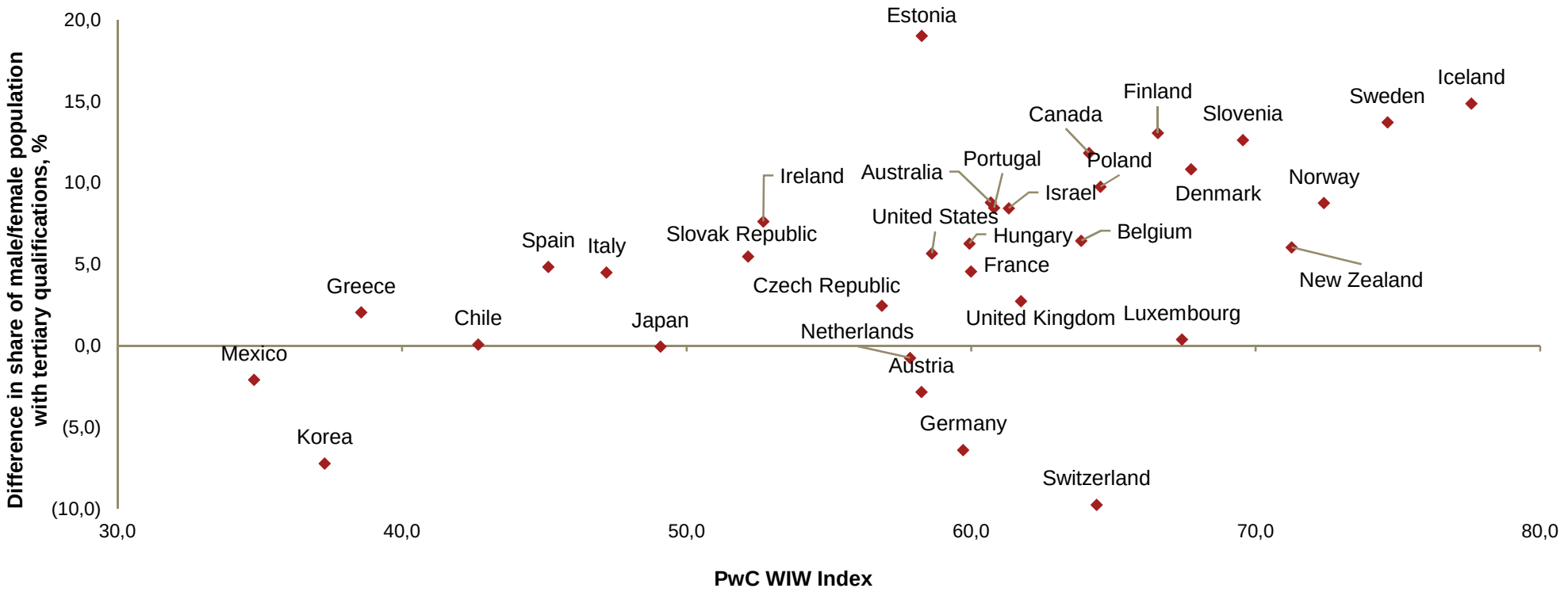


Source: OECD.

Comparing PwC WIW Index performance against the gap between male and female educational attainment

There is a positive correlation, with a correlation coefficient of 0.51 between PwC WIW Index performance and the difference in the percentage of men and women who have tertiary qualifications, indicating a potential relationship between female economic empowerment and the gap between male and female educational attainment.

Figure 19: Correlation between PwC WIW Index and difference in share of male/female population with tertiary qualifications, 2015



Source: PwC analysis, OECD.

6 *Technical appendix: Data and methodology*

Comparison of country results, 2000-2015

	2000		2014		2015	
	Index	Rank	Index	Rank	Index	Rank
Iceland	68.1	4	75.3	1	77.6	1
Sweden	69.3	1	73.2	2	74.6	2
Norway	68.2	3	73.1	3	72.4	3
New Zealand	63.0	8	71.2	4	71.3	4
Slovenia	64.9	6	67.9	5	69.6	5
Denmark	69.2	2	67.2	6	67.7	6
Luxembourg	46.4	23	66.1	8	67.4	7
Finland	63.7	7	66.8	7	66.6	8
Poland	48.3	19	61.4	12	64.5	9
Switzerland	54.6	11	63.4	11	64.4	10
Canada	54.9	10	63.8	9	64.1	11
Belgium	48.3	20	63.6	10	63.9	12
United Kingdom	49.3	17	60.1	14	61.8	13
Israel	40.1	26	60.3	13	61.3	14
Portugal	65.6	5	59.5	16	60.8	15
Australia	51.5	14	60.1	15	60.7	16
France	53.3	12	59.3	17	60.0	17
Hungary	49.8	16	58.2	20	59.9	18
Germany	47.9	21	58.8	19	59.7	19
United States	57.7	9	59.0	18	58.6	20
Estonia	49.0	18	56.9	23	58.3	21
Austria	52.5	13	57.6	22	58.3	22
Netherlands	**47.5**	**22**	**57.6**	**21**	**57.9**	**23**
Czech Republic	50.3	15	53.7	24	56.9	24
Ireland	43.9	25	50.8	25	52.7	25
Slovak Republic	43.9	24	49.0	26	52.2	26
Japan	33.9	29	47.7	27	49.1	27
Italy	38.6	27	47.3	28	47.2	28
Spain	31.0	31	44.4	29	45.1	29
Chile	36.1	28	43.6	30	42.7	30
Greece	33.5	30	35.8	32	38.6	31
Korea	27.9	33	36.0	31	37.3	32
Mexico	27.9	32	33.2	33	34.8	33
OECD average	**50.0**		**57.6**		**58.7**	

Source: OECD.

Summary statistics
Top 18 countries in the PwC WIW Index

Country	Pay gap		Labour force participation		Female unemployment		Women in full-time employment	
	Difference between female and male median pay, %		% Female		%		% of total female employment	
	2014	2015	2014	2015	2014	2015	2014	2015
Iceland	17%	16%	84%	85%	5%	4%	77%	76%
Sweden	14%	14%	79%	80%	8%	7%	82%	82%
Norway	15%	15%	76%	76%	3%	4%	72%	72%
New Zealand	6%	6%	74%	74%	7%	7%	67%	67%
Slovenia	7%	6%	67%	68%	11%	10%	87%	88%
Denmark	16%	16%	75%	75%	7%	7%	75%	74%
Luxembourg	5%	5%	64%	66%	6%	7%	72%	73%
Finland	18%	18%	74%	74%	8%	9%	83%	84%
Poland	8%	7%	61%	61%	10%	8%	89%	90%
Switzerland	19%	19%	79%	80%	5%	5%	54%	55%
Canada	19%	19%	74%	74%	6%	6%	73%	74%
Belgium	7%	7%	63%	63%	8%	8%	70%	70%
United Kingdom	17%	17%	72%	73%	6%	5%	62%	62%
Israel	20%	19%	68%	68%	6%	5%	77%	77%
Portugal	15%	16%	70%	70%	15%	13%	87%	87%
Australia	15%	15%	71%	71%	6%	6%	62%	62%
France	16%	15%	67%	67%	10%	10%	78%	78%
Hungary	15%	15%	61%	62%	8%	7%	94%	94%

Source: OECD, Eurostat.

Summary statistics
Next 15 countries in the PwC WIW Index

Country	Pay gap		Labour force participation		Female unemployment		Women in full-time employment	
	Difference between female and male median pay, %		% Female		%		% of total female employment	
	2014	2015	2014	2015	2014	2015	2014	2015
Germany	22%	22%	73%	73%	5%	4%	63%	63%
United States	17%	19%	67%	67%	6%	5%	74%	75%
Estonia	28%	29%	71%	73%	7%	6%	90%	88%
Austria	22%	21%	71%	71%	5%	5%	65%	65%
Netherlands	**16%**	**16%**	**74%**	**75%**	**7%**	**7%**	**39%**	**39%**
Czech Republic	23%	21%	66%	66%	7%	6%	92%	93%
Ireland	15%	15%	62%	63%	10%	8%	65%	65%
Slovak Republic	20%	19%	63%	64%	14%	13%	94%	92%
Japan	26%	26%	66%	67%	4%	3%	63%	63%
Italy	6%	7%	55%	55%	14%	13%	67%	67%
Spain	15%	17%	70%	70%	26%	24%	76%	77%
Chile	19%	21%	56%	56%	7%	7%	75%	76%
Greece	9%	9%	59%	60%	30%	29%	84%	84%
Korea	37%	36%	57%	58%	4%	4%	84%	84%
Mexico	18%	17%	47%	47%	5%	5%	72%	72%
OECD average	**16%**	**16%**	**68%**	**68%**	**9%**	**8%**	**75%**	**75%**

Source: OECD, Eurostat.

About the PwC Women in Work Index

The PwC Women In Work is a weighted average of various measures that reflect female economic empowerment, including the equality of earnings, the ability of women to access employment opportunities and job security. The indicators that make up the Index and their associated weights are provided on the following page.

Scoring methodology

- Indicators are standardised using the z-score method, based on the mean and standard deviation of the sample of 33 OECD countries (all OECD countries excluding Turkey and Latvia) in 2000, to allow for comparisons across countries and across time for each country. This is a standard method used by PwC and others for many other such indices.
- Positive/negative factors were applied for each variable based on the table on the next page.
- The scores are constructed as a weighted average of normalised labour market indicator scores.
- Finally, the scores are rescaled to form the PwC Index with values between 0 and 100 and an average value across 33 countries set by definition to 50 in 2000. The average index value for 2015 can, however, be higher or lower than this 2000 baseline.

Data sources

- Labour market data obtained for 2015, except where specified. All data provided by the OECD with the exception of data on the pay gap, which has been obtained from Eurostat for all countries with the exception of the following, where data has been obtained from the OECD: Australia, Canada, Chile, Greece, Ireland, Israel, Japan, Korea, Mexico, New Zealand, United Kingdom and United States.
- Methodological differences account for differences between data on the gender pay gap reported by the OECD and Eurostat. The OECD pay gap measures the difference in median earnings for all male and female full-time employees in all sectors, whereas the headline Eurostat pay gap (largely used in our analysis) measures the difference in mean hourly earnings for all male and female employees for all sectors except agriculture and public administration.

Note: Throughout this report, we follow convention in the literature and refer to the gap between male and female pay as the 'gender pay gap'. This however accounts only for differences in hourly earnings and not overall pay which includes bonus payments.

PwC WIW Index methodology
Variables included in scoring

Variable	*Weight*	*Factor*	*Rationale*
Gap between female and male earnings	25%	Wider pay gap penalised	Earnings equality underpins the fundamental principle of equal pay for equal work.
Female labour force participation rate	25%	Higher participation rates given higher score	Female economic participation is the cornerstone of economic empowerment, which is a factor of the level of skills and education of women, conducive workplace conditions, and broader cultural attitudes outside the workplace (e.g. towards shared childcare and distribution of labour at home).
Gap between female and male labour force participation rates	20%	Higher female participation rate relative to male participation rate given higher score	Equality in participation rates reflect equal opportunities to seek and access employment opportunities in the workplace.
Female unemployment rate	20%	Higher unemployment penalised	The female unemployment rate reflects the economic vulnerability of women. Being unemployed can have longer-term impacts in the form of skills erosion, declining pension contributions and increased reliance on benefits.
Share of female employees in full-time employment	10%	Higher share of full-time employment given higher score	The tendency for part-time employment may adversely affect earnings, pensions and job security. However, this factor is given a lower weight in the index since some women may prefer part-time jobs to fit flexibly with caring roles.

Methodology for calculating potential GDP impacts from increasing employment rates

We break down GDP in the following way:

GDP	=	***Female FT workers * GDP per FT worker***	+	***Male FT workers * GDP per FT worker***	+	***Female PT workers * GDP per PT worker***	+	***Male PT workers * GDP per PT worker***

We consider the potential boost to GDP under two different scenarios, holding the employment rate for male part-time (PT) and full-time (FT) workers constant:

- Increasing the female PT and FT employment rates to that of a benchmark country
- Increasing the female PT and FT employment rates to that of the male PT and FT employment rates in the same country

Simplifying assumptions

In order to estimate the GDP impacts of increasing female employment rates, with the data available, we have made the following simplifying assumptions:

- Total employment in the economy is equal to employment within the 15-64 age group.
- A full-time (FT) worker is twice as productive on average as a part-time (PT) worker.

Methodology for measuring the gains from closing the gender pay gap

We consider the potential increase to total female earnings from completely closing the gender pay gap such that the average annual earnings for women is equal to the average annual earnings for men. This allows us to calculate the average male and female earnings from data on the total male and female earnings. We breakdown total male and female earnings as follows:

Total earnings	=	*Average male earnings * Male workers*	+	*Average female earnings * Female workers*

where

Average male earnings	=	*Average female earnings*	/	*(1 - gender pay gap)*

In order to estimate the potential gains from closing the gender pay gap, we made the following simplifying assumptions:

- Total employment in the economy is equal to employment within the 15-64 age group.
- The median wages, which form the basis of comparison for the gender pay gap in OECD data, are equivalent to mean wages.
- The gender pay gap is closed by increasing female wages to match male wages rather than by decreasing male wages to match female wages.
- The elasticity of female employment to a change in wages is 0, meaning that a 1% increase in wages results in no change in female employment. This takes into account the counteracting effects of labour supply and demand elasticities: an increase in wages makes it more expensive for employers to hire more workers, however higher earnings also incentivise potential workers to seek employment. Our literature review suggests that:
- Estimates of labour supply elasticity range from 0.5 to 0.9 [1].
- Estimates of labour demand elasticity range from – 0.5 to – 0.3 [2].
- We take a conservative view that the counteracting effects of cancel each other out with no resulting change in female employment.
- The simplifying assumptions provide us with conservative gain estimates for the following reasons:
- The gender pay gap is likely to be higher at the mean, which may be skewed upwards by a small number of high earners amongst male employees, than at the median which has been used to obtain data for at least 10 countries, as noted in the data sources above [3].
- The 64+ age group has not been included in the analysis and therefore the increase in female earnings within this age group from closing the gender pay gap has not been accounted for.

[1] *Source: Blundell, R. et al. (2013) 'Female Labour Supply, Human Capital and Welfare Reform', IFS Working Paper W13/10.*

[2] *Source: Merikull, J. and Room, T. (2014). 'Are foreign-owned firms different? Comparison of employment volatility and elasticity of demand', European Central Bank Working Paper Series No 1704.*

[3] *Source: ONS (2015) 'Annual Survey of Hours and Earnings, 2015 Provisional Results'.*

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