

The gender employment gap: Challenges and solutions



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When citing this report, please use the following wording:

Eurofound (2016), *The gender employment gap: Challenges and solutions*, Publications Office of the European Union, Luxembourg.

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With special thanks to Professor Alessandra Mattei, Department of Statistics, University of Florence, for her feedback and guidance, and Joanna Napierala for her valuable help and support with the data analysis.

Luxembourg: Publications Office of the European Union

Print: ISBN: 978-92-897-1551-5 doi:10.2806/170147 TJ-02-16-865-EN-C

PDF: ISBN: 978-92-897-1550-8 doi:10.2806/75749 TJ-02-16-865-EN-N

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Printed in Luxembourg

Cover image: Shutterstock

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Country codes

EU Member States

AT	Austria	FI	Finland	NL	Netherlands
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	HR	Croatia	PT	Portugal
CY	Cyprus	HU	Hungary	RO	Romania
CZ	Czech Republic	IE	Ireland	SE	Sweden
DE	Germany	IT	Italy	SI	Slovenia
DK	Denmark	LU	Luxembourg	SK	Slovakia
EE	Estonia	LT	Lithuania	UK	United Kingdom
EL	Greece	LV	Latvia		
ES	Spain	MT	Malta		

Country groups

EU15	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom
EU12	Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia

Abbreviations used in the report

ALMPs	active labour market policies
GDP	gross domestic product
EQLS	European Quality of Life Survey
EIGE	European Institute for Gender Equality
EU-LFS	European Union Labour Force Survey
EU-SILC	European Union Statistics on Income and Living Conditions
ISCED	International Standard Classification of Education
NEET	not in employment, education or training
PSM	propensity score matching
SNA	System of National Accounts (United Nations)

Executive summary

Introduction

Women's labour market participation in the European Union has increased over recent decades. In 2014, women comprised almost 46% of people active in the EU labour market. Nevertheless, women's participation rates are still systematically lower than those of men in almost all Member States.

This report explores the main characteristics and the evolution of gender gaps in labour market participation, employment and economic status. It looks at the main determinants of female labour market participation, investigating the interplay with individual and household characteristics. It examines the economic loss to the EU of the gender gap in employment and undertakes a forecasting exercise to examine the medium- and long-term prospects for increasing female participation rates. The report also studies the social effects of women's participation in the labour market, as these effects go beyond the economic sphere and extend to women's well-being and to society as a whole. Finally, it provides an overview and assessment of the effectiveness of policy measures promoting the labour market participation of women in six Member States (Denmark, France, Germany, the Netherlands, Sweden and the United Kingdom), drawing attention to particularly successful and innovative cases.

Policy context

Increasing the participation of women in the labour market is crucial to meet the Europe 2020 target to achieve an overall employment rate of at least 75% by 2020. The 'Strategy for equality between women and men 2010–2015' proposed concrete actions for addressing several issues, such as the economic independence of women and equality in decision-making. In the 2013 Social Investment Package, the European Commission reaffirmed the importance of fostering higher participation of women. This policy framework highlighted that gender gaps in employment rates, as well as other gender disparities in the labour market, need to be reduced or eliminated to decrease the risk of social exclusion and poverty among women and to achieve inclusive growth. A policy roadmap has been provided to facilitate the 2014 implementation of the Social Investment Package in Member States and to help them reach the goals set in the Europe 2020 strategy. In August 2015, the Commission published a roadmap for the initiative 'A new start to address the challenges of work–life balance faced by working families'. The initiative aims to modernise and adapt the current EU

legal and policy framework to today's labour market, to allow parents with children or dependent relatives to better balance their care and professional responsibilities.

Key findings

In 2014, the EU employment rate for people aged 15 to 64, as measured by the EU's Labour Force Survey, was 59.6% for women and 70.1% for men. Since 2008, the female employment rate has increased only slightly, with the convergence in employment driven by the relative worsening of the male employment rate. The gender gap in employment rates is highest in Greece, Italy and Malta, while it remains low in northern countries such as Finland, Latvia, Lithuania and Sweden.

The total cost of a lower female employment rate is estimated to have been around €370 billion in 2013, corresponding to 2.8% of the EU's GDP. This is the sum of resource costs, which represent forgone earnings and missed welfare contributions of individuals to society, and public finance costs, comprising individual welfare transfers and social benefits. The cost of a woman's exclusion from employment throughout her working life is estimated at between €1.2 million and €2 million, depending on her educational level.

The study acknowledges that the unpaid domestic work performed by women who are not active in the labour market contributes substantially to the economy; however, estimating the monetary value of this labour was beyond the scope of the study.

An exercise was conducted to forecast how the future participation rates of women might be influenced by different types of policy intervention as well as no intervention. The results indicate coordinated and synergetic policy action may boost markedly the share of women who participate in the labour market.

Participation has not only economic implications, but also social effects. It improves a person's perceptions of their overall quality of life and improves the quality of society. Women in employment evaluate their lives more positively than those outside the labour market. They have higher levels of economic security and social inclusion, and they are more empowered. However, in general terms, the effects that employment has on these dimensions are higher for men than for women.

Policies to promote women's participation in the labour market vary considerably in the way they support individuals to move into employment or to increase their working hours. They also differ in their breadth of

application and target groups. The results of an examination of 18 policies reveal various determinants of their effectiveness. Among them are the provision and flexibility of childcare services, flexibility of parental leave and other leave arrangements, a workplace culture supportive of flexible working, and responsiveness to changing needs over the life course.

Policy pointers

- The female activity rate increased steadily during the crisis, although at a slower pace than before. Despite a narrowing of the gender participation gaps in most Member States, they remain significant, as do gender differences in the quality and forms of employment.
- Gender gaps in employment in Europe lead to significant and immediate economic losses. An increase in female labour market participation has the potential to boost GDP growth substantially in the medium and long term.
- Work is not merely a source of income that ensures adequate living standards, but is also important for personal well-being and for society as a whole. It is a major mechanism for social inclusion, being the primary means through which citizens relate to society and contribute to maintaining it.
- Policies and initiatives aiming to foster female labour market participation should focus on moving women into employment, creating incentives for employers to increase labour demand and providing childcare support, various forms of leave and flexible working arrangements. Education is a key tool in EU policy to tackle gender gaps and stereotypes.
- It is key that employers see women as a crucial segment of their workforce, and that care responsibilities and the adaptations needed to help them reconcile these with work are not regarded as a 'women's problem' but an area for action from which the workforce as a whole as well as the employer can benefit.
- Individual policies may be ineffective without an integrated support system to help women and their families navigate transitions between parental leave and a return to employment, or between periods of informal care and employment.
- Shifting the gender balance in the provision of care is likely to require targeted interventions, although gradual cultural change can also be facilitated by means of policies such as an extended right to request flexible working.
- Policies based on financial incentives or supportive interventions have to be appropriately targeted, reflecting evidence on which groups are most responsive to which types of incentives.

Introduction

The gender employment gap is defined by Eurostat as the difference between the employment rates of men and women aged 20–64. Hidden behind this indicator is the reality of millions of women who are unable to participate in the labour market. These include women who would like to have a job but who cannot take one due to family responsibilities, women who cannot secure a job under the right conditions, one that offers fair treatment, good job quality and equal pay, and women who seek to avoid segregation into the traditional ‘women’s’ sectors.

Female labour force participation – captured by the female activity rate, which is the percentage of employed and unemployed women available for work in the working age female population – has generally increased in European countries over the past few decades, reaching 70.6% in the 20–64 age group in 2014. Nevertheless, the participation gap between men and women remains large, at more than 12 percentage points.

The situation is mirrored in employment rates: the EU average female employment rate in 2014 in the 20–64 age group was 63.5%, 11 percentage points below the male employment rate. And while a convergence between male and female activity and employment rates seems to be under way, heterogeneity among EU countries is high: female employment rates in the 20–64 age group range from below 55% in Croatia, Greece, Italy and Malta to a high of 77.6% in Sweden.

European societies are facing daunting challenges. For almost a decade now, the European economic crisis has preoccupied policymakers and public opinion. The recession hit Member States hard, and economic contraction was accompanied with a rise, sometimes sharp, in unemployment. Moreover, accelerating globalisation poses additional challenges to the European social model and to European labour markets. Globalisation and the rise of new competitors in the market implies a reallocation of labour between sectors and companies that may adversely affect low-skilled workers and put pressure on European governments to secure adequate finance for social spending. Furthermore, societies in Europe are growing old. Population ageing presents immediate economic and social challenges for EU Member States, as well as for other developed countries. Compared with 1970, an average EU citizen now lives about 10 years more and works 10 years fewer.¹ And demographic change is

accelerating: Eurostat projects that the old-age dependency ratio (the ratio of people aged 65 and over to people aged 15–64), which is now below 30%, will rise to approximately 50% by 2050.

This explains the emphasis policymakers have put on increasing labour force participation rates over the past two decades, in particular those of women. The European Commission in 2000 proposed a Community framework strategy on gender equality for the period 2001–2005, which aimed, among other objectives, at strengthening the gender dimension in the European Employment Strategy. Equal employment opportunities and work–family balance were highlighted as priorities. This was followed by the *European pact for gender equality for the period 2011–2020* (Council of the European Union, 2006) and *A roadmap for equality between women and men 2006–2010* (European Commission, 2006), updated in *The strategy for equality between women and men 2010–2015* (European Commission, 2011). In these documents, the European Commission proposed concrete actions for addressing a number of issues, such as the economic independence of women and equality in decision-making. The Europe 2020 strategy, acknowledging that ‘policies to promote gender equality will be needed to increase labour force participation thus adding to growth and social cohesion’, sets as one of its targets for 2020, as noted above, an overall employment rate of 75%, including men and women (European Commission, 2010a).

In launching the Social Investment Package, the European Commission (2013e) reaffirmed the importance of fostering higher labour market participation of women. This policy framework underlined that gender gaps in employment rates, as well as other gender disparities in the labour market, need to be reduced or eliminated to decrease the risk of social exclusion and poverty for women and to achieve inclusive growth. Access to early childhood education and care needs to be improved both to support female employment and to develop children’s life opportunities. More recently, in August 2015, the Commission published a roadmap for the initiative ‘A new start to address the challenges of work–life balance faced by working families’ (European Commission, 2015a), which will replace the 2008 Commission proposal to amend the Maternity Leave Directive. The objective of this new initiative is to modernise and adapt the current EU legal and policy framework to allow for parents with children,

¹ Average life expectancy is up from approximately 70 to 80, mean years of education is up from approximately 6 to 11, and retirement age is down from approximately 68 to 63. These figures are approximate as historical data are not available for a number of EU Member States. Sources: Eurostat, OECD, United Nations.

or those with dependent relatives, to better balance caring and professional responsibilities, to encourage a more equitable use of work–life balance policies between women and men, and to strengthen gender equality in the labour market. In addition to furthering equality, enhancing women’s access to employment can sustain economic growth, especially when considering population ageing and the expected labour supply shortages across the EU. According to the OECD (2008, 2012b), narrowing the gap between male and female employment rates has accounted for half of the increase in Europe’s overall employment rate and a quarter of annual economic growth since 1995.

Against this background, this report aims to investigate the gender employment gap in Europe, providing evidence on its characteristics, costs and policy challenges.

Structure of the report

The analysis is organised into six chapters.

Chapter 1 presents an overview of the labour market participation of women during the crisis. It investigates trends in female labour market participation from 2008 onwards on the basis of a selected set of indicators, drawn from Eurostat data, depicting participation in the labour market and type of employment. Because the crisis has severely hit the young, a section of the chapter focuses on gender gaps among those aged 15–24.

Chapter 2 presents an empirical analysis of the determinants affecting the labour market participation of women, using data from the European Union Statistics on Income and Living Conditions (EU-SILC) over the period 2009–2012. After reviewing existing literature, the analysis focuses on cross-country differences in the relationship between female labour market participation and individual characteristics and family and household circumstances.

Chapter 3 explores the economic losses due to the existence of a gender gap in employment participation. Using EU-SILC data, the total cost arising from women’s lower employment rate is estimated to be around €370 billion in 2013, corresponding to 2.8% of the EU’s gross domestic product (GDP). This is the sum of resource costs, which represent forgone earnings and unpaid taxes, and public finance costs, including individual

welfare transfers and social benefits. The cost of a woman’s exclusion from employment over her working life is estimated at between €1.2 million and €2 million, depending on her educational level. Although these estimates do not take into account the value of unpaid activities that women do within a household, the study also addresses the subject of non-paid domestic work.

While the results of Chapter 3 are based on the theoretical assumption of closing the gender employment gap, in Chapter 4 future participation rates of women in the labour market are projected. Firstly, through a microsimulation model, a baseline scenario is computed. This scenario describes a plausible future based on actual trends. Then, possible policy intervention is included in the model and the resulting changes in future trends are presented and discussed in relation to selected Member States.

Chapter 5 analyses other effects of women’s participation in the labour market, aside from economic benefits, by testing the relationships between work and people’s quality of life and social quality, applying a global perspective where individual and societal well-being are examined. Additionally, the social effects of women’s employment are compared with the effects for men. The study is carried out using the last available wave of the European Quality of Life Survey (EQLS).

Chapter 6 presents a review of 18 policy measures and initiatives, 3 for each of six selected Member States (Denmark, France, Germany, the Netherlands, Sweden and the United Kingdom), which have been identified as good practice examples for encouraging and supporting female labour market participation. The policy measures have been organised in four categories:

- labour market policy measures: active labour market policies (ALMPs), benefits and taxation measures;
- childcare support policies;
- leave policies (maternity, parental, childcare and adult care leave);
- flexible working and work–family reconciliation.

The objective is to provide an overview and assessment of the effectiveness of policy initiatives implemented in Member States that promote the labour market participation of women, giving priority to cases which have been particularly successful and innovative.

1 Labour market participation of women during the crisis

In almost all Member States, employment and labour market participation (or activity) rates for women, even if they have increased over the decades, are still systematically lower than for men, while unemployment and, especially, inactivity rates are higher, due in large part to the disproportionately high number of women who do not participate because of care responsibilities.

Besides the lower participation rates, women are also disadvantaged in the types of employment they engage in. A higher proportion of female workers compared to male workers are employed in temporary and part-time jobs and in low-paid sectors and occupations. Women are less likely than men to be self-employed, especially if this entails running a business with employees; this may be due in part to traditional perceptions of gender roles, but also to the greater difficulties women have in accessing finance, training and networking, and in reconciling business and family life.

The disadvantaged position of women in the labour market is a waste of resources, as women's educational attainments have improved significantly. Statistics on education show that among new generations, women have higher educational attainment in almost all European countries. Nonetheless, women still often choose different fields of study than men (such as humanities), which may translate into poorer employment opportunities and a larger skill mismatch for women compared with men (Flabbi, 2012). Furthermore, gender differences in human capital tend to increase with age because of the unbalanced division of housework and care activities between men and women in a household, with women experiencing more and longer out-of-work spells than men when there are children. Segregation in education is replicated by segregation in employment, with more women than men in low-paid service jobs and in public administration.

While the gender employment gap had been narrowing over several decades, the crisis of 2008 shook European economies, changing traditionally consolidated trends. Against this background, this chapter investigates trends in female labour market participation from 2008 onwards as well as trends in female part-time and temporary employment and self-employment, using a selected set of indicators from Eurostat data.

Participation and non-participation

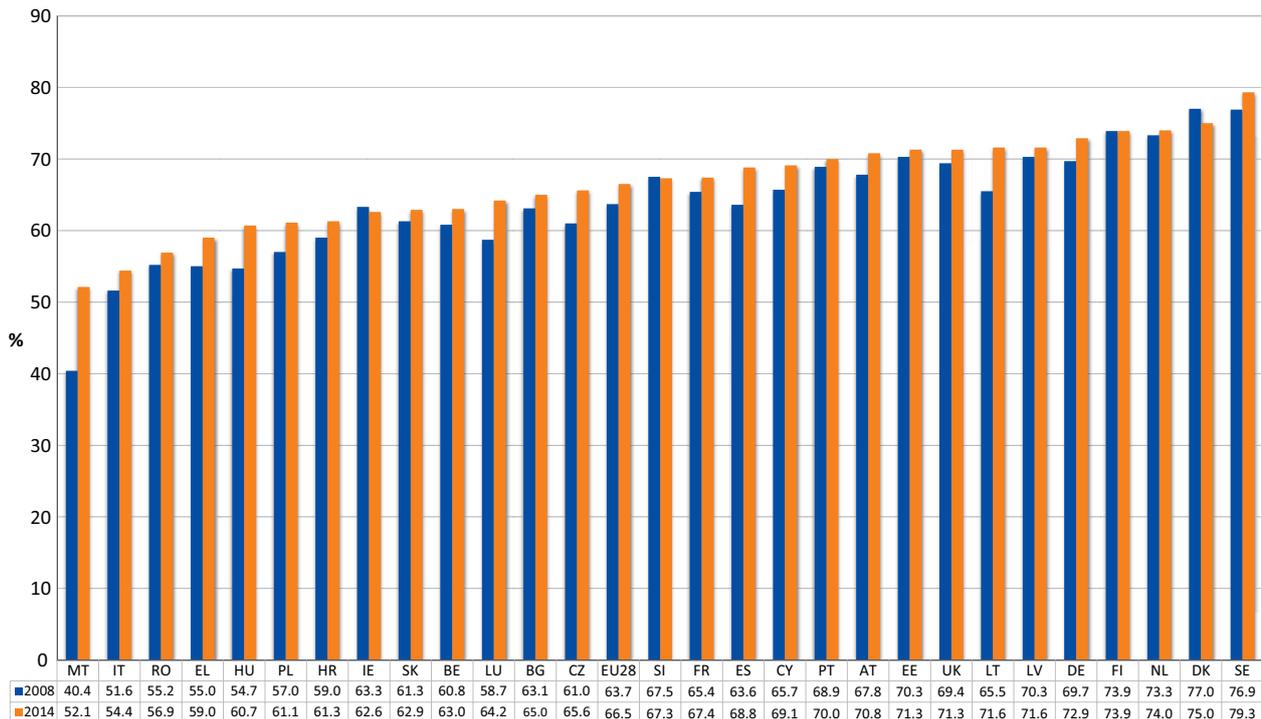
The secular (or long-term) increase in female labour market participation in most EU countries is the result of the interplay of a number of factors, mainly the increase in women's educational attainment, the expansion of the service sector and the rise in part-time jobs. Equal opportunities and work-life balance policies, especially the provision of childcare services (Thevenon, 2013), have also played a crucial role. This section reviews three indicators to depict the participation of women in the labour market: the activity rate, the employment rate and the unemployment rate. The cost of the gender employment gap will subsequently be calculated, in Chapter 3, based on the population of unemployed and inactive women.

Activity rates

Women contributed more than two-thirds of the overall change in the labour force in the past 20 years in the EU15 (more than three-quarters if only the prime-age population is considered). In 2014, they accounted for almost 46% of active people in the EU28 labour market. Despite the concern that the recent economic downturn may have interrupted the secular increasing trend in labour market participation (European Parliament, 2011), the EU female activity rate in the 15–64 years age group increased steadily from 63.7% in 2008 to 66.5% in 2014 (Figure 1), albeit at a slower pace than in the pre-crisis years. Conversely, in the same period, the male activity rate was roughly stable at around 78%. Hence, even during the crisis, the gender gap in activity rates continued to decline, from 14.1 percentage points in 2008 to 11.6 percentage points in 2014, confirming that convergence in participation by gender continued during the crisis.

However, the EU average hides a high degree of heterogeneity across countries. Comparison of activity rates in 2008 and 2014 shows that the male activity rate generally declined over the period in many Member States. This decline was especially large in Denmark, Greece, Ireland, Portugal and Spain. Importantly, these countries are also the only ones that experienced a significant decline in the female activity rate. In Ireland, particularly, the reduction in the activity rate partly offset the impact on unemployment of a dramatic decline in the employment rate (Estrada et al, 2012). Conversely, the female activity rate increased substantially (by more than 5 percentage points) in Hungary, Lithuania, Luxembourg, Malta and Spain. However, the increase in women's participation in some of these countries may

Figure 1: Female activity rates (%), EU Member States, 2008 and 2014



Note: 15–64 age group

Source: EU Labour Force Survey (EU-LFS) (lfsa_argan)

not necessarily be good news. It may have been caused by the need to find an alternative or additional source of income due to a household’s financial distress and increasing male unemployment resulting from the crisis. This may be especially true in countries that were hit hardest by the recession in those sectors that are male-dominated, such as construction and manufacturing.

Moreover, the results reveal significant cross-country differences in activity rates. While the EU average activity rate for women stood at almost 67% in 2014, rates were particularly low in Italy, Malta and Romania, hovering between 52% and 57%. However, northern countries such as Denmark, the Netherlands and Sweden had particularly high female activity rates, ranging from 74% to 79%. The cross-country variation in male activity rates is much smaller: just above 70% at the lower end in Belgium, Bulgaria and Croatia, while between 80% and 85% at the higher end in Germany, the Netherlands and Sweden, with an EU average rate of 78%.

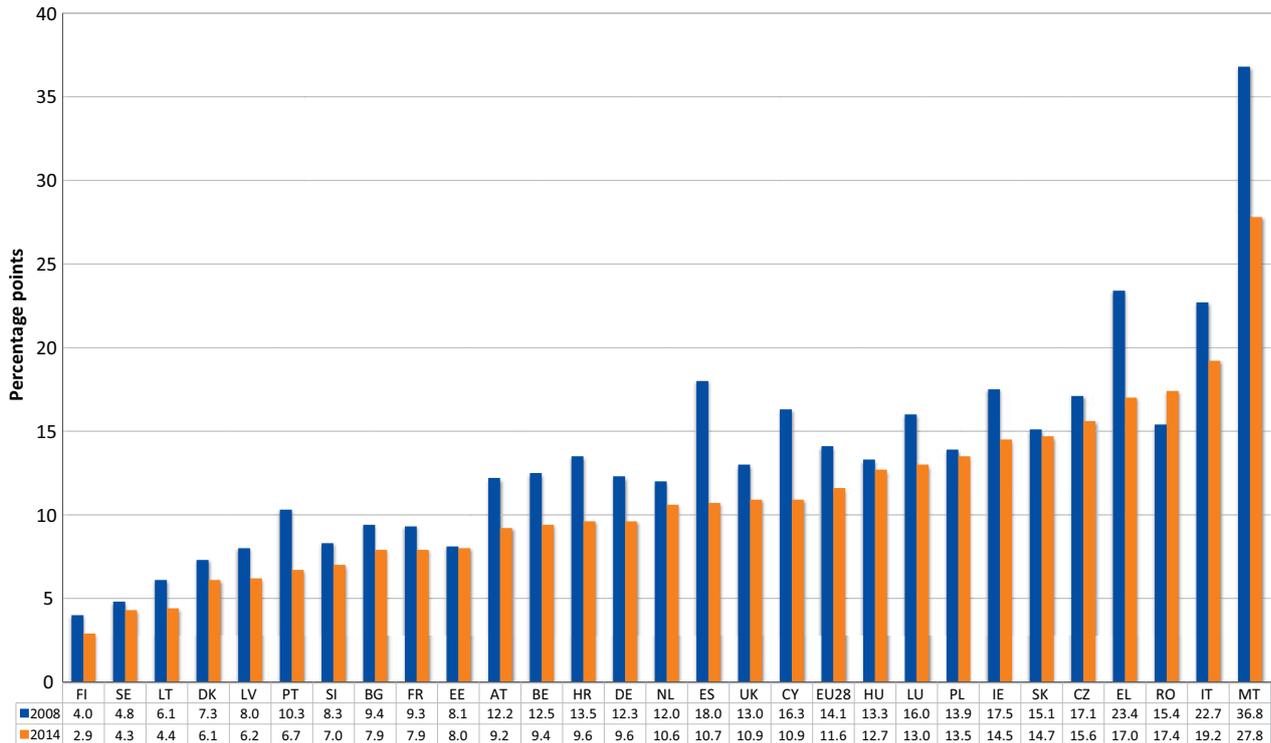
The gender gap in activity rates decreased between 2008 and 2014 in all countries except Romania. Nevertheless, the EU average gender gap stood at 11.6 percentage points in 2014. The gender gap persisted at particularly high rates (between 17 percentage points and 28 percentage points) in Greece, Italy, Malta and Romania, while in Finland, Lithuania and Sweden, it fell below 5 percentage points (Figure 2).

Employment rates

A similar convergence is evident in the employment rate, but while convergence in participation was due to a relative improvement in the female activity rate, convergence in employment was mainly driven by a relative worsening of the male employment rate. In 2014, the EU employment rate reached 59.6% for women and 70.1% for men. Data show that the female employment rate had been increasing slowly since 2008 (+0.8 percentage points, compared with -2.5 percentage points for men). Among women, the initial decline, registered in 2008–2010 (-0.6 percentage points), was then compensated for by a slight increase in 2011–2014 (+1.4 percentage points). The employment rate decreased more dramatically for men, with the largest decline in 2008–2013 (-3%), followed by a slight recovery during 2014 (+0.7%). At Member State level, the largest decreases among men were recorded in Cyprus, Greece and Spain (more than 12 percentage points) and Croatia, Portugal and Ireland (7–8 percentage points), while the biggest declines in female employment rates were recorded in Greece (-7.5 percentage points) and in Cyprus, Denmark, Slovenia and Spain (more than 4 percentage points).

The countries with the highest female employment rates across this time period were Denmark, Germany, the Netherlands and Sweden, all with rates at around 70% in 2014, while the EU average rate was around 60% (Figure 3). Greece, Italy, Malta and Croatia had the lowest rates, from 41% to 50%. Male employment rates ranged

Figure 2: Percentage point gap in activity rates between men and women, EU Member States, 2008 and 2014



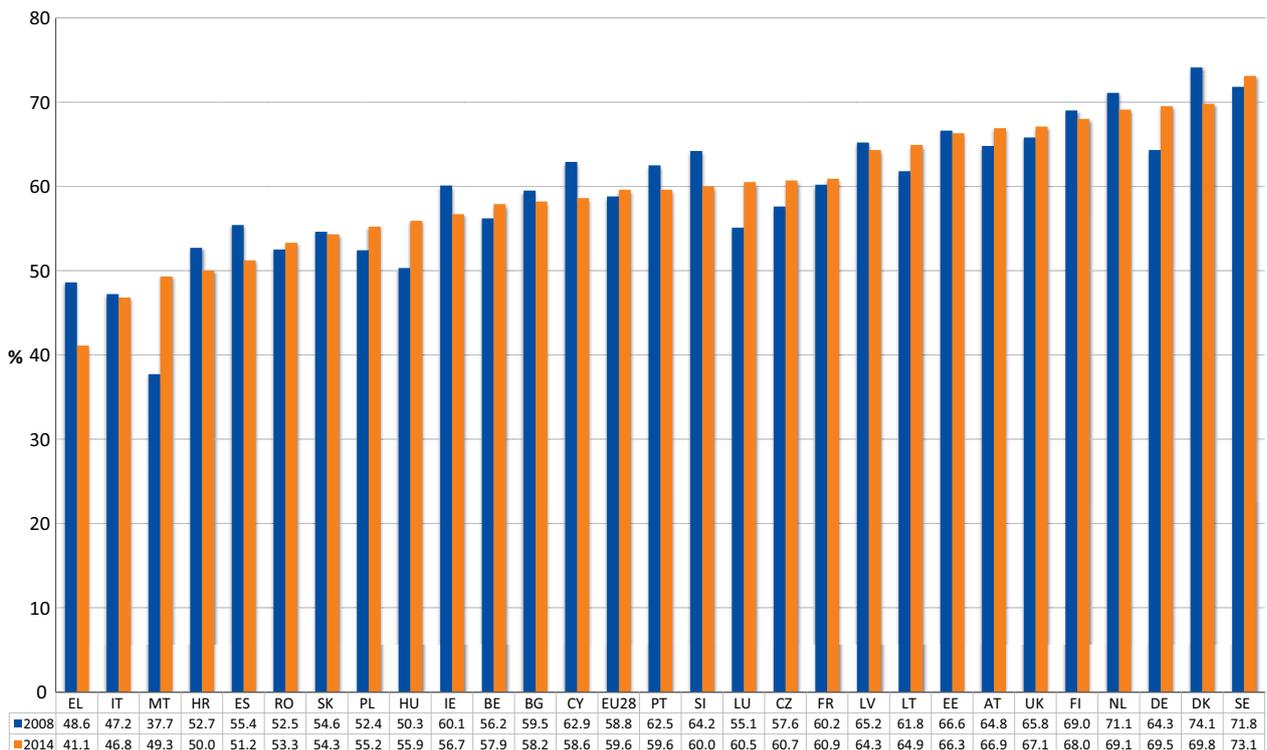
Note: The gender gap is calculated by subtracting the female rate from the male rate; 15–64 age group.

Source: EU-LFS (lfsa_argan)

from 58% in Greece, 59.1% in Croatia and 60.7% in Spain to more than 75% in the Czech Republic, Denmark, Germany, the Netherlands, Sweden and the United Kingdom. The EU average male employment rate stood at around 70%.

Like the gender gap in activity rates, the gender gap in employment rates was highest in Malta, Italy and Greece, between 17 and 26 percentage points, while it remained below 5 percentage points in Finland, Latvia, Lithuania, and Sweden (Figure 4).

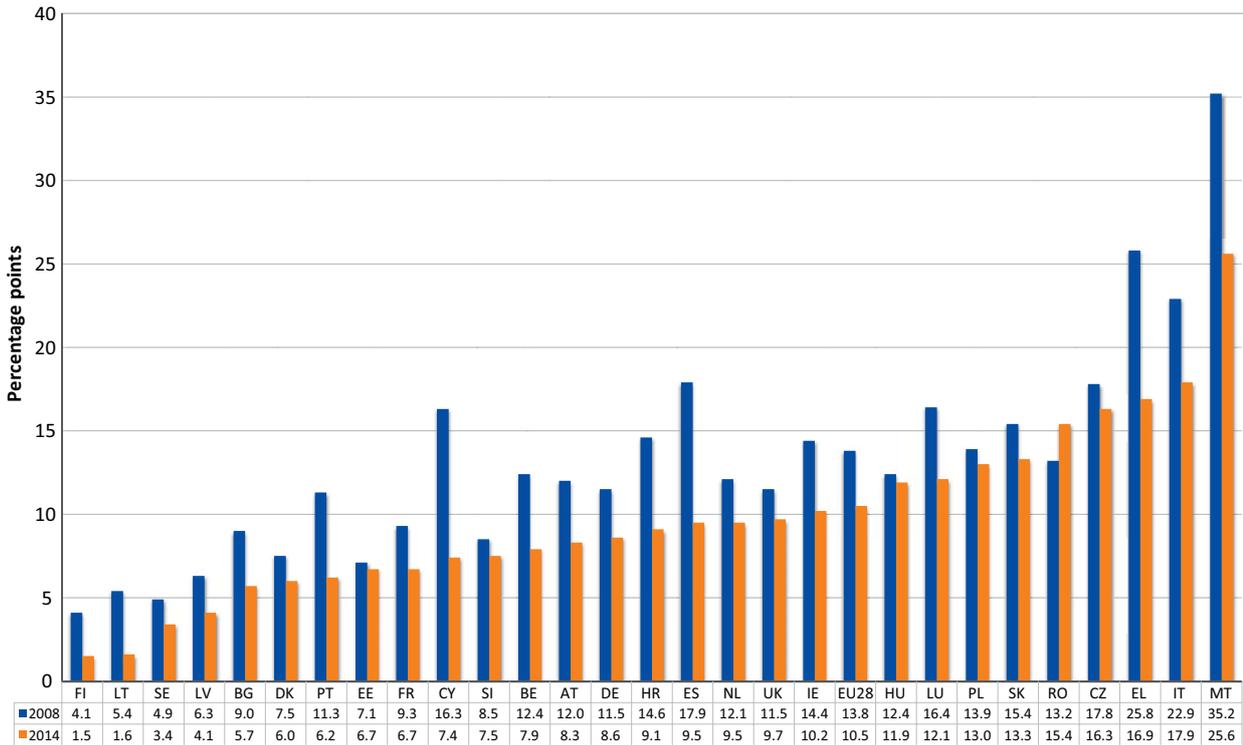
Figure 3: Female employment rates (%), EU Member States, 2008 and 2014



Note: 15–64 age group

Source: EU-LFS (lfsa_argan)

Figure 4: Percentage point gap in employment rates between men and women, EU Member States, 2008 and 2014



Note: The gender gap is calculated by subtracting the female rate from the male rate; 15–64 age group.

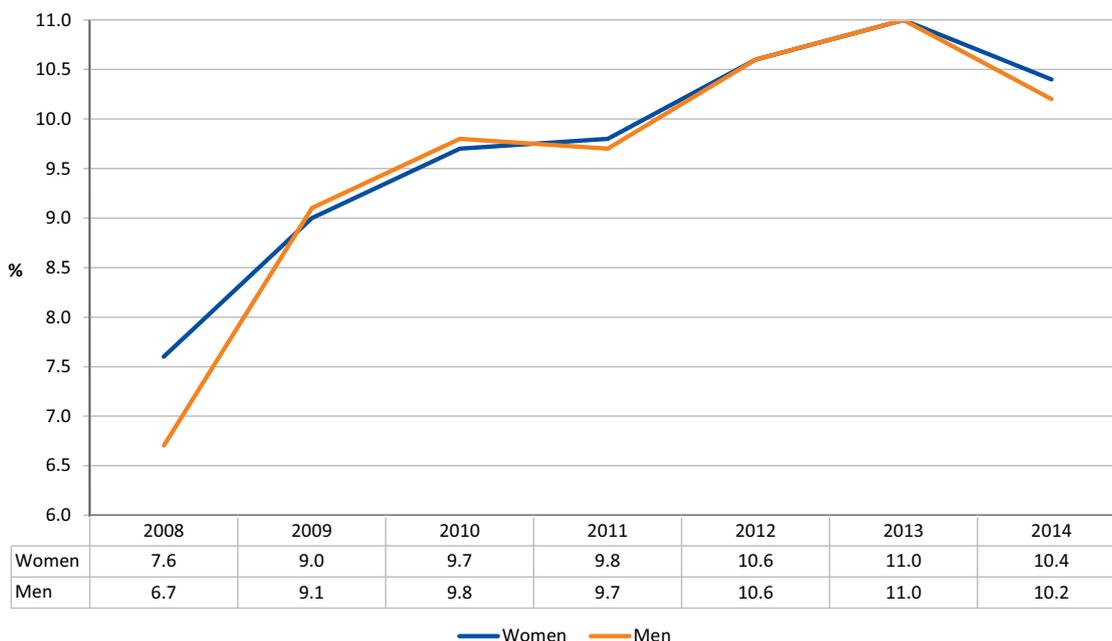
Source: EU-LFS (lfsa_ergan)

Unemployment rates

Unemployment soared during the crisis, the EU rate increasing from 7% in 2008 to 10.2% in 2014. For both sexes, the unemployment rate increased by around 3 percentage points in this period, with the largest increase registered at the beginning of the crisis, with a second

upward jump between 2011 and 2013 (Figure 5). The crisis has eliminated the gender gap in this indicator; it was around -1 percentage point in 2008 and -0.2 percentage points in 2014. A negative gender gap signifies that female unemployment is higher than male

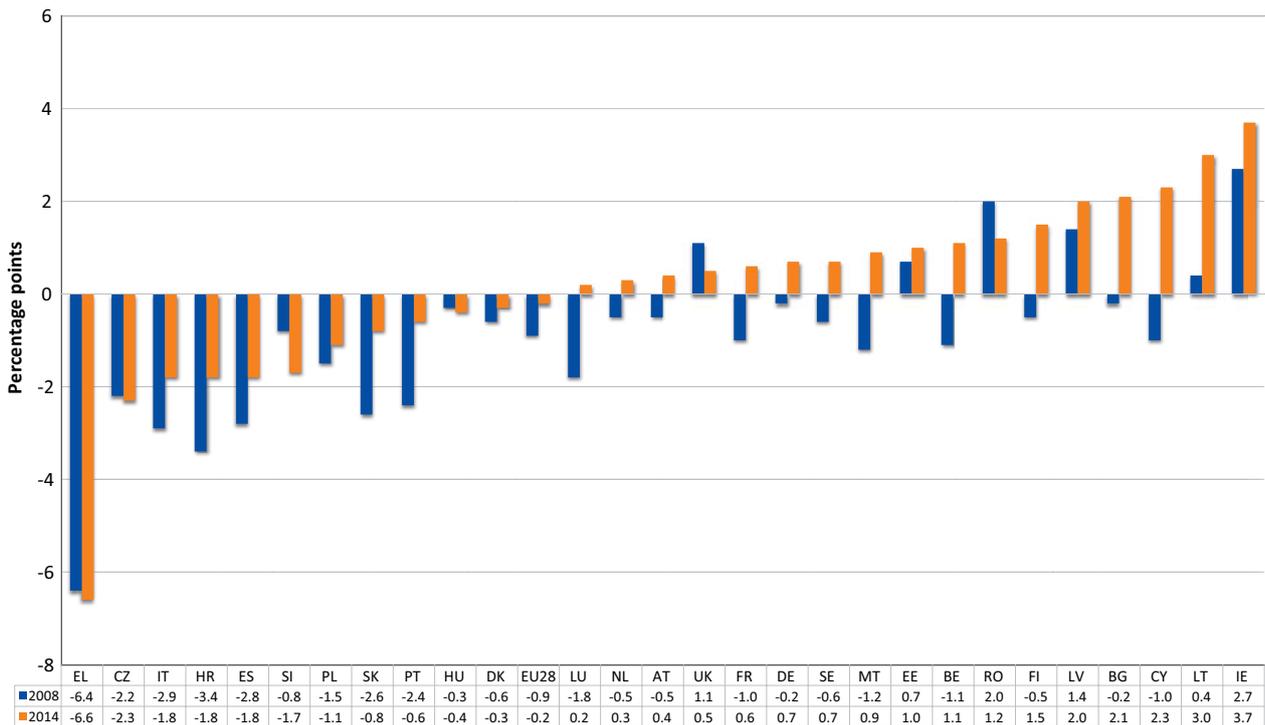
Figure 5: Unemployment rates (%), by sex, EU28, 2008–2014



Note: 15–64 age group

Source: EU-LFS (lfsa_ergan)

Figure 6: Percentage point gap in unemployment rates between men and women, EU Member States, 2008 and 2014



Note: The gender gap is calculated by subtracting the female rate from the male rate; 15–64 age group.

Source: EU-LFS (*lfsa_urgan*)

unemployment. As a result of the crisis, and because of its nature, for the first time, the male unemployment rate was higher than the female rate, and a negative gender unemployment gap was recorded.

Analysis of the evolution of this indicator by country shows that the male unemployment rate increased in all the EU Member States, with the exception of Hungary and Germany. The latter two countries, together with Malta and Luxembourg, also registered a decline in the female unemployment rate. Cyprus and Greece had the largest increases for both sexes, but significant changes were also registered for Bulgaria, Croatia, Italy, Lithuania and Portugal.

In 2014, female unemployment rates were highest in Croatia, Cyprus, Greece and Spain, with the Greek rate more than 30%. These countries also had the highest male unemployment rates, with the rate in Greece reaching almost 24%. Countries with the lowest female unemployment rates were Austria, Germany, Luxembourg and Malta (Germany having the lowest at 4.7%), while Austria, the Czech Republic, Germany, and Luxembourg had the lowest male unemployment rates (the Czech Republic was the lowest at 5.2%). The EU average was around 10% for both men and women.

The gender gap in unemployment also varied significantly across countries, with Croatia, the Czech Republic, Greece, Italy and Spain at the low end, all at around -2 percentage points except for Greece, which

surpassed them all, reaching -6.6 percentage points in 2014 (Figure 6). In many other countries, such as Bulgaria, Cyprus, Ireland, Latvia and Lithuania, the female unemployment rate was higher than the male one, with Ireland reaching 3.7 percentage points. The EU average rate was around -0.2 percentage points.

Increasing unemployment rates may be less worrying if they are characterised by relevant inflows and outflows, and the average duration of unemployment is low. The main problem during an economic downturn is that increasing inflows into unemployment are associated with decreasing outflows, with a subsequent increase in the average duration of unemployment. Increasing long-term unemployment may be very harmful in terms of individual employability and potential economic growth in the medium to long term. Regarding the current recession, the OECD has recently pointed out that long periods of high unemployment may lead to rising structural unemployment, which will remain at higher levels even if the economy starts to recover (OECD, 2013a). This may be a problem for the EU, since the long-term unemployment rate has been on the rise, particularly between 2009 and 2010, with no significant differences by gender. The share of long-term unemployed among total unemployed rose from around 37% in 2008 to around 50% in 2014 for both sexes. The countries with the lowest long-term unemployment rates were Denmark, Finland and Sweden, with female rates between 17% and 25% and male rates between 20% and 26%.

Focus on the young and NEETs

The crisis hit the young severely, regardless of gender. Among those aged 15–24, the male employment rate declined by 5.8 percentage points and the female rate by 3.7 percentage points between 2008 and 2014. Similar trends were registered for those aged 25–29. The relatively larger decline in the male employment rates has favoured convergence in this indicator also among the young but, in 2014, the gender gap was still relevant, particularly among those aged 25–29 (9.5 percentage points, compared with 3.8 percentage points among the younger age group).

Moreover, Eurostat data show that unemployment has risen dramatically among 15–24-year-olds, particularly men (+6.9 percentage points, compared with +5.6 percentage points for women). Since 2008, the female unemployment rate has been lower than the male one in this age group (in 2014, 21.2% and 22.6%, respectively). A decrease in the figures for both sexes was registered in 2014.

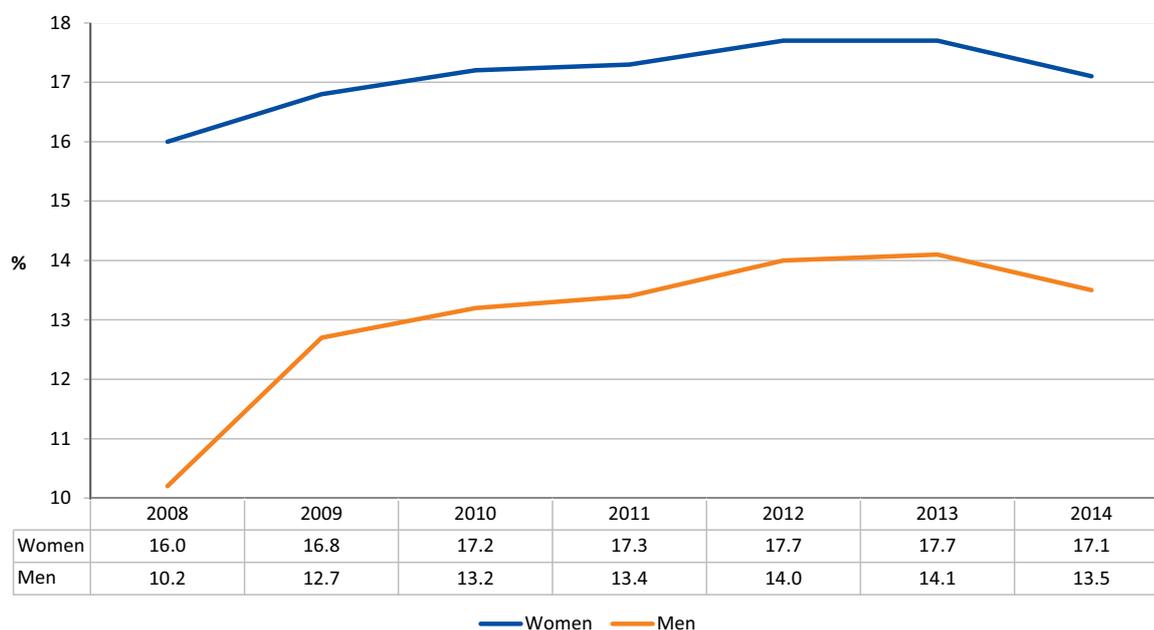
The increasing trends in youth unemployment rates are mirrored in the NEET rates (among 15–29-year-olds), which increased more for men than for women over the period considered (+3.3 percentage points and +1.1 percentage points, respectively, see Figure 7). In addition, the observed convergence between 2008 and 2014 is due to unemployment rising among young men to a greater extent than among young women. However, given the high and persistent contribution of inactivity to the indicator in relation to women, the female NEET rate was still higher than the male rate in 2014 (17.1% versus 13.5%).

Examining the composition of the NEET population reveals many differences between young men and young women. Among young men, the share of those who are NEET due to labour-market-driven factors, namely short-term and long-term unemployment, or those who have already found a job or an education opportunity, are almost 68% of the total. Among young women, however, this share is 43%, as the largest group, 34%, are those who are NEET due to family responsibilities, such as the care of children or dependent adults. As can be seen in Figure 8, while more than one-third of young women are NEET due to family responsibilities, this share falls to only 3.6% among young men.

A look at cross-country differences shows that in Croatia, Cyprus, Finland and Luxembourg, the male NEET rate in 2014 was higher than the female rate. All other countries, however, had negative gender gaps, indicating higher female NEET rates; the gaps in the Czech Republic, Hungary, Malta, Romania and Slovakia ranged from -6 percentage points to -10.4 percentage points. A detailed investigation of the composition of the NEET population at country level can be found in the report *Exploring the diversity of NEETs* (Eurofound, 2016).

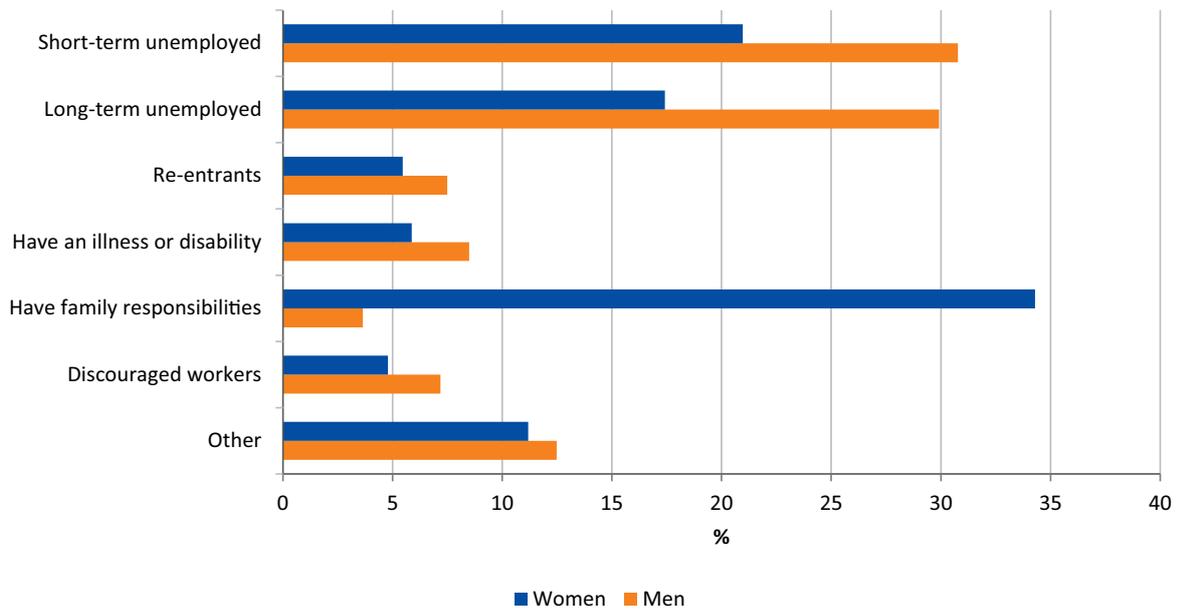
Among the countries with the highest male and female NEET rates as well as the largest increase in NEET rates from 2008 to 2014 are Bulgaria, Croatia, Greece and Italy; Greece had the highest female NEET rate, 28.5%, and Italy had the highest male rate, 24.8%. The EU average rates were around 17% for women and 16% for men. Among the countries with the lowest NEET rates in 2014 were Denmark, Germany, Luxembourg and the Netherlands, with the lowest female NEET rate, in Luxembourg, at 5.6%.

Figure 7: NEET rates in 15–29 age group (%), EU28, by sex, 2008–2014



Source: EU-LFS

Figure 8: Composition of the NEET population aged 15–29 (%), by sex, EU28



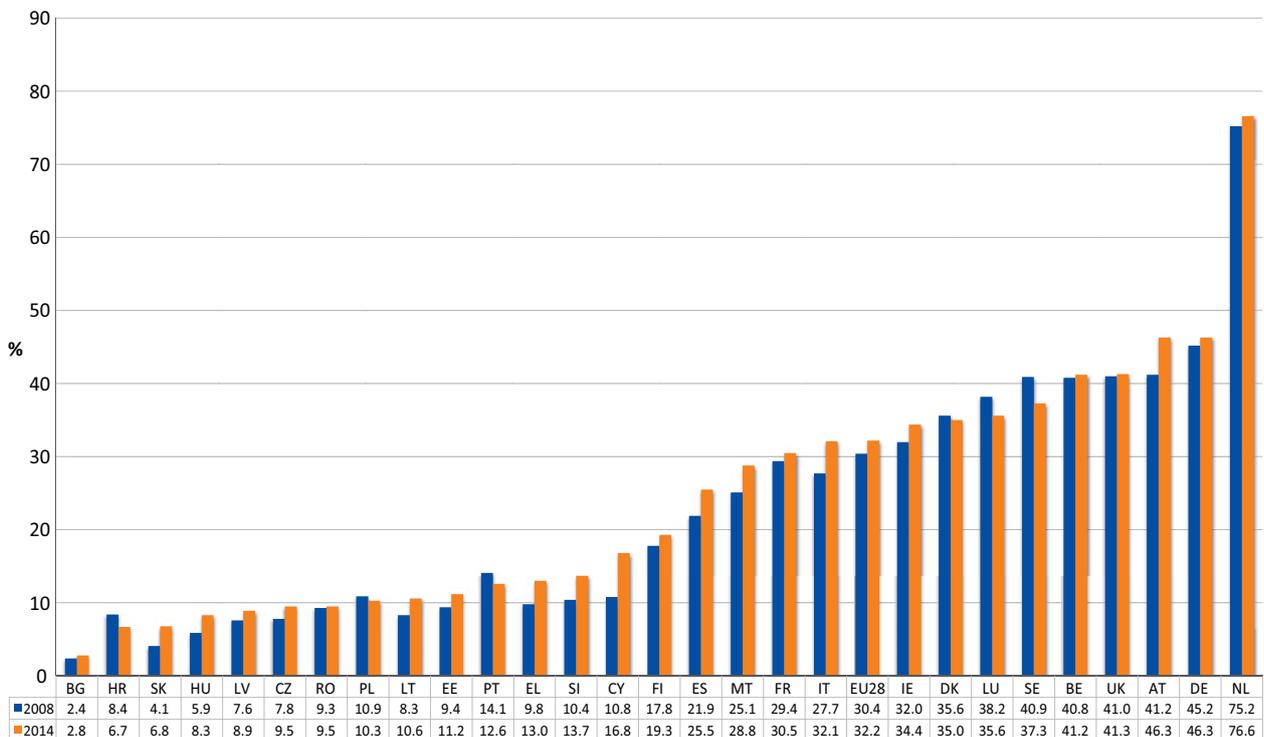
Source: Eurofound, 2016, based on Eurostat data

Type of employment

Since the quality of participation in the labour market is as important as the quantity of participation, it is not enough to look solely at levels of employment or unemployment in order to assess the state of women’s

labour market participation. It is also necessary to examine the form this participation takes. Women are overrepresented in temporary and part-time jobs and in low-pay sectors and occupations, compared with men, which reduces their economic independence. They are less likely to be self-employed and more likely to be

Figure 9: Female part-time employment as a percentage of total employment, EU Member States, 2008 and 2014



Note: 15–64 age group

Source: EU-LFS (Ilsa_organ)

employees, due to the greater difficulties they face in accessing credit, training and networking opportunities, and in reconciling business and family life. This section focuses on women’s participation in three types of employment: part-time, temporary and self-employment.

Part-time employment

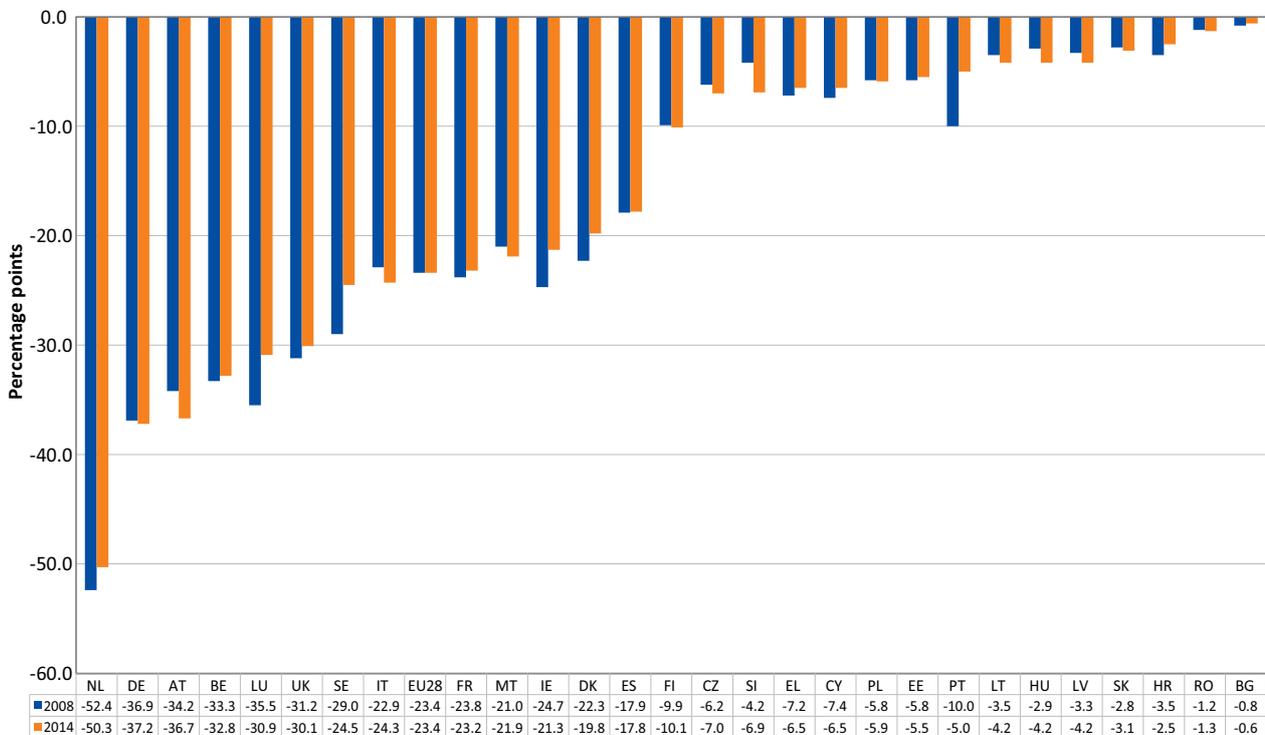
Eurostat data record the evolution of the share of part-time employment in the EU28 by sex from 2008 to 2014. In 2014, 32.2% of women were part-time workers compared with 8.8% of men. Part-time work increased for men and women at the same pace over the 2008–2014 period (+1.8%), confirming that in many developed countries shorter hours of work due to work-sharing policies or part-time work (both voluntary and involuntary) were used to minimise employment cuts during the economic crisis (ILO, 2012).

In the period 2008–2014, the percentage of involuntary part-time employment in the EU28 increased significantly, from 25.2% to 29.4%. The increase was mainly due to a large rise in male involuntary part-time employees (from 32.4% in 2008 to 40% in 2014), while the rise in the percentage of female involuntary part-time employees was lower (from 23.2% in 2008 to 26.4% in 2014).

As Figure 9 illustrates, while the EU28 average for the share of part-time employment among women was about 30% in the period under study, there was great variation across countries. The Netherlands, which also has one of the highest female activity rates, had the highest share of female part-time employment, reaching almost 77% in 2014; Austria, Belgium, Germany and the United Kingdom followed, with rates between 40% and 50%. However, the share of female part-time employment in Bulgaria, Croatia, Hungary and Slovakia was below 9%. Male part-time employment was much lower across countries. While in the Netherlands the share of male part-time employment reached 26%, the vast majority of other countries had rates between 2% and 10%.

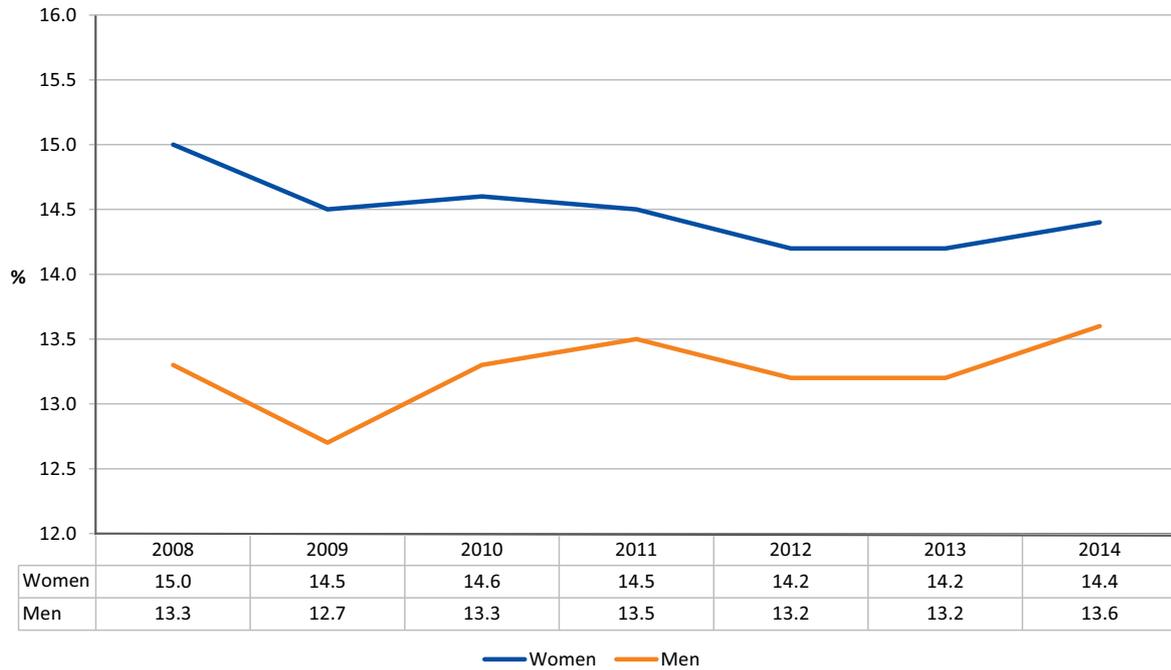
As might be expected, the gender gap was negative in all countries in 2008 and 2014, indicating that women had a higher share of part-time employment. However, this gap was much larger in some countries, such as Austria, Belgium, Germany, Luxembourg and the Netherlands, reaching -50.3 percentage points in the Netherlands (Figure 10).

Figure 10: Percentage point gap in part-time employment rates between men and women as a percentage of total employment, EU Member States, 2008 and 2014



Note: 15–64 age group
 Source: EU-LFS (lfsa_urgan)

Figure 11: Temporary employment as a percentage of total employment, by sex, 2008–2014, EU28



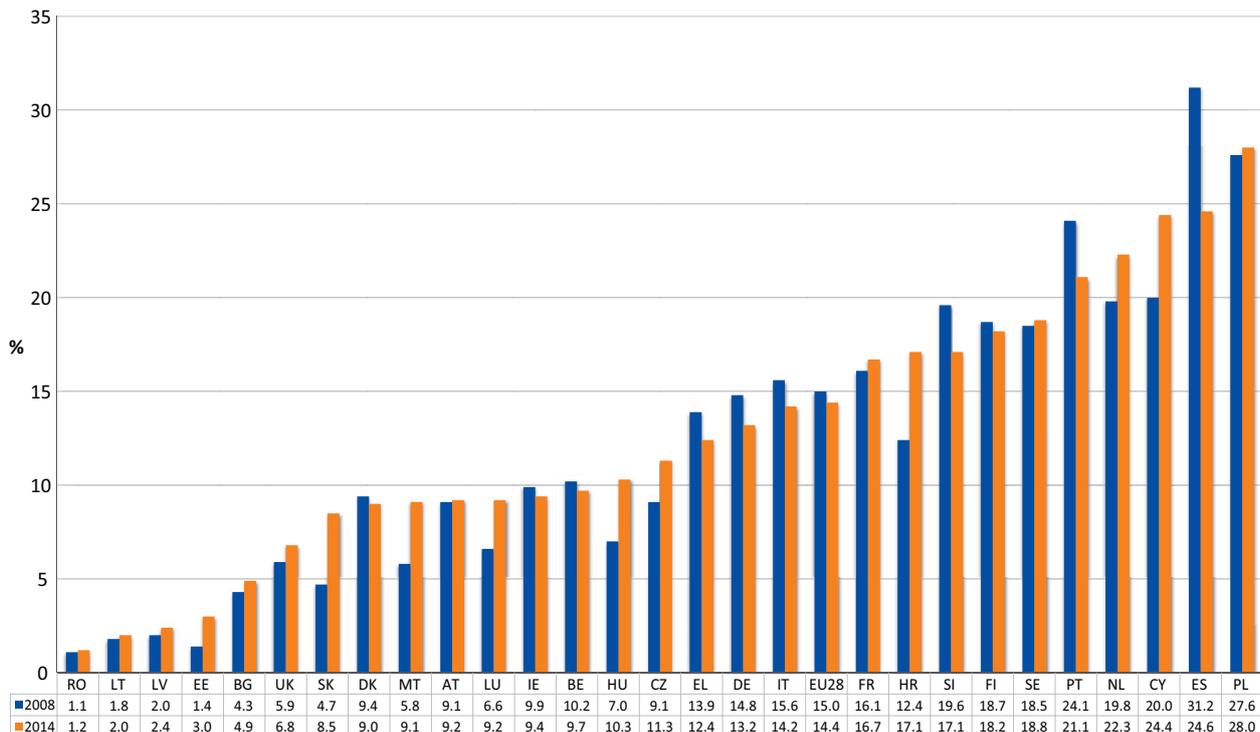
Note: 15–64 age group
 Source: EU-LFS (lfsa_etpga)

Temporary employment

Temporary employment was used as a first ‘buffer’ against the crisis, with many companies responding to the economic downturn by not renewing expiring

temporary contracts. Figure 11 shows that the evolution of the share of temporary workers in total employment followed that of the business cycle: it declined between

Figure 12: Female temporary employment as a percentage of total employment, EU Member States, 2008 and 2014



Note: 15–64 age group
 Source: EU-LFS

2008 and 2009, it increased during the mild recovery in 2010 (since companies hired new workers mainly on a temporary basis), it declined again when the crisis returned to bite in 2011–2013, and it started to increase once again in 2014. The declines, particularly the second one, affected women more than men, while the opposite occurred when temporary employment increased during the transitory recovery. Hence, overall, there was no significant change in the share of temporary workers among men over the 2008–2014 period, while the share declined by almost 0.6 percentage points in the case of women.

These trends caused the gender gap in temporary employment to narrow: in 2014, female temporary employment was 14.4%, 0.8 percentage points higher than the corresponding indicator for men.

While the average share of temporary workers among women in the EU stood at about 15% in 2014, this share was particularly low in Latvia, Lithuania and Romania, all below 3% (Figure 12). Cyprus, the Netherlands, Poland and Spain had the highest shares of temporary employment among women, with the figure in Poland reaching 28%. The cross-country variation in the share of temporary workers among men tends to exhibit similar trends. Consequently, the gender gap, which in most countries was between -2 percentage points and 2 percentage points, tends to be quite small. Only Cyprus, Finland and Sweden had gender gaps below

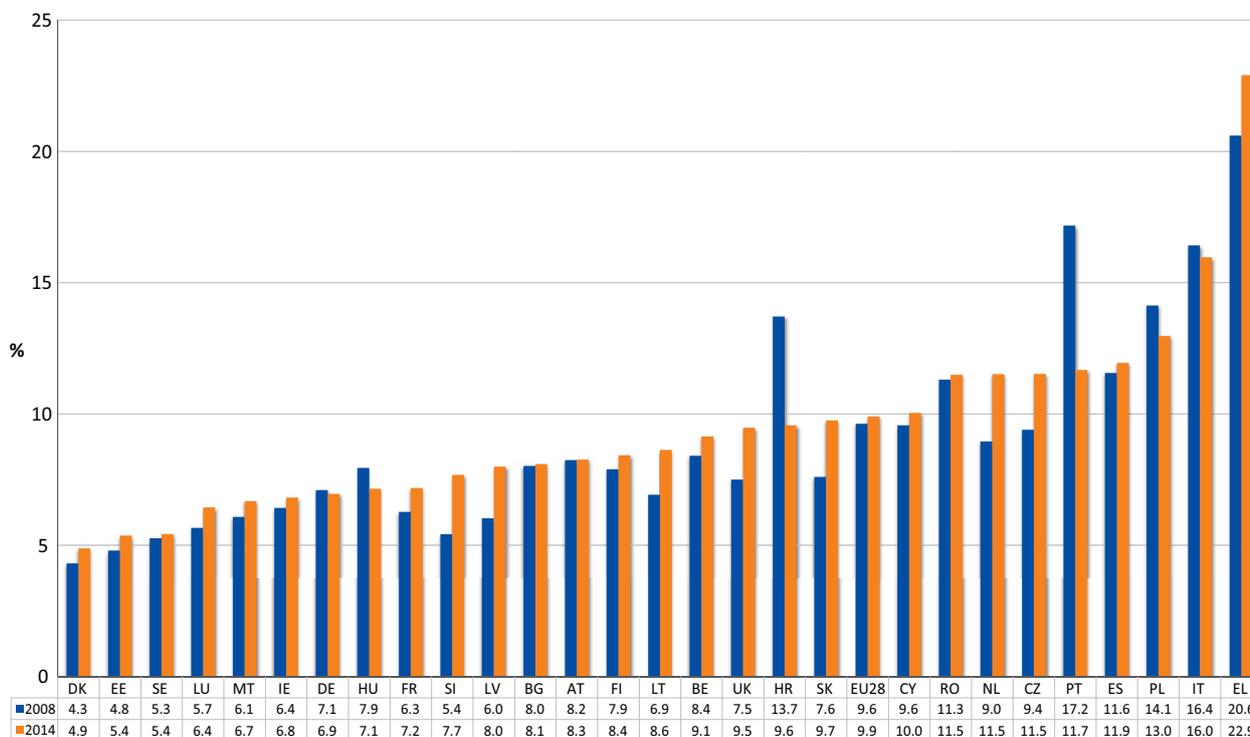
-2 percentage points in 2014, indicating that women had higher shares of temporary employment; Cyprus was at the extreme, with a gap of -11.3 percentage points.

Self-employment

The evolution of the share of self-employment in total employment by gender in the EU28 between 2008 and 2014 was quite stable over the period of the crisis. In the EU28, this indicator was around 10% for women and 18% for men in 2014 (Figure 13). The highest shares were registered in Greece (22.9% for women and 36.4% for men in 2014), which also experienced the largest increase in this indicator for both sexes between 2008 and 2014. Denmark, Estonia, Luxembourg and Sweden had the lowest shares of self-employment, without much change from 2008 to 2014; Denmark had the lowest female rate in 2014, at 4.9%, and Luxembourg had the lowest male rate, at 9%.

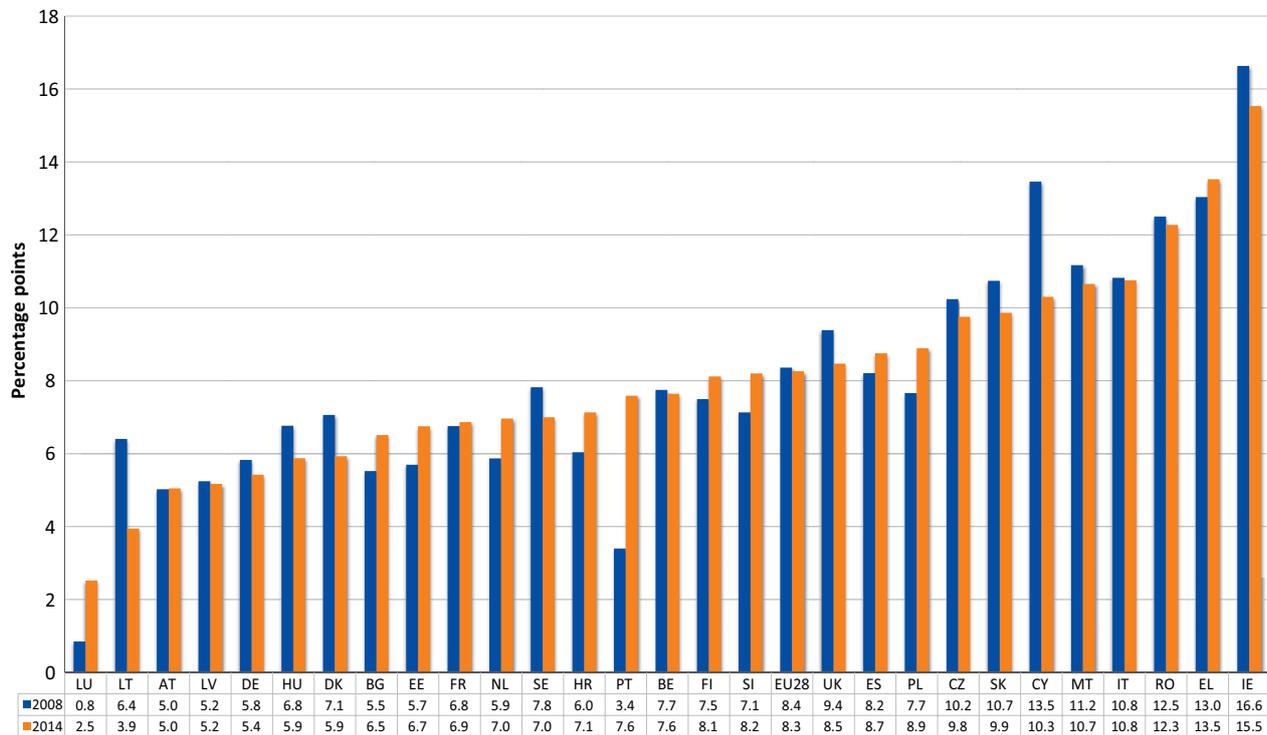
On average, however, self-employment rates increased steadily in the EU28 for both men and women during the 2008–2014 period, except for 2010–2011 (Figure 14). On the whole, the crisis has not substantially changed the gender gap in self-employment, which is still around 8.3 percentage points in favour of men. This gap, however, is larger in some countries, such as Romania, Greece and Ireland (where it reaches 15.5 percentage points), while it is lowest in Luxembourg, at 2.5 percentage points.

Figure 13: Female self-employment as a percentage of total employment, EU Member States, 2008 and 2014



Note: 15–64 age group
 Source: EU-LFS (lfsa_esgan/egan)

Figure 14: Percentage point gap in self-employment rates between men and women as a percentage of total employment, EU Member States, 2008 and 2014



Note: 15–64 age group

Source: EU-LFS (lfsa_esgan/egan)

Segregation in employment

Gender-based segregation is the result of a number of factors, including: innate biological differences; under-investment in human capital (both schooling and training); differences in education, income roles and in the distribution of unpaid domestic work; entry barriers and organisational practices; and prejudices and stereotypes. The development and enforcement of equal opportunities legislation, women's increasing educational attainment, technological progress and subsequent changes in work organisation (with the decline of physically demanding jobs), and the progressive changes in family roles have, at least partly, removed some of these factors. Recent socioeconomic research has focused on four main factors (European Commission, 2009):

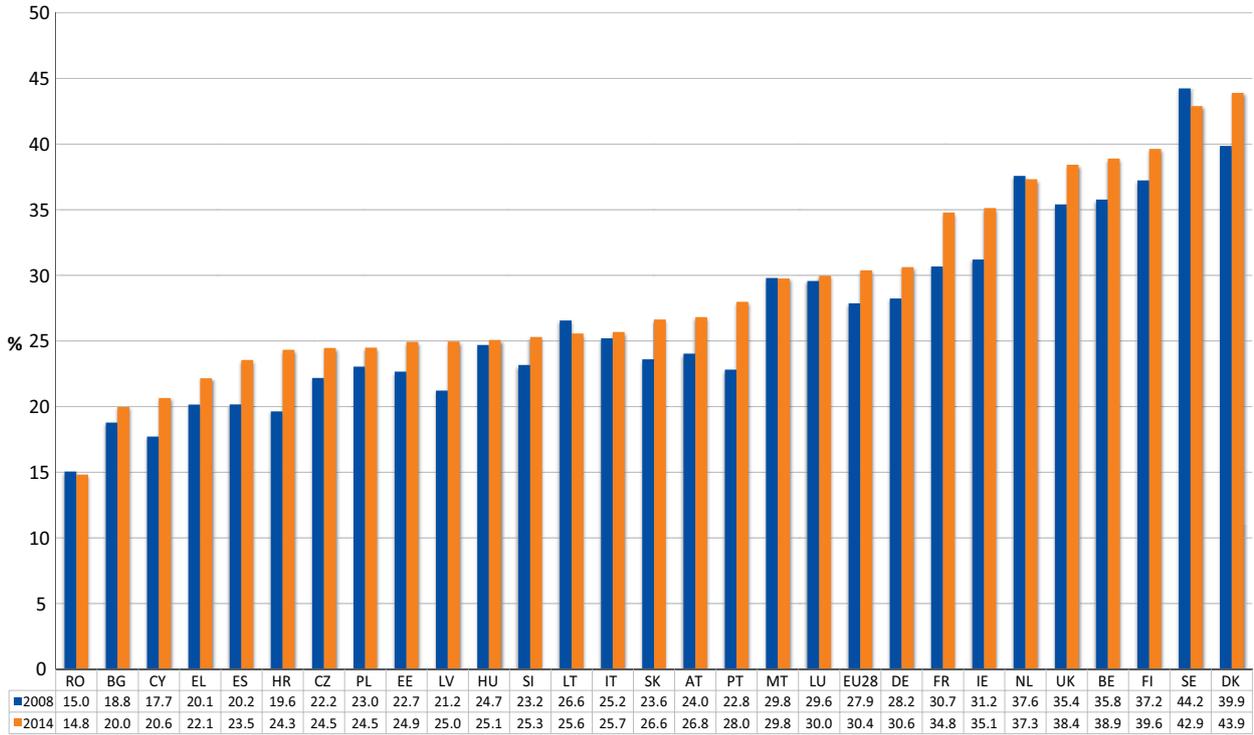
- stereotypes;
- gender differentials in the choice of field of study;
- shorter or flexible working hours because of different income roles or unequal division of unpaid work within the household;
- gender-biased organisational practices, including collective bargaining procedures.

Segregation in employment is still pervasive. As shown in Figure 15, in 2014 almost 30% of female employment was in the female-dominated sectors of education and

human health and social work activities, compared with 8% of men. This share increased for both sexes between 2008 and 2014 (partly due to the fact that the crisis had a greater impact on male-dominated sectors), but the increase was larger for women than men (+2.5 percentage points and +0.9 percentage points, respectively). As a result, the gender gap in employment segregation measured by this indicator increased. This evidence is consistent with the 'silver lining' effect: since women are more concentrated in the public sector and non-tradable services, they faced softer adverse employment effects than men during the crisis. However, it has been noted that recent restrictive fiscal policies and the delayed effects of finance-related factors can still cause significant employment losses in female-dominated sectors, such as services and public administration. Public budget cuts, by reducing disposable income, social services and labour turnover in the public sector, can extend the impact of the recession, with stronger negative effects on women, since they are more likely than men to be employed in the public sector and also more likely to be greater users of social services (European Parliament, 2011).

Employment segregation, however, varies greatly across countries in the EU. As shown in Figure 15, almost 44% of women in Denmark worked in female-dominated sectors in 2014, with Sweden, Finland and Belgium close behind. These countries also had some of the highest shares of

Figure 15: Female employment rates in education, human health and social work (%), EU Member States, 2008 and 2014

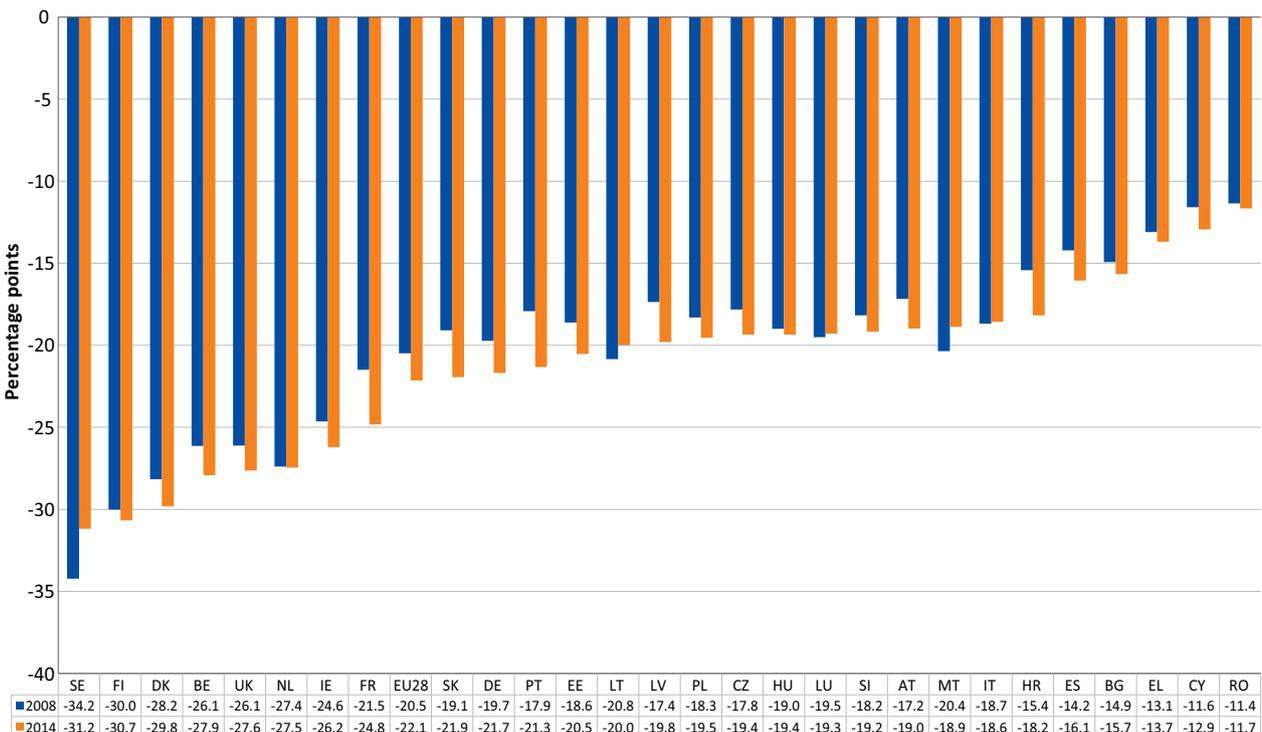


Note: 15–64 age group
 Source: EU-LFS (lfsa_egan2)

men in these sectors (with Denmark, the highest, at 14%), although they also had the largest gender gaps (all

around -30 percentage points, see Figure 16). Interestingly, the countries with the highest levels of

Figure 16: Percentage point gap in employment rates in education, human health and social work between women and men, EU Member States, 2008 and 2014



Note: 15–64 age group
 Source: EU-LFS (lfsa_egan2)

segregation are often also those with the highest female employment rates. At the other end of the spectrum, Bulgaria, Cyprus, Greece and Romania had the smallest share of women in female-dominated professions in 2014 (between 15% and 22%). These countries also had the smallest gender gap in employment segregation (between -11 percentage points and -16 percentage points). An easy explanation of this trend is the remarkably lower number of women in employment in those countries with the smallest share of women in female-dominated sectors.

Earnings and the gender pay gap

In spite of more than 30 years of equal pay legislation, the gender pay gap² has remained persistent across all Member States, regardless of the overall level of female employment, national welfare models or equality legislation (Vosko et al, 2010). A gender-segregated labour market, the difficulty of balancing work and family life, and the undervaluation of women's skills and work are some of the complex causes of the persistent gender pay gap. On average, in 2014, women in the EU earned 16.1% less per hour than men, according to Eurostat data.³ The gender pay gap exists even though women do better at school and university than men. Arulampalam and colleagues (2007) also found variation in the gender pay gap across the wage distribution. In most countries,

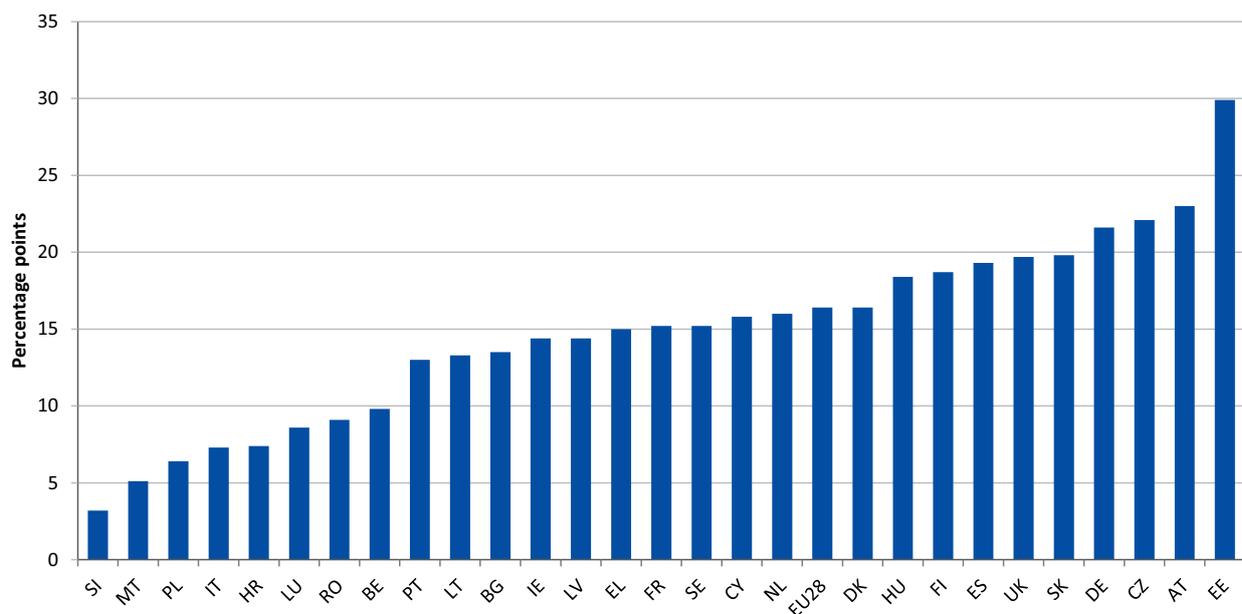
the gap is higher at the top, a consequence of the 'glass ceiling'; Germany is the exception, in both the private and public sectors. Some countries have a larger pay gap at the bottom of the wage distribution.

Gender gaps in earnings have been on the EU's policy agenda for several decades. With the aim of promoting equality, the EU since the 1980s has been implementing positive action programmes and specific projects concerning work-life balance, women's role in the decision-making process, and the participation of women in economic activity and employment.

These aggregate numbers give an initial idea of the gender pay gap in EU countries, but conceal the prevalence of wage differences across Member States (Figure 17). The pay gap is below 10% in eight countries (Belgium, Croatia, Italy, Luxembourg, Malta, Poland, Romania and Slovenia) and is greater than 20% in four countries (Austria, Estonia, the Czech Republic and Germany).

Whether pay gaps have become wider or simply stable is a question that remains largely unresolved. As the constraints facing women in employment include time management and difficult decisions between paid work and unpaid work, issues related to the reconciliation of the two spheres acquire prime importance. It remains the case that, although parenthood still tends to boost men's employment rates, it has the opposite effect for women in nearly all European countries (Eurostat, 2014).

Figure 17: Percentage point gap in pay between men and women, EU Member States, 2013



Note: Data refer to 2010 for Greece and to 2012 for Ireland.

Source: EU-SILC (earn_gr_gpgr2)

² According to the definition used by the European Commission, the gender pay gap is the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees.

³ See the web page Gender pay gap statistics at http://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_pay_gap_statistics

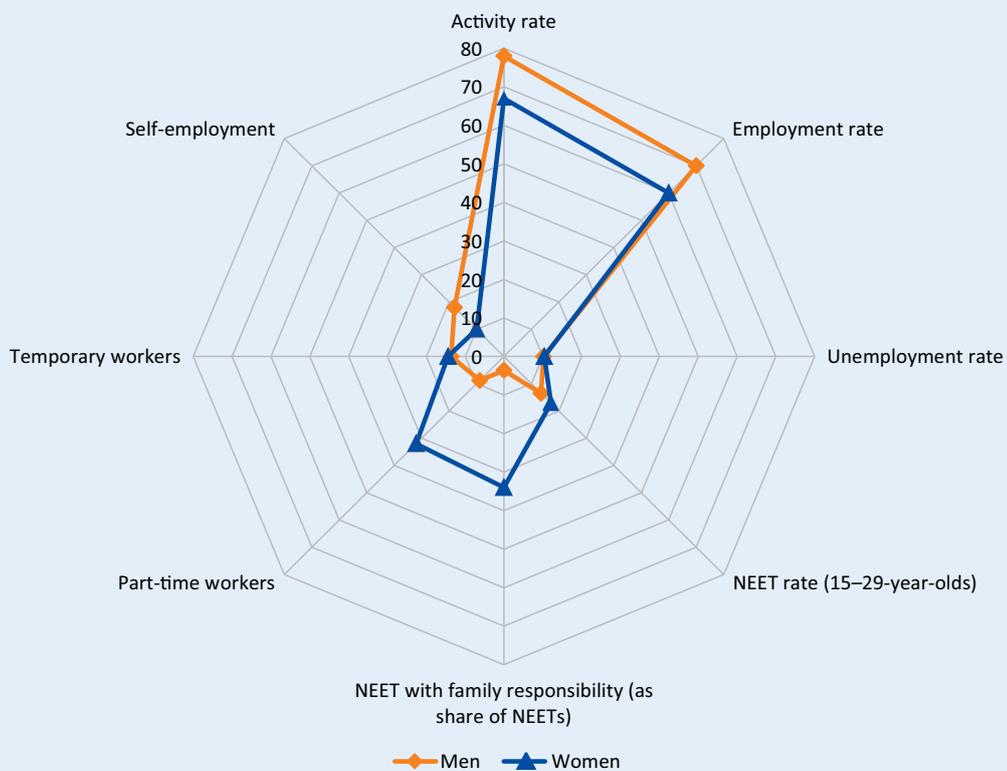
SUMMARY

The past decades have seen an increase in female labour market participation in most EU countries. Nevertheless, in almost all, employment and participation rates for women are still systematically lower than for men. This trend is the result of the interplay of a number of factors, particularly the increase in women’s educational attainment, the expansion of the service sector and the increase in part-time jobs.

In the EU28, the activity rate of women increased steadily from 63.7% in 2008 to 66.5% in 2014, while the male activity rate remained roughly stable at around 78%. Hence, the gender gap in the EU activity rate declined in this period; rates also fell in all Member States except Romania.

Employment rates in 2014 reached 59.6% for women and 70.1% for men (Figure 18). The female employment rate has been increasing slowly since 2008. The convergence in employment was driven by a relative worsening of the male employment rate. Cross-country differences in employment rates are worth noting. The gender gap in employment rates is highest in Greece, Italy and Malta, while it is lowest in Finland, Latvia, Lithuania and Sweden.

Figure 18: Summary of participation indicators (%), EU28, 2014



Source: EU-LFS 2014

The unemployment rate increased for both women and men in the period 2008–2014, with the largest increase registered at the beginning of the crisis. The crisis has eliminated the gender gap in the unemployment rate (10.4% for women and 10.2% for men in 2014). The share of long-term unemployed rose from around 37% in 2008 to around 50% in 2014 for both sexes.

The crisis has hit young people severely, regardless of gender. Among those aged 15–24, the employment rate declined between 2008 and 2014, to 34.4% for men and 30.6% for women. Similar trends were registered for those aged 25–29. In 2014, the gender gap was still relevant, particularly among those aged 25–29. Greece, Italy and Spain consistently have low youth employment rates compared with other countries.

Unemployment rates rose dramatically among the youngest, particularly among men (+6.9 percentage points among those aged 15–24, compared with +5.6 percentage points for women), between 2008 and 2014. Since 2008, the female unemployment rate has been lower than the male rate (in 2014, 21.2% and 22.6%, respectively). The increasing trends in the youth unemployment rates are mirrored in the NEET rates (15–29-year-olds), which

increased more for men than for women over the period considered (17.1% versus 13.5% in 2014). Furthermore, 32% of young women who are NEET are of that status due to family responsibilities against only 3.6% of young men.

Women are overrepresented in part-time and temporary jobs and in low-pay sectors and occupations, which reduces their economic independence, even if they tend to have higher average educational levels than men. In 2014, almost 32.2% of women in the EU were part-time workers, compared with 8.8% of men. Part-time work increased for men and women in 2008–2014, and the gender gap was negative in all countries. The share of female temporary workers in the EU stood at about 15% in 2014; this share was particularly low in Latvia, Lithuania and Romania, below 3% in all three. In the period 2008–2014, the percentage of involuntary part-time employment in the EU28 increased significantly (from 25.2% to 29.4%). The increase was mainly due to a significant increase in involuntary part-time employees among men.

Women are underrepresented among the self-employed. The share of self-employment in total employment in the EU was around 10% for women and 18% for men in 2014.

Segregation in employment is still a pervasive phenomenon. In 2014, almost 30% of female employment was in female-dominated sectors (education, human health and social work activities), compared with 8% of men. The gender gap in employment segregation increased in 2008–2014.

Finally, on average, women in the EU earned around 16.1% less per hour than men in 2014. In spite of more than 30 years of equal pay legislation, the gender pay gap has remained persistent across all Member States, regardless of the overall level of female employment, national welfare models or equality legislation.

2 Determinants of the labour market participation of women

Understanding the dynamics of labour market participation is important to explain the drivers and barriers underlying such participation, particularly those affecting women. Neoclassical economic theory explains the labour supply in terms of the alternative time-use between work and leisure. This approach is illustrative but too simplistic, as there are many other factors that help explain the supply of labour.

The factors that influence women's labour market participation are multiple and complex. Among the main determinants that the socioeconomic literature identifies to explain the persistent gender gaps in European labour markets are:

- individual characteristics (such as age, education, nationality and work experience);
- family and household circumstances (such as the presence of children or elderly relatives, marital status and the presence of unemployed partners);
- institutions and policy regimes.

Cultural attitudes and gender stereotypes also play a significant role, but measuring them accurately is challenging, and the relative strength of these variables is more difficult to discern. Furthermore, contextual factors such as macroeconomic conditions can amplify or weaken the effects of these determinants.

Many of these factors overlap and are dependent on one another, which complicates the identification of key determinants. Disentangling the effects of labour market institutions and social policies, for example, from the role of cultural beliefs and attitudes is a daunting task. Institutions, social policies and economic circumstances often shape how people think and act, thereby proving to be influential in their gender biases. However, beliefs about gender can also have a significant impact on the implementation of policies and changes in institutions.

This chapter reviews the existing literature on the determinants of female labour market participation. It then investigates the relationship between women's labour market participation and, firstly, individual characteristics and, secondly, family and household characteristics. The empirical analysis, which makes use of EU-SILC microdata and covers the period of the economic crisis 2009–2012, is conducted separately for each Member State in order to identify possible cross-country differences.

Main factors driving women's labour market participation

Individual characteristics

At the individual level, age and education are among the most relevant predictors of female labour force participation. Age might affect participation non-linearly, having a positive effect up to a certain point and turning negative as one grows older.⁴ Some authors also take into account the year of birth in order to control for cohort effects (Anderson and Levine, 1999; Attanasio et al, 2008; Thévenon, 2009). Education and human capital accumulation have also been shown to have a significant positive impact on female employment (Anderson and Levine, 1999; Jaumotte, 2004; Fortin, 2005; Azmat et al, 2006). A number of studies also consider past experience or previous employment status a relevant predictor of women's labour market status. If returns to work experience increase with the number of years in employment, the attachment of women to the labour market will strengthen. Hyslop (1999) and Keane and Sauer (2009) find strong state dependence in intertemporal female labour supply behaviour, which means that previous working behaviour affects the current labour supply decision. Finally, race is also taken into account since, for non-natives, it can act as a barrier to certain occupations or sectors.

Family and household circumstances

The presence of children is a major determinant of a woman's decision to participate in the labour market. In particular, the presence of children under the age of three has the strongest negative impact on the probability of working (Del Boca et al, 2009), although the effect reverses as children grow and start attending school (Cipollone et al, 2013). There is scant and more mixed evidence on the effect of elderly care responsibilities on women's labour supply, probably because of differences in the samples studied or in the indicators used to measure the intensity of informal care (Crespo and Mira, 2014). Some studies have found significant and negative effects of informal caregiving on labour supply, which suggest large trade-offs between time spent caring for elderly people and hours of paid work; others did not find statistically significant differences (Johnson and Lo Sasso, 2006). Moreover,

4 This would be captured by a quadratic term included to check whether participation peaks at some age.

most of the studies used US data, while less work has been done for Europe (see Heitmueller and Michaud, 2006 for the United Kingdom; Casado-Marín et al, 2011 for Spain; Crespo, 2008 for selected EU countries).

Marital status is also a significant determinant of female labour force participation. According to Becker's (1973, 1974) theory of marriage, gains from marriage and marital status decisions decrease as a woman's potential wage increases. The higher the potential wage for a woman, the lower the marital gains due to the specialisation of labour within the household. This implies that married women are less likely to be employed. Yet, no consensus is reached in the literature, and more recent studies do not find that being married significantly decreases the likelihood of being employed (Cipollone et al, 2013). The economic status of the partner is also relevant, since having an unemployed husband may result in an 'added worker effect', by which the woman engages in the labour market to compensate for the loss of income. The spouse's employment status has a significant effect on women's participation in most European countries, and women with unemployed partners are more likely to be seeking work (Thévenon, 2009). However, this effect acts counter-cyclically and varies across different welfare regimes, being highest in Mediterranean countries and weakest in the United Kingdom and Ireland (Bredtmann et al, 2014).

Policy regimes and institutions

Institutional factors that influence women's participation in the labour market can be divided into two overarching groups:

- various features of the welfare state, including social policies that provide childcare subsidies, parental leave and flexible working time arrangements;
- labour market institutions, such as employment protection legislation, tax schemes and systems of unemployment benefit.

Most of the studies investigating the effects of family policies, such as subsidised childcare services, paid maternity and parental leave, and availability of part-time work, find that these have a positive impact on the participation decision of women with children (Paull and Taylor, 2002; Jaumotte, 2003; Sánchez-Mangas and Sánchez-Marcos, 2008; Del Boca et al, 2009; Anxo et al, 2011; Cipollone et al, 2013).

In this context, mothers' education also matters. Del Boca and colleagues (2009) show that childcare availability affects the probability of working more significantly for less-educated women, while part-time opportunities have a larger impact on participation decisions of highly educated women. However, all over Europe highly educated women benefit more from childcare services than low-skilled mothers (the so-called social gradient in the use of childcare), and the increased spending on childcare has not reduced the inequality in

the use of these services, while the overall use has increased (van Lancker and Ghysels, 2013).

Childcare subsidies have been shown to be a better tool than child benefits in raising the female labour supply. The main difference between the two is that child benefits are not conditional on the use of childcare services. While childcare subsidies reduce the effective tax burden on mothers and, hence, the relative price of formal childcare, thereby incentivising the return to the labour market, child benefits are essentially lump-sum transfers for the maintenance of children, and the income effect may decrease a woman's labour supply (Jaumotte, 2003).

Maternity and paid parental leave exert a positive effect on women's participation (Jaumotte, 2003; Pronzato, 2009). However, this effect reverses for very long leave duration due to the detachment from the labour market, lack of human capital accumulation, deterioration of skills, and loss of opportunities for promotion and training, all of which increase the difficulties in re-entering the labour market after child-bearing (Rønsen and Sundström, 2002; Del Boca et al, 2009). As for institutional characteristics, the flexibility or rigidity of labour markets (hiring and firing conditions) as well as tax and benefit systems have a significant impact on a woman's desire or ability to enter the workforce. A number of empirical studies show that strict employment protection legislation reduces the employment opportunities for prime age women because they experience more problems entering the labour market compared with men, due to difficulties in reconciling work and family life (see Cipollone et al, 2014).

Tax systems have a significantly greater impact on the labour supply decisions of married women than those of men and single women (Jaumotte, 2003). In particular, tax schemes that impose a higher tax rate for second earners in a couple strongly discourage women's participation. Similarly, transferability of general tax credits may render entering the labour market relatively unappealing for non-earning or lower-earning women with a higher-earning partner. In Spain, the 2003 tax reform, which introduced a tax credit for working mothers of young children and sizeable increases in households' tax deductions per child, increased the participation rate of mothers with children under the age of three, particularly among lower-educated women (Azmat and González, 2010).

Cultural attitudes and gender stereotypes

Some papers also investigate the role of attitudes and beliefs in shaping women's participation in the labour market. According to the traditional male breadwinner household model, women's primary role is in the home as a caregiver, not in the job market. These traditional views on gender roles can lead to inactivity or part-time work with flexible hours in order to better balance work with family life and household duties such as childcare.

Women can also face various forms of discrimination at different stages throughout their career, which can act as a barrier when trying to enter certain sectors or jobs. Yet, there are debates on the strength of these effects and their relevance in comparison to policy and institutional variables. Some studies claim that the literature on women's labour market participation has overemphasised the effects of social policy variables, such as childcare expenditures (Fortin, 2005; Algan and Cahuc, 2007). Fortin (2005) finds that introducing attitudes and values into a statistical model measuring the determinants of women's employment reduces the effect of childcare expenditures by more than half. Giavazzi and colleagues (2009), on the other hand, claim that Algan and Cahuc (2007) overestimate the effect of culture and that, while attitudes and beliefs do matter for women's labour market participation, policies matter even more. The relative strength of these variables is difficult to discern. However, the large number of studies presented here clearly illustrates the importance of these many factors on women's labour market participation.

Macroeconomic conditions

Local macroeconomic conditions such as the availability of jobs may unevenly affect men and women's decisions to enter the labour market. High unemployment rates may discourage labour market participation when the spouse is employed; however, if their spouse is unemployed, women may be willing to join the labour market to compensate for the loss of income. Jaumotte (2003) finds that a high female unemployment rate reduces female labour force participation and a high male unemployment rate induces an 'added worker effect'. Wetzels (2005) also finds that regional unemployment decreases the probability of women entering the labour force. Recent studies show that in developed countries men's employment is more sensitive to cyclical macroeconomic fluctuations compared with women, who usually work in more stable industries (see, for example, Antonopoulos, 2009; ILO, 2009; Smith, 2009).

Econometric analysis

This section presents and discusses the econometric models used for the empirical analysis of female labour force participation and its determinants. Several different methods have been used in the literature, which can be essentially grouped into macro-level and micro-level models. Examples of studies applying macro-level models are Jaumotte (2003), who investigates the role of policy and other factors on female labour supply using a dynamic panel data model at the country level, and Chevalier and Viitanen (2002), who assess the relationship between childcare availability and aggregate labour force participation in the United Kingdom using an autoregressive model. At the micro-level, the most diffused approaches are linear probability models (see,

for instance, Arpino et al, 2010) or log-linear models (see Thévenon, 2009), simple probit models (see Anderson and Levine, 1999; Wetzels, 2005; Del Boca et al, 2009; Azmat and González, 2010) or dynamic probit models (see Hyslop, 1999; Keane and Sauer, 2009).

Alternatively, the multilevel approach allows the exploration of the interactions between micro-level and macro-level characteristics. The idea is that individuals are nested in countries, and country-level factors such as institutions and policies affect women with specific characteristics differently. Using multilevel models, Cipollone and colleagues (2014) try to measure the joint effect of labour market reforms and social policies in 15 European countries over the period 1994–2008. Specifically, they assess the role played by family-friendly social policies and institutional characteristics of the labour market on a woman's decision to join the labour market. This study estimates multilevel models in which country-specific characteristics such as policies and institutions (second level) drive the effect of individual level characteristics (first level) on female labour force participation. Multilevel models are estimated by grouping countries according to welfare regimes.

Along these lines, Cipollone and D'Ippoliti (2011) investigate changes in women's employment in Italy over time using multilevel analysis and show the existence of significant interactions between the micro and macro factors. On the one hand, the impact of individual characteristics may be affected by contextual variables such as the cultural and political environment; on the other hand, macro-level factors may have a direct and indirect influence on women's employment by affecting the impact of micro variables.

This chapter explores the relationship between individual and household characteristics and a woman's decision to participate in the labour market using logistic regression models. While macro-level factors such as social policies and labour market institutions are significant determinants of female labour market participation, these are the same for different individuals in the same country. In addition, they do not vary significantly over time. Given that this report's analysis is performed separately for each Member State, such aggregate variables are not included in the logit models since they would have limited explanatory power.

Data

The data used in this report's analysis come from the European Union Statistics on Income and Living Conditions (EU-SILC), which is the successor of the European Community Household Panel (ECHP). EU-SILC contains comparable cross-sectional and longitudinal microdata on income and living conditions as well as other sociodemographic characteristics. The EU-SILC panel is a rotational panel where the same people are interviewed for a certain time period (in this case four years), and each year one-quarter of all respondents is

replaced by new respondents.⁵ The project started in 2003 on the basis of an agreement in seven countries (six EU Member States and Norway). Given the progressive implementation of EU-SILC, this report's dataset is unbalanced at country level, which means that not all countries have observations for all years.⁶ Italy is the country with the highest number of observations, while Croatia, which was included only from 2011 onwards, has the lowest. Since this report's analysis focuses on all Member States, this is restricted to the years of the economic crisis 2009–2012, so that all countries except Croatia have observations for at least four continuous years.

The selected sample comprises 521,811 women aged 20–64 at the time of the survey. Around 60% of the sample are active in the labour market, with an average age of 43 years. Some 23% of respondents have basic secondary education or lower, 50% hold an upper secondary or vocational qualification, and 27% have a higher degree or university degree.⁷ About 59% of the respondents are married, and 5% of the respondents report serious limitations due to illness or disability. As for family responsibilities, 9% have at least one child aged 3 or under, 9% have a 4–6-year-old child, 21% have a 7–14-year-old child and 43% a child older than 15. Regarding the variable capturing cohabitation with the elderly, 4% of the sample reported cohabiting with an old person (aged 70 or over) who is limited to some extent by illness or disability. Around 39% of the responding households confirmed they received child allowances and 14% were using (formal or informal) childcare. In addition, 21% lived in a materially deprived household.⁸

Model specification

This section describes the model used for the analysis of the determinants of female labour market participation in each Member State using binary logistic regressions.⁹ These models enable one to estimate the probability of a woman participating or not participating in the labour

market, given a set of individual and household characteristics. The final specification used takes the following form:

$$Y_{it} = g(\alpha + \beta X_{it} + \gamma H_{it} + \delta year)$$

where Y_{it} is a dummy dependent variable for labour market status (1 being active and 0 inactive)¹⁰ at time t for woman i ; X_{it} and H_{it} are sets of personal and family or household characteristics of woman i at time t ; $year$ is a common linear trend. While in linear regression a coefficient can be directly interpreted as the change in the dependent variable due to a one-unit increase in the independent variable, in binary regression models marginal effects have to be computed for a more intuitive interpretation of the relationship between variables. In the current context, marginal effects will show the effect of a unit change in an independent variable on the probability of participating to the labour market. For continuous variables, this represents the instantaneous change; for binary variables, the change is from 0 to 1. Based on the reviewed literature, X_{it} includes controls for age range, educational level, marital status, nationality and serious illness or disability. Although work experience is a relevant factor, it was not included in order to ensure comparability between countries, due to limited data availability. At the household level, H_{it} includes controls for the partner's employment status and education, the presence of an elderly person (70 or over) with some limitations due to illness or disability, material deprivation, and the presence of children in different age ranges (0–3, 4–6, 7–14 and 15 or over). In addition, given availability of information on the receipt of childcare allowance and the use of (formal and informal) childcare, these two variables are also included in the analysis, although in this case results should be interpreted with more caution given potential endogeneity problems. For instance, a place in childcare may affect labour market participation, but the converse can also be true.

5 Due to lack of some information about variables and country in the longitudinal data, pooled cross-sectional data were used for this analysis. A significant limitation that results from this exercise is that someone who is interviewed in two or more consecutive years cannot be identified because their personal identifiers change from one cross-section to the other. In order to partly overcome this problem, a heteroskedasticity-consistent standard error was computed. (It is not assumed that the error term has a constant variance, due to repeated observations of the same individuals over time).

6 Cyprus, the Czech Republic, Germany; Hungary, Latvia, Lithuania, the Netherlands, Poland, Slovakia, Slovenia and the United Kingdom are missing in 2004 only; Bulgaria and Romania from 2004 to 2006; Malta from 2004 to 2007; Croatia from 2004 to 2010.

7 Unfortunately, EU-SILC does not provide information on the field of the studies and therefore does not enable one to further differentiate into more detailed categories.

8 Materially deprived households are those facing severe financial constraints, which cannot afford at least three items out of the following nine: (1) unexpected expenses, (2) one week's annual holiday away from home, (3) to pay for arrears (mortgage or rent, utility bills or hire purchase instalments), (4) a meal with meat, chicken or fish every second day, (5) to keep their home adequately warm, (6) a washing machine, (7) a colour TV, (8) a telephone, (9) a personal car (Eurostat, 2010b).

9 These models are estimated using a maximum likelihood procedure and, contrary to linear probability models, they force the predicted values to be between 1 and 0 because probabilities cannot be less than 0 and greater than 1.

10 Women were considered as active in the labour market if they reported being employed, self-employed and unemployed (ILO definition). The reason for choosing labour market status rather than employment status as the outcome variable is that the interest of this analysis is female labour supply, which includes employed and involuntarily unemployed women. Employment status does not depend only on the individual's decision to join the labour market, but also on other factors that are exogenous to them, such as labour demand.

Results

The results of the analysis for every Member State for the period 2009–2012 are reported in Table 1. Overall, the results are highly consistent with the reviewed literature, although some interesting cross-country differences in the magnitude of the effects emerge.

Age increased the likelihood of being active in the labour market in all countries, particularly in Slovenia, but as women grow older, they are less likely to participate. Across all countries, women with educational levels higher than International Standard Classification of Education (ISCED) 0–2 (pre-primary and primary) are more likely to participate in the labour market. The highest marginal effect of having medium educational level (ISCED 3–4) is found in Slovakia and the lowest in Greece. Having tertiary education (ISCED 5–6) has an even higher positive effect, which results in a change in the probability of more than 40 percentage points in Malta and more than 30 percentage points in Bulgaria, Hungary, Ireland, Lithuania, Poland, Romania, Slovakia and Slovenia. Having a tertiary education in eastern European Member States increases the likelihood of being active relative to other countries. Nationality plays a more modest role, although it has a positive impact on participation in all significant estimates except for Slovenia.

Because household dynamics affect time-allocation decisions, the relationship between female labour market participation and marital status, partners' characteristics and partners' employment status are also investigated. Overall, being married results in a lower probability of joining the labour market in all countries relative to not being married. However, it is interesting to note that a spouse's educational level matters in this context. In almost two-thirds of cases, being married to a low-skilled spouse (with an educational level corresponding to ISCED 0–2) means a higher negative probability of participating in the labour market compared with being married to someone with medium-level education (ISCED 3–4). For the rest of the cases, the effect is rather similar and only two countries, Greece and Luxembourg, represent a notable exception. The same is true for most countries when women married to spouses with a high educational level (instead of a medium level) are considered. In this case, the countries that stand out most are Luxembourg and United Kingdom, where being married to a man with a high educational level reduces the probability of being active by around 20 percentage points (compared with not being married), which is higher than the negative effect of being married to a man with a low level of education.

A partner's employment status is also relevant: women married to an employed person are more likely to join the labour market than those who are single or who are married to an unemployed spouse. This relationship is significant for almost all countries, with differences above 20 percentage points in Denmark and the United Kingdom.

As discussed in the literature review, motherhood is one of the main determinants of female labour force participation. Therefore, the relationship between female labour force participation and the presence of children in various age groups – 0–3 years, 4–6 years, 7–14 years and 15 years or older – was investigated. The base category is composed of households with no dependent children. The results show that the younger the child, the lower the probability of joining the labour market relative to not having dependent children within the household. In Austria, the Czech Republic, Estonia, Finland, Hungary and Slovakia, the presence of children aged 0–3 reduces the probability of being active in the labour market by more than 50 percentage points.

As for childcare-related variables, results show a negative relationship between the female activity rate and the receipt of child allowances, with the exception of Spain and Sweden, which could be due to particular features of the family benefits systems in these countries. Indeed, receiving child allowances could possibly raise the opportunity-cost of leaving family care activities and discourage labour market participation. Conversely, a positive relationship emerges between the female activity rate and the use of formal and informal childcare. The results suggest that cohabitating with elderly people with limitations due to illness or disability is detrimental to the female activity rate in all countries except Malta and Cyprus. Results are not available for Denmark, Finland, the Netherlands, Sweden and Slovenia because of data limitations. Other significant, but more general, barriers to female labour market participation are the individual's health status (limitations due to serious illness or disability) and living in a materially deprived household. For these two variables, a negative effect is consistently found across all countries.

Lastly, with respect to the beginning of the crisis in 2009, the probability of participation conditional on other variables has decreased over time in Denmark, Slovakia, Greece, Lithuania and Spain, with the greatest negative effect in 2012 in all countries except the last. As Figure 1 in Chapter 1 shows, Denmark had the highest drop in female activity rate in the EU28, from 77% in 2008 to 75% in 2014. Due to the availability of data for Croatia only since 2011, time effects for earlier years are not available.

Table 1: Female activity rate – marginal effects

	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark
Age	0.129***	0.143***	0.119***	0.122***	0.104***	0.164***	0.098***
Age squared	-0.002***	-0.002***	-0.001***	-0.002***	-0.001***	-0.002***	-0.001***
ISCED 3–4	0.128***	0.128***	0.223***	0.246***	0.118***	0.207***	0.069**
ISCED 5–6	0.164***	0.259***	0.314***	0.450***	0.274***	0.262***	0.158***
National citizen	0.029	0.159***	-0.018	-0.012	0.068***	0.110***	0.066
Illness or disability	-0.359***	-0.451***	-0.485***	-0.313***	-0.222***	-0.422***	-0.329***
Material deprivation	-0.240***	-0.274***	-0.129***	-0.077***	-0.060***	-0.156***	-0.259***
Spouse with ISCED 0–2	-0.137***	-0.162***	-0.043*	-0.048	-0.176***	-0.258***	-0.151***
Spouse with ISCED 3–4	-0.102***	-0.111***	-0.026	0.008	-0.148***	-0.116***	-0.085***
Spouse with ISCED 5–6	-0.113***	-0.151***	0.023	0.045	-0.184***	-0.110***	-0.117***
Spouse employed	0.095***	0.112***	0.103***	0.035	0.077***	0.125***	0.203***
Children aged 0–3	-0.512***	-0.086***	-0.175***	0.028	-0.157***	-0.555***	0.025
Children aged 4–6	-0.187***	-0.129***	-0.121***	-0.033	-0.104***	-0.141***	-0.061
Children aged 7–14	-0.127***	-0.105***	-0.016	-0.023	-0.055**	-0.123***	-0.033
Children over 15	0.045***	-0.011	0.004	0.047*	0.027*	0.012	0.047
Children's allowance	-0.119***	-0.125***	-0.034**	-0.188***	-0.146***	-0.324***	0.001
Childcare use	0.168***	0.257***	0.035	0.217***	0.328***	0.128***	0.030
Cohabiting with person aged 70+	0.006	-0.152**	-0.041*	-0.032	0.068**	-0.071*	
Year 2010	-0.011	-0.003	-0.007		-0.002	-0.012	-0.048*
Year 2011	0.008	-0.002	-0.008		0.002	-0.031*	-0.062*
Year 2012	0.002	0.011	-0.021	0.007	-0.016	-0.014	-0.124***
N	17,388	16,760	18,728	7,394	13,678	22,582	7,860
	Estonia	Finland	France	Germany	Greece	Hungary	Ireland
Age	0.095***	0.077***	0.131***	0.094***	0.104***	0.177***	0.072***
Age squared	-0.001***	-0.001***	-0.002***	-0.001***	-0.001***	-0.002***	-0.001***
ISCED 3–4	0.055**	0.086***	0.101***	0.077***	0.048**	0.204***	0.147***
ISCED 5–6	0.204***	0.216***	0.169***	0.177***	0.282***	0.354***	0.305***
National citizen	0.076***	0.161***	0.087***	0.079***	-0.009	0.005	0.051*
Illness or disability	-0.446***	-0.361***	-0.280***	-0.441***	-0.270***	-0.390***	-0.351***
Material deprivation	-0.148***	-0.320***	-0.195***	-0.253***	-0.135***	-0.118***	-0.225***
Spouse with ISCED 0–2	-0.056	-0.058*	-0.109***	-0.080***	-0.078***	-0.149***	-0.063*
Spouse with ISCED 3–4	-0.071***	-0.042*	-0.108***	-0.081***	-0.165***	-0.054***	-0.001
Spouse with ISCED 5–6	-0.084***	-0.091***	-0.190***	-0.129***	-0.138***	-0.092***	-0.061*
Spouse employed	0.027	0.080***	0.106***	0.087***	0.056**	0.141***	0.011
Children aged 0–3	-0.510***	-0.552***	-0.292***	-0.488***	-0.193***	-0.553***	-0.121***
Children aged 4–6	-0.046*	-0.214***	-0.146***	-0.242***	-0.082***	-0.251***	-0.196***
Children aged 7–14	-0.047**	-0.092***	-0.133***	-0.143***	-0.121***	-0.192***	-0.135***
Children over 15	-0.010	0.058***	-0.040***	0.008	-0.005	-0.025**	0.017
Children's allowance	-0.048***	-0.019	-0.081***	-0.081***	0.007	-0.112***	-0.090***
Childcare use	0.073***	0.251***	0.304***	0.187***	0.369***	0.110***	0.337***
Cohabiting with person aged 70+	-0.103***		-0.060*	-0.080***	-0.014	-0.071***	-0.237***
Year 2010	-0.055***	-0.040*	-0.004	0.004	0.012	-0.002	-0.031
Year 2011	-0.015	-0.027	0.005	0.014	-0.082***	-0.002	-0.001
Year 2012	-0.023	-0.016	0.004	0.019*	-0.085***	-0.010	0.007
N	16,505	14,112	31,418	34,868	18,345	35,447	12,521

	Italy	Lithuania	Luxembourg	Latvia	Malta	Netherlands	Poland
Age	0.128***	0.104***	0.129***	0.089***	0.075***	0.116***	0.149***
Age squared	-0.001***	-0.001***	-0.002***	-0.001***	-0.001***	-0.001***	-0.002***
ISCED 3–4	0.167***	0.209***	0.067***	0.149***	0.263***	0.092***	0.187***
ISCED 5–6	0.257***	0.373***	0.178***	0.294***	0.427***	0.176***	0.359***
National citizen	-0.005	0.033	0.000	0.040**	0.081**	0.133***	0.145
Illness or disability	-0.214***	-0.512***	-0.254***	-0.380***	-0.139**	-0.478***	-0.382***
Material deprivation	-0.146***	-0.133***	-0.094*	-0.128***	-0.134***	-0.250***	-0.120***
Spouse with ISCED 0–2	-0.212***	-0.022	-0.100***	-0.035	-0.114***	-0.134***	-0.038*
Spouse with ISCED 3–4	-0.149***	-0.031	-0.175***	-0.030*	-0.027	-0.144***	-0.037**
Spouse with ISCED 5–6	-0.116***	0.011	-0.281***	-0.067**	-0.060*	-0.187***	-0.010
Spouse employed	0.023*	0.092***	0.062**	0.036*	0.033	0.108***	0.052***
Children aged 0–3	-0.087***	-0.022	-0.210***	-0.304***	-0.198***	-0.091**	-0.280***
Children aged 4–6	-0.116***	-0.058	-0.212***	0.023	-0.157***	-0.138***	-0.163***
Children aged 7–14	-0.127***	-0.054*	-0.099***	-0.015	-0.130***	-0.174***	-0.093***
Children over 15	-0.050***	-0.042**	-0.024	-0.014	-0.023	0.019	-0.004
Children's allowance	-0.073***	-0.018	-0.189***	-0.004	-0.122***	-0.135***	-0.134***
Childcare use	0.221***	0.080**	0.318***	0.222***	0.197***	0.269***	0.214***
Cohabiting with person aged 70+	-0.073***	-0.011	-0.063	-0.058***	0.087*		-0.018
Year 2010	-0.008	-0.010	0.035	-0.052***	0.006	0.009	0.002
Year 2011	0.000	-0.042*	0.033	-0.024	0.026	0.020	0.005
Year 2012	0.005	-0.048*	0.045*	-0.010	0.052**	0.014	0.009
N	55,417	15,574	16,848	18,377	13,529	15,913	42,345
	Portugal	Romania	Spain	Slovakia	Slovenia	Sweden	UK
Age	0.095***	0.143***	0.096***	0.178***	0.245***	0.065***	0.072***
Age squared	-0.001***	-0.002***	-0.001***	-0.002***	-0.003***	-0.001***	-0.001***
ISCED 3–4	0.061***	0.143***	0.091***	0.300***	0.100***	0.113***	0.135***
ISCED 5–6	0.182***	0.388***	0.246***	0.331***	0.313***	0.123***	0.197***
National citizen	0.000	0.395***	0.000	0.011	-0.086***	0.158***	0.092***
Illness or disability	-0.354***	-0.402***	-0.301***	-0.451***	-0.213***	-0.431***	-0.466***
Material deprivation	-0.087***	-0.058***	-0.111***	-0.134***	-0.238***	-0.232***	-0.177***
Spouse with ISCED 0–2	-0.121***	-0.190***	-0.178***	-0.272***	-0.112***	-0.080**	-0.136***
Spouse with ISCED 3–4	-0.105***	-0.148***	-0.120***	-0.120***	-0.036	-0.084***	-0.129***
Spouse with ISCED 5–6	-0.133***	-0.067**	-0.108***	-0.065**	-0.077*	-0.110***	-0.218***
Spouse employed	0.110***	0.169***	0.070***	0.177***	0.094***	0.119***	0.206***
Children aged 0–3	-0.034	-0.185***	-0.093***	-0.549***	-0.014	-0.080***	-0.247***
Children aged 4–6	-0.036	-0.043	-0.067***	-0.203***	-0.058*	-0.045	-0.193***
Children aged 7–14	-0.085***	-0.113***	-0.099***	-0.111***	-0.159***	-0.051*	-0.156***
Children over 15	-0.056***	-0.028**	-0.072***	0.018	-0.010	0.019	0.011
Children's allowance	-0.050***	-0.078***	0.058**	-0.154***	-0.056**	0.043*	-0.116***
Childcare use	0.162***	0.074***	0.134***	0.109***	0.118***	0.046*	0.150***
Cohabiting with person aged 70+	-0.033	-0.004	-0.020	-0.074***			-0.172***
Year 2010	-0.020	0.005	-0.007	-0.033**	-0.030	0.011	-0.005
Year 2011	-0.014	-0.019	-0.037***	-0.050***	-0.056**	0.017	-0.012
Year 2012	-0.039**	-0.010	-0.057***	-0.042**	-0.073***	0.011	0.015
N	15,294	21,454	41,373	21,776	13,814	9,949	19,958

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Source: EU-SILC and authors' own calculations

SUMMARY

This chapter investigated the determinants and barriers underlying female market labour participation. It first reviewed the existing literature on the main factors driving women's labour market participation, which include individual characteristics, family and household circumstances, institutions and policy regimes. Cultural attitudes and gender stereotypes ought also to be taken into account, but the relative strength of these variables is more difficult to discern. Next, the chapter presented an analysis of some of these determinants at the micro-level using EU-SILC microdata for the period 2009–2012. Using binary logistic regression models, the relationships between female labour force participation and individual characteristics and family and household circumstances were analysed for each EU Member State.

In line with existing literature, the results suggest that higher educational achievement leads to higher participation in all countries. In particular, having tertiary education increases the probability of being active in the labour market (compared with having primary or lower secondary education only) of more than 40 percentage points in Malta and more than 30 percentage points in Bulgaria, Hungary, Ireland, Lithuania, Poland, Romania, Slovakia and Slovenia.

Because household dynamics affect time-allocation decisions and thus female labour force participation, the effect of marital status, partners' characteristics and partners' employment status were also investigated. This analysis found that married women are less likely to participate in the labour market, and in most countries, this negative effect is more marked for women married to highly educated spouses. In Luxembourg and the United Kingdom, being married to a highly educated man reduces the probability of being active by around 20 percentage points, compared with not being married. Furthermore, women married to an employed person are more likely to join the labour market than those who are single or who are married to an unemployed spouse. The statistic is significant for almost all countries, with differences above 20 percentage points in Denmark and the United Kingdom.

Motherhood is one of the key determinants of female labour force participation; the younger the child, the lower the probability of a woman joining the labour market relative to not having children at all. Similarly, having responsibilities for the care of an elderly person is negatively related to participation rates in all countries (except for Malta), although not as strongly as having small children. Suffering from a serious illness or disability or living in a materially deprived household also decreases the likelihood of participating in the labour market.

The receipt of family allowances seems to moderately discourage women from joining the labour market in most countries, while benefiting from either formal or informal childcare is associated with higher activity rates in most countries, although to a different extent.

3 Economic loss due to the gender gap in employment

The reconciliation of work with family and private life is recognised at EU level as a priority for achieving gender equality, increasing women's participation in the labour market, and promoting the sharing of care responsibilities between women and men. However, equality between women and men is not just a matter of fairness, but also an economic objective. More equal employment opportunities and better access to the labour market for women have been identified as key dimensions for achieving inclusive growth and a sustainable social system in Europe, especially when considering population ageing (European Commission, 2013e).

The existing literature suggests that a decrease in gender inequality in the labour market can lead to substantial macroeconomic gains. Löfström (2009) shows that full gender balance in the labour market in the EU could potentially increase GDP by 27%–29%, with a gain of €6,800 per capita. Even if this were an overestimation of the real gains, due to the assumption that full gender balance is not only characterised by gender equality in the activity rate but also an equal share of part-time work and equal wages, it still shows that the potential economic gains are substantial. Along the same lines, Aguirre and colleagues (2012) find that the net impact on GDP resulting from an increase in female employment rates ranges from 2% in Sweden to 11% in Italy. More recently, studies have found that gender gaps in entrepreneurship and labour force participation in Europe lead to a total income per capita loss of 10.4% (of which 4.6% is due to the existence of gender inequality in labour participation) (Teignier and Cuberes, 2014; Cuberes and Teignier, 2016). On a global scale, an ILO report (2012) shows that the potential economic contribution of increased female employment between 2012 and 2017 amounts to USD 1.6 trillion (€1.4 billion as at 10 August 2016) in output (measured in purchasing power parity, or PPP). Furthermore, the expansion of the female workforce not only brings immediate economic gains but also offers the potential for a significant boost to GDP growth in the medium and long term. According to the OECD (2008, 2012b), narrowing the gap between male and female employment rates has accounted for a quarter of annual economic growth since 1995.

In light of existing literature, this chapter provides further evidence on the economic gains EU Member States could

benefit from when women participate fully in the labour market. The aim is twofold.

- Firstly, estimates of the economic loss due to the existence of a gender employment gap for each EU country are presented. The purpose of this exercise is to gain a better understanding of the monetary gains of closing the gender gap in employment participation, reiterating the need for policy intervention. Because women have the freedom to choose to work or not, often depending on family responsibilities, an alternative scenario is also considered, taking into account women's willingness to work.
- Secondly, the lifetime cost of a woman's exclusion from employment is estimated. In other words, the economic loss due to the lack of participation in employment of a 20-year-old woman all along her working life is calculated.

It is important to highlight that the aim of this analysis is not to treat women as commodities but rather to stress the importance of engaging women in employment and to develop an insight into how things would be different if their employment participation was higher. Indeed, it is acknowledged that reducing the gender gap in employment participation does not lead only to substantial monetary gains but also to societal benefits. Last, but not least, the investigation of the cost of the gender employment gap in Europe does not take into account the value of unpaid activities that women do within a household for its members, including care and housework. Therefore, the economic loss that is computed is not net of the benefits related to women's higher involvement, relative to men, in unpaid care work. If this value was taken into account, the cost of the gender employment gap would certainly be lower. The last section of this chapter addresses unpaid domestic work.

Methodology and data

Definition of the costing framework

The costing framework adopted here for the computation of the economic loss due to the gender employment gap is inspired by the framework originally implemented in a previous Eurofound report to estimate the economic loss due to the disengagement of young people from the labour market (Eurofound, 2012c). The cost of NEETs (young people aged 15–29 not in employment, education or training for 6 months or more during the previous 12 months) was computed in terms

of transfers and benefits from public benefit schemes and forgone earnings and taxes.¹²

Two types of costs were considered in the computation: a (direct) public finance cost, which represents the potential savings in public finance transfers if NEETs were re-engaged in the labour market; and an (indirect) resource cost, which represents the earnings losses and missing welfare contributions to the economy due to the unemployment or inactivity of a young person who is NEET.

The estimation of the public finance cost was computed as a difference between public finance income received by NEETs and that received by non-NEETs, based on the hypothesis that the former are more likely to receive higher transfers from the welfare state than the latter. Similarly, the resource cost was defined as the difference between resource income earned by NEETs and that earned by non-NEETs, based on the assumption that NEETs are more likely to have a lower resource income than non-NEETs.

On the basis of this costing framework, the total cost of NEETs corresponded to the earnings loss from market activity and to the savings made in public finance transfers if a NEET was in employment. The total resource and public costs were combined at the country level only for illustrative purposes. In practice, the two costs partially overlap since public finance costs may have a mitigating effect on the loss of income from unemployment and inactivity.

Here, the costing framework used for NEETs is adapted to a different population of interest, namely non-working women aged 20–64 whose income is compared with that of women in employment, and to a different context, the estimation of the economic loss due to the gender employment gap. Figure 19 shows the costing framework schematically. While the definition of the costing framework and its main features are not substantially changed, a refinement of its implementation based on available data sources is introduced. This will be discussed in detail in the following section.

Implementation of the costing framework

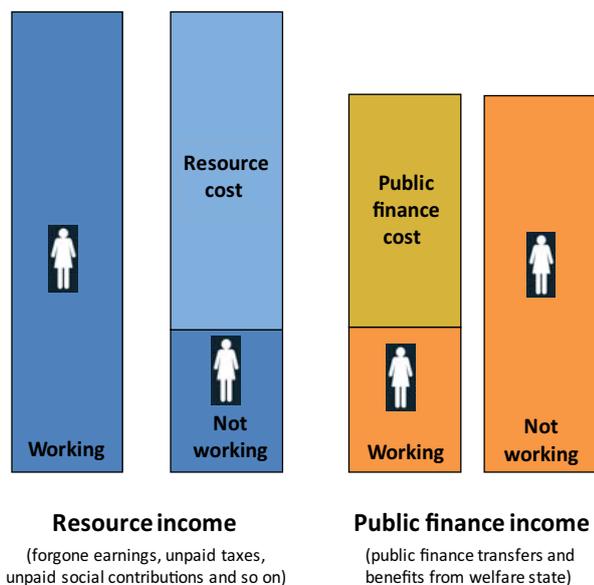
For the implementation of the costing framework defined above, the latest available data (at the time of the study) from the EU-SILC 2013 are used. EU-SILC is an annual cross-sectional and longitudinal survey whose aim is to monitor living conditions of the population in private households across Europe. The survey is coordinated by Eurostat and data are representative at the national level for EU Member States, ensuring a high level of comparability of results. The survey takes personal income to be all monetary income received by the individual: all income from work (employee wages and self-employment earnings), private income from investment and property, transfers between households plus all social transfers received in cash, including unemployment benefits during the income reference year. It provides information on net and gross personal income. For this analysis, gross income data were used for the reasons discussed above.

For this study, the authors have introduced two innovative features with respect to previous exercises performed for the NEET study (Eurofound, 2012c) in order to estimate the economic loss due to the gender employment gap:

- the inclusion of additional social benefits in the computation of the public finance income, which are relevant for this study’s population of interest (for instance family or child-related allowances);
- the estimate of the unit (per person) economic cost by specific age and education subgroups of the female population.

On the first point, the previous chapter showed that family and household circumstances, notably the presence of children, and the related allowances that are received on the basis of having children are significant elements to take into account when discussing the integration of women in the labour market. So while in the NEETs study the public finance income was given only by the sum of individual transfers, this analysis additionally includes social benefits, which are defined as transfers received by households intended to relieve them from the financial burden of a number of risks or needs.

Figure 19: Schematic of the costing framework



12 The cost added up to €153 billion (1.21% of GDP) in 2011 and to €162 billion in 2013 (Eurofound, 2014).

Therefore, the public finance income is computed here not only as income deriving from welfare benefits measured at individual level (unemployment benefits, old-age benefits, survivor benefit, sickness benefits, disability benefits and education-related allowances) but also as social benefits at the household level (family or child-related allowances, housing allowances and social exclusion allowances not elsewhere classified) (Table 2). Unfortunately, in EU-SILC social benefits are, by definition, not available at individual level. Because this limitation in the data does not allow the identification, with certainty, of the recipient of social benefits within households, separate estimates of the public finance cost will be provided, the first for welfare transfers at individual level and the second for social benefits at household level.

As for resource income, this is defined as income generated by the individuals themselves and the present contribution to future income. It is computed as the sum of six different items: cash or near-cash employee income; non-cash employee income; the employer's social insurance contribution; contributions to individual private pension plans; cash benefits or losses from self-employment; and pension from individual private plans. Therefore the resource cost represents forgone earnings and missed contributions.

The second innovative feature introduced in the implementation of the framework is the estimation of the unit (per person) economic cost for specific subgroups of women defined by age and educational attainment. Age and education, as noted in the previous chapter, are among the most significant individual characteristics that determine women's participation in the labour

market; therefore, this report aims to refine the methodology by estimating the cost for different subpopulations of interest. Three different age categories (20–34 years, 35–49 years and 50–64 years) and two educational levels (from pre-primary to post-secondary non-tertiary education, ISCED 0–4, and tertiary education and advanced research qualifications, ISCED 5–6) are considered.

Population of interest and sample size

The population studied consists of unemployed and inactive women aged 20–64 (excluding those in education or retired), who, during the previous income reference period of the survey,¹³ worked for six months or fewer, consecutively or not. This is a crucial restriction in order to consider those women who are more distant from the labour market, not only because they are currently not working but also because they were working for a limited time span in the last 12 months.

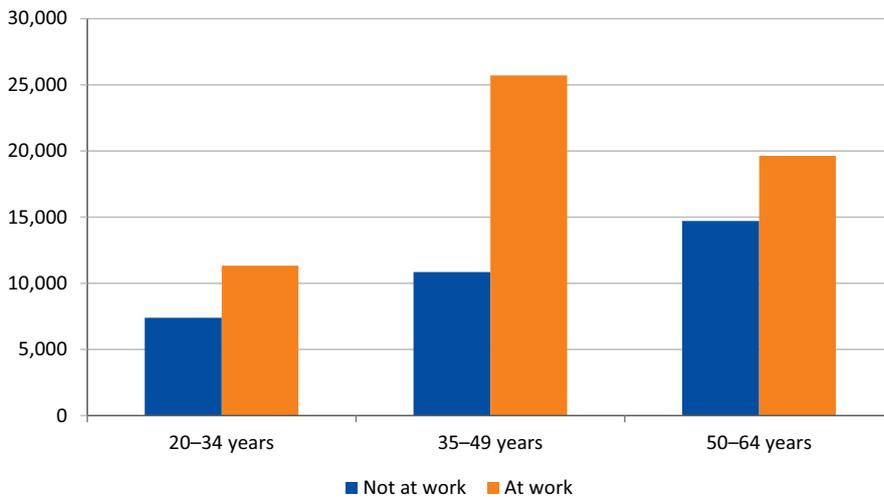
According to the definition of this study's costing framework, a suitable comparison group needs to be identified in order to compute the cost of women's exclusion from employment. This is defined as those women who were at work at the time of the interview and spent seven or more months in employment in the previous income reference period. The unit (per person) cost of women's unemployment and inactivity is computed by comparing the public finance income and the resource income of women not in employment with the income of a contrasting group of women who are at work. Due to the limited number of observations in the sample, the analysis could not be performed separately between unemployed and inactive women, who are therefore considered together.

Table 2: Implementation of the costing framework

Public finance income	Resource income
Individual welfare transfers <ul style="list-style-type: none"> ○ Gross unemployment benefits ○ Gross old-age benefits ○ Gross survivor benefits ○ Gross sickness benefits ○ Gross disability benefits ○ Gross education-related allowances 	<ul style="list-style-type: none"> ○ Gross cash or near-cash employee income ○ Gross non-cash employee income ○ Gross employer's social insurance contribution ○ Gross contributions to individual private pension plans ○ Gross cash benefits or losses from self-employment ○ Gross pension from individual private plans
Social benefits (household level) <ul style="list-style-type: none"> ○ Gross family or child-related allowances ○ Gross housing allowances ○ Gross social exclusion allowances not elsewhere classified 	

¹³ The income reference period is defined as a fixed 12-month period (such as the previous calendar or tax year) except for the United Kingdom (current income refers to the year of the survey) and Ireland (last 12 months).

Figure 20: Distribution of women with ISCED 0–4, by activity status and age



Source: EU-SILC 2013, Eurofound elaboration

The sample consists of 132,627 women, of whom 39,614 were not working (unemployed or inactive). Figures 20 and 21 show how women with different educational levels (ISCED 0–4 and ISCED 5–6) are distributed by activity status and age. Most of the non-working women in the sample have from pre-primary to post-secondary non-tertiary education (85%). The group of women with the lowest participation rate in the sample is composed of those aged 50–64 with ISCED 0–4, while women with tertiary education aged 35–49 have the highest.

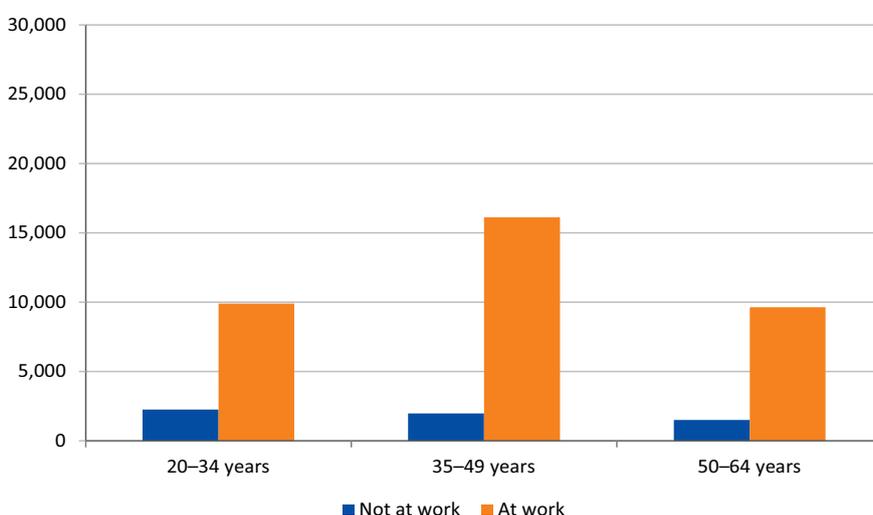
Propensity score matching methodology

The unit (per woman) cost of unemployment and inactivity could be calculated simply as the difference in the mean individual welfare transfers, social benefits and resource income between non-working and working women. However, comparing only the mean outcomes of

women not in employment and women at work is not advisable, since it would ignore the fact that an individual’s decision to participate or not in the labour market depends on personal characteristics, as extensively highlighted already. These characteristics have to be taken into account in the computation, otherwise the estimation will be biased. Indeed, with a simple difference approach, the welfare transfers and social benefits received by non-working women are likely to be underestimated, while their potential earning capacity is likely to be overestimated.

For this reason, the unit cost of women’s non-participation in employment is calculated by applying the propensity score matching (PSM) methodology, a very popular technique widely used in evaluation studies of economic policy interventions to estimate the causal impact of a treatment (such as participation in a training

Figure 21: Distribution of women with ISCED 5–6, by activity status and age



Source: EU-SILC 2013, Eurofound elaboration

programme) on an outcome (such as income). The basic idea behind this approach is to compare two groups of individuals (treated and non-treated) who have a similar probability of receiving the treatment, conditional on observable characteristics (in other words, they have a similar propensity score). The difference in the outcome variable between treated and non-treated individuals, who are similar in all relevant pre-treatment characteristics, is therefore due to the treatment itself. With the matching approach, the bias is reduced in estimating this difference using observational datasets by constructing a suitable comparison group (the statistical twins of the treated group).

First proposed by Rosenbaum and Rubin in 1983, the PSM method is one way to overcome the problem of the missing counterfactual mean outcome that arises because both outcomes cannot be observed for the same individual, under the treatment and not. In this analysis, non-participation in the labour market is considered as the treatment, while income (individual welfare transfers, social benefits and resource income) is the outcome variable.¹⁴ In a nutshell, the aim is to estimate the counterfactual mean income that a woman not in employment would have if she worked.

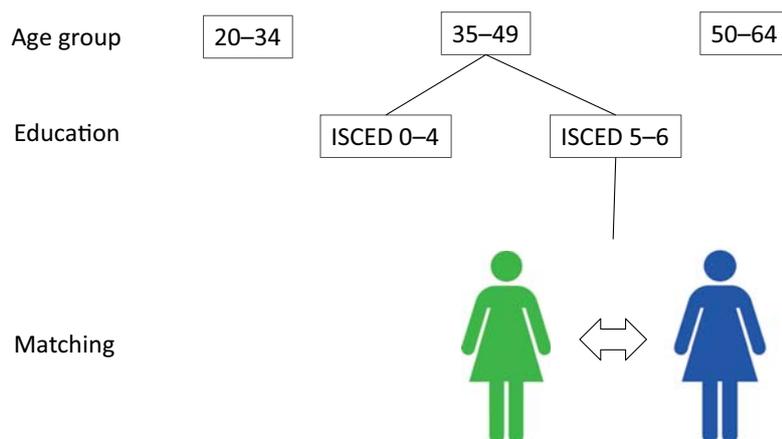
An alternative method that could be used to remove the effects of confounding variables would be regression modelling. However, the statistical literature suggests that the PSM has several advantages over regression analysis. In particular, PSM considers only people with the same values for the covariates in both the treatment and the control groups; therefore, only enough similar

individuals are matched and compared. Furthermore, being a non-parametric technique, PSM is more flexible in the way covariates affect the treatment probability. Regression analysis relies instead on linearity assumption, and it is sensitive to potential misspecification when interactions are added to make it less parametric.

Unit cost of women's unemployment and inactivity

The unit cost of women's unemployment and inactivity is estimated as the difference in the mean income (individual welfare transfers, social benefits and resource income separately considered) between non-working women and working women who are as similar as possible in selected sociodemographic characteristics. As previously mentioned, an innovative feature of this analysis is that the estimation is performed at the Member State level for each combination of age category (20–34 years, 35–49 years and 50–64 years) and educational level (ISCED 0–4 and ISCED 5–6). Within these subpopulations the observable¹⁵ characteristics that influence a woman's decision whether to work are taken into account. Each non-working woman is matched with a woman at work with the same age,¹⁶ migrant status, marital status, total number of children, presence of children in different age categories, health status, place of living (densely populated area or not), total number of adults in the household, and presence of a partner in the household who works.¹⁷ Figure 22

Figure 22: Schematic of models run for each age category and educational level in each Member State



Note: Different colours (green and blue) are assigned purely to distinguish working women from non-working women with the same observable characteristics.

- ¹⁴ It is important to emphasise that in this study's context, and unlike evaluation studies, the authors cannot interpret the effect of the treatment as causal.
- ¹⁵ It is important to recognise that unobservable characteristics such as motivation or general ability may also play a significant role in the decision whether to work. In the matching approach, however, it is assumed that unobservable factors do not affect outcomes in the absence of the treatment. So conditioning on observables only, the assignment to treatment can be taken as if it was random.
- ¹⁶ The analysis controls for age even within each age category given that the probability of working or not differs greatly between, for example, a 20-year-old woman and a 34-year-old woman.
- ¹⁷ Given the use of survey data, sampling weight is also included as covariate. Note that for Malta, the Netherlands and Slovenia, lack of data meant it was not possible to control for the effect of living in a densely populated area or not.

Table 3: Unit costs of women’s underemployment and inactivity in France, 2013

Age	Education	Total unit cost	Public finance unit cost		Resource unit cost
			Individual welfare transfers	Social benefits	
20–34 years	ISCED 0–4	€22,100	€1,351	€2,419	€18,329
35–49 years		€27,699	€3,070	€2,250	€22,380
50–64 years		€29,634	€3,237	€1,067	€25,331
20–34 years	ISCED 5–6	€26,864	€2,162	€1,556	€23,146
35–49 years		€44,614	€3,791	€1,774	€39,049
50–64 years		€47,696	€2,990	€1,002	€43,704

Source: EU-SILC 2013, Eurofound elaboration

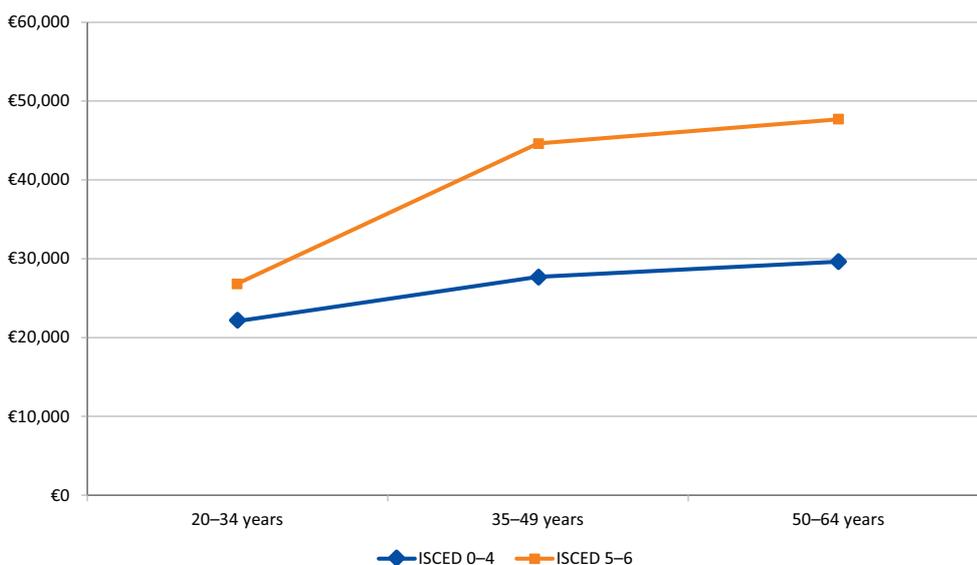
summarises schematically the way matching was performed.

The analysis follows that of Zanutto (2006), who extended PSM to incorporate survey weights from complex survey data. Indeed, Zanutto showed that ignoring survey weights can substantially affect the estimates of population-level effects. Firstly, blocks of observations that are homogeneous in the propensity score are constructed in a way that the means of each covariate do not differ between non-working and working women. Secondly, once a suitable comparison group is constructed for each age and educational category in each Member State, the average difference in individual welfare transfers, social benefits and resource income between unemployed and employed women is computed.

Overall, 168 unit costs of women’s unemployment and inactivity (28 EU Member States x 3 age groups x 2 educational categories) were estimated. For the sake of brevity, results for only one country, France, are reported in Table 3 as an example. It presents the total unit cost for each age and educational category and its subcomponents: public finance cost (individual welfare transfers and social benefits) and resource cost.¹⁸

As one can better appreciate from Figure 23, while the unit cost of unemployment and inactivity in this example is very similar for women with different levels of education at an early stage of their career, the difference widens considerably up to the age of 35 and then stays more or less constant.

Figure 23: Unit cost (€) of women’s unemployment and inactivity in France, 2013



Source: EU-SILC 2013, Eurofound elaboration

¹⁸ Formally, the unit resource cost should have a negative sign since it is computed as the difference of mean resource income between non-working and working women, who notably earn more. However, because this difference is intended as a cost in this study’s framework, it is reported with a positive sign.

In a few cases, negative estimates of the unit costs for individual welfare transfers (10 cases) or social benefits (14 cases) were obtained. These figures were set to 0 for consistency with the underlying assumption of the costing framework (that women not at work are more likely to receive higher transfers from the welfare state than women at work). With the exception of two cases, all the negative unit welfare transfer costs were driven by higher sickness benefits for women at work, compared with women not in employment. As for the negative values of the unit costs of social benefits, a possible interpretation may be that women who are not at work benefit from family or household allowances that are actually received by their working partner and then shared among household members. In practice, setting negative values to 0 has negligible effects on the computation of the total cost.

Once the unit (per woman) costs of unemployment and inactivity are computed for each combination of age category and educational level in every Member State, two quantities can be calculated:

- the total cost of the gender employment gap;
- the lifetime cost of a young woman's exclusion from employment.

The next section calculates the first quantity.

Total cost of the gender employment gap in 2013

The economic loss arising from the existence of a gender gap in employment participation is computed by multiplying the estimated unit costs in each age group and education category (as those reported, for example,

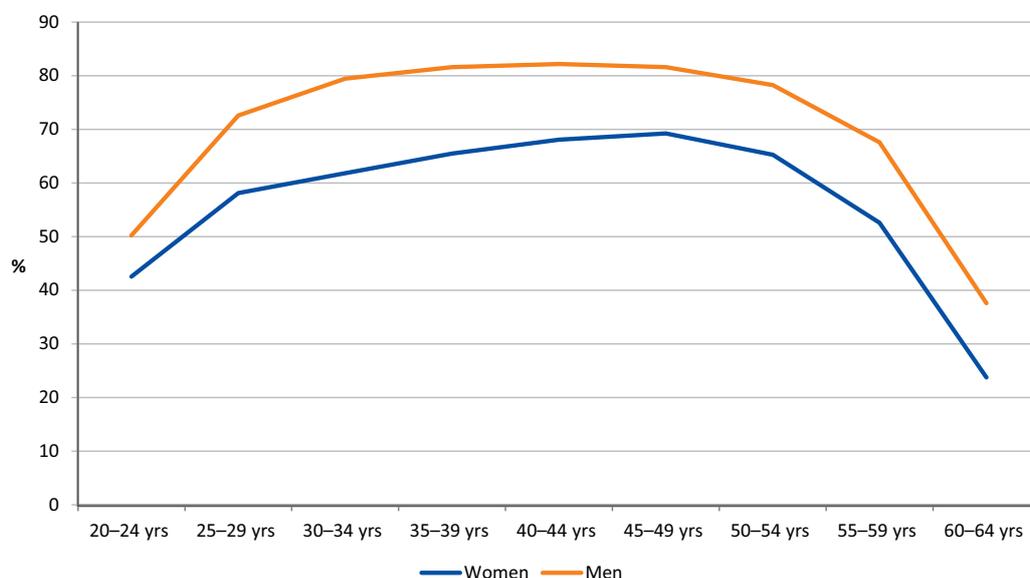
in Table 3) for the number of women whose participation in employment would be necessary in order to close the gender gap in that specific subpopulation. The technique adopted is explained in detail next.

For every combination of age and educational category in each Member State, the number of women who would have to work so that the female employment rate equalled the male employment rate in that cell was derived from the EU-LFS 2013 microdata. Closing the gender employment gap here means having an extra number of women who participate in employment so that the difference between male and female employment rates is 0. This entails satisfying the following condition:

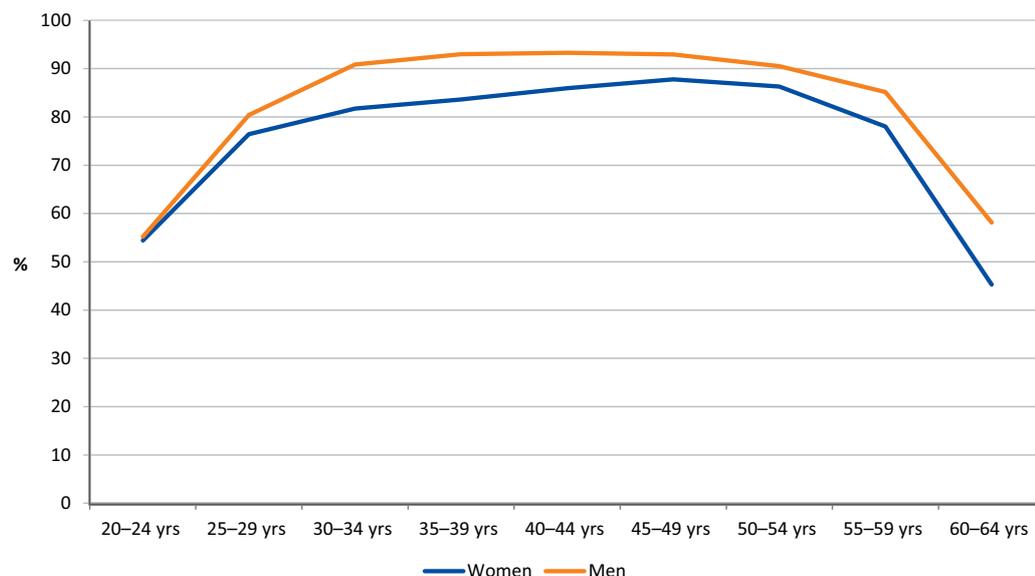
$$\text{Male employment rate}_{cij} \frac{N \text{ women employed}_{cij} + \text{Extra } N \text{ women employed}_{cij}}{N \text{ women in the population}_{cij}} \times 100$$

where c represents the country (EU28 Member States), i the age category (20–34, 35–49 or 50–64) and j the educational level (ISCED 0–4 or ISCED 5–6). Figures 24 and 25 depict the employment rate by gender and age for two different levels of educational attainment. From a graphical point of view, reducing the gender employment gap to 0 would mean making the two curves overlap, therefore eliminating the area between them. Note that the male and female employment rates in the charts are computed for a higher number of age categories only for a better graphical representation and illustrative purposes. The only age categories considered in the computation of the cost are 20–34, 35–49 and 50–64 years.

Figure 24: Employment rates (%), by sex and age, ISCED 0–4



Source: EU-LFS 2013, Eurofound elaboration

Figure 25: Employment rates (%), by sex and age, ISCED 5–6

Source: EU-LFS 2013, Eurofound elaboration

In those very few cases (4 out of 168 country–age–education cells) where more women than men were employed, the number of women who should have been excluded from employment in order to eliminate a gender gap disfavouring men is set to 0. This is because the primary interest here is in the economic benefit of increasing (and not decreasing) female labour market participation, despite the acknowledgement that displacement effects could take place. Finally, the total cost of the gender employment gap at country level is simply computed by aggregating the resource cost and public finance cost derived for each of the six combinations of age and education.

It is important to clarify that the analysis is merely supply-side and accounting based; hence, there are some caveats:

- the methodology does not take into account general equilibrium effects;
- the gains are assumed to be independent of the sector of employment; however, if employment in the public sector increased, the increase in female labour market participation would have fiscal implications;
- the study takes into account only the effects of participation during working life and does not look at the implications that the female labour market participation has on the entire life span, including the period that the individual is a pensioner.

The next section presents the calculation of the economic loss due to women under-participating in employment with respect to men in 2013 at country level (labelled here as the ‘Closing the gap’ scenario).

‘Closing the gap’ scenario: Results

The costs of the gender employment gap in 2013 were calculated based on the methodology described above, and the results are presented in Table 4. For each country, resource and public finance costs (individual welfare transfers and social benefits) are reported, as well as total figures for illustration. All amounts are given in euro.

The total cost for the EU amounts to more than €370 billion, or 2.8% of EU GDP. Around €324 billion of this is the resource cost, which, as expected, is much higher than the public finance cost in every country. Overall, the costs of individual welfare transfers and social benefits account for only 7.6% and 5%, respectively, of the total cost. Italy is the country with the highest resource cost (more than €88 billion), while Lithuania has the lowest (around €270 million).

The high resource cost in Italy is driven by the high number of women who would have to be reintegrated in the labour market to close the gender employment gap, rather than by a high unit cost. In general, the cost of the gender employment gap depends both on its absolute size and on the composition of the employment participation of women, since the cost has been computed in order to replicate the male employment structure. Furthermore, differences in the cost of living inflate or deflate total figures.

As for the public finance cost, Germany has the highest value, at around €9 billion, while Bulgaria has the lowest, €24 million. When only social benefit costs are considered, the United Kingdom ranks first and Cyprus last. In line with the different welfare models, the share of public finance costs varies substantially between Member States, being below 4% in Bulgaria, Croatia,

Greece, Italy and Romania, while it is above 25% in Denmark and Sweden.

The last row of Table 4 reports the total cost as a percentage of GDP. In this case, the country that pays the highest bill is Malta, with a loss equal to 8.2% of GDP, followed by Italy (5.7%), Greece (5.0%), Cyprus (4.5%) and the Czech Republic (4.5%). The two countries that pay the lowest bills are Sweden (1.4%) and Lithuania (1.0%). These results are presented graphically in Figure 26.

‘Narrowing the gap’ scenario: Willingness to work

The ‘closing the gap’ scenario provides interesting results that will raise awareness further around the issue of women’s underemployment with respect to men and its economic cost. Furthermore, this scenario is in line with the EU’s target employment rate of 75% for women and men by 2020. Yet, it would be remiss to consider an increase in women’s participation in employment while completely neglecting to take account of their willingness to work.

Table 4: Cost of the gender employment gap in 2013: ‘Closing the gap’ scenario

	Austria	Belgium	Bulgaria	Croatia	Cyprus
Number of women to reintegrate	227,154	355,407	168,437	118,792	32,240
Total welfare transfers cost (1)	€389,713,834	€1,526,907,427	€4,674,570	€8,311,251	€32,232,564
Total social benefits cost (2)	€401,242,836	€319,913,708	€19,787,264	€29,107,376	€13,865,097
Total public finance cost (1) + (2)	€790,956,670	€1,846,821,134	€24,461,834	€37,418,627	€46,097,661
Total resource cost (3)	€5,232,065,608	€12,125,916,418	€629,784,947	€1,161,734,799	€695,611,638
Total cost (1) + (2) + (3)	€6,023,022,278	€13,972,737,552	€654,246,781	€1,199,153,426	€741,709,299
% GDP	1.9	3.7	1.6	2.8	4.5
	Czech Republic	Denmark	Estonia	Finland	France
Number of women to reintegrate	569,854	102,639	33,578	80,790	1,547,952
Total welfare transfers cost (1)	€483,801,704	€1,909,445,606	€13,052,582	€279,913,289	€4,046,945,535
Total social benefits cost (2)	€718,760,651	€72,345,988	€77,815,305	€506,275,992	€2,927,740,085
Total public finance cost (1) + (2)	€1,202,562,355	€1,981,791,595	€90,867,888	€786,189,281	€6,974,685,620
Total resource cost (3)	€5,516,705,376	€3,469,122,589	€317,447,025	€2,559,611,626	€37,688,435,723
Total cost (1) + (2) + (3)	€6,719,267,731	€5,450,914,184	€408,314,912	€3,345,800,907	€44,663,121,343
% GDP	4.5	2.2	2.2	1.7	2.2
	Germany	Greece	Hungary	Ireland	Italy
Number of women to reintegrate	2,241,488	639,547	417,030	164,588	3,717,110
Total welfare transfers cost (1)	€5,774,950,414	€284,753,722	€168,019,829	€442,957,150	€729,397,251
Total social benefits cost (2)	€3,900,143,230	€54,868,520	€312,090,623	€260,670,309	€891,399,699
Total public finance cost (1) + (2)	€9,675,093,644	€339,622,243	€480,110,453	€703,627,460	€1,620,796,951
Total resource cost (3)	€45,424,784,055	€8,718,639,043	€2,597,460,289	€4,582,971,184	€87,079,361,597
Total cost (1) + (2) + (3)	€55,099,877,699	€9,058,261,286	€3,077,570,742	€5,286,598,643	€88,700,158,548
% GDP	2.0	5.0	3.1	3.2	5.7
	Latvia	Lithuania	Luxembourg	Malta	Netherlands
Number of women to reintegrate	43,290	53,004	21,839	37,560	481,300
Total welfare transfers cost (1)	€6,855,126	€28,166,650	€90,687,638	€12,775,475	€2,403,351,912
Total social benefits cost (2)	€29,871,831	€41,630,098	€24,386,842	€34,212,694	€1,857,010,424
Total public finance cost (1) + (2)	€36,726,957	€69,796,749	€115,074,480	€46,988,168	€4,260,362,336
Total resource cost (3)	€306,000,175	€270,822,236	€943,845,785	€545,477,586	€13,622,046,635
Total cost (1) + (2) + (3)	€342,727,132	€340,618,984	€1,058,920,265	€592,465,755	€17,882,408,972
% GDP	1.5	1.0	2.3	8.2	3.0

	Poland	Portugal	Romania	Slovakia	Slovenia
Number of women to reintegrate	1,825,475	235,470	1,051,958	257,175	59,658
Total welfare transfers cost (1)	€855,121,018	€322,630,121	€54,285,852	€158,604,339	€30,668,925
Total social benefits cost (2)	€407,221,295	€43,515,348	€16,809,405	€234,357,817	€48,164,917
Total public finance cost (1) + (2)	€1,262,342,313	€366,145,469	€71,095,257	€392,962,156	€78,833,842
Total resource cost (3)	€11,867,414,838	€2,908,118,367	€2,230,399,278	€2,090,317,029	€1,014,138,112
Total cost (1) + (2) + (3)	€13,129,757,151	€3,274,263,836	€2,301,494,535	€2,483,279,185	€1,092,971,954
% GDP	3.4	2.0	1.6	3.4	3.1

	Spain	Sweden	United Kingdom	EU28
Number of women to reintegrate	1,508,576	160,628	2,138,068	
Total welfare transfers cost (1)	€2,902,484,392	€1,203,492,555	€4,021,128,816	€28,185,329,549
Total social benefits cost (2)	€257,576,958	€331,808,765	€4,789,267,656	€18,621,860,732
Total public finance cost (1) + (2)	€3,160,061,350	€1,535,301,320	€8,810,396,472	€46,807,190,282
Total resource cost (3)	€27,399,251,302	€4,368,726,448	€38,651,183,357	€324,017,393,068
Total cost (1) + (2) + (3)	€30,559,312,651	€5,904,027,768	€47,461,579,828	€370,824,583,349
% GDP	3.0	1.4	2.5	2.8

Notes: The row 'Number of women to reintegrate' reports the number of women who should participate in employment in order to close the gender employment gap. For each country, the number is derived as a simple sum of all the age-education combinations.

Source: EU-LFS 2013 and Eurostat, Eurofound elaboration

Figure 26: Cost of the gender employment gap as a percentage of GDP, EU Member States, 2013

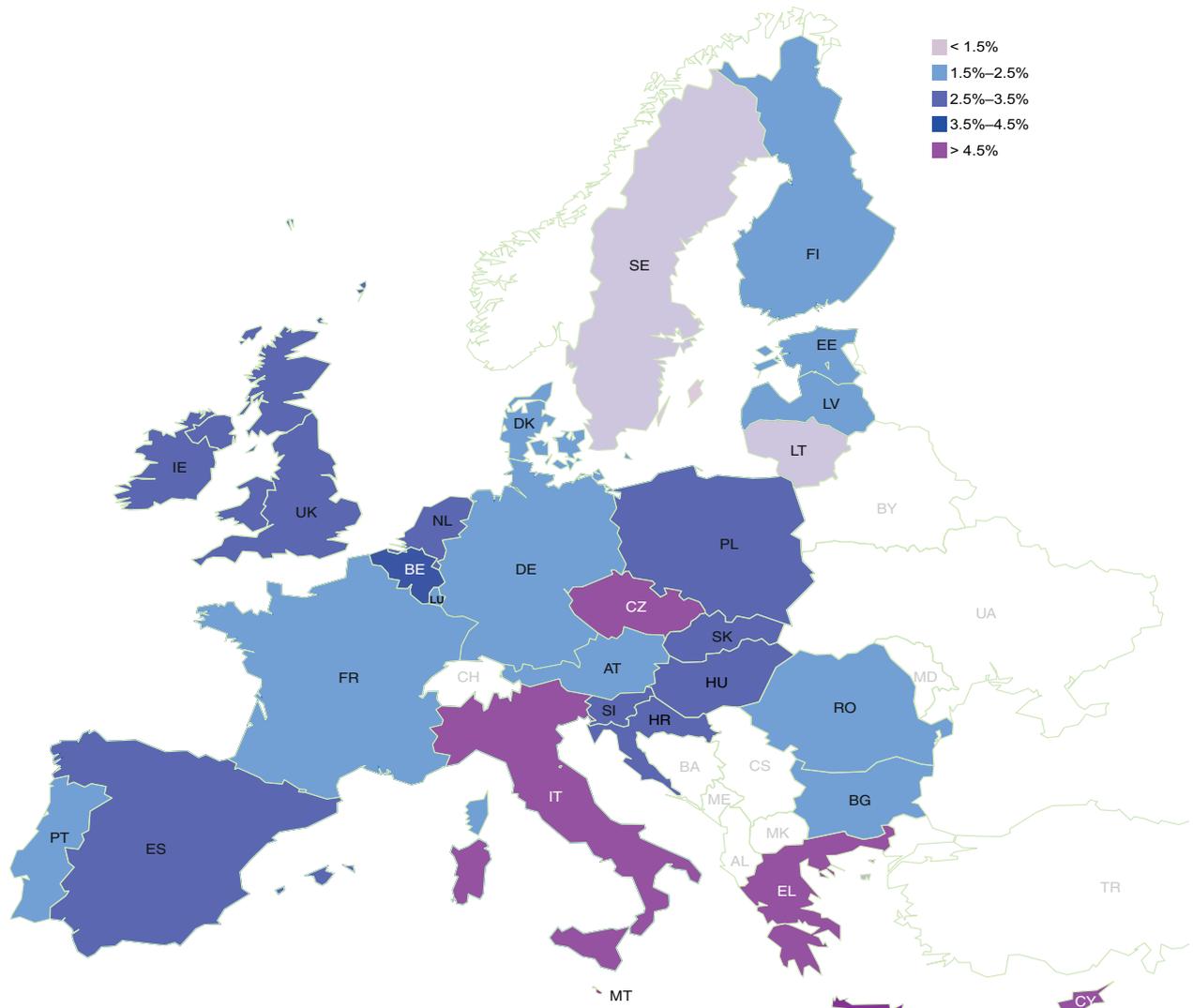
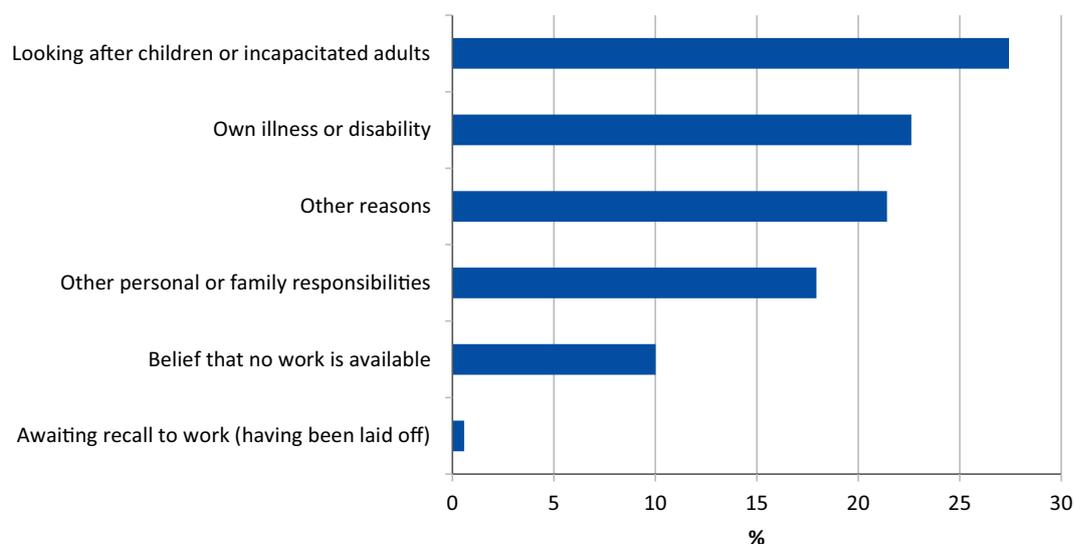


Figure 27: Reasons for women's inactivity in the labour market (%), EU28

Note: Results are based on responses of inactive women aged 20–64, excluding reasons of retirement and education or training.

Source: EU-LFS 2013, Eurofound elaboration

As Figure 27 shows, there are many reasons why inactive women do not search for employment, the most significant (after excluding retirement, which is the most frequent reason among older women) being looking after children or incapacitated adults (27%). Additionally, almost 18% of women declare that other personal or family responsibilities are their reason for not seeking employment.

With that in mind, more conservative estimates of the total cost can be provided by considering, as an alternative goal to bringing the gender employment gap to 0, the participation in employment only of those

women who are not seeking employment but who are willing to work ('narrowing the gap' scenario). This information, which is taken once again from EU-LFS 2013 microdata, is available only for inactive individuals (who are, by definition, not part of the labour force) and not for unemployed people (who are actively looking for jobs).

The estimates of the unit (per person) cost are clearly not affected by this exercise. What changes is the number of women for whom the unit cost is multiplied in order to compute the total. While the 'closing the gap' scenario aims at bringing into employment enough women in order to have the same male and female employment

Table 5: Cost of the gender employment gap in 2013: 'Narrowing the gap' scenario

	Austria	Belgium	Bulgaria	Croatia	Cyprus
Number of inactive women willing to work	178,829	110,251	123,275	102,758	15,012
Total welfare transfers cost (1)	€284,960,023	€425,844,449	€4,820,390	€7,437,159	€11,609,638
Total social benefits cost (2)	€380,438,534	€115,452,124	€13,641,760	€28,219,711	€8,912,532
Total public finance cost (1) + (2)	€665,398,557	€541,296,574	€18,462,150	€35,656,870	€20,522,169
Total resource cost (3)	€3,865,487,653	€3,585,646,339	€446,585,296	€1,039,189,508	€279,275,507
Total cost (1) + (2) + (3)	€4,530,886,210	€4,126,942,913	€465,047,446	€1,074,846,378	€299,797,677
% GDP	1.3	1.0	1.1	2.4	1.8
	Czech Republic	Denmark	Estonia	Germany	Greece
Number of inactive women willing to work	78,013	56,405	19,463	878,810	102,113
Total welfare transfers cost (1)	€69,703,646	€955,614,620	€11,324,773	€2,091,736,163	€41,437,377
Total social benefits cost (2)	€96,808,008	€27,464,705	€21,296,654	€1,720,100,541	€9,390,815
Total public finance cost (1) + (2)	€166,511,654	€983,079,325	€32,621,427	€3,811,836,705	€50,828,192
Total resource cost (3)	€758,072,885	€1,748,177,821	€165,913,766	€16,870,969,910	€1,425,798,022
Total cost (1) + (2) + (3)	€924,584,539	€2,731,257,146	€198,535,193	€20,682,806,615	€1,476,626,214
% GDP	0.6	1.1	1.0	0.7	0.8

	Finland	France	Hungary	Ireland	Italy
Number of inactive women willing to work	45,080	520,713	188,087	55,488	2,310,988
Total welfare transfers cost (1)	€307,119,003	€1,297,331,013	€81,665,357	€149,656,384	€361,854,278
Total social benefits cost (2)	€162,103,050	€999,363,904	€121,385,954	€93,053,732	€648,417,375
Total public finance cost (1) + (2)	€469,222,054	€2,296,694,917	€203,051,311	€242,710,116	€1,010,271,653
Total resource cost (3)	€1,418,724,537	€12,347,291,734	€1,123,344,336	€1,391,729,018	€50,507,539,223
Total cost (1) + (2) + (3)	€1,887,946,590	€14,643,986,651	€1,326,395,647	€1,634,439,134	€51,517,810,876
% GDP	0.9	0.7	1.2	0.9	3.3
	Latvia	Lithuania	Luxembourg	Malta	Netherlands
Number of inactive women willing to work	51,323	20,258	13,666	9,486	218,934
Total welfare transfers cost (1)	€11,101,646	€11,426,139	€54,394,768	€1,982,989	€994,384,902
Total social benefits cost (2)	€23,911,891	€16,705,480	€15,744,320	€10,601,070	€949,462,305
Total public finance cost (1) + (2)	€35,013,537	€28,131,619	€70,139,087	€12,584,059	€1,943,847,207
Total resource cost (3)	€339,864,009	€111,645,431	€573,539,639	€135,214,823	€6,041,919,298
Total cost (1) + (2) + (3)	€374,877,545	€139,777,050	€643,678,726	€147,798,881	€7,985,766,505
% GDP	1.5	0.4	1.4	1.9	1.2
	Poland	Portugal	Romania	Slovakia	Slovenia
Number of inactive women willing to work	946,462	195,986	340,858	48,190	34,391
Total welfare transfers cost (1)	€395,090,748	€229,802,353	€14,831,461	€34,301,597	€19,704,782
Total social benefits cost (2)	€222,795,948	€46,447,429	€6,899,483	€42,165,736	€28,215,413
Total public finance cost (1) + (2)	€617,886,697	€276,249,783	€21,730,945	€76,467,332	€47,920,196
Total resource cost (3)	€6,082,568,006	€2,291,996,112	€723,863,118	€390,537,528	€610,739,439
Total cost (1) + (2) + (3)	€6,700,454,702	€2,568,245,894	€745,594,063	€467,004,860	€658,659,635
% GDP	1.5	1.5	0.5	0.6	1.8
	Spain	Sweden	United Kingdom	EU28	
Number of inactive women willing to work	1,060,644	62,557	835,670	8,623,713	
Total welfare transfers cost (1)	€1,921,895,573	€447,475,636	€1,575,874,243	€11,814,381,110	
Total social benefits cost (2)	€191,838,143	€119,921,273	€1,870,491,434	€7,991,249,324	
Total public finance cost (1) + (2)	€2,113,733,715	€567,396,909	€3,446,365,677	€19,805,630,434	
Total resource cost (3)	€18,549,244,129	€1,724,765,070	€14,933,624,082	€149,483,266,237	
Total cost (1) + (2) + (3)	€20,662,977,844	€2,292,161,979	€18,379,989,759	€169,288,896,671	
% GDP	2.0	0.5	0.9	1.2	

Notes: The row 'Number of inactive women willing to work' reports the number of inactive women not seeking employment but willing to work.

Source: EU-LFS, Eurofound elaboration

rate, the 'narrowing the gap' scenario considers only the integration into the labour force of those inactive women who are willing to work. Table 5 presents the results under this alternative scenario. The total cost for the EU amounts now to €169 billion, of which around €149 billion is resource costs.

Lifetime cost of exclusion from employment

The second part of this analysis is to compute the lifetime cost of a young woman's exclusion from employment. Specifically, it will calculate the economic cost of a 20-year-old woman never entering the labour market, by educational category.

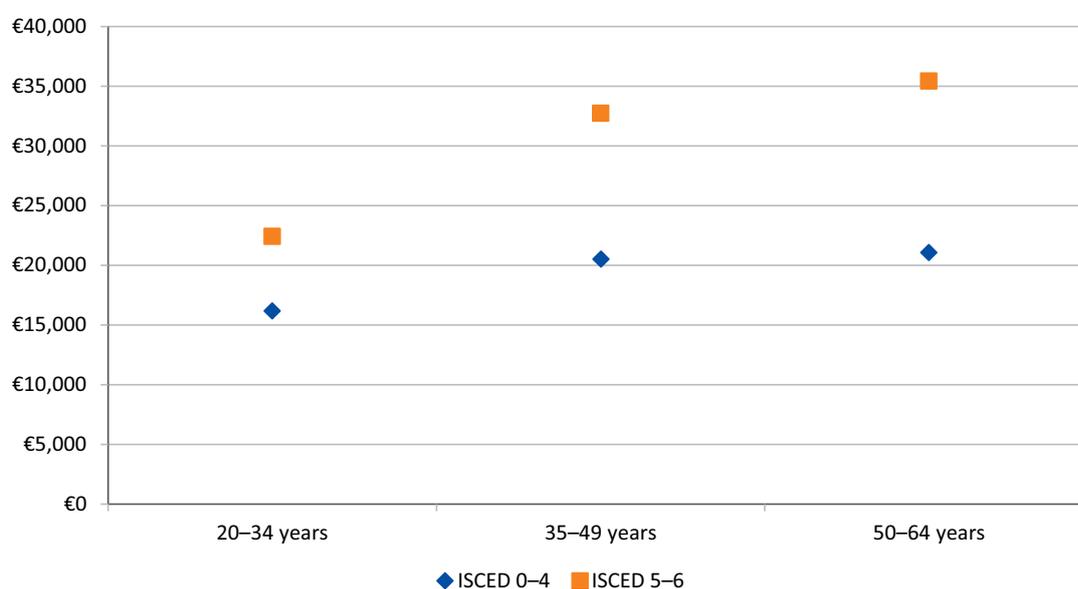
Because this exercise is carried out at EU level, the estimated unit costs of women's unemployment and inactivity are first adjusted for the price level index¹⁹ in

¹⁹ These data are published online by Eurostat.

Table 6: Unit costs of female underemployment and inactivity, EU28, 2013

Age	Education	Total unit cost	Public finance unit cost		Resource unit cost
			Individual welfare transfers	Social benefits	
20–34 years	ISCED 0–4	€16,166	€1,260	€1,565	€13,341
35–49 years		€20,472	€2,139	€1,319	€17,013
50–64 years		€21,081	€2,693	€605	€17,784
20–34 years	ISCED 5–6	€22,425	€1,022	€1,648	€19,755
35–49 years		€32,735	€2,165	€1,386	€29,184
50–64 years		€35,442	€3,610	€578	€31,254

Source: EU-SILC 2013 and Eurostat (price level index), Eurofound elaboration

Figure 28: Total unit costs, EU28, 2013

Source: EU-SILC 2013 and Eurostat (price level index), Eurofound elaboration

2013, which expresses the price level of a given country relative to the aggregate EU28. This way, the fact that the cost of living is very different among Member States is accounted for, ensuring comparable figures are averaged. Results of the average unit costs at EU level are shown in Table 6. Total unit costs by age and education are also graphically presented in Figure 28, which clearly shows an increasing pattern with age but a divergent one by educational level.

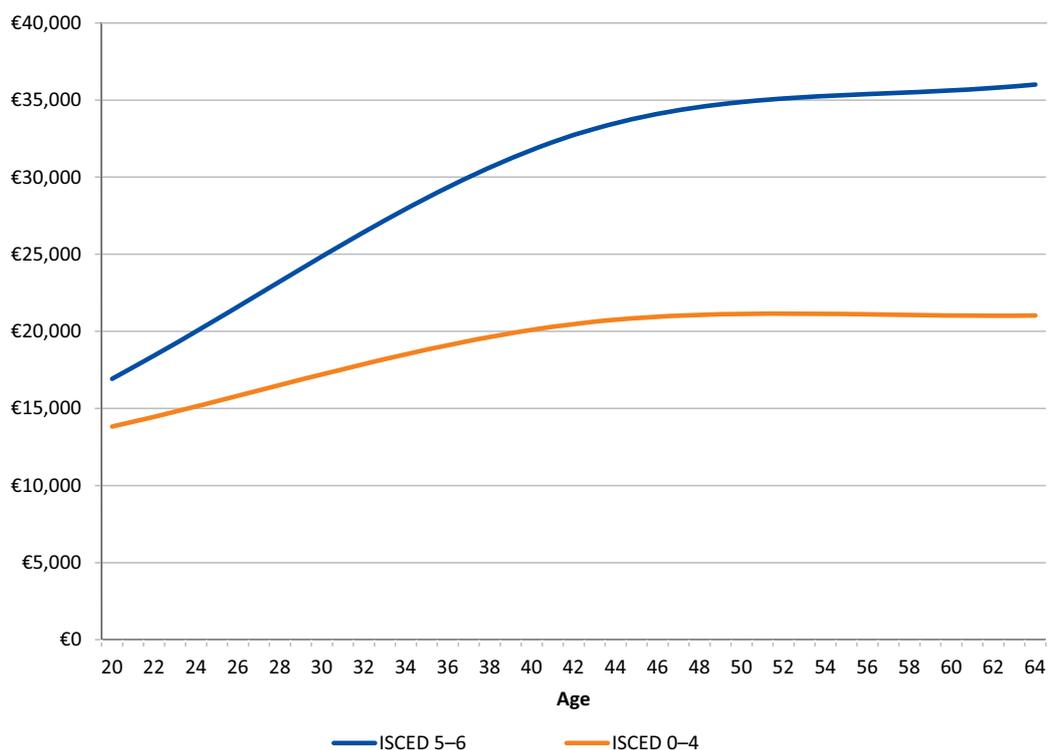
In order to compute the economic cost of a young woman's exclusion from employment over the course of her working life, estimates of the total unit cost for each year from age 20 to 64 would be needed. To overcome this lack of data, missing values are filled using natural cubic spline interpolation between the three points in Figure 28 for each educational level separately. The result of this exercise is depicted in Figure 29. At this stage, the lifelong cost could be simply computed as the sum of all total unit costs at every age from 20 to 64. This would

amount to around €863,000 for women with primary or secondary education (ISCED 0–4), with €720,000 being the resource cost, and to around €1.3 million for women with tertiary education (ISCED 5–6), of which €1.2 million is the resource cost. This would correspond graphically to the area in Figure 29 under the red and blue curves respectively.

Yet, so far, an essential, but likewise complex, matter has not been considered: money value fluctuates over time, and the total unit cost of a 21-year-old woman not in employment in 2013 will not be the same in 2014.

To convert current values of total unit costs at each age into future values (an operation called 'capitalisation'), a compound interest rate is used. It is common practice in the literature to choose a risk-free interest rate, which corresponds to the minimum guaranteed rate on savings accounts, for example. The rate on the deposit facility (the rate which banks may use to make overnight deposits with the Eurosystem) provided by the European

Figure 29: Total unit costs for EU28, cubic spline interpolation



Source: EU-SILC 2013 and Eurostat (price level index), Eurofound elaboration

Central Bank is chosen here.²⁰ Furthermore, given the great variation in interest rates over the past few years due to the economic recession and the very slow recovery, the average of the rate on the deposit facility over 10 years from 2002 (the introduction of the euro) to 2013 (1.52%) is taken. If the 2013 deposit facility rate had to be applied, this would have been 0.

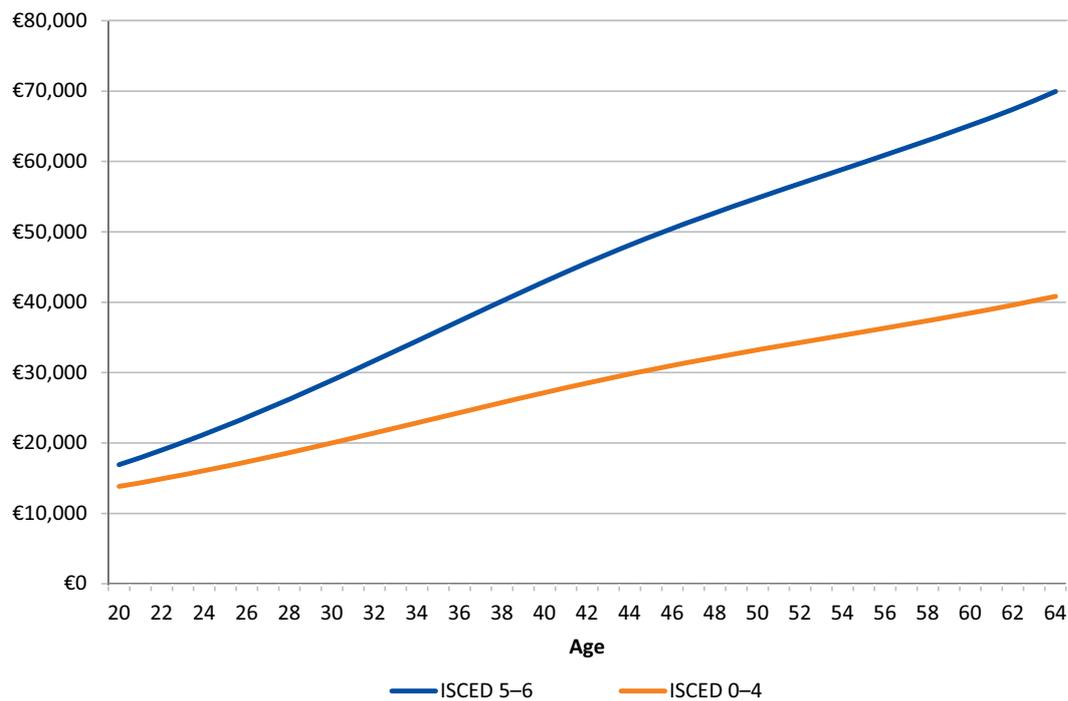
Figure 30 shows how the results change when one converts current values of total unit costs into future values, at each age. Now the lifelong cost is clearly higher than before, amounting to around €1.2 million for women with primary or secondary education (ISCED 0-4), with €1 million being the resource cost, and just below €2 million for women with tertiary education (ISCED 5-6), of which €1.7 million is the resource cost. Clearly, these estimates are very sensitive to the choice of the interest rate, which has varied since the introduction of the euro and which currently even has negative values. Hence the reader should consider this exercise purely as a scenario analysis, assuming that in 2057 (when a 20-year-old in 2013 will be 64) the interest rates will be the same as 2013.

Value of unpaid work

So far the economic cost associated with women’s underemployment relative to men has been presented and discussed with the aim of gaining a better understanding of the problem and reiterating the need for policy intervention. However, while the investigation of the cost of the gender employment gap in Europe shows the extent of the potential added value of higher women’s participation in employment, it is not by any means an exhaustive analysis of the problem. Indeed, the approach used does not emphasise the importance of unpaid activities that women do within a household, including care of children or elderly dependants and routine domestic work.

Eurofound’s European Working Conditions Survey has shown that unpaid care work is unequally distributed between men and women, with women typically spending disproportionately more time on caring activities and on housework (Eurofound, 2012e). In fact, unpaid care work is still seen primarily as a female responsibility, despite the heterogeneity in the distribution of household work by gender in EU Member States (Miranda, 2011). So higher gender inequalities in unpaid care work clearly translates into higher inequalities in labour force participation.

20 The authors acknowledge as a limitation that this would apply also to non-euro-area countries.

Figure 30: Total unit cost for the EU28, cubic spline interpolation and capitalisation of present values

Source: EU-SILC 2013, Eurostat (price level index) and European Central Bank (rate on the deposit facility), Eurofound elaboration

While work activities rewarded in the labour market are viewed as economically productive, unpaid care activities performed by women are not considered similarly. Indeed, women who are engaged in full-time household work are commonly viewed as not working. Such prejudices are widespread, ranging from the distinction between working women and housewives to government classifications that are normally used to calculate a country's GDP. Therefore, a large amount of unpaid work, such as child-rearing and household tasks, where women contribute substantially to the economy, often remains unseen and unaccounted for in GDP.

Any attempt to put a price tag on the unpaid work done by women, however, raises various problems and objections. First, there is a risk of undervaluing such work through underestimating the time and effort required. Second, the nature of unpaid work can be belittled by the assumption that everything, including 'worth', can be measured only in monetary terms. By putting no price on unpaid work, the value is considered to be zero, despite a demonstrated range of beneficial outcomes in terms of the well-being of individuals, their families and societies. An estimate of monetary value, however, is not meant to demonstrate objectively what such work is worth and is certainly not intended as a justification for demanding a wage in return. Instead, it is meant to indicate the significance of the value of the work that women do without pay. This would put various sectors of the economy into perspective and allow women to gain the recognition they deserve for their contributions.

Different methods have been proposed in the literature to calculate the economic value of the work women do without pay. Two main alternatives are available: the 'output method' and the 'input method' (OECD, 1995). The output method directly assigns a price to the goods and services produced within the household (for example, the number of rooms cleaned, the amount of clothes laundered, and the numbers of children cared for would be counted and priced). Despite being conceptually superior, this method is difficult to implement because it requires a good measurement of the price to assign to the output produced. With the input method, hours worked in unpaid productive activities are first counted and then assigned a price, applying a comparable wage rate. This method relies on the availability of good time-use surveys, which record how people allocate their time daily over different activities.

There are two broad approaches to the application of the input method. One is to assign market rates to the tasks that women perform (the replacement-cost approach); the other is to estimate the opportunity costs for the time spent (the opportunity-cost approach). Briefly, the first approach looks at what household tasks women engage in and what it would cost to hire someone else to carry out that work, by using either a specialist's wage or a generalist's wage of a domestic servant or handyman. The second approach is to look at what women could have earned if the time they spent on household work were spent on paid employment instead.

One significant limitation of the opportunity-cost approach is that one can get different values depending on who performs the unpaid work. This method, therefore, says far more about the difference in wage rates for traditionally male and female work, urban and rural work, and skilled and unskilled work than about the actual value of household work. When using this method, the results suggest that the relatively less time spent by men on household work is of far greater value than the longer time spent by women because of men's higher wage rates.

In 1993, the United Nations Statistical Commission stipulated that national statistics offices in all countries prepare figures using time-use data for unpaid work, particularly that performed by women. The Commission also emphasised that these should conform to the now universally accepted United Nations System of National Accounts (SNA) so that women would be included within policy frameworks.²¹ Since then, a growing number of countries have attempted to estimate women's contribution to the economy using available time-use surveys. Although the 1993 SNA production boundary was expanded to include the household production of goods for own consumption, it still excludes all production of services for own final consumption except for paid domestic services and owner-occupied housing. Non-SNA production activities, that is, unpaid services for own consumption that still remain outside the realm of the national accounts (such as cooking, caring or housekeeping) are instead included in satellite accounts on unpaid care work.

Several national-level studies have been conducted in various European countries that have attempted to estimate the contribution to the economy of non-SNA activities (see Khatun et al, 2014 for a short review). In the USA, Landefeld and colleagues (2009) show that extending the production boundary to include household production of non-market services would increase the US GDP by 19% using the replacement-cost approach or 62% using the opportunity-cost approach. Yet, comparing results from various national studies poses

some challenges due to changes in the SNA system production boundary over time and the use of different estimation methods. Furthermore, Ahmad and Koh (2011) show that estimates at national level are extremely sensitive to the value given to labour inputs used in producing non-market services, and robust cross-country comparisons can be obtained when estimates are converted on a purchasing power parity basis.

Recent sound international comparisons suggest that the value of labour devoted to household production of non-market services as a percentage of GDP is significant, despite heterogeneity among countries. Miranda (2011) shows that between one-third and one-half of all valuable economic activity in the OECD area is not accounted for in the SNA system when simple country averages of the opportunity-cost and the replacement-cost approaches are taken. The replacement-cost approach, which offers more conservative estimates, suggests that the value of unpaid work activities accounts for a maximum of 53% of GDP in Portugal and a minimum of 19% of GDP in Korea. Furthermore, values are likely to be underestimated given that only time-use estimates for the population aged 15–64 are considered.

At EU level, estimates by the Fondazione Giacomo Brodolini (FGB) of the value of unpaid family care work range between a minimum of 3.9% and a maximum of 5.8% of EU GDP, depending on the methodology used (FGB, 2009). When unpaid family domestic work and unpaid family care work are considered together, the figures increase to a minimum of 27.1% and a maximum of 37% of EU GDP. The study also reports results at country level, showing that the contribution that family childcare work would give to each economy if considered in the national accounts would range from around 2% or 3% in the Czech Republic, Estonia, Latvia and Slovakia up to more than 6% in the Netherlands and the United Kingdom.²² The FGB report shows that, in some countries (including Belgium, France, Germany, Spain and the United Kingdom), the contribution of women is more than twice the contribution of men.

21 First published in 1953, the SNA excluded goods and services produced by households for their own consumption in the estimates of GDP.

22 As the FGB report emphasises, results are largely driven by differences in salaries and population size among EU countries rather than the amount of hours spent performing domestic activities.

SUMMARY AND DISCUSSION

This chapter presented estimates of the economic loss due to the existence of a gender employment gap in EU Member States. The total resource cost (forgone earnings and missed welfare contributions) and public finance cost (individual welfare transfers and social benefits) arising from women's lower employment rate compared with men in 2013 amounted to more than €370 billion, which corresponds to 2.8% of GDP. The resource cost is, as expected, much higher than the public finance cost in every country, amounting to around €324 billion in total. Overall, the cost of individual welfare transfers and social benefits accounts for only 7.6% and 5% of the total cost, respectively.

The results reveal great variety among countries. Italy has the highest resource cost (more than €88 billion), while Lithuania has the lowest (around €270 million). As for the public finance cost, Germany has the highest, around €9 billion, while Bulgaria has the lowest, at €24 million. When the total cost is considered as a percentage of GDP, the country that pays the highest bill is Malta, with a loss equal to 8.2% of GDP, followed by Italy (5.7%), Greece (5.0%), the Czech Republic (4.5%) and Cyprus (4.5%). The two countries that pay the lowest bills are Sweden (1.4%) and Lithuania (1.0%). Of course, the cost of the gender employment gap depends both on its absolute size and on the composition of the employment participation of women, since the cost has been computed to replicate the male employment structure.

Because women, as much as men, have the freedom to choose to work or not, which often depends on family responsibilities, the cost of the gender employment gap under an alternative scenario was computed, in which their willingness to work was taken into account. If the integration into the labour force of only inactive women who are willing to work is considered as a policy target, instead of equal employment rates between men and women, the economic loss to the EU decreases from €324 billion to €169 billion.

Furthermore, the lifetime cost of a woman's exclusion from employment was estimated, with a calculation of the economic loss due to the lack of participation in employment of a 20-year-old woman throughout her working life. The analysis shows that the lifelong cost amounts to just below €2 million for a woman with tertiary education and to around €1.2 million for a woman with secondary education or less.

The calculation of the cost of the gender employment gap is a supply-side accounting exercise based on a number of simplified assumptions. There are some issues arising from such a complex exercise that go beyond the scope of this report, therefore there are some important caveats that demand a cautious interpretation of the results.

Firstly, the analysis does not take into account the value of unpaid care and housework that women do within a household for its members. If this value was taken into account, the economic loss due to the gender employment gap would certainly be lower, given women's greater involvement in unpaid care work compared with men. Due to the additional complexity of the exercise, the estimate of the monetary loss due to women's under-participation in employment neglects the economic benefits arising from those activities that women perform while not in employment.

Secondly, the methodology does not take into account general equilibrium effects. It is important to acknowledge that the labour market does not grow to accommodate all new entrants, and some displacement will take place. In fact, the narrowing of the gender employment gap over time has happened not just because female participation and employment has grown but also because the male employment rate has decreased. Therefore, a possible displacement effect between male and female workers could take place.

Thirdly, an increase in female labour market participation might have positive externality effects. Indeed, a rise in the female employment rate is accompanied by a decline in women's working hours in the household, and this generates more market demand for unpaid services usually provided by women (the 'marketisation of household production'). Because service jobs are better suited to women in the market due to their comparative advantage with respect to men, the rise of the service sector affects, in turn, gender gaps in hours and wages (Ngai and Petrongolo, 2014).

Finally, as a general and concluding remark, one should consider that, even if the gender gap in employment is reduced and female labour market participation increases, this does not automatically imply a gender-equal condition in the labour market. The presence of a gender pay gap and significant gender segregation both vertically and horizontally in the occupational structure has been well documented and discussed in previous chapters. Filling the gender gap by increasing the participation rate of women is not the same as ensuring social justice for the position of women in the labour market. This is a significant aspect not treated here, but it certainly matters. In other words, job quality and careers, security and employment contracts, the gender wage gap and job sector segregation are equally important aspects in the process of closing the gender employment gap.

4 Estimating the future labour market participation of women

In the previous chapter, the gender employment gap was estimated to cost European economies €370 billion a year. This estimate was based on the assumption that the employment rate of women would become equal to the employment rate of men, taking into consideration age and education. Although it is a conservative estimate, which does not take into account possible spiral effects, this calculation indicates the possible economic returns of a wider participation of women in the labour market. However, despite being very informative on the crucial added value that women's wider participation in the labour market could bring to European economies, it is only a theoretical estimate. In fact, despite the secular increasing trend in the labour market participation of women, closing the gender employment gap is a target that is still far from being reached.

Against this background, the objective of this chapter is to study the possible effects on medium-to-long-term trends in female participation and employment of demographic and behavioural dynamics as they are currently observed, with a focus on selected Member States characterised by low female participation. The following strategy is applied: firstly, baseline scenarios are computed, which are the scenarios that are forecast if no changes happen in the policy panorama and everything remains equal as today; then some policy scenarios are estimated on the basis of the possible effects of key parameters that might be affected by policies.

Introducing the forecasting exercise

Projecting complex and intertwined dynamics is, of course, difficult. Most forecasting exercises, generally performed by governmental institutions at national level or by international organisations such as the ILO, OECD or the European Commission, focus on only one outcome variable of interest (female participation), assuming an exogenous evolution for its determinants. Houriet-Segart and Pasteels (2011) offer a review of the methods used. Aside from judgemental (or qualitative) methods and simple time extrapolations from historical aggregate data, the most common methodologies are either regression models, based on the correlation between participation rates and demographic, economic and institutional factors, or cohort models.

Unlike previous approaches, this report develops a more sophisticated technique for the analysis of participation and employment in the selected countries. This technique relies on the use of dynamic microsimulations

(Li and O'Donoghue, 2013). These features are exploited by analysing and modelling education, household formation and dissolution, fertility decisions, labour force participation, employment outcomes, retirement decisions and, ultimately, death within the same model.

In this analysis, projections of participation rates for both men and women for each country are first provided, starting from representative samples of the population in the base year. These forecasts are produced without intervening in any parameter, therefore assuming that the policy actions and contextual variables remain as they are now. These scenarios are called baseline scenario projections.

Then the implications of different scenarios for the parameters of the microsimulation model are explored, contrasting them with the participation rates of the baseline projections. The effects of key parameters that might be affected by policies are investigated here. These include the speed of recovery from the Great Recession, the suppression of early retirement opportunities, and more favourable family policies: longer paid parental leaves, higher availability of part-time jobs and increased support to public childcare services.

The baseline scenario

This section presents long-term projections for six Member States in the baseline, or reference, scenario. The projections are made under the implicit assumption that the structural relationships between variables detected in the data – on which the model is built – will remain stable over the simulation period. These variables are: education, household formation and dissolution, fertility decisions, labour force participation, employment outcomes, retirement decisions and mortality rate.

For this reason, these projections should be considered as benchmarks rather than forecasts. These benchmarks are useful insofar as they point to the implicit consequences of the dynamics that are currently under way in the society and that could trigger or require, at some point in the future, the activation of corrective mechanisms. Also, the benchmarks are useful because they enable one to investigate, through comparison of differences, the effects of specific policy parameters and the determinants of the results. This is done later in the chapter, where the results obtained in the baseline scenario presented here are contrasted with those obtained under alternative scenarios.

Country selection

The countries investigated in this analysis are: Greece, Hungary, Ireland, Italy, Spain and Sweden. Table 7 reports the participation subindex of the Gender Equality Index, computed by the European Institute for Gender Equality (EIGE, 2015), which takes into account both the gender gap and the overall level of achievement. Sweden is the best performer, while the other countries included in the focus of this study rank among the most problematic.

Table 7: Gender Equality Index 2012 – Member State scores on participation subindex

Country	Index	Country	Index
Sweden	94.7	France	75.0
Denmark	85.3	Bulgaria	72.9
Finland	85.3	Slovakia	72.3
Estonia	83.6	Romania	71.8
Latvia	80.8	Luxembourg	71.3
Lithuania	79.8	Poland	71.1
Cyprus	79.6	Ireland	69.8
Portugal	78.4	Spain	69.5
Slovenia	77.4	Hungary	67.5
United Kingdom	77.4	Belgium	66.9
Austria	77.0	Croatia	62.0
Germany	75.9	Greece	59.5
Netherlands	75.6	Italy	57.1
Czech Republic	75.3	Malta	56.2

Source: EIGE, 2015

Methodology

The evolution of participation rates in the selected countries are investigated in this chapter by means of a dynamic microsimulation model. In dynamic microsimulations, each individual in a given initial population is evolved through time according to estimated transition probabilities. Different life course events are simulated (for example, educational choices, entry in the labour market, household formation and dissolution, fertility, evolution of careers, retirement and death), with specific microsimulation models having a focus on different dimensions (for example, demography, work and family) and different subgroups of the population.

Li and O'Donoghue (2013) review the use of microsimulation models; however, the only microsimulation model the authors of the current report could find in the literature with a focus on female labour force participation and its interaction with family life in a European context is Richiardi and Poggi (2014), which

performed an estimate for Italy. Their model provides the basis for the model developed here. In addition to improvements in model specification, the new model developed in the current study provides a first example of a multi-country dynamic microsimulation; the structure of the model is the same for all countries considered, and the simulations differ only because of country-specific inputs. This feature enables one to obtain results for more countries, which are directly comparable in terms of the assumptions and modelling choices made. Moreover, it allows 'as if' scenarios to be run, where inputs from one country are tested on a different country. For this reason, the model can be interpreted as a first step towards a more general model for all EU Member States, similar to EUROMOD for tax-benefit microsimulations (Sutherland and Figari, 2013).

The dynamic microsimulation approach developed here can be best assessed in comparison with the other main methodologies used to project population trends, namely cohort (or cell-based or macrosimulation) models. These are widely used by bodies such as the OECD and the European Commission. For instance, labour force projections in *The 2015 ageing report: Underlying assumptions and projection methodologies* are based on a cohort model (European Commission, 2014a). The main feature that distinguishes the two types of model is that microsimulations have individual people, families or households as their unit of analysis, while cohort models consider aggregates of individuals grouped by their characteristics (such as age and gender).

Moreover, cohort models are single-equation models, where the outcome of interest (for example, the participation rate) is estimated on the basis of individual characteristics (such as age and gender defining the cells of interest). Aggregate participation rates are recovered as a weighted average of the participation rates in the different cells, using population shares as weights. These weights are then evolved based on external scenarios (for example, demographic projections). In the most sophisticated models, the number of cells (individual characteristics) increases, for instance taking into account differences in skills and family structure. Still, the evolution of these weighting variables (skills and family structure) is exogenous to the model. Dynamic microsimulation models, on the other hand, are multiprocess models, where each process is estimated at an individual level and feeds back into the other processes in the simulation. For instance, educational choices are simulated and predict, for every individual in the simulation, a level of education at any point in life. This level of education is then taken into account in the simulation of the (individual-specific) probability of entering a consensual union or participating in the labour market.

In comparison with other approaches, the advantage of the microsimulation approach is threefold. First, aggregation can be performed *ex-post* on any subpopulation of interest. Second, by providing projections on a possibly large set of outcomes, dynamic microsimulations allow for a more comprehensive analysis of participation and its complex relationship with other life course events. Third, by endogenising the evolution of the determinants of participation, dynamic microsimulations allow for a more comprehensive quantification of the uncertainty surrounding the projections.

In the face of the benefits outlined above, there is a price to pay for the integrated microsimulation approach in terms of higher model complexity and increased data requirements. If the subpopulations of interest are defined only by exogenous variables such as gender and age structure – considering, at a first approximation, the age structure as exogenous – the extra burden of a microsimulation model might not be worthwhile. However, as in this case, if the subpopulations of interest are defined in terms of clearly endogenous variables, such as family composition, microsimulations offer a better and more comprehensive theoretical framework.

The microsimulation model

The microsimulation model implemented here is based on the models developed by Richiardi and Poggi (2014) and Leombruni and Richiardi (2006). It receives as an input a representative sample of the population in each country, drawn from the 2012 wave of the EU-SILC²³ – the last available wave at the time the model was implemented – plus the estimated coefficients and tables for the scenario parameters.

Individuals effectively enter the simulation at age 17, the first age observed in EU-SILC data. The initial population is then evolved forward in time from 2013 to 2050 according to the estimated coefficients and the scenario parameters. Time is discrete, with one period corresponding to one year; correspondingly, all models are discrete choice models (either probit or multinomial probit), with the outcome variable being the probability of occurrence of a given event or transition.

The microsimulation is composed of four different modules: demography, education, household composition and labour market. Each module is in turn composed of different processes, or submodules (Figure 31).

In each period, agents (the simulated individuals) first go through the demographic module, which deals with evolving the population structure by age, gender and area, based on Eurostat official demographic projections. Then, individuals above a specific age threshold retire. Retired individuals remain in the simulation until they die, but nothing else happens to them. Students enter the education module. If they remain in education, nothing else happens to them until the next period. If they exit education, they join the ranks of potentially active individuals. Women enter the household composition module, where it is determined whether they form or remain in a union and whether they give birth to a child. Then, they join men in the labour market module, where participation and employment are finally determined.

The model simulates the following state variables of the individuals: age, gender, region, educational attainment, labour market status (student, employed, unemployed, retired or other inactive), cohabitation status (for women only) and number and age of children (for women only). In choosing the specifications for the different equations, the ‘usual suspects’ identified in the literature (see Del Boca and Wetzels, 2007; and Boeri et al, 2008 for surveys) were looked at. The equations are estimated on the 2005–2011 waves of the EU-SILC longitudinal panel.

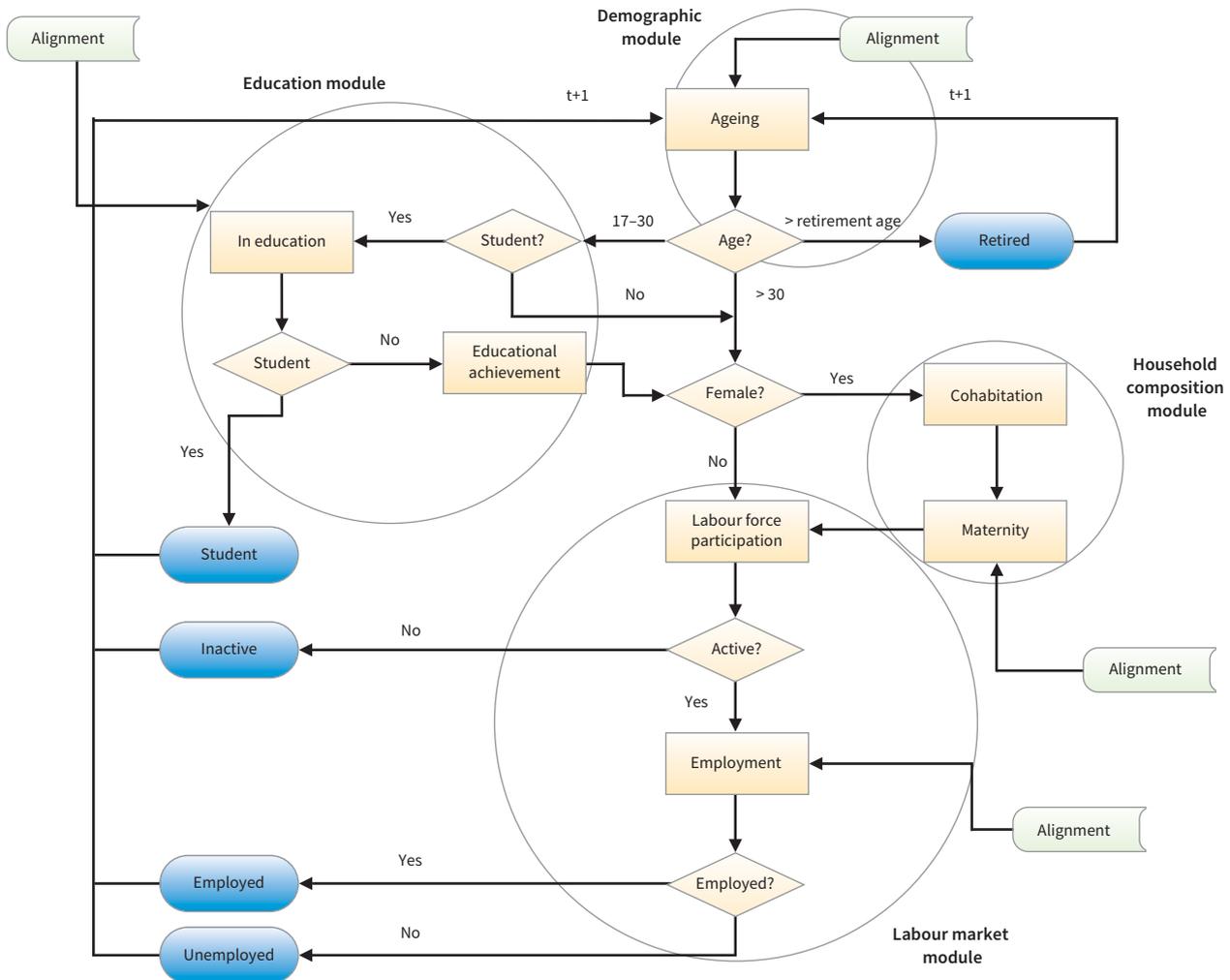
The simulation of the population is then regulated on the basis of significant simplifying assumptions on behaviour concerning participation in education, retirement decisions, maternity and participation in the labour market.

All parameters are initialised at the beginning of every simulation, and an assessment of uncertainty analysis is performed over every scenario through bootstrapping the coefficients of the estimated equations from a multivariate normal distribution.²⁴

23 2011 for Ireland, updated to 2012.

24 Full details about the methodological approach are available on request.

Figure 31: The structure of the model



Source: Eurofound

Results of the baseline scenario in six EU Member States

Overall trends

In 2013, only Sweden had an overall employment rate above the Europe 2020 target of 75%. In the baseline scenario, employment rates are predicted to increase in all countries in the simulation period, due to an increase in participation rates and a gradual recovery from the historically high unemployment rates observed at the beginning of the period caused by the Great Recession. By 2020, no other country will have reached the target employment rate for the population aged 20 to 64, although Ireland will be close. According to the projections, the 75% target will be approached only at the end of the simulation period, by 2050, in all countries with the exception of Hungary.

Focusing on the projection of female participation rates during the period 2013–2050 (Table 8), it is interesting to note that in Sweden, the best performing country, this is expected to pass from the already high 86.4% to 89.7%.

Among the other countries, the highest increase is expected in Italy and Greece, where the rate is expected to surge from 59% and 62.4%, respectively, to 68.8% and 73% (an increase of approximately 10 percentage points over the next 37 years). In both countries, the increase in the activity rates seems to be driven by the increase in labour market participation of those women aged 20–44 who have children. Similarly, in Ireland, the rate is expected to increase from 62.8% to 72%. The increase is expected to be more limited in Spain and Hungary. According to the projections, in Spain, the female participation rate will increase from 70.9% to 75.5% (+4.6 percentage points), while in Hungary it is expected to grow from 65.1% to 71.3% (+6.2 percentage points). The uncertainty analysis reveals that, overall, the sampling error is small.

Comparison with the 2015 ageing report

To assess the robustness of the projections obtained with the microsimulation model, they can be contrasted with those of the 2015 ageing report (European Commission, 2015b), which were derived from a cohort model. For a proper comparison, it should be taken into account that

Table 8: Participation rates (%), baseline scenarios, female population aged 20–64

	2013	2020	2030	2040	2050
Greece	62.4	64.1	67.1	70.0	73.0
Hungary	65.1	66.8	70.2	71.3	71.3
Ireland	62.8	69.5	69.6	69.6	72.0
Italy	59.0	63.3	64.7	67.0	68.8
Spain	70.9	72.3	71.8	73.3	75.5
Sweden	86.4	88.3	89.6	89.4	89.7

Source: Eurofound estimates

the forecasting horizon and the population at risk in the two models do not match perfectly. Firstly, the 2015 ageing report offers projections for 2060, while this report only goes as far as 2050. All other things being equal, given the upward trends in participation, one would then expect higher figures for the 2015 ageing report. Secondly, the 2015 ageing report focuses on the population aged 15–64 years, while this report is restricted to the population aged 20–64, since the estimates here are based on EU-SILC data.²⁵ All other things being equal, given the low participation rates of individuals aged 15–17, this censoring should drive the figures here up. The net effect of these two forces is, theoretically, unknown. Table 9 compares the participation rates predicted by the two models. When considering the larger age group, higher participation rates are found in the microsimulation model than in the cohort simulation model for Ireland (75.2% versus 68.2%) and Italy (75.2% versus 65.2%). In the 55–64 age group, the microsimulation model projects a lower rate for Spain (76.9% compared with 82.5% in the cohort simulation model) and a higher rate for Ireland (77.5% compared with 64.9%) and Sweden (95.1% compared with 78.9%).

The reader should evaluate the different projections on the basis of the assumptions of the two models.

However, focusing on the larger age group, it should be noted that the cohort simulation model predicts a decrease in the participation rate in Ireland from the current level of about 70%, and only a very modest increase (from 63% to 65%) in Italy. This looks counterintuitive.

Alternative scenarios

While the baseline scenario is very useful for an understanding of what can be expected if current trends continue, this section explores the implications of different scenarios, changes in policies and in the macroeconomic scenario. These scenarios are encoded in different settings for the parameters of the microsimulation model. The scenarios are contrasted with the baseline projections for the selected EU Member States, also presented earlier. The results focus mainly on participation rates, as employment rates, which are computed in the microsimulation conditional on participation, do not feed back into the evolution of the other variables.

Table 9: Comparison of microsimulation model outcomes with the projections of the cohort simulation model of the 2015 ageing report

	Participation rate (%)			Participation rate (%)		
	Eurostat	CSM	MSM	Eurostat	CSM	MSM
Age group	15–64	15–64	15–64	55–64	55–64	55–64
Year	2013	2060	2050	2013	2060	2050
Greece	67.7	75.4	77.3	42.4	78.0	76.8
Hungary	64.7	73.0	72.8	41.8	77.5	75.1
Ireland	69.7	68.2	75.2	57.3	64.6	77.5
Italy	63.4	65.2	75.2	45.4	69.0	70.9
Spain	74.2	78.9	79.3	54.2	82.5	76.9
Sweden	81.3	82.3	86.3	77.7	78.9	95.1

Notes: Labour force participation (male and female population); CSM = cohort simulation model, MSM = microsimulation model; the Eurostat column includes participation rates for 2013.

Source: Authors' computation and 2015 ageing report (European Commission, 2015).

²⁵ EU-SILC is limited to individuals aged 17+. Individuals enter the simulation at age 17 but then are immediately aged. Given that the statistics are collected at the end of each simulation period, information is given only on individuals aged 18+.

The different scenarios are induced in the model by setting different parameterisations of the variables. These are chosen with the aim of investigating the effects of key parameters that might be affected by policies. These involve the speed of recovery from the Great Recession, the suppression of early retirement opportunities, and more favourable family policies. These policy action scenarios are set by choosing reasonable values for the policy parameters and keeping in mind that key policy-relevant parameters might be only partially under the control of the regulators, for example the path of recovery from the crisis, and that policy actions are not at all exhaustive.

Policy action scenarios

On the basis of the above, the following three scenarios have been constructed. These are encoded in the baseline described in the previous section only in terms of the different specification of the input parameter values.

Delayed recovery

In the delayed recovery scenario, it is assumed that the effects of the Great Recession on participation and employment fade away more slowly. The Great Recession enters the model in two ways. First, a flag is introduced that signals the presence of the crisis in the participation and employment equations, which is set to 0 in the estimation data before 2009 and set to 1 from 2009 onwards. The estimated coefficient of this flag measures, in each country, the strength of the effects of the crisis. Second, the aggregate unemployment rate that enters the employment equation is measured in the estimation data and also reflects the effects of the crisis. In the simulations, the estimated coefficient of the flag is kept constant, but the flag itself, signalling the presence of the crisis, is allowed to 'shrink' towards 0. In the baseline scenario, the value of this flag decreases linearly from 1 to 0, reaching 0 in 2020 (2030 in Greece). The aggregate unemployment rate is also assumed to decrease linearly to pre-crisis levels, which are reached in 2020 (2030 in Greece). Hence, in the baseline scenario,

the Great Recession is assumed to be completely over by 2020 (2030 in Greece). In the delayed recovery scenario, this is postponed by 10 years to 2030 in all countries apart from Greece, where it is postponed to 2040.

No early retirement

In this scenario, the estimated minimum retirement age is set to 60 years old in all countries. Note, however, that because retirement age is randomly drawn for each individual from a normal distribution, with the mean equal to the average (expected) retirement age and the standard deviation equal to the standard deviation in retirement age observed in the estimation, there are only a minority of people for whom the minimum retirement age constraint is binding.

Enhanced family policies

The enhanced family policies scenario considers that the duration of paid parental leave,²⁶ the amount of public childcare expenditure per child, and the overall diffusion of part-time arrangements among employed workers all increase by 20% with respect to the baseline scenario. The values for the baseline scenario are taken from the OECD Family Database and are kept constant throughout the simulations.

Results of the policy action scenarios

The results for the policy action scenarios are presented in Table 10. It shows, for each country, the projections for female participation rates in the 20–64 age group under the scenarios of a delayed recovery, no early retirement and enhanced family policies, against the background of the baseline. With the exception of Greece, where abolishing early retirement has an impact on aggregate participation rates of about 2 percentage points in the mid-2020s, the only detectable effects at an aggregate level come from the enhanced family policy scenario, with an increase in female participation rates of 1 to 3 percentage points. No further gains can be obtained, according to these projections, in Sweden. This is consistent with the findings of the previous section, where it was pointed out that differences in the

Table 10: Projected female activity rates (%), 20–64 years old

	Delayed recovery					No early retirement					Enhanced family policy				
	2013	2020	2030	2040	2050	2013	2020	2030	2040	2050	2013	2020	2030	2040	2050
Sweden	86.4	88.1	89.7	89.4	89.8	86.4	88.3	89.5	89.8	89.8	86.4	88.3	89.5	89.8	89.8
Spain	70.9	71.7	71.8	72.6	74.8	70.9	72.6	72.8	73.3	75.2	70.9	72.6	73.2	74.4	77.0
Hungary	65.1	66.4	70.1	71.1	71.1	65.1	67.4	70.3	71.1	71.1	65.1	69.5	72.7	74.0	74.0
Ireland	62.8	69.1	69.3	69.8	72.3	62.8	69.3	69.5	69.9	71.7	62.8	71.9	72.1	72.3	74.8
Greece	62.4	64.1	66.6	69.4	73.9	62.4	64.1	66.6	69.4	73.9	62.4	65.5	67.9	70.6	75.1
Italy	59.0	63.2	64.3	67.0	68.6	59.0	63.4	65.0	67.4	68.6	59.0	64.7	65.7	68.4	69.8

Source: Eurofound calculation

²⁶ The amount of benefits is country-dependent and is not considered in the exercise.

conditional behaviour of women explain almost entirely, in the aggregate, the participation gap.

The fact that these effects are small should be no surprise, given that some of the policies have an impact on specific segments of the population only: in particular, childcare benefits and paid parental leave are only relevant for mothers in the years that they are raising children, for whom part-time opportunities also matter more, while the abolition of early retirement options impacts only individuals who would otherwise retire before the new minimum retirement age.

In fact, when the analysis is broken down by sociodemographic characteristics, the results are remarkable for mothers aged 20–44. As shown in Table 11, in Greece, Ireland and Italy, improving family policies increases participation rates for women with a low education by a striking amount of about 10 percentage points. Even in Sweden, where participation rates are very high to start with, increasing childcare, leave periods and part-time opportunities by 20% would increase the participation rate of women with a low education from about 95% to about 97%. Gains for highly educated women are more limited but still substantial.

Finally, the individual contributions of the different policies in the enhanced family policy scenario were explored: public childcare, paid parental leave and the availability of part-time work. While all the policy

variables have an effect, it was found that it is their combination that drives participation rates up, as analysed above. In most countries, and particularly in Spain, it is an increase in the duration of paid parental leave that is deemed to have the biggest effect (though the effects are generally so close that any difference is likely not to be robust under statistical testing). This is not surprising as maternity leave enables women to remain formally employed while taking care of their children.

Interpreting the results

The plausibility of the outcomes of these simulation exercises and of the policy actions they would imply were discussed by six national country experts in the context of the national policy debates. This section brings together and summarises their examination of the issues.

A major outcome of the policy action scenario is that enhanced family policies increase projected female participation significantly among mothers with young children. All actions (increased public provision of childcare, longer parental leave and greater availability of part-time work) have an effect individually, but it is having them in combination that drives participation rates up. Each country expert interviewed highlighted different aspects of these actions, as well as further actions that could be taken in their country in connection

Table 11: Disaggregated results of the enhanced family policy scenario: Activity rates (%) of women aged 20–44 with low educational attainment and not in education

	Sweden					Italy				
	2013	2020	2030	2040	2050	2013	2020	2030	2040	2050
Total	94	96	97	98	98	52	72	76	80	78
Childcare	92	96	96	96	96	50	68	73	76	75
Maternity leave	91	96	96	96	97	49	66	74	74	74
Part-time	92	95	96	95	96	48	64	72	72	71
	Ireland					Hungary				
	2013	2020	2030	2040	2050	2013	2020	2030	2040	2050
Total	45	71	73	71	72	50	59	57	60	57
Childcare	42	63	68	66	67	50	57	57	58	55
Maternity leave	44	67	67	66	69	48	51	49	52	45
Part-time	43	61	66	64	62	47	48	50	51	42
	Greece					Spain				
	2013	2020	2030	2040	2050	2013	2020	2030	2040	2050
Total	54	55	65	68	70	75	78	79	79	80
Childcare	54	53	65	65	65	73	74	76	77	78
Maternity leave	53	54	62	68	63	74	73	74	74	76
Part-time	53	51	58	60	58	73	71	71	72	76

Source: Eurofound calculation

to those examined. They also mentioned possible spiral effects that could emerge in the longer run.

Enhanced public support for childcare is forecast to improve the participation of mothers mostly in Greece, Ireland and Italy, although the estimates are imprecise and the differentials, with respect to the baseline scenario, might be non-significant. Scholars from these three countries agree on the importance of improving public childcare provision and deem it likely to happen as soon as the economy and the state of public finances improve. The scenario is therefore plausible, as these kinds of policies are actually discussed in these countries. However, the likelihood that public childcare provision will be enhanced soon is determined also by public budget constraints. For example, in Italy, kindergartens are financed by municipalities, whose transfers from central government have been cut dramatically in recent years.

In addition, in Greece as well as in Italy, the expansion of school hours is also considered by experts to be crucial in allowing mothers to work full time. In Sweden, public childcare is guaranteed to all parents, and it operates on a whole-day basis: most childcare facilities are open from 6:30 until 18:30. Pre-school care is free for children aged between 3 and 6 for up to 15 hours per week. Aside from paid leave, the government provides an additional monthly child allowance until a child reaches the age of 16, which covers the cost of additional childcare in pre-school years. Schooling for children aged six to the time when they start university is free.

Along with childcare, enhanced public support for elderly care is mentioned by the experts from all countries as a complementary policy that needs to be considered in order to improve female participation. In Ireland, a recent long-term care reform (the Fair Deal) has already addressed the issue, so that it is plausible that elderly care in the future should not pose strong challenges to female labour force participation, once the initiative is properly financed. In the case of Hungary, however, the plausibility of an increase in labour force participation through the driver of family care policies may be limited by attitudes; the pursuit of a favourable cultural attitude towards increasing female employment has currently many opponents across the political spectrum in favour of traditional family values.

Spiral effects can emerge from childcare services to participation to enhanced care services. This is because increased participation and, consequently, employment are likely to enlarge the tax base and to increase tax revenues, so that eventually more public funds will be available to support even stronger and more comprehensive care policies. Furthermore, the demand for care services will be augmented by higher participation, as the case of Sweden currently shows. In addition, working mothers would be able to afford paid care-givers, thereby contributing to job creation (for low-skilled workers) in a typical Keynesian set-up, as

mentioned for Greece and Italy, for example. On the other hand, there is also the risk of negative effects of cuts in care services having long-lasting consequences beyond the duration of austerity policies: they may detach women from the labour market now, and this will make it more difficult for them to be employed in the future (as happened previously to older women in Italy).

In several countries, and particularly in Italy and Spain, the results of the simulations suggest that policies aimed at promoting part-time work might significantly increase female participation. The experts underline the plausibility of this scenario, as laws aimed at increasing part-time work have been enacted in several countries since the beginning of the new millennium. These laws have targeted women and young people and have decreased the cost of part-time work, with the aim of creating additional jobs. However, the country experts issue a warning: these reforms made part-time jobs cheaper but less family-friendly, hampering their potential role in promoting mothers' participation in the labour market. For instance, in Italy, since the Legislative Decree on part-time work (25 February 2000, No. 61), part-time work schedules can be set and changed by the employer without the consent of the employee and at very short notice. In Spain, Law 3/2012 allowed, for the first time, overtime work in part-time contracts. However, the prohibition of overtime work in part-time contracts was re-instituted one year later by the Royal Decree Law 16/2013 of 20 December on measures for the promotion of stable employment and the enhancement of the employability of workers. While the 2013 royal decree prohibited overtime again, at the same time it made the use of the 'complementary hours' more flexible under certain conditions and limitations, and obliged employers to record the working time of the part-time worker. An additional feature of part-time jobs was mentioned in relation to their possible role in empowering women within the family and in women's ability to act as employers of care-givers: part-time jobs often command a very low wage and sometimes also low employment protection. So, it can be concluded that, in addition to the availability of part-time jobs, the features of the contract are crucial in determining the impact on women's participation and employment and in spurring positive knock-on effects. Furthermore, in addition to part-time employment, fiscal support to self-employment was suggested in the expert discussions as a mechanism to foster female participation in Spain, and fiscal policies to reduce the tax wedge on low-skilled employment was recommended to foster employment in Hungary.

A longer duration of parental leaves increases the projected participation rates of mothers in most countries. The discussion of this policy should separate maternity leave (compulsory and optional) and parental leave, as they have different characteristics and potentially different effects. In several low-participation countries, only women can access optional leave, so

experts often focus on mothers' behaviour. In fact, as noted earlier, the expected impact of these policies on women has been discussed and deemed to be ambiguous: on the one hand, employment protection and, on the other, human capital obsolescence. Our simulations seem to indicate that the net effect could be positive, although some country experts raised concerns. In Italy, maternity leave has a positive impact on the female employment rate since mothers who would have otherwise exited the labour market after childbirth would find it very hard to re-enter employment; temporary exits from the labour market are likely to become permanent, in other words, the employment protection effect prevails. In Hungary, however, the country expert raised doubts whether more extended periods of leave can contribute to increasing female labour force participation; mothers who choose to stay at home for three, six or nine years (three years for each child, as the law currently permits) are often unable to return to their workplace or suffer from significant skill degradation. The human capital obsolescence effect is likely to prevail, despite this study's estimates suggesting the opposite. However, as anticipated, the model refers to the overall duration of parental leave and not only to maternity leave. The supposedly detrimental effect in Hungary might therefore be because parental leave in this country is enjoyed almost exclusively by mothers, rather than to a detrimental effect of parental leave per se. In other words, were fathers to use parental leave as well, this might help women's participation in market activities.

Turning to parental leave, the scenario plotting the lengthening of this is plausible, as many countries are implementing or discussing the enhancement of parental leaves to foster a more balanced distribution of childcare tasks between men and women. For example, in June 2015, Italy passed a new regulation allowing parents to access paid (30% of salary) optional parental leave up to the child reaching the age of 8, and unpaid parental leave until the child reaches the age of 12 (before the reform it was 3 and 8 years of age respectively). Changes in societal attitudes are crucial, however, as a negative perception of fathers accessing this provision could discourage them from using it. As an example of this attitude, in Italy, fathers taking parental leaves are labelled 'male-mothers'. By contrast, in Sweden people judge fathers who have a limited role in everyday child-rearing negatively. It is difficult to separate the directions of the causal link between attitudes and behaviours, a positive attitude towards female participation being both a prerequisite and a consequence of increased female participation. However, policies aimed at promoting gender equality favour both. In Sweden, for instance, each parent is entitled to 240 of the 480 days of paid parental leave. Each parent has two months reserved exclusively for him or her. Should a father – or a mother – decide not to take them, they cannot be transferred to the partner. Some 85% of Swedish fathers take parental leave, and men in Sweden take nearly a quarter of all

parental leave. And, in an effort to further improve these figures, the government provides a gender equality bonus, consisting of an extra daily payment if 270 days of the paid parental leave are divided evenly between the mother and the father.

Moreover, low-participation countries face an additional challenge in the need to change general attitudes towards sharing family responsibility. A financial stimulus in this direction would help, such as a more limited decrease in the wages of fathers (and of mothers) using parental leaves. For instance, most Swedish companies are flexible regarding parental duties, and employees still get 80% of their pay when they have to stay home with sick children or dependants. Yet, this does not happen at the expense of productivity: Sweden ranks ninth in the Global Competitiveness Index 2015–2016 (Ireland is 24th, Spain 33rd, Italy 43rd, Hungary 63rd and Greece 81st; see Schwab, 2015). Of course, firms and public finances have both to be mobilised. For example, in Sweden, parental leave is financed to a large extent by employers' contributions and the remaining part (about a quarter) by general taxation.

The country experts also point to the effects of segmentation in the labour market, as better-protected jobs are mainly a prerogative of a subset of women (those with higher educational attainment and those belonging to older age cohorts who got 'good' jobs in the past and still retain them). In Greece, a great divide exists between women employed in the private sector and those employed under better terms in the public sector. A negative spiral effect is already developing, as public sector employment is declining and will continue to decline in Greece due to prolonged austerity policies. In Italy, maternity leave and parental leave regulation affects mainly workers employed with open-ended contracts, given that temporary workers often fail to meet the minimum contribution requirements (Berton et al, 2012). Again, a negative spiral effect is developing, as the growth in the proportion of young women with temporary and unstable jobs is increasing fast, pointing to the urgency of extending effective parental leave coverage to all type of workers.

Moving to the no early retirement scenario, it was seen that, despite the aggregate effects of this policy being negligible, the effects on the 50–59 years subpopulation are substantial. The maximum effects are expected in Greece, where in the past the pension system was characterised by a strong gender bias, helping to keep the participation and employment rates of women aged 45 and over, and especially those aged 55–64, very low. The scenario is deemed to be plausible by all country experts, as the countries studied here have already implemented policies of this type in recent years. The country experts also find it plausible that an increase in the minimum retirement age, especially in those cases where it used to be quite low, will increase female participation in the longer run, inasmuch as women will

have to stay in the labour market for more years before retiring. The report's projections about these effects are perceived as accurate, even if lower than what policymakers seem to expect. In fact, a negative spiral effect could counterbalance the positive side of the policy. The experts warn that the positive effects of a higher minimum retirement age on women's participation in the medium term might backfire later on, as there will be fewer grandmothers available for unpaid childcare. This might be all the more relevant given two consequences of the recession: the retrenchment of family-oriented benefits such as childcare allowances and day-care funding, and the reduction of the financial ability on the part of the households to hire migrant women for the care of children and the elderly.

Not surprisingly, the simulations show that a delayed recovery from the Great Recession scenario would harm Greece the most, even though Ireland and Spain would also be affected significantly. The country experts have frequently pointed out how the recession and the resulting austerity measures have had a negative impact on female labour force participation and employment. For instance, in Greece, the recent cuts to the welfare state have had severe consequences for female

employment, in part because female employment is common in public education, the health sector and social services.

These cuts will presumably produce negative spiral effects and impact on future female employment rates and on the possibilities of implementing policies to support female participation. For instance, in Ireland, a childcare subsidy was abolished due to budgetary pressures during the crisis. In Spain, because of austerity policies, insufficient resources were devoted to implement the above-mentioned law on elderly care support, and this has precluded it from having a truly positive impact on female participation, as many families with dependants have not had access to the resources provided by the law. Lasting effects of the detachment of women from the labour force will have to be dealt with in the future, adding a burden to the public budget.

Finally, this report has not yet commented upon Sweden. This is because, given its high participation and employment rates, only small gains can be further achieved in this country, and this is duly reproduced by the simulation results.

SUMMARY

This chapter has used a dynamic microsimulation model to analyse the medium-term and long-term prospects for female participation rates in five EU countries where rates are low (Ireland, Italy, Greece, Hungary and Spain), as compared with a high-participation country (Sweden). The model projects life-course trajectories on an individual basis and innovates with respect to most of the literature, which makes use either of cohort models, as in the *2015 ageing report* (European Commission, 2015b), where the cohort – all individuals born in the same period – is the unit of analysis, or cross-sectional models, where the whole population is the unit of analysis.

The key feature of this study's approach is to investigate, by comparing differences with respect to specific subgroups of the population, the effects of different scenarios or policy parameters in relation to a baseline projection. The projections should, therefore, be considered as benchmarks rather than forecasts; these benchmarks are useful insofar as they point to the implicit consequences of the dynamics that are currently under way in society and that could trigger or require the activation of corrective mechanisms at some point in the future. The results identify several points of potential interest for policymakers and international institutions.

In the baseline scenario, one can identify a general trend of increasing participation rates towards the very high Swedish levels, which accelerates in the population aged 20–64 after 2030, when older cohorts are replaced by younger cohorts characterised by higher participation rates. The only exception to this general pattern is Hungary, where participation rates of mothers are particularly low and, given the recent trends observed in EU-SILC data, are not projected to increase. However, Sweden will not be joined by any other country in the sample in meeting the Europe 2020 target of a 75% overall employment rate by 2020, although Ireland will get close. According to the projections, the 75% target will be approached by all countries with the exception of Hungary only at the end of the simulation period, 2050.

These projections are not too dissimilar from other forecasting exercises in the literature. They reach the same conclusions as the *2015 ageing report*, in the aggregate, with respect to Greece, Hungary and Spain, while they are less pessimistic than the *2015 ageing report* with regard to Italy and Ireland.

The analysis proceeded to assume changes in key policy tools and projected this in a policy scenario, comparing the results driven by a change in policy with the baseline benchmark scenario. The results of the analysis reveal that enlarging the policy offer would result in a considerable increase in the participation of women in the labour market, particularly those aged 20–44.

This analysis suggests that the reason for persistently low participation of prime-age women has to be sought in the economic and institutional environment in which they live; the model highlights that inadequate family policies and part-time opportunities are significant determinants of the observed and projected low-participation rates. This is consistent with the findings of the literature, which point to the importance of flexibility of working time arrangements and support to families with young children (ILO et al, 2014) as key policy drivers of female participation rates.

Country experts who were consulted on the results of this exercise mentioned a whole set of family-friendly policies that would be desirable in their countries but are not implemented to a sufficient degree, partly because of budgetary constraints imposed by austerity. In alternative scenarios arising from specific policy actions posited by the analysis, two sets of family–work conciliation policies were discussed: first, policies that would facilitate women to perform both family and labour market-related tasks (focusing on part-time jobs and parental leave); second, policies that would allow women to access services provided by professionals that could substitute them in several basic care tasks (public childcare, but also elderly care or subsidies to families to hire care-givers, as underlined by all the country experts).

The first set of policies (part-time jobs and parental leave) has the downside of detaching women – at least partially – from the labour market, with the risk that they would not be able to revert in the future to full participation. Moreover, such policies require cooperation from employers in accommodating (costly) part-timers and on-leave mothers without penalising their careers. Incentives and support from governments are clearly needed to achieve this goal. For instance, most Swedish companies are flexible regarding parental duties, but this does not happen at the expense of productivity. Sweden ranks ninth in the Global Competitiveness Index 2015–2016 (Schwab, 2015). Sweden is also a leading example of enlightened parental leave policies. The duration of parental leave in Sweden is very high by international standards and is perhaps Sweden’s most famous argument for being a child-friendly system. Generous parental leave by itself is not sufficient, however, to ensure a good family–work balance. Hungary provides even longer periods of parental leave, but participation rates of mothers in Hungary are among the lowest in Europe and are projected to grow only at a comparatively slow rate. The reason is twofold. First, while men are encouraged in Sweden to take a fair share of the parental leave, this practice is very uncommon in Hungary. Second, parental leave can backfire when gender equality is not firmly rooted in the workplace, as women might lose their attachment to the labour force or end up being discriminated against.

The second set of policies (childcare services and subsidies) have fewer risks of detaching women from the labour market but are more costly for the public budget and require a strong political will to engage in long-term investments aimed at empowering women and sustaining families. The example of Sweden, with its comprehensive list of family-friendly policies – including the provision of public childcare and pre-schools, child allowances, free primary, secondary and tertiary education, free public transport for parents with young children, and housing allowance – shows that the government needs to be an active player in structuring the whole society around the needs of young families.

In conclusion, this investigation points to the prominent role of family policies: what is needed is not a change of attitude on the part of women (which has already happened) nor a rebalancing of the demographic structure (which will inevitably happen), but a change of pace on the side of institutions and companies, which could prompt much-needed further changes in the role of women in society at large. Unfortunately, it may take time in many countries before companies, left to themselves, realise that favouring equality in the workplace and meeting the specific needs of women, and young mothers in particular, can be beneficial for profits and competitiveness. Also, companies might not be very sensitive to normative recommendations that appeal to moral concepts such as fairness, equality and justice or to economic advantages that show up only in the aggregate or in the medium or long term. All this highlights the role of government and institutions in shaping the right incentives and constraints for companies and individuals. Family policies, provided they are large enough to be effective and smartly designed to maximise impact and minimise side effects, have the potential to trigger a virtuous cycle, where increased family support prompts more female participation in the labour market, which in turn changes the corporate attitude and the awareness of society at large, creating the demand for even more advanced family policies and government intervention.

5 Social effects of women's employment participation

Women's participation in the labour market has a significant effect on their countries' economy, as the previous chapter shows. And these effects go beyond the economic sphere, since they extend to people's well-being and to society as a whole. Employment affects well-being not only in relation to income or financial rewards, but also through its psychosocial benefits (Tay and Diener, 2011), providing, for instance, a sense of belonging, an identity, a social status, a source of self-esteem, autonomy and satisfaction, as well as networks of social contacts and support (Alber, 2008). There are, therefore, economic and social arguments on the effectiveness of work in improving the well-being of individuals, their families and their communities. The relevance of employment on well-being is widely accepted, both from the personal and the societal perspective (Atkinson et al, 2002; Fitoussi et al, 2011; OECD, 2011a).

The main aim of the present chapter is to study the effects of women's participation in the labour market that go beyond the economy, by testing the relationships between employment and two relevant dimensions – subjective well-being and social quality – that take into account the individual and global perspectives.

The next section presents the theoretical framework of the analysis in more detail. This is followed by a description of the methods applied and the data source used. Then an analysis is conducted of the relationship between employment status and a set of indicators selected for measuring subjective well-being and social quality. Finally, the conclusions of the study are drawn.

Conceptual framework

In order to analyse the social impact that participation in the labour market has both on individuals and on their relationship with society, two dimensions of social life have been selected: subjective well-being and social quality. These dimensions and their interrelations have gained importance in the political and academic debates over the last few decades due to the increased need to measure social progress with indicators other than the purely economic (Sen, 2000; Stiglitz et al, 2009).

Subjective well-being is defined by the OECD (2013b, p. 29) as 'good mental states, including all of the various evaluations, positives and negatives, that people make of

their lives and the affective reactions of people to their experiences'; it can be considered to be the individual evaluation of quality of life (Proctor, 2014).

Social quality was defined by Beck and colleagues (2001, pp. 6–7) as 'the extent to which citizens are able to participate in the social and economic life of their communities under conditions that enhance their well-being and individual potential'. The social quality model states not only the conditions for individual well-being but also the conditions for building and sustaining societies where individuals are able to grow (Beck et al, 1997, cited in Eurofound, 2013b, p. 73).

The social quality model measures the quality of people's everyday life through four subdimensions that have been extensively described in the literature (Beck et al, 2001; Abbott and Wallace, 2012; Yee and Chang, 2011; Yuan and Golpelwar, 2013):

- economic security, which refers to the availability of the resources needed for enabling people to participate in the society;
- social inclusion, which means the degree to which people are, and feel, integrated in institutions and social systems within the community;
- social cohesion, which indicates the shared cultural norms and values that bind a society together and create trust;
- social empowerment, which denotes the availability of support mechanisms that enable people to make use of the opportunities available to them.

As stated by Yuan and Golpelwar (2013), social quality represents the extent to which a social structure provides the resources, opportunities and context for the achievement of subjective well-being within the society. The differences in societies along these four dimensions can give a good indication of how advanced these societies are with regard to progress, going beyond the dominant economic metrics of development.

Figure 32 summarises the theoretical framework adopted in this chapter, which considers the individual as an active subject in a social context. The figure presents the dimensions and subdimensions that are covered for the analysis of quality of life, both at the individual and the society level.

Figure 32: Schematic of the theoretical framework



Data and methods

In this theoretical framework, Eurofound’s European Quality of Life Survey (EQLS) is a suitable source for measuring subjective well-being and social quality due to its focus on both objective conditions and subjective assessments and on both individual living conditions and societal characteristics. This survey was carried out by Eurofound in 2003, 2007 and 2011, with the next round taking place in 2016. It covers the adult population (aged 18 and over) of all EU Member States, as well as the EU candidate countries and other European countries. The data used in the present chapter are from the 2013 EQLS and cover the EU28, with a total of 36,517 respondents.²⁷

In order to measure each of the dimensions considered in the conceptual framework, several indicators have been selected from the EQLS. As the following sections show, some of these indicators are single questions from the survey, while others have been computed from a set of questions. In the latter case, before aggregation, a check was conducted to discover whether the internal consistency of the items to be combined was high enough to indicate that they all measure a common concept and therefore to justify their aggregation. This

information was provided by the Cronbach’s alpha statistic, which in all cases showed an acceptable internal consistency (around 0.7 out of 1).

Table 12 provides the main descriptive statistics of all indicators used for the measurement of subjective well-being and social quality for people aged 20–64 years. In total, there are 13 variables desegregated by gender and employment status.

The next sections are structured around the dimensions of interest (subjective well-being and the four dimensions of social quality). Each section first presents the set of indicators used for measurement of the dimension. Then the effect of women’s employment on these dimensions is studied by analysing the relationship of the selected indicators and the presence of statistically significant differences between women in employment and women out of employment (unemployed and inactive women). In this regard, the definition of employment adopted covers the following three self-reported economic statuses: at work as employee or employer/self-employed; employed, on childcare leave or other leave; and at work as relative assisting on family farm or business.

Table 12: Descriptive statistics

Dimension	Variable (survey questions)	Gender	Status	N	Min.	Max.	Median	Mean	SD
Subjective well-being	Life evaluation (Q30, Q41)	Women	In employment	8,567	0	10	7.222	7.157	1.796
			Not in employment	6,172	0	10	7.222	6.657	2.168
		Men	In employment	7,743	0	10	7.222	7.155	1.767
			Not in employment	3,554	0	10	6.667	6.249	2.282
Economic security	Affordability of items (Q59)	Women	In employment	8,602	0	6	6	4.932	1.537
			Not in employment	6,230	0	6	5	4.125	1.893
		Men	In employment	7,784	0	6	6	5.141	1.413
			Not in employment	3,587	0	6	4	3.923	2.006
	Make ends meet (Q58)	Women	In employment	8,514	0	1	1	0.575	-
			Not in employment	6,149	0	1	0	0.400	-
		Men	In employment	7,692	0	1	1	0.629	-
			Not in employment	3,534	0	1	0	0.393	-

²⁷ Data for Croatia refer to 2012.

Dimension	Variable (survey questions)	Gender	Status	N	Min.	Max.	Median	Mean	SD
Social inclusion	Left out of society (Q29e)	Women	In employment	8,572	0	1	0	0.084	-
			Not in employment	6,200	0	1	0	0.129	-
		Men	In employment	7,763	0	1	0	0.083	-
			Not in employment	3,564	0	1	0	0.174	-
	Contacts (Q33, Q34)	Women	In employment	8,602	0	8	6	5.322	1.659
			Not in employment	6,230	0	8	5	4.990	1.744
		Men	In employment	7,784	0	8	5	5.057	1.743
			Not in employment	3,587	0	8	4	4.425	1.824
	Voluntary work (Q22)	Women	In employment	8,602	0	1	0	0.356	-
			Not in employment	6,230	0	1	0	0.300	-
		Men	In employment	7,784	0	1	0	0.360	-
			Not in employment	3,587	0	1	0	0.293	-
Political actions (Q23)	Women	In employment	8,602	0	1	0	0.319	-	
		Not in employment	6,230	0	1	0	0.200	-	
	Men	In employment	7,784	0	1	0	0.310	-	
		Not in employment	3,587	0	1	0	0.257	-	
Social cohesion	General trust (Q24)	Women	In employment	8,567	1	10	5	5.229	2.351
			Not in employment	6,203	1	10	5	4.907	2.398
		Men	In employment	7,755	1	10	5	5.280	2.259
			Not in employment	3,561	1	10	5	5.044	2.391
	Institutional trust (Q28a,b,d,e,f)	Women	In employment	8,116	0	10	4.222	4.212	2.141
			Not in employment	5,781	0	10	4	3.987	2.221
		Men	In employment	7,446	0	10	4.222	4.164	2.202
			Not in employment	3,424	0	10	4	3.905	2.312
	Social tensions (Q25)	Women	In employment	8,602	0	7	1	1.807	1.786
			Not in employment	6,230	0	7	1	1.846	1.859
		Men	In employment	7,784	0	7	1	1.619	1.713
			Not in employment	3,587	0	7	1	1.726	1.751
Social empowerment	Support (Q35)	Women	In employment	8,602	0	5	5	4.273	0.951
			Not in employment	6,230	0	5	4	4.120	1.071
		Men	In employment	7,784	0	5	5	4.243	1.018
			Not in employment	3,587	0	5	4	3.889	1.296
	Life worthwhile (Q29b)	Women	In employment	8,579	0	1	1	0.830	-
			Not in employment	6,166	0	1	1	0.752	-
		Men	In employment	7,759	0	1	1	0.829	-
			Not in employment	3,549	0	1	1	0.687	-
	Free to decide (Q29c)	Women	In employment	8,583	0	1	1	0.756	-
			Not in employment	6,205	0	1	1	0.707	-
		Men	In employment	7,774	0	1	1	0.759	-
			Not in employment	3,568	0	1	1	0.701	-

Source: EQLS 2011, EU28, weighted data

Finally, several models according to gender were developed and tested in order to investigate if the individual and societal effects of women's participation in the labour market are statistically significant when controlling for personal sociodemographic factors, and if they are larger or smaller in comparison to men. In these models, the dependent variable is each of the 13 variables selected to measure subjective well-being and social quality. Depending on the nature of the dependent variable, the model used was one of the following: an ordinary least squares regression when the variable can be considered as continuous; a logistic regression when it is a binary variable; and a Poisson regression when dealing with event count data.

In every model, the independent variable is the employment status, which is binary and takes value 1 if the person is employed and 0 otherwise. The coefficients of this variable for the different models run are provided in Table 13. It has to be taken into account that different types of models have different interpretations for their coefficients. Therefore, coefficients are not directly comparable across models.

Additionally, controls for personal sociodemographic factors were added through the following variables: age (people aged 20–64 years) and age squared, education (with three categories, coded as two dummy variables representing secondary and tertiary education), health (a dummy variable with 'good and very good health' as the reference), number of children living in the household, partner living in the household (a dummy variable with 'yes' as the reference), living in an urban or rural area (a dummy variable equal to 1 if the area is urban) and citizenship (a dummy variable equal to 1 if the respondent is a national citizen). Finally, the characteristics of the external context are measured by also including as controls the countries as dummy variables, with Austria as the reference country. The choice of these control variables is standard and follows the literature.

Results of the analysis

Employment and subjective well-being

Among the existing approaches for measuring subjective well-being (ONS, 2011; OECD, 2013b), the evaluative approach is the one taken in this chapter. Eurofound notes that in measuring evaluative well-being respondents are expected to weigh up different aspects of their lives and provide a cognitively influenced judgement (2013a, p. 16).

The EQLS includes a wide battery of questions that can be applied in this context. The indicators selected are the most commonly used: life satisfaction and happiness. In this way, the cognitive and the affective elements of subjective well-being (Diener and Suh, 1997; Helliwell

and Barrington-Leigh, 2010) are combined because 'happiness is more emotionally driven and less determined by the standard of living, while the satisfaction indicator is more strongly influenced by socioeconomic circumstances' (Eurofound, 2009c, p. 16). The survey questions selected were the following:

- All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.
- Taking all things together on a scale of 1 to 10, how happy would you say you are? Here 1 means you are very unhappy and 10 means you are very happy.

Following the usual approach taken in the literature (Klein, 2013; Bertelsmann Stiftung and Eurofound, 2014), these two items were combined by taking the arithmetic mean of the normalised value for each individual, creating the life evaluation variable.

The literature provides a wealth of evidence for the slightly higher level of life satisfaction and happiness reported by women in comparison with men (Alesina et al, 2004; Boarini et al, 2012; European Commission, 2015d). Despite the fact that these differences are small on average both for workers (7.2 out of 10 for women and men) and non-workers (6.7 for women and 6.3 for men), as Table 13 shows, they are statistically significant. The reason behind this is that women present a slightly higher standard deviation in their average life evaluation values than men, because more women than men report being in the extreme categories (very happy and very unhappy), which is in line with findings in literature (Frey and Stutzer, 2002; Della Giusta et al, 2011).

In the sample, the level of satisfaction and happiness reported is higher if the person is working, these differences being statistically significant both for women and men. The results of the multivariate regression run in order to examine the effect of employment on satisfaction and happiness (Table 13) show that, holding all the other independent variables constant, the level of satisfaction and happiness is higher for women in employment than it is for women not in employment by 0.3 points on average, while men in employment enjoy a level of satisfaction and happiness about 0.8 points higher than those who are not working.

Employment has a crucial role, not only in providing people with adequate living conditions but also with tools to achieve their aspirations and personal goals (Eurostat, 2015), and in fostering independence and freedom of choice. This role explains that people participating in the labour market are more satisfied with their lives on average than those who are out of employment. That makes employment a keystone of socioeconomic development and well-being.

Table 13: Estimates of regression models, by dimension and sex

Subjective well-being	Life evaluation (OLS β coefficient)							
	Women	Men						
In employment	0.317***	0.785***						
Adjusted R ² (%)	15.33	19.30						
Economic independence	Affordability of items (Poisson coefficient)		Make ends meet (Logit coefficient)					
	Women	Men	Women	Men				
In employment	0.123***	0.240***	0.590***	1.023***				
Pseudo R ² (%)	4.16	4.30	13.54	15.69				
Social inclusion	Left out of society (Logit coefficient)		Contacts (Poisson coefficient)		Voluntary work (Logit coefficient)		Political actions (Logit coefficient)	
	Women	Men	Women	Men	Women	Men	Women	Men
In employment	-0.466***	-0.862***	0.024**	0.072**	0.023	0.165*	0.404***	0.152*
Pseudo R ² (%)	5.96	8.48	0.84	1.05	5.78	5.31	9.56	6.13
Social cohesion	General trust (OLS β coefficient)		Institutional trust (OLS β coefficient)		Social tensions (Poisson coefficient)			
	Women	Men	Women	Men	Women	Men		
In employment	0.044	0.105	-0.008	0.085	0.002	-0.023		
Adjusted/pseudo R ² (%)	9.11	8.95	21.69	21.55	4.02	3.20		
Social empowerment	Support (Poisson coefficient)		Life worthwhile (Logit coefficient)		Free to decide (Logit coefficient)			
	Women	Men	Women	Men	Women	Men		
In employment	0.024*	0.068***	0.423***	0.674***	0.229***	0.385***		
Pseudo R ² (%)	0.81	1.11	6.28	8.07	4.57	4.82		

Notes: Models are controlled for age, age squared, education, health, number of children living in the household, partner living in the household, urban or rural area, and citizenship, as well as for country dummies. Significance level: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. OLS = ordinary least squares.

Source: EQLS 2011, EU28, weighted data

Employment and economic security

Economic security indicates the availability of various resources that are needed for enabling participation by people (Yuan and Golpelwar, 2013). This dimension has been measured using indicators on the affordability of certain items and the ability to make ends meet.

The indicator on affordability is a scale that has been constructed based on whether or not respondents can afford the six following items:

- keeping their home adequately warm;
- paying for a week's annual holiday away from home (not staying with relatives);
- replacing any worn-out furniture;
- a meal with meat, chicken or fish every second day;
- buying new, rather than second-hand, clothes;
- having friends or family for a drink or meal at least once a month.

The scale is computed by counting the number of items that respondents can afford and so goes from 0 (able to afford none) to 6 (can afford all items).

As expected, the coefficients of the multivariate regressions are positive and statistically highly significant for both sexes, which means that being in employment makes people more likely to be able to afford the items, while people not in employment are more likely to be deprived, all other things being equal (Table 13). These differences in employment status are more pronounced for men, for whom the level of affordability is 24% higher if they work, than for women, for whom participating in the labour market increases their ability to afford the items by 12.3%. Furthermore, women have lower average scores on this indicator than men when they both work (4.9 and 5.1, respectively), while the scores are higher than those reported by men when both do not work (4.1 and 3.9, respectively), these differences being statistically significant. These results could be explained by the existing gender pay gap in EU Member States, which measures imbalances in wages between men and women and reflects the inequalities in the labour market that mainly affect women.

The second indicator considered is the ability to make ends meet. It is binary, and the responses 'very easily, easily and fairly easily' are coded as 1, while the

remaining categories are coded as 0. The results obtained are similar to those for the indicator on affordability. The models applied show that the relationship between labour force participation and this indicator is significantly strong and positive. Hence, the reported adequacy assessment of the household income is higher among people who participate in the labour market. For women, the probability of being able to make ends meet is 56.1% if they are in employment and 41.4% if they are not, while for men these percentages are 64.1% and 38.9%, respectively.

The results obtained in the analysis of this dimension were very much as expected. Considering that economic security reflects the amount of the economic resources attained by people (Yuan and Golpelwar, 2013), it is clear that the effect of employment is strong and positive both for women and men. Employment enhances the availability of an adequate income to ensure an acceptable standard of living (Böhnke, 2008a), not only by meeting an individual's basic needs and contributing to their material comfort but also by giving them more options in their lives. Nevertheless, economic security means more than having employment because it is also linked to having access to welfare services that ensure that security (Abbott and Wallace, 2012).

Employment and social inclusion

As stated by Eurofound (2015), social inclusion is a broad concept with multiple definitions. In the current analysis, social inclusion describes the subjective feelings of inclusion that ensure people do not feel left out of society (Eurofound, 2013b), their links with friends, family and neighbours, as well as their level of civic engagement.

The first variable used to measure social inclusion is the extent to which people feel left out of society. It is a binary variable where 1 represents feeling left out of society and 0 means not feeling so. The multivariate regressions run to analyse if being in employment has an effect on social exclusion show that there is a significant relationship between employment status and feeling left out of society. Employed women are less likely to feel this than women not in employment, while, for men, this difference is higher. The probability of feeling left out of society is more than 3 percentage points higher for women outside the labour market than for working women (11.0% and 7.2%, respectively). For men, these percentages are 15.1% and 7.0%. The reason behind the higher probability of non-working men feeling left out of society than non-working women could be that non-participation in the labour market is, for men, associated with high levels of disengagement, while, for women, it is more related to housework and care activities. These results reveal a different role of employment in people's lives.

These results show the important role that employment plays in combating isolation and loneliness, which can negatively affect people's health and can undermine

overall well-being. It is a twofold role. On the one hand, most jobs involve interactions with other individuals, and for many people, their jobs provide many of their social contacts. On the other hand, the literature claims that people with low incomes lose social contacts and feel more isolated (Gallie et al, 2003; Crown, 2004), as employment is the main source of income.

Social contacts are a relevant indicator of people's well-being (OECD, 2013c). Here, they have been captured by the sum of the interactions with different relatives, friends and neighbours that occur at least one to three times a month. Table 13 shows that people in employment report they have more social contacts of this type than people outside the labour market. The level of interaction with relatives, friends and neighbours is 2.4% higher for women participating in the labour market than for those who do not participate. For men, that percentage in favour of workers is even higher, 7.2%. The fact that employment helps to maintain social interaction with relatives, friends and neighbours is crucial, since these interactions not only give people a sense of belonging but also are key sources of support.

Finally, following the OECD's work (2013d), civic engagement is covered by including two activities that positively contribute to the collective life of a community or society: voluntary work and participation in political actions, which have been demonstrated to have an important role in democratic and cohesive societies, and also in preventing social exclusion (Eurofound, 2012b). They are significant indicators both for their benefits for society as a whole and for individual well-being.

The first variable indicates if respondents are involved in certain kinds of unpaid voluntary work:

- community and social services;
- educational, cultural, sports or professional associations;
- social movements;
- political parties or trade unions and other voluntary organisations.

The values that it takes are 1, meaning participation, and 0, meaning non-participation. The interest in studying this indicator is its role in building networks of trust and support that help people in difficult times.

People in employment declare a higher participation in voluntary work in comparison with those outside the labour market: 63.3% of women who participate in volunteering are working, while this figure increases to 72.4% for men. Despite statistically significant differences in the level of participation in volunteering reported by working and non-working respondents, there is no longer an association for women when the control variables included in the regression models are considered. They have similar probabilities of doing voluntary work regardless of whether they are inside and outside the labour market (32.3% and 31.8%,

respectively). Men appear to continue being more involved in volunteering if they work (34.1%, compared with 30.5% for non-working men); nevertheless, the degree of association is low. A possible interpretation may be that participation in voluntary work is linked more to social awareness and solidarity principles than to employment status or other individual characteristics.

The measurement of participation in political actions is done using a binary variable that takes the value 1 when respondents took at least one of the following actions in the last year (and 0 if they did not):

- attended a meeting of a trade union, a political party or political action group;
- attended a protest or demonstration;
- signed a petition or contacted a politician or public official.

People in employment report a higher participation in political actions in comparison with those not in employment: 69.0% of women taking part in these actions are working, while this figure increases to 72.7% for men.

Looking at the results of the regression (Table 13), individuals who are working are more likely to report they are involved in political actions than those who are outside the labour market. For women, the probability of participating in political actions is 27.7% if they are in employment and 20.4% if they are not, while for men, these percentages are 28.8% and 25.8%, respectively. As mentioned before, employment provides more social contacts and the opportunity to discuss and share opinions and experiences with more people, which, at the same time, stimulates political opinion and participation.

The results in this section show that the level of social inclusion is higher for working women than for those who are not working. They have a lower probability of feeling left out of society and a stronger network of contacts, as well as being more involved in political actions. These results are in line with findings in the literature (Atkinson et al, 2002; Böhnke, 2008b), which claim that employment significantly increases not only people's income but also their social integration.

Employment and social cohesion

Social cohesion indicates the shared cultural norms and values that bind a society together at a structural level. It is analysed here using three indicators: general trust, institutional trust and perception of social tensions. The goal of social cohesion not only recognises the existence of differences within every society but also the desirability of strong ties between groups that differ in gender, age and economic status (Eurofound, 2010, p. 41).

Analysing these indicators finds that differences in employment status are associated with differences in

social cohesion. Nevertheless, once the control variables are included in the multivariate regression, this association is no longer statistically significant. Following Delhey and Keck (2008), the underlying reason may be that differences in trust and perception of social tensions are not explained by individual characteristics but by cultural, economic, social or political conditions that are acting as overarching effects.

Eurofound (2012c) comments that trust is a central component of democracy, a crucial element of political participation and a key factor in societal stability. That analysis of trust differentiated between trust in people and trust in institutions, based on their different nature. Personal trust is focused on informal personal relationships, while institutional trust concerns large-scale impersonal bureaucratic bodies (Newton, 2007).

In the academic literature, the variable that is frequently used in the analysis of social cohesion is general trust (Dragolov et al, 2013). This has been measured here using the question 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?' Answers are provided along a 10-point scale, where the higher value means the respondents consider that individuals can be trusted. The regression coefficients show employment status has no significant effect on generalised trust in people. However, if the effect of the control variables included in the model is taken out, there are statistically significant differences in the level of general trust reported by workers and non-workers. Women in employment have higher average levels of general trust than those who not in employment (5.2 and 4.9 out of 10, respectively), while for men, the average levels are higher (5.3 and 5.0, respectively, for those in employment and not in employment). High levels of trust improve well-being by facilitating cooperative behaviour among members of the same community (Delhey and Keck, 2008).

Institutional trust is the average of the normalised levels of an individual's trust (measured on a 10-point scale) in five institutions: parliament, the legal system, the police, government and local (municipal) authorities. People's employment status is related to their level of trust in institutions. For women, the average degree of trust in institutions is 4.2 out of 10 if they participate in the labour market and 4.0 if they do not. For men, these average levels are 4.2 and 3.9, respectively. Nevertheless, controlling that relationship using the set of sociodemographic and country variables, participating in the labour market is no longer associated with institutional trust, either for women or men.

The indicator on social tensions, called 'conflict scale' in Abbott and Wallace (2012), was computed from the answers to a question asking whether or not strong tension exists between seven groups: poor and rich people, management and workers, men and women, old people and young people, different racial and ethnic groups, different religious groups, and people with

different sexual orientations. The scale is computed counting for each respondent the number of groups where they perceive tension, so it goes from 0 (no tensions perceived) to 7 (tensions perceived in all groups). The regressions coefficients indicate that participation in the labour market is not significantly associated with differences in the perception of strong social tensions. However, this association is significant when no controls are included, which could be related with the above-mentioned idea that these aspects of social cohesion are mainly influenced by countries' general socioeconomic, cultural or political conditions, instead of individual characteristics.

Employment and social empowerment

Social empowerment is a concept that goes beyond the subjective power of the individual in terms of self-esteem (Herrmann, 2005). It refers to the availability of support mechanisms that enable people to make use of the opportunities available to them and also the extent to which people feel capable of acting in their environment (Nussbaum and Sen, 1993).

On the basis of those arguments, three indicators were used for measuring empowerment: social support, the extent to which people feel what they do in life is worthwhile and the extent to which they feel they are free to decide how to live their lives.

The first indicator, social support, plays a role in fostering the conditions for empowerment. It considers different sources of support – from family, friends and neighbours – in five different circumstances: when ill, depressed, in need of advice, looking for a job or needing money urgently. The indicator is computed, counting by respondent, by the number of circumstances in which they would receive support, so it goes from 0 (no support) to 5 (total support). The relationship between the employment status of respondents and receipt of support is statistically significant and positive. The support received is 2.4% higher for women participating in the labour market than for those who do not participate, while holding all the variables constant in the model. For men, the percentage in favour of workers is even higher, 6.8%. Furthermore, women have higher average levels of support than men (as shown in Table 12), both when they work (4.3 out of 5 for women and 4.2 for men) and when they do not participate in the labour market (4.1 and 3.9 respectively), these differences being statistically significant.

The second variable used is related to respondents' self-esteem, who report whether they generally feel that what they do in life is worthwhile. This is a binary

variable, where 1 equals 'yes' and 0 equals 'no'. Table 12 indicates that participation in the labour market makes people feel higher levels of self-esteem. The average level for women is 0.83 out of 1 if they work and 0.75 if they do not work, while for men, these averages are 0.83 and 0.69, respectively. These results show that the self-esteem of non-working men is lower than that of non-working women, while, if both work, the levels of self-esteem are similar. The explanation of these figures could be found in the pronounced gender roles still existing in contemporary societies.

Looking at the influences of employment status on this variable, the regression coefficients show a positive and statistically significant relationship, indicating that the probability of feeling worthwhile is 0.8 for women in employment and 0.8 for women out of employment. These probabilities are 0.8 and 0.7, respectively, for working and non-working men. Participating in the labour market and overcoming challenges at work can help to develop a sense of autonomy, self-worth and satisfaction.

The third and last variable analysed in this dimension identifies whether respondents feel free to decide how to live their lives, which provides information on the freedom of choice and control individuals have over their lives. It takes the values of 0 and 1, where 1 means feeling free. Employment has a significantly high and positive effect on the feelings of freedom of women and men, improving their sense of independence and control over their lives. Multivariate regressions show that the probability of feeling free to decide is 76.5% for working women and more than 4 percentage points lower for women outside the labour market (72.1%). These percentages for men are 77.5% and 70.1%, respectively. The lower probability of feeling free to decide among working women in comparison with working men may be explained by the worse conditions that women experience in the labour market. On the other hand, the higher probability of feeling free to decide among non-working women in comparison with non-working men may be explained by the internalised gender roles in relation to the negative effects of being outside the labour market.

The results of this section show that employment provides a network of social support as well as a source of independence and self-esteem. Participation in the labour market has a significant role in social empowerment due to it increasing the chances of development, growth and personal fulfilment and enhancing the possibility of building a future life project. Additionally, it serves to give a self-image, while providing a socially recognised position and status.

SUMMARY

Women's participation in the labour market has been a determinant of recent societal developments, producing profound changes that have led to an improvement in well-being, both at individual and societal level.

This chapter has analysed the effects of employment on quality of life and social quality, applying a global perspective where individual and societal well-being were covered. The analysis explored the dimensions identified in the social quality model, which specifies both the conditions for individual well-being and the conditions for building and sustaining societies, particularly inclusive and socially cohesive societies that empower citizens who can enjoy a decent standard of living (Abbott and Wallace, 2012). The position of societies on the dimensions covered could indicate their level of progress and be a tool that goes beyond the purely economic indicators.

For each dimension, the influence of employment on women's well-being was analysed, considering their participation in the labour market and how these effects differ between women and men. In order to do that, several regression models were applied, employment being the independent variable, together with a set of sociodemographic control variables, as well as controls at country level.

The results obtained show that perceptions of overall quality of life and the quality of society are, in general terms, positively affected by participation in the labour market. Women in employment evaluate their lives in more positive terms. Their level of social inclusion is higher than those who are outside the labour market since they say they have a stronger network of contacts and are more involved in political actions, which is in line with having a lower probability of feeling left out of society. Employed women are more empowered because they receive more support; they are also more likely to feel that what they do in life is worthwhile and that they have higher levels of control over their lives. Additionally, as expected, employment plays a large role in the dimension of economic security, reducing deprivation and enhancing the ability to make ends meet. In general terms, the effects that employment has on those dimensions are higher for men than for women, with the exception of participation in political actions.

This analysis showed how people experience the different elements related to the quality of society, according to their employment status. The general picture that emerges is that work is not merely a source of income that ensures adequate living standards but also appears to be significant in ensuring well-being for the individual and for society as a whole. Work is not only the main source of income and therefore the main tool against deprivation and poverty, but is also a major mechanism of social inclusion, being the primary means through which citizens relate to society and contribute to maintain it. This link between individuals and society also enables a sense of belonging and identity, participation and usefulness.

6 Policy measures promoting women's labour market participation

Introduction

In the previous chapters, recent trends in the labour market participation of women have been investigated. The results have shown that the crisis has not interrupted the secular increasing trend in female participation, and female activity rates continued to increase steadily between 2008 and 2014, although at a slower pace than in the pre-crisis years. The determinants of the labour market participation of women were explored, and the economic loss arising from the gender employment gap has been estimated. While the results highlight the importance of mobilising actions in order to close the gender employment gap, a great heterogeneity among the Member States was clear.

This chapter presents an overview of policy measures recently implemented in selected Member States to promote the labour market participation of women. The chapter provides a review of 18 policy measures from 6 Member States (Denmark, France, Germany, the Netherlands, Sweden and the United Kingdom), which have been identified as good practice examples of measures that encourage female labour market participation. These measures cover a variety of approaches and policy areas that aim to influence female employment participation in different ways, intervening at different stages of the life course and targeted at women both in and outside of employment or the labour market, as well as at rebalancing gendered divisions of labour within the family.

This chapter is organised as follows. Firstly, an overview of the institutional set-ups and welfare policy regimes across the EU Member States is provided. This enables one to contextualise the latest trends in policymaking to support the labour market participation of women and the results of the country case studies. Then, the results of the review of the policy measures are presented, as well as a discussion of their effectiveness.

Policy regime typology: A gender perspective

National institutional set-ups and welfare regimes have significant effects on women's participation in the labour market. The level and type of impacts also depend, however, on the state of female emancipation from male dependency and on the availability of services and provisions to support female employment. Household decision-making processes appear, indeed, to be connected to the wider structures of labour markets and welfare states, as well as to gender stereotypes and the balance of power within the household (Morris, 1990).

Developments in the debate on policy regimes from a gender perspective (or gender regimes) suggest a redefinition of the traditional welfare state models according to women's position in the household and in the labour market in order to identify the model that best supports women in the labour market and society (Lewis, 1993, 1997; Trifiletti, 1999).

Compared to the traditional classification of European welfare or institutional models, the gender-revised typology is different in two ways. Firstly, it takes into consideration women's positions both in the household and in the labour market; secondly, it shows that, contrary to common belief, there is an important difference between the male breadwinner, state-centred and family-centred welfare models, especially in relation to women's economic and social position.

Five welfare state models can be outlined in this respect.

Universalistic welfare regimes of Nordic countries are based on individual rights to equal opportunities. Social protection policies are targeted at individual needs, whatever the family status. Women's full-time work or long-term part-time work is supported by public services that substitute for unpaid care work, and women living alone are supported in coping with difficulties, especially through access to income safety nets and publicly provided services. Care years are considered for pension entitlements both in public and compulsory private schemes, whatever the carer status; residence-based minimum pensions are available to those who do not have access to other types of pension benefits and substitute derived pension rights. The main shortcoming of these regimes is occupational segregation, with women largely employed in the public sector. However, these countries have lower gender gaps and greater

equality both in the labour market and within households, compared with other EU countries, even if recent debate in these countries has been on the underlying persistence of an unequal division of unpaid work.

Liberal universalistic welfare regimes, typical of the United Kingdom, are considered residual welfare regimes, supporting women mainly through means-tested benefits in cases of poverty and exclusion. These regimes ignore women's family role except in the case of extreme poverty and offer meagre social service endowments. A large proportion of women work but receive very little protection from the state. As for single mothers, liberal welfare regimes support them in getting access to the labour market.

Male breadwinner state-centred regimes include continental countries, where women are usually treated on the basis of their family role and are protected in the labour market when they are the family breadwinner. In this type of regime, women mostly work part time, while single mothers are protected as breadwinners. Access to social protection largely depends on the length of employment, while a woman's socioeconomic conditions in old age depend on access to derived pension benefits.

Male breadwinner family-centred regimes include mainly Mediterranean countries. As with the previous regimes, women are treated on the basis of their family role, but are much less supported in the labour market because of the lack of individualised minimum income provisions and of public services supporting care work. In most Mediterranean countries, there are major disincentives for the participation of women in the labour market. Only when women work full time do they have access to benefits and social services that are based on their employment status. Social protection largely comes from the family rather than from the state, and no specific social protection is available for single parents, while socioeconomic conditions in old age largely depend on past family roles and on access to derived pension benefits.

Eastern European countries have gone through major processes of reform and redesign of their welfare regimes since their transition from the communist system. It is still uncertain which models they will converge towards or what original model they are designing and whether a homogeneous or mixed welfare regime will prevail.

This classification shows that, in the EU framework, there are two opposite gender regimes – the universalistic welfare regimes of Nordic countries at one end and the breadwinner family-centred regimes of Mediterranean countries at the other. The other regimes are in between and combine different features of these models to varying degrees.

Overview of policy measures and policy effectiveness

Type and nature of the evaluated measures

The trends in labour market participation among the five clusters identified reveal that among other factors, the institutional and policy set-up of individual countries has a clear impact on shaping the pattern of women's labour market participation and on fostering their successful integration. Therefore, it is particularly important to understand the features and analyse the effectiveness of policy measures aimed at favouring women's labour market integration and work-family reconciliation in countries that have been most successful at reducing the gender employment gap.

This research focuses on reviewing 18 policy measures, 3 for each of the 6 country case studies identified as good practice examples of encouraging female labour market participation. The six countries investigated were selected as part of the best-performing clusters for labour market participation: the universalistic (Denmark and Sweden), liberal universalistic (United Kingdom) and the male breadwinner state-centred (Germany, France and the Netherlands).

To facilitate a systematic analysis of their features and effectiveness, the policy measures have been organised in four distinct categories.

- The first category comprises **labour market policy measures** that aim to encourage a greater supply of women outside and inside the labour market, as well as to encourage greater demand on the part of employers. Stimulation of the female labour supply can take place either via supportive ALMPs or via the taxation and benefits system through measures that aim to 'make work pay' for single parents or second earners. These measures are mainly focused on women who are outside the labour market, to encourage their entry into employment, but can also act as mechanisms that encourage permanence in employment or increased working hours among those already in work. Stimulation of female labour demand, on the other hand, mainly takes place via employer subsidies or discounts/exemptions on employers' social security contributions.
- The second category is **childcare support measures**; that is, policy measures that directly or indirectly aim to offer support with the costs and provision of childcare in order to support parental (and especially female) participation in the labour market. Availability of public childcare provision and the affordability of childcare more generally are vital in supporting parental participation in the labour market and form a significant part of the current policy discussions around the social investment agenda. In 2002, at the Barcelona Summit, the

European Council set targets to provide childcare by 2010 to at least 33% of children under three years of age and to at least 90% of children between three years and the mandatory school age, with the explicit goal of raising the labour market participation of women. This is particularly significant, given that parenthood still affects men's and women's employment unequally, as women are more often involved in childcare duties, especially when care services are lacking or fail to meet the needs of full-time working parents. Moreover, the high costs of childcare facilities increase the marginal effective tax rates for second earners when moving from non-work to work or when increasing their working hours, acting as a disincentive to take up jobs or increase working hours, especially given the large labour supply elasticity of second earners. However, the take-up of childcare also appears to reflect cultural 'ideals of care' (Kremer, 2007) about who is best placed to rear children.

- The third category is **leave policies**, both for maternity and parenthood-related reasons as well as for adult care. Maternity and parental leave are important measures that help women to combine childcare responsibilities with their work commitments; parental leave can also enable families to rebalance gendered divisions of care work within the family. Adult-care leave, on the other hand, facilitates the reconciliation of work and other care responsibilities that women and their families may face. The availability of flexible and generous parental leave systems has clearly been identified in the literature as one of the factors explaining the positive female employment performance of countries such as Denmark and Sweden. However, the evidence also shows that the lion's share of

parental leave entitlement is still taken by women, even when the law grants both parents an equal right to it. For this reason, it is important to consider how policy systems interact with cultural norms, employment practices and other policies that may shape families' incentive to take up available entitlements.

- The fourth category includes measures related to **flexible working time and work-family reconciliation**. Flexible working policies provide a framework within which women who are in employment, as well as their partners, can combine work and family responsibilities and improve their overall work-life balance. Flexible working policies, which include the availability of part-time employment and reduced working hours, have received increasing attention as a policy measure able to facilitate the reconciliation of work and family life for women as well as families as a whole. They constitute an interesting example of a policy area that involves governments, social partners and employers, in particular, for its successful implementation. By definition, the target population of these measures is primarily individuals who are already in employment. However, by aiming to affect a cultural change in the norms surrounding female participation in the labour market, these measures can also exercise an indirect effect on the division of care work within the family and on the labour supply of women outside the labour market. Conversely, their success also appears to depend on cultural norms concerning the gendered division of labour, as well as on employers' criteria for evaluating what makes a good employee.

Figure 33 shows the 18 policy measures under analysis according to the category to which they belong. Note that some policies can belong to more than one category.

Figure 33: Policies and types of policies investigated



Policies are distinguished by the labour market situations they focus on:

- policies that focus on women outside employment and promote their entry into the labour market or employment via ALMPs that support their reintegration or employer subsidies that stimulate demand for their work;
- policies that focus on women in employment, whose attachment to work can be sustained by enabling them and their families to reconcile work with the demands of child or adult care via leave or flexible working policies (flexible childcare can also fall into this category);
- policies that affect both groups, by creating financial incentives for women to seek or remain in employment or to increase their working hours – these include childcare support policies that reduce the cost of childcare and tax-benefits policies designed to incentivise the female labour supply.

The cultural expectations and values concerning female employment and dominant practices in the gendered division of care and family work form the background against which such policies operate. These factors, along with societal ‘ideals of care’ (Kremer, 2007) governing how communities expect children and dependent adults to be cared for – by relatives, by care workers in the home, or in institutional settings – influence the extent to which such policies can succeed in promoting increased female labour market participation. Simultaneously, successful policies to facilitate female labour market participation can influence such cultural expectations.

The approach to the comparative analysis

The comparative analysis focuses on the policy groupings identified above – ALMPs, tax-benefit policies, childcare support policies, leave policies and flexible working policies. It first seeks to identify the shared logic underlying different policy groupings: the outcomes and broader impact they seek to have. The country case studies analyse the broader cultural and policy context in each country, as well as the following features of each policy:

- target population and scale of initiative (national, regional or local);
- sources of funding and the actors involved or responsible for implementation;
- intended beneficiaries, outputs and outcomes (such as the rationale underpinning the policy measure);
- evidence of outcomes and impacts;
- policy learning.

The comparative analysis draws on this information in order to discover how the overarching logic underlying the different policy groupings plays out differently in the individual policies. It then seeks to identify the factors influencing the effectiveness of policies in achieving their intended outcomes in relation to female labour market participation. Throughout, the analysis will link back to information on the broader policy and cultural context.

Labour market policy measures

This section looks at labour market policies in the broadest sense and has a dual focus. On the one hand, it outlines measures designed to facilitate the reintegration of women who are currently outside the labour market by providing practical support, such as training, job

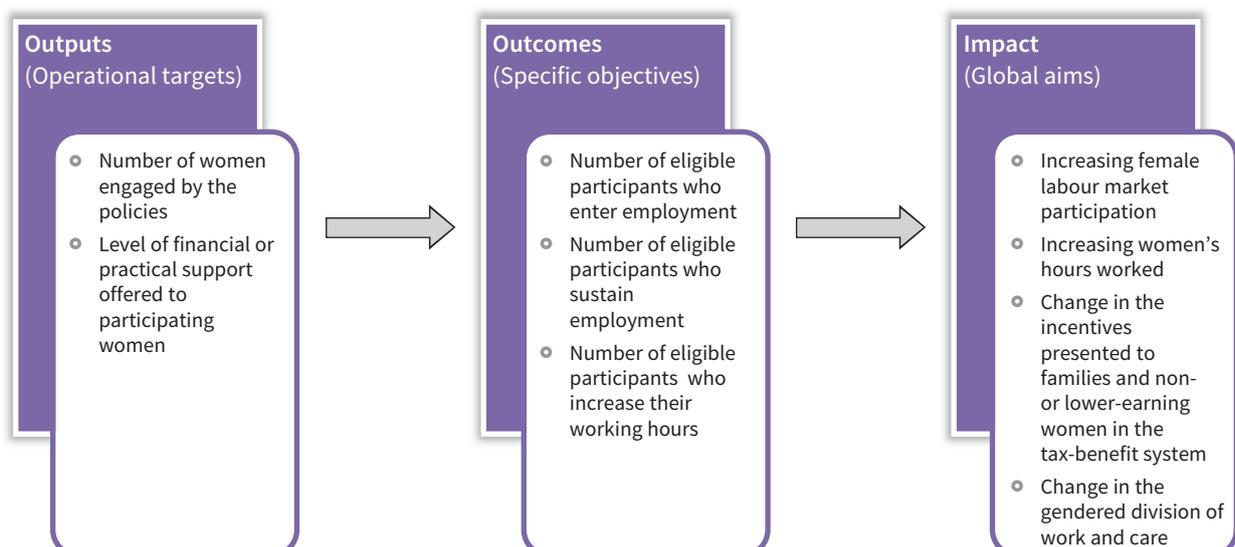
search support, support for female entrepreneurs or employer subsidies. On the other hand, it describes measures directed at adjusting the tax-benefits system to create stronger incentives for women to enter work, sustain employment, or increase their hours.

Logic of labour market policy measures

While this section covers a diverse range of policy approaches, they share an immediate focus on moving women into the labour market or increasing their labour supply. The policies vary notably in the barriers to participation in the formal labour market that they focus on and the ways in which they seek to remove those barriers. As can be seen in Figure 34, ALMPs and measures to directly stimulate employer demand seek to integrate women into work by eliminating barriers arising from a lack of skills or employment opportunities. Tax-benefit measures, by contrast, focus on changing the incentive structures facing women and families with regard to women's labour supply decisions. They strive to 'make (women's) work pay' for women and families and to eliminate disincentives in the existing taxation or benefits system that deter women from entering work. Two of the measures explicitly target women, while the remaining three would be expected to affect women mostly due to their position in the tax system and their disproportionate involvement in domestic work and caring for children.

A detailed overview of the policy measures within this group, showing the targets to be met for population, outputs and outcomes and for performance is presented in an annex published alongside this report on the Eurofound website, at <http://www.eurofound.europa.eu/publications/report/2016/labour-market/the-gender-employment-gap-challenges-and-solutions>.

Figure 34: Logic chain of labour market policy measures



Overview of policy measures

Table 14 sets out the five policy measures investigated in this group.

Table 14: Labour market policy measures

Name of measure and country	Description
Vocational reintegration (<i>Perspektive Wiedereinstieg</i>) (Germany)	The programme supports women who have been outside employment for family reasons for at least three years and are seeking to re-enter the labour market. It offers information via an online portal, counselling, coaching and accreditation programmes. It targets employers via an online advisory portal with good practice examples on strategies for supporting re-entrants, family-friendly policies and information about financial support for employers.
Promotion of female entrepreneurship (Sweden)	The programme (2007–2014), which was funded by the government through the Swedish Agency for Economic and Regional Growth and implemented via regional projects, supported female start-up activity and entrepreneurship. It provided financial support for business development, information and mentoring, supporting potential and active female entrepreneurs, students, business networks and other relevant organisations. It also sought to create role models via an Ambassadors programme.
In-Work Credit for Lone Parents (United Kingdom)	In-Work Credit (2004–2013) was a tax-free weekly payment of £40 (£60 in London) to long-term unemployed (52+ weeks) lone parents who entered employment, paid for up to a year following their entry into work. The aim of In-Work Credit was to create incentives for lone parents on benefits, the vast majority of whom are women, to enter work and to provide financial support to help make employment sustainable.
Phasing out the transferability of the general tax credit (<i>Algemene heffingskorting</i>) (Netherlands)	This reform gradually eliminates the transferability of the general tax credit that allowed non-earning or low-earning individuals to transfer the discount on their income tax and national insurance contributions, to which all Dutch taxpayers are entitled, to their tax partners. This amounted to a negative income tax and resulted in a high marginal tax rate for second earners, rendering entering work relatively unappealing for individuals with a higher-earning partner.
Universal service employment cheque (<i>Chèque emploi service universel</i>) (France)	This voucher system, introduced in 2006, can be used by employers to fund and declare the employment of domestic services workers such as cleaners, care or childcare workers, or to pay an agency or external provider that supplies such services. The system simplifies the procedures that people must follow in order to hire, pay and make social security contributions for such employees. It has financial advantages and offers co-financing opportunities.

These five policies vary considerably in the manner in which they seek to move individuals – and women in particular – into employment or to increase their labour supply as measured in hours worked. The two ALMPs explicitly target women. The German policy programme is directed at women seeking to re-enter employment after a career break for family reasons, a central group of inactive women, while the Swedish programme focuses on moving women into a specific form of work, namely self-employment. The benefits and tax policies, by contrast, are not focused on women, but rather target specific groups or positions in the tax system to increase their labour supply. These are groups whose labour supply has been identified as particularly responsive to financial incentives in certain countries (de Boer et al, 2014). These policies are, nonetheless, likely to affect female employment participation particularly by virtue of the fact that women are overrepresented in the policies' target populations. Women are more likely than men to be lone parents, as well as the non-earners or second earners in couples subject to joint taxation in the Netherlands. The French voucher scheme affects women in two ways: firstly, as potential employers of domestic service workers benefiting from the vouchers and tax benefits, with women accounting for most beneficiaries

and vouchers being used for childcare in 70% of cases; and, secondly, as potential employees in the sector benefiting from improved working conditions and increased employment opportunities.

The policies also differ on their breadth of application. While the German and Swedish employment-promotion policies and the French voucher scheme are voluntary for participants and cover a small share of the individuals in their target population, the tax and benefits policies in the Netherlands and the United Kingdom affect (virtually) all eligible individuals. Considered more broadly, they can be viewed as attempts to change the overall financial incentives facing women and families making a decision about women's employment participation.

The links between women's decisions and their family's expectations and situation are explicitly addressed by two of the policies. The German vocational reintegration measure aims to increase the support offered by women's male partners for their efforts to re-enter work and seeks to prepare families for the women's new role. The Dutch reforms to the general tax credit seek to change the marginal tax rates applied to women within tax partnerships, as well as the financial incentives for families as a whole.

Effectiveness and determinants of effectiveness

Evidence on the effectiveness and underlying success factors is not available for all individual policies. However, the national experts consulted highlighted a range of success factors for the policies.

The phasing out of the transferability of the general tax credit in the Netherlands is an example of a broader effort to individualise the taxation system. This eliminates financial incentives favouring a single-earner family model, which function as a barrier to female labour market participation. The policy thus follows a negative logic of eliminating disincentives, rather than creating new incentives to participate. Ex-ante modelling suggests that, while its impact on the overall levels of female labour supply are limited, it is likely to have increased labour market participation among women with partners as well as hours worked, particularly among less-educated women. This reflects the fact that the policy targets a group whose labour supply in the Netherlands has been found to be more responsive to financial incentives than that of other groups (de Boer et al, 2014). The experts also stressed the importance of the gradual implementation of the reform, which allows time for families to adjust to the changing incentives offered to them, and the absence of political opposition to the underlying challenge to the traditional family model.

In-Work Credit for Lone Parents in the United Kingdom was found to be quite effective in moving lone parents on benefits, most of whom are women, into work; 20% more than those who did not participate in the measure took up employment. It was found to be particularly effective in creating incentives for lone parents with lower labour market attachment, by giving them security and supporting them in managing the transition into work. However, its effect on sustained employment appears to be limited. Experts identified the fact that, unlike many comparable benefits associated with entry into work, In-Work Credit was an immediate and unconditional financial benefit for parents fulfilling its basic eligibility conditions, which did not decrease with increases in income, and hence created no disincentives for increasing working hours among its target group, as a key success factor. The fact that it was easy to administer and understand for claimants was also seen as positive. The clear targeting of the benefit was key to reducing deadweight loss and increasing its impact; this was highlighted by the fact that pilots of the policy among two-parent families were less successful.

The existing evidence suggests that the German vocational reintegration measure has some effect on the employment rates of women who were previously distant from the labour market, notably in the long term. It also increased the motivation to engage in job searching among this group. Success factors of the programme appear to be its focus on a clearly defined target group – women at a life stage when they are open to re-entering work after exiting the labour market for family reasons –

and its approach to re-entry as a process involving women's families as well as employers, which requires a high degree of support from the family and openness from employers, as well as a potential reduction of the burden of domestic responsibilities via household services. The programme also seeks to integrate the efforts of the federal states (Länder), municipal authorities and other service providers to create local networks to address women's needs in a comprehensive way.

There is no clear evidence on the impact of the Swedish initiative on promoting female entrepreneurship, although it has been claimed to have increased the visibility of female entrepreneurs. Its success factors may include the involvement of a broad range of actors and the use of an innovative media strategy. The Ambassadors programme was also considered a success and replicated across the European Union.

Finally, the French universal service employment cheque appears to have succeeded in facilitating the creation of formal employment in the sector, reducing the proportion of informal work. Expert sources suggest that its success may, to some extent, reflect the complexity and high hiring costs characteristic of the sector in France.

Comparative conclusions on the factors determining the effectiveness of policies within the category of ALMPs and tax-benefit measures are somewhat difficult to draw, given the diversity of the policies it includes. However, it appears that the effectiveness of measures across this category is dependent on accurate targeting of an appropriate population. This is particularly the case with measures designed to create incentives for labour market entry, whose success depends on the responsiveness of the target group to such financial incentives. Where policies are well-directed, manipulating the financial incentives presented to women appears to be a successful policy approach. A second factor identified as significant across the policies is their attention to the way in which women's decisions about re-entering work interact with their families' demands, financial situation and values.

Childcare support policies

This section covers systems of childcare provision and policies designed to support access to childcare.

Logic of childcare support policies

As can be seen in Figure 35, childcare policies tend to pursue a range of objectives, including aims related to children's education and social integration. They have a dual logic with regard to female employment participation. Firstly, childcare provision can be seen as providing alternatives to families caring for children in the home, a task most commonly taken on by mothers, and to provide care in a form that can be reconciled with parents' working hours. Secondly, childcare support

policies seek to reduce the costs of mothers returning to work for families by reducing the cost of childcare provision inside or outside the home. This is expected to increase mothers’ employment participation and hours worked, and addresses the fact that the impact of parenthood on female employment is negative in the vast majority of European countries (European Commission, 2014b). More broadly, childcare support policies can also be seen to offer alternatives to a gendered division of labour that confines women to the home and care work.

Overview of policy measures

Table 15 sets out three of the four policy measures that have been investigated in this group; the fourth is the French universal service employment cheque, a measure that overlaps with the labour market policy category and so is described in Table 14.

The four childcare policies analysed vary in how they seek to improve parents’ access to childcare. The Danish and Swedish public childcare systems provide guaranteed access to a high-quality and flexible service

Figure 35: Logic chain of childcare support policies

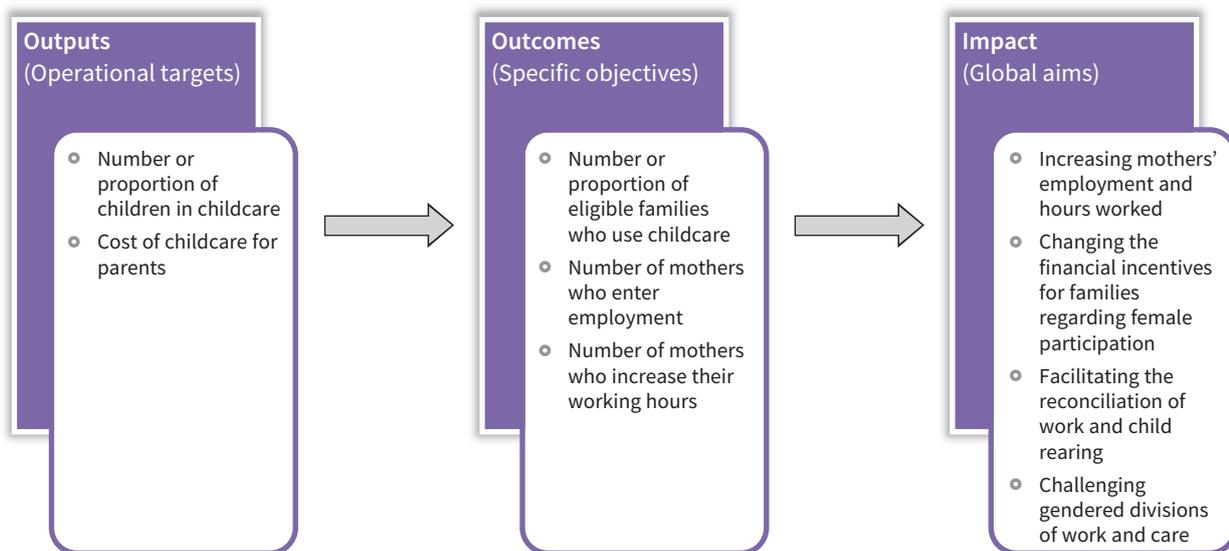


Table 15: Childcare support policies

Name of measure and country	Description
Supplement for the free choice of childcare <i>(complément de libre choix du mode de garde)</i> (France)	This benefit is intended for parents using the services of a registered childminder or a private childcare provider for a child under the age of six. The level of the allowance depends on the family income, the number of parents present and working, the number of children and the age of the children. The aim of the benefit is to give parents flexibility over their childcare options.
Public childcare and child-rearing allowance <i>(vårdnadsbidrag)</i> (Sweden)	The Swedish public childcare system is open to all parents and operates on a full-time basis, with most facilities being open from 6:30 until 18:30. Public childcare is funded through a combination of parental contributions and large subsidies from municipal taxation. Parental contributions are directly proportional to parents’ income and inversely proportional to the number of children in a family. Pre-school is free for children aged three to six for up to 15 hours per week. Children are guaranteed a place in formal childcare after they reach the age of one. The child-rearing allowance (<i>vårdnadsbidrag</i>) is a municipal benefit that seeks to give parents the option of choosing how their children are cared for.
Guaranteed day care (Denmark)	The policy is an entitlement for parents to a guaranteed day-care place for their children at the end of the parental leave period. Local authorities are responsible for providing places and must cover parents’ expenses for a private care scheme or a place in another local authority if they fail to do so within a four-week waiting period. Parents are entitled to full-time places, with children of two working parents having priority. Places are subsidised for at least 75% of their cost, and parental contributions are income-related.

at heavily subsidised rates. France is relatively unusual in Europe for offering financial support via a dedicated allowance and a voucher scheme (European Commission, 2014b). None of the policies explicitly targets women.

Effectiveness and determinants of effectiveness

The effectiveness of childcare support measures can be assessed in various ways. They can be considered in terms of the extent to which they reduce the cost of entering work for mothers and families, and to which they offer the flexibility and quality required to allow parents to pursue work while being assured that their children are receiving the care they require. More broadly, they can be assessed in terms of the overarching aim of increasing female employment participation. Sources such as the European Commission's study on early childhood education and care in Europe provide detailed data on take-up, costs and modes of financial support. However, evidence on the impact on mothers' employment participation of the policies under consideration here appears to be limited. More generally, the provision of formal childcare services to working parents of children under the age of three has been found to be a main policy driver of female labour force participation (Thévenon, 2013).

According to the expert interviews, the key success factors of childcare-related policies appear to be the impact they have on the cost of childcare, its (perceived) quality, and its compatibility with dominant patterns of working hours. Moreover, there is agreement that the extent to which even cheap and high-quality formal childcare provision facilitates mothers' employment participation depends on whether placing young children in formal childcare outside the home is considered culturally and socially acceptable. Kremer's notion of 'ideals of care' (2007) describes such cultural expectations and values in relation to child-rearing. The effectiveness of childcare-related interventions in increasing female labour market participation is likely to depend on the extent to which such interventions are in keeping with prevailing ideals. Hence, the approach of supporting different parental choices with regards to the

mode of childcare may be justified. However, a strong consensus centred on a system such as the Danish public childcare system may also reinforce shared cultural ideas concerning the desirability of professional childcare and mothers' return to work.

Leave policies

This section covers seven family leave policies of different kinds. It focuses first on the maternity and parental leave schemes in Denmark, Sweden and the United Kingdom, as well as the financial support policies for parents during parental leave in Germany and for self-employed women in Denmark, more specifically. Then it covers family care leave policies in Germany and the Netherlands.

Logic of leave measures

Leave-related policies – provisions for maternity and parental leave and adult care leave – focus on allowing individuals with care responsibilities to remain in employment. Their logic in relation to female employment participation is that by giving women, who often take on a large share of informal care, the opportunity to reconcile employment with their care work, they can be dissuaded from exiting the labour force or given opportunities to re-enter work. A potential broader impact of policies that seek to rebalance the take-up of leave between men and women is to change the gender division of labour within households and to change employers' expectations about women's labour market attachment after childbirth or in cases of care need relative to that of male employees. Take-up on the part of fathers is a difficult but vital issue to address, from a cultural standpoint, but also from an economic standpoint: the pay offered during leave is often not enough to make it feasible for the father to take the leave. (Figure 36 provides a summary of the rationale underlying leave-related measures.)

Overview of policy measures

Table 16 describes the seven policy measures that have been investigated in this group.

Figure 36: Logic chain of leave-related policy measures

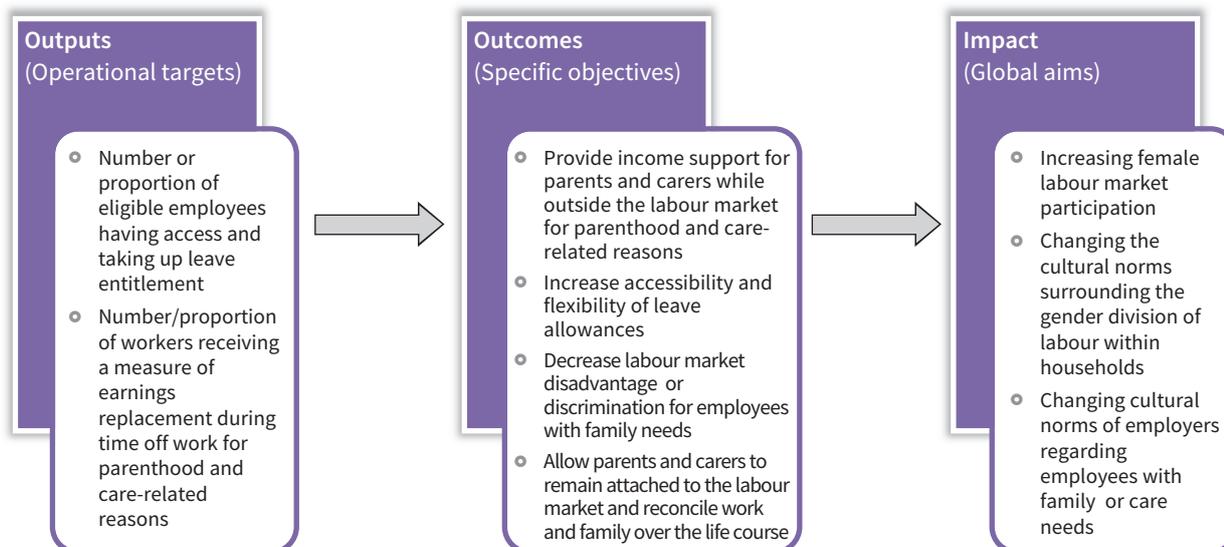


Table 16: Leave-related measures

Name of measure and country	Description
Maternity, paternity and parental leave system (<i>Graviditetsorlov, Barselsorlov, Fædreorlov, Forældreorlov</i>) (Denmark)	The Danish maternity, paternity and parental leave system is a universal scheme granting parents one year of leave in respect of childbirth. The mother is entitled to 4 paid weeks of maternity leave before the expected date of birth and 14 weeks of maternity leave after the birth. The father is entitled to 2 paid weeks of paternity leave within the first 14 weeks after the birth. On top of that, both parents are entitled to 32 weeks after the 14th week of freely shared parental leave. The total leave period is thus 52 weeks (the longest in the EU).
Maternity fund for self-employment (Denmark)	Introduced in 2013, self-employed women and men are entitled to the same parental leave entitlements as employees. Women can thus receive a weekly payment during the 4 weeks before childbirth and for 14 weeks after the birth. Self-employed men can receive a weekly payment for 2 continuous weeks within the 14 weeks following birth. Both parents can share a leave of 32 weeks after the initial 14 weeks. The scheme is administered on a contributory insurance basis, based on the contributions of self-employed people.
Statutory maternity leave and pay (United Kingdom)	Statutory maternity leave in the United Kingdom lasts 52 weeks. All mothers who have been in employment for a continuous period of 26 weeks, ending 15 weeks before the expected week of childbirth, are eligible. It is made up of ‘ordinary maternity leave’ (first 26 weeks) and ‘additional maternity leave’ (final 26 weeks). It is compulsory for women to take 2 weeks off after childbirth, while under the regulations for shared parental leave, it is possible for mothers to share the remainder of the leave with their partners.
Parental allowance (<i>Elterngeld</i>) (Germany)	The parental allowance is a benefit to which parents are entitled for the first year after the birth or adoption of a child if they reduce their working hours (to 30 hours at most) or take leave to care for their child. It is structured as an income-replacing benefit for working parents, but unemployed parents and students are entitled to a basic allowance. Single parents are entitled to 14 months of support. Self-employed parents are also entitled to the allowance, provided they work no more than 30 hours per week.
Care Leave Act and Family Care Leave Act (<i>Pflegezeitgesetz und Familienpflegezeitgesetz</i>) (Germany)	The Care Leave Act (2008) defines employees’ right to take unremunerated short- or long-term leave in order to care for close relatives. All employees are entitled to take up to 10 days of short-term leave to address unexpected care needs. Employees in businesses with more than 15 employees are also entitled to take long-term leave or to work part time for up to six months in order to care for close relatives whose care needs are recognised in line with the standards of the German Long-Term Care Insurance. The Family Care Leave Act (2012) seeks to improve the position of employees who care for close relatives on a more long-term basis. Subject to a voluntary agreement between employee and employer, such individuals can reduce their working hours to as few as 15 per week, on average, for up to two years.
Care leave (<i>zorgverlof</i>) (Netherlands)	The Dutch Work and Care Act (2001) regulates short- and long-term care leave. Short-term care leave can be taken by any employee for the purposes of administering ‘necessary’ care to a spouse or registered/co-habiting partner, a resident child or relative of the first degree affected by illness under circumstances where there is no-one else able to care for the ill individual. Employees are entitled to leave of up to twice the length of the working week in every 12-month period. Long-term care leave covers care for a relative with a life-threatening disease.
Flexible parental leave scheme (<i>Föräldraledighet</i>) (Sweden)	The Swedish parental leave scheme is part of the compulsory social insurance system. Each parent is entitled to take full-time leave from work until their child is 18 months old. There are 480 days of paid leave per family. Within this period, 60 days are reserved for each parent and cannot be transferred. The remaining 12 months can be freely shared between parents. Both parents can take up to 30 days of leave at the same time (‘double days’), until the child reaches one year of age.

The policies covered in this section differ in the ease of access to leave they offer: a statutory entitlement versus an arrangement based on an agreement between employees and employers, the eligibility conditions (length of tenure, size of employing company), the duration of leave, the level of financial compensation offered, and the extent to which policies are designed to influence the gender balance of take-up. The issue of take-up by fathers is vital in promoting gender equality in the labour market. However, it is hindered by cultural factors – socially acceptable norms around who stays at home to look after the children – and practical issues around the level of compensation. It will often be the case that the father earns more than the mother, and therefore the income offered during leave to care for children is not high enough to make it worthwhile for the father, instead of the mother, to take this leave.

In the area of parenting-related leave entitlements, the policies differ notably as to whether they distinguish between maternity and parental leave, as in the United Kingdom – a distinction that allows employers to define diverging benefits for mothers and fathers – and as to whether entitlements are defined in such a way as to incentivise fathers to take up leave entitlements.

Effectiveness and determinants of effectiveness

The evidence with regard to the policies considered here mostly concerns the take-up of leave entitlements, including the relative uptake of parental leave by men and women. There is some comparative research on the impact of different parental or maternity leave policies on female labour market participation. At the aggregate level, the provision of paid leave appears to have a small positive effect on the proportion of women engaged in paid work (Ruhm, 1998; Thévenon and Solaz, 2013), encouraging better labour market attachment and rates of return to work post-birth. Thévenon (2013), when modelling the effect of different policies on female participation across the OECD since the 1980s, found a more complicated picture. Controlling for all other variables, an increase in the duration of paid leave is likely to reduce total female labour force participation rates. However, providing paid leave also makes it more likely that women will work full time rather than part time. Full-time employment rates appear to be unresponsive to the length of leave entitlements but positively related to the levels of spending on compensation during leave. By contrast, both variables are negatively associated with the incidence of part-time working (Thévenon, 2013). Thévenon also found variation in the impact of the duration of leave entitlements between welfare regimes.

These general conclusions are borne out by the limited evidence available on the policies under consideration here. Increases in the generosity of allowances in Germany and the United Kingdom seem to have been associated with increased take-up among women in both countries, while rates of return to work have remained

broadly stable (United Kingdom) or increased (Germany). In the United Kingdom, rates of return were highest among those who received the most generous financial support. This suggests that one success factor of leave policies is the extent to which families can access generous financial support. As outlined above, this differs between countries, with comparatively low statutory rates of compensation in the United Kingdom and more generous rates in the Nordic countries.

Moreover, there are considerable differences based on women's resources, occupation and position in the labour market in some cases. In the United Kingdom, those who are best placed in the labour market appear to receive more financial support, as modest statutory allowances are topped up by employers. Germany, on the other hand, provides an example in which the income of some lower-paid couples has been reported to increase while receiving parental allowance, as even unemployed parents and students are entitled to a basic allowance of €300 per month. The fact that women in more precarious or marginal labour market situations appear to be less likely to return to work after parental leave in the United Kingdom suggests that this may be problematic. Some countries, like Denmark and the United Kingdom, provide dedicated benefits for self-employed parents, while others, like Germany, cover all parents via a single benefit. Such support for those with a less reliable earnings profile may be helpful in ensuring labour market attachment, although the evidence on such policies is scant.

A further issue highlighted by the United Kingdom case study is that, even in the absence of generous compensation, women may be unable to return to work where childcare arrangements do not make doing so financially viable; the guaranteed transition into affordable childcare arrangements in Denmark and Sweden stands in marked contrast to this feature of the UK system. More flexible parental leave entitlements that allow parents to spread leave over longer periods of the children's lives and that allow for leave to be taken flexibly and in small units may also be helpful in allowing families and mothers to reconcile work and child-rearing in the longer run.

A further, crucial factor in determining the broader impact of parental leave policies on women's labour market situation is the extent to which male partners take up leave entitlements. Arguably, the equal sharing of leave entitlements could be central to changing the gender division of labour within households and employers' expectations about women's labour market attachment after childbirth. According to some experts, it could also serve to counteract statistical discrimination against women of child-bearing age on the part of employers. The extent to which fathers take leave has been shown to depend on the levels of financial support available during leave, as fathers tend to earn more than mothers and hence face greater opportunity costs, as

well as on features of the leave policies that are explicitly designed to promote take-up of paternal leave. In both Germany and Denmark, more generous entitlements have been linked to higher take-up of leave by fathers. Take-up of paternal leave is notably high in Sweden, where it is encouraged via individual entitlements and an equality bonus. The Swedish design has been proven to increase the uptake of parental leave among fathers, although it has been difficult to point to any average effects on female labour supply. Germany's parental allowance (Elterngeld) now also provides financial incentives for parents to share leave. However, to the extent to which the distribution of leave is left to voluntarism on the part of families – a feature that applies to most leave, even in Sweden and Germany – evidence shows that women still take the lion's share of leave. Notably, fathers' readiness to take leave depends on gender roles and the extent to which organisational cultures and expectations are conducive to fathers doing so, as illustrated by the Danish case study and differences between occupational groups in Sweden. The evidence thus suggests that, even in countries with flexible and generous leave entitlements, gender norms are entrenched and require both time and concerted effort to change.

Overall, it appears that more voluntaristic policies that allow families to determine the division of leave or that make levels of financial compensation during leave dependent on employers' discretion (such as shared parental leave in the United Kingdom) are less successful in promoting female labour market attachment, particularly among women in more marginal labour market positions. Moreover, generous leave entitlements in terms of duration may in themselves not make a big difference to levels of maternal employment, unless they are also combined with generous income replacement measures and with systems of childcare provision or support that give women alternatives to remaining at home with children below pre-school or school age.

Care leave policies have also been identified as a key instrument for ensuring (women's) labour market attachment. Caring responsibilities affect significant proportions of the population in the case study countries, and most providers of informal care are women (OECD, 2011c). Care leave can allow women with care responsibilities to remain attached to the labour market while temporarily dedicating more time to caring.

This prevents exits from the workforce, which are common among carers, and permanent reductions in working hours. The policies under consideration here have not been subject to systematic evaluations of their impact on female labour force participation. Key success factors identified by experts include levels of financial compensation during leave – an issue addressed in an innovative manner by the German policy – the flexibility of leave arrangements (whether leave can be taken in chunks over a period of time, rather than all at once), plus ease of access, employer support and the availability of information on entitlements.

Flexible working time and other work–family reconciliation measures

This section considers flexible time working measures, specifically three measures from France, the Netherlands and the United Kingdom. These measures are interesting as none explicitly focuses on women, and all apply to all employees, but they disproportionately benefit women (especially mothers) due to entrenched caregiving gender roles in all three countries.

Logic of flexible working and other work–family reconciliation measures

The three policies considered in this section are broadly similar in their objectives: expanding flexible working rights for employees and challenging the entrenched stigma associated with part-time or flexible working. Additionally, they are expected to have the dual benefit of increasing female participation in the labour market and increasing men's participation in caregiving. The Netherlands and the United Kingdom both have statutory policies, whereas France's policy is implemented on a voluntary basis by employers. As can be seen in Figure 37, wider benefits are expected to stem from these policies, including a changing work–life balance, increased flexibility in the labour market, and both extrinsic and intrinsic benefits for employers and employees alike.

Overview of policy measures

Table 18 sets out the three policy measures that have been investigated in this group.

Figure 37: Logic chain of flexible working and other work–family reconciliation measures

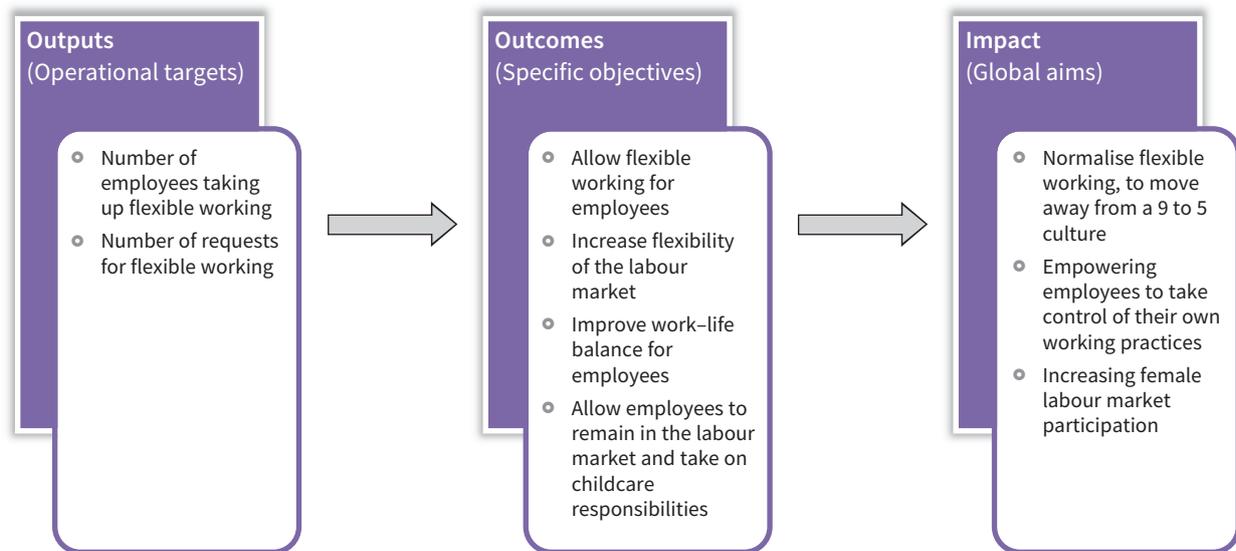


Table 18: Flexible working and work–family reconciliation

Name of measure and country	Description
Parenthood Charter in Enterprise (<i>La Charte de la Parentalité en Entreprise</i>) (France)	The charter aims to encourage companies to make commitments to help employees balance their work and family lives. The main objectives are to change attitudes towards parenting in companies, create a favourable environment for employees with children, and respect the principle of non-discrimination in the professional development of employees with children. The charter can be signed by any and all French enterprises, and activities envisaged are devoted to employees with children, especially women.
Working Hours Adjustment Act (<i>Wet Anpassing Arbeidsduur</i>) (Netherlands)	This Act provides employees who want to adjust their working times with strong rights. Employees may request an expansion or reduction of their working hours and, under certain conditions, alter the terms of an existing employment contract. The Act aims to allow for more flexible transitions between full- and part-time employment to facilitate balancing work and care over the life course. Requests for alterations must be made in writing to the employer at least four months before the intended commencement date of the adjustment, and requests may only be rejected due to 'substantial business/service interests'. The rights apply to employees who have worked for their employer for at least a year before the desired date of the adjustment across the public and private sector.
Flexible working regulations (United Kingdom)	The statutory right to demand flexible working for parents of young children was expanded gradually to cover all employees from April 2014. The aim is to encourage flexible working practices to facilitate employees to improve their work–life balance. All employees with at least six months' service can request flexible working, which includes job sharing, homeworking, part-time work, compressed hours, flexitime, annualised hours, staggered hours or a phased retirement.

The three policies above represent two different manners of implementation: the Netherlands and the United Kingdom have formalised the right to request flexible working, whereas France's policy is voluntary and highly symbolic; they present contrasting examples of 'hard' and 'soft' policy instruments (Fawcett, 2012, p. 9).

As for female labour market participation, none of the policies above is exclusively or explicitly targeted at women; however, all three are expected to implicitly increase female labour market participation. This will be achieved by allowing all workers to better balance work and home lives, thus enabling them to share the burden of care better, although, as the table shows, evidence on the efficacy of this has been mixed in all three countries. Notably, there is a risk that flexible working will continue

to be taken up more readily by women than men, leading to a situation where women work fewer hours and remain responsible for a larger share of care work. In environments where flexible working has a negative impact on career development, as employers judge employees based on how visible they are in the workplace, women who take up such policies can hence face disadvantage. Where this is the case, flexible working policies neither increase female participation, as measured in hours, nor favour women's advancement in the workplace.

A point to consider is the wider focus of the three policies. While France and the United Kingdom express how the policy is likely to increase female labour market participation, the Dutch policy is purposely equally

targeted at men and women. This is perhaps unsurprising, since the Netherlands has long been seen as a bastion of gender equality, with a historically comparatively low gender gap (Hausmann, 2014), so being further advanced than France and the United Kingdom on female labour market participation.

Differences in expected impacts can also be seen by their implementation: the Dutch and British legislation specify that the employers implement and act on the requests, but the French policy is overseen by an independent observatory. All three policies have been adopted at very low or minimal costs due to the onus being on employer–employee dialogue in all three cases. As for stakeholder involvement, experts and social partners were consulted in the policy development phase of all three, and now all three have a strong focus on collective bargaining.

Effectiveness and determinants of effectiveness

Due to the lack of formal evaluations, comparable success factors are difficult to identify and isolate. However, evidence provided by the country experts sheds some light on the success factors of the policies.

One factor highlighted in the Netherlands, and to some extent in the United Kingdom, in the successful implementation of flexible working policies has been the presence of underlying consensus among the social partners or employers that flexibility is valuable. Such a consensus makes it easier to harmonise and formalise pre-existing practices and reduces barriers to implementation. Moreover, as both the Dutch and the UK policies are formulated in a manner that allows employers to reject requests for significant business reasons, a workplace culture supportive of flexible working is arguably a key determinant of access to flexible working. Hence, the experts identified promoting the business benefit of flexible working regulations to employers as central, as highlighting the greater commitment, lower turnover and absenteeism, and higher productivity of employees granted flexible working make employer agreement more likely.

A further factor identified as key to the success of flexible working policies is their responsiveness to changing needs over the life course. This is achieved by the Dutch policy, which defines a right to increase as well as decrease working hours, for instance when a child or adult's care needs start to level off. This facilitates the reconciliation of work with care over the life course to a greater extent as simple rights to reduce working hours. The UK legislation also provides for this option, although, according to stakeholder interviews, this is not widely publicised. Added flexibility in the duration of time during which such reductions or increases are agreed, as introduced by recent Dutch reforms, also appears helpful. A broad definition of flexibility, which extends to the location of work and its timing as well as the overall level of working hours, has also been identified as innovative.

As to their effect on female labour market participation and women's position in the labour market more broadly, the effectiveness of flexible working policies appears to depend on the broader cultural expectations and practices of dividing care work in which they are embedded. UK experts highlighted that where flexible working – notably part-time work – is taken up predominantly by women, and remains perceived as a benefit for mothers as primary carers, it can sometimes be a source of stigma. Employers may associate it with reduced commitment, resulting in negative consequences for women's career prospects, according to experts. By contrast, where it is implemented as a universal right and comes to be perceived as mutually beneficial for employees and employers, it may succeed in affording families greater flexibility and could be central to a broader shift towards a rebalancing of work and family commitments not restricted to women. The fact that the relevant entitlements in both the Netherlands and the United Kingdom are universal, and not restricted to those with care responsibilities, are likely to be helpful in this regard. However, this is likely to be a slow process.

SUMMARY

This section has reviewed four categories of measures designed to promote the participation of women in the labour market: labour market, childcare support, leave and flexible working arrangements. In the case of active labour market measures, it was found that the five policies analysed varied considerably in the manner in which they seek to move individuals – and women in particular – into employment or to increase their labour supply as measured in hours worked. They also differed on their breadth of application. The effectiveness of these types of measures was based on the following factors:

- individualisation of taxation systems to eliminate financial incentives favouring a single-earner family model, which function as a barrier to female labour market participation;
- focusing on a clearly defined target group;
- involving a broad range of actors (moreover, the use of an innovative media strategy seems very useful in enlarging the number of participants and publicising the attractiveness of the overall measure).

The combination of all these factors permits the accurate targeting of an appropriate population and specific attention to the way in which women's decisions about re-entering work interact with their families' demands, financial situation and values.

In the case of childcare support policies, determinants of success and effectiveness included:

- providing formal childcare services to working parents of children under the age of three;
- the impact that policies have on the cost of childcare, its (perceived) quality, and its compatibility with dominant patterns of working hours.

Moreover, there is also agreement that the extent to which even cheap and high-quality formal childcare provision facilitates mothers' employment participation depends on whether placing young children in formal childcare outside the home is considered culturally and socially acceptable.

In the case of maternity leave, parental leave and other leave policies, determinants of effectiveness included the provision of paid leave. However, an increase in the duration of paid leave is likely to reduce total female labour force participation rates. On the other hand, providing paid leave also makes it more likely that women will work full time rather than part time. Dedicated benefits for self-employed parents may be helpful in ensuring labour market attachment for those with less reliable earnings. Other determinants of success include:

- more flexible parental leave entitlements that allow parents to spread leave over longer periods of the children's lives and that allow for leave to be taken flexibly and in small units;
- the extent to which male partners take up leave entitlements (even in countries with flexible and generous leave entitlements, gender norms are entrenched and require both time and concerted effort to change.)

Care leave policies have also been identified as a key instrument for ensuring (women's) labour market attachment. Key success factors identified by experts include levels of financial compensation during leave, the flexibility of leave arrangements (whether leave can be taken in chunks over a period of time rather than all at once) plus ease of access, employer support and the availability of information on entitlements.

In terms of flexible working and other work-family reconciliation measures, the main drivers of effectiveness include:

- the presence of underlying consensus among the social partners or employers that flexibility is valuable;
- a workplace culture supportive of flexible working;
- responsiveness to changing needs over the life course.

However, it should be noted that the effectiveness of flexible working policies appears to depend on the broader cultural expectations and practices of dividing care work in which they are embedded. Where flexible working is implemented as a universal right and comes to be perceived as mutually beneficial for employees and employers, it may succeed in affording families greater flexibility and could be central to a broader shift towards a rebalancing of work and family commitments not restricted to women.

7 Conclusions and key policy pointers

Over the past few decades, women's participation in the labour market has significantly increased throughout the European Union. However, the extent and timing of this increase varies greatly across countries, and appreciable gender gaps in the labour market and economic status are still present. Moreover, and despite higher levels of female participation, significant gender differences in the quality and form of employment are apparent. These persistent disparities and significant cross-country differences represent an economic and social challenge and explain the emphasis policymakers put on women's integration into the labour market.

The fragmentation of family models and individual patterns in the life cycle, due to major changes in demographic trends and the redefinition of gender roles in modern societies, have produced new areas of female inequality: the traditional male-dependent condition of women is replaced by differentiated forms of economic and social vulnerability that call for different types of policy responses depending on the stage of the life cycle.

During the crisis, gender gaps in the labour market continued to decline in most EU Member States. While the secular increasing trend of labour market participation by women has remained steady, although at a slower pace, the sharp contraction of male employment has consolidated this trend. However, the economic crisis and the need to increase financial sustainability are likely to aggravate the disadvantaged circumstances of women by reducing the policy offers aimed at promoting their participation in the labour market. Cuts in public services and welfare provisions are likely to have a greater impact on women than men, as women are largely employed in the public sector and use public services more than men. They are also likely to increase the amount of unpaid work and care responsibilities within households, exacerbating the existing disparity in the care workload between women and men and making it even more difficult for women to participate fully and continuously in the labour market.

The factors that influence women's labour market participation are multiple and complex. Within this context, the econometric analysis of the micro-level determinants of women's labour market participation during the crisis showed that higher education increases the likelihood of participating in the labour market, while the presence of young children decreases it. Having elderly care responsibilities is also negatively associated with the female activity rate, as well as living in materially deprived households and suffering from serious illness or disability. Marital status and a partner's educational level also matter, and the results show that being married to a

partner with low educational attainment decreases a woman's probability of participating in the labour market more than being married to a high-skilled spouse. Regarding the use of childcare, this is shown to be positively associated with the female activity rate, while receipt of child allowances is not.

The equality between women and men in the labour market is not just a matter of fairness, but also an economic objective since it can lead to substantial macroeconomic gains. This report provides evidence on the economic gains EU Member States can benefit from when women participate fully in the labour market. In particular, the economic loss due to the existence of a gender employment gap in the EU is estimated to have been around €370 billion in 2013 (corresponding to 2.8% of the EU's GDP). Similarly, the lifetime cost of a woman's exclusion from employment over the course of her working life is estimated to be between €1.2 million and €2 million, depending on her educational level.

A higher female employment rate does not automatically imply that social justice in the position of women in the labour market has been achieved, however, due to the presence of a gender wage gap and significant gender segregation both vertically and horizontally in the occupational structure. And although the unpaid care activities that women do within the household while not working are also valuable, the estimate of the great economic cost related to women's lower inclusion in the labour market underlines the need for policy intervention. Indeed, investigating the cost associated with women's underemployment relative to men stresses the importance of developing policy interventions aimed at engaging women in employment.

While women's participation in the labour market has significant effects on the economy of a country, it also has effects beyond the economic sphere, affecting women's well-being and society as a whole. Employment influences well-being not only in relation to income or financial rewards, but also through its potential as a mechanism for social inclusion, being the primary means through which citizens relate to society and contribute to maintaining it. This link between individuals and society also enables a sense of belonging and identity, participation and usefulness.

Analysis of the projects aimed at promoting the labour market participation of women shows that enlarging the set and the scope of policies will have a noticeable effect in shaping future trends in participation. While all actions, including increased public childcare, longer parental leave and greater availability of part-time work,

have an effect on their own, it is their combination that drives participation rates markedly up.

Across Europe, the different architecture of the welfare systems, market regulations and labour policies has differentiated impacts on women in the labour market and their socioeconomic circumstances. In the EU framework, the Nordic design of the welfare system, focusing on individual rather than family entitlements, widespread public services and citizenship rights available to all, appears to better address recent socioeconomic and demographic challenges and to support women in the labour market. Conversely, the male breadwinner model of continental and Mediterranean countries increases significantly the risk of women's economic and social exclusion, as women are still the 'secondary' earners in most working age couples, and access to social protection is largely dependent on the continuity of employment.

On all these issues, Member States have undertaken different policy measures and approaches. Indeed, the 18 policies reviewed in this report approach the issue of supporting the labour market participation of women in diverse ways, focusing on moving women into employment, creating incentives to increase their labour supply, providing childcare support, or establishing various forms of leave or flexible working to facilitate the reconciliation of work and care. The policies, moreover, have different target groups – women in different labour market situations, specific groups of women, or specific groups irrespective of gender – and vary in the extent to which increasing the female labour supply or employment are their explicit goal.

Given this diversity, it is not easy to come to unified conclusions about the European policy landscape in this area. Nonetheless, the analysis revealed a number of key features of policies and the cultural environment that influence the effectiveness of interventions in increasing female labour force participation.

- The cultural values and expectations of a society are a central influence on the extent to which policy interventions will succeed in raising female employment participation. Such values and expectations concern the division of household and family labour, the role expectations for women and men, and the 'ideals of care' governing whether it is viewed as appropriate for children and other dependent individuals to be cared for in settings other than by close relatives in their homes.

- A key requirement is the recognition by employers that women are a crucial segment of their workforce and that care responsibilities and the adaptations required to be able to reconcile them with work are not a 'women's problem' but an area for action from which the workforce as a whole as well as employers can benefit. Employers' support and openness to flexible arrangements are particularly important in relation to the implementation of flexible working and parental leave.
- Without an integrated support system that supports women with care responsibilities and their families in navigating transitions – for instance, between parental leave and a return to employment or between periods of informal care and employment – individual policies may fail to have their intended effect.
- A shift in the gender balance of care provision is likely to require targeted interventions, although gradual cultural change can also be facilitated by means of policies such as an extended right to request flexible working.
- Policies based on financial incentives or supportive interventions have to be appropriately targeted, reflecting evidence on which groups are most responsive to which types of incentives. It should also be noted that the interaction between various policies operating in a national context is important and markedly influences outcomes.

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Women's labour market participation in the European Union has increased over recent decades, passing 70% in 2014. In that year, women comprised almost 46% of the active EU labour market population. Nevertheless, women's employment and participation rates are still lower than those of men in almost all Member States. Fostering higher participation of women is crucial to meet the Europe 2020 target to achieve an overall employment rate of at least 75% by 2020. This report explores the main characteristics and consequences of gender gaps in labour market participation. It finds that the total cost of a lower female employment rate was €370 billion in 2013, corresponding to 2.8% of EU GDP. The report also examines policies and measures aimed at fostering female labour market participation, which could be central to closing gender gaps.

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