ANALYSIS OF CAUSES FOR THE GENDER PENSION GAP IN THE REPUBLIC OF SLOVENIA

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The overall aim of the project is to highlight the problem of the pension gap between women and men and to examine its main causes and characteristics. The project includes gender equality perspective in the pension policy, raises awareness of the consequences of different decisions and opportunities in professional and private life on pensions, and informs about the pension system in Slovenia. More information about the project can be found at: https://mojedelo-mojapokojnina.si/ and https://pokojnina.enakostspolov.si/.

1 The European Commission is not responsible for the content and its further use, since it represents the views of the project implementing party.

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AU	Austria	**LT**	Lithuania
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CZ	Czechia	**DE**	Germany
DK	Denmark	**NL**	Netherlands
EE	Estonia	**PL**	Poland
FI	Finland	**PT**	Portugal
FR	France	**RO**	Romania
EL	Greece	**SK**	Slovakia
HR	Croatia	**SI**	Slovenia
IE	Ireland	**ES**	Spain
IT	Italy	**SE**	Sweden
LV	Latvia	**UK**	United Kingdom

LIST OF ACRONYMS

EIGE	European Institute for Gender Equality
OECD	Organisation for Economic Co-operation and Development
MDDSZ	Ministry of Labour, Family, Social Affairs and Equal Opportunities
EU-SILC	Survey on Income and Living Conditions
SORS	Statistical Office of the Republic of Slovenia
ZPIZ	Pension and Disability Insurance Institute of Slovenia

1 INTRODUCTION

The life of European pensioners has improved[1] over the last decade; however, it has not improved enough, as there are still pensioners that are living below the threshold of what is required for a decent standard of living, female pensioners in particular. Almost every seventh person aged 65 and over in EU-28 is at risk of poverty (Eurostat, 2020b). In 2018, the proportion of European female pensioners aged over 64 who were at risk of poverty increased to over 17% (Eurostat, 2020c). In Slovenia, it was 21.8% in the same year (Eurostat, 2020c). Pensions, which replace income from work and are the primary source of income for most pensioners, are lower than wages. As life expectancy is increasing and the population is ageing, a further decrease in pensions is expected. Therefore, forthcoming measures should be implemented with caution, because if not, this will affect elderly women more than men, as women already receive lower pensions than men in all EU Member States. Lower pensions for women and the gender pension gap are the result of decisions made throughout life and of actions that originate from the values, culture and opportunities of an individual and which significantly contribute to gender differences. The pension gap is primarily a reflection of the complex decisions made by women and the opportunities given to women to reconcile work and private or family life throughout their working life.

Women's access to and participation in the labour market depends on various factors, such as labour market flexibility, access to public services and infrastructure for formal childcare, the availability of long-term care for the elderly and care for the sick and disabled, the tax and benefit systems and, ultimately, gender stereotypical beliefs about different stages of life (parenthood in younger years and care for elderly and infirm parents or family members in later years).

In the European Union, women generally participate less in the labour market than men, are often employed in low-paying industries, are more likely to work part-time, are paid less for the same work, have more career breaks due to motherhood or care of a family member, and face fewer and slower promotions at work as their male counterparts, while their duration of working life is also shorter. On the one hand, women have shorter working life due to longer participation in education (in 2018, the proportion of women aged 15–64 with tertiary education was higher than the proportion of men of the same age and education in all EU-28 Member States, except in Germany and Austria), and on the other hand due to women having more career breaks because of caring responsibilities. In Slovenia, the situation is slightly different, as the full-time employment rate of women is high and it also remains high after childbearing. The employment rate of mothers aged 20–49 is even higher in Slovenia than the employment rate of women without children, which is not characteristic of other EU-28 Member States. On average, women in Slovenia still do most of the unpaid work, despite the fact that the younger generations of men are more involved in caring responsibilities and household chores than previous generations of men. On average, women work six hours per week more than men, when comparing total work performed, which includes both paid and unpaid work (European Commission, 2018d, 2018e).

All the described differences between men and women in the labour market, which accumulate throughout their working life, are transferred into retirement and are reflected in women receiving lower pensions than those received by men. In addition to women's presence and position in the labour market, the functioning of the pension system plays an important role in creating the pension gap, as it can narrow or widen this gap.

Data show that on average a female pensioner in EU-28 aged 65 and over receives a pension that is over 30% lower than that of a male counterpart. According to Eurostat, a female pensioner in Slovenia aged 65 and over receives around an 18% lower pension than her male counterpart. The data of the Pension and Disability

1 Throughout this report, *male pensioners* and *female pensioners* mean men and women receiving a pension.

Insurance Institute of Slovenia show that in recent years, female old-age pensioners entering the pension system have even been receiving a higher pension than male old-age pensioners, which is a result of the pension system (higher accrual rates) and relatively small gender differences in the pension assessment base for these generations in the labour market. In Slovenia, the pension gap mainly occurs in older age groups.

The report is structured as follows. Chapter two describes and analyses the causes of the gender pension gap, focusing on factors in the labour market, where the main causes of the gender differences have been identified. Afterwards, the pension gap in the EU and the pension gap in Slovenia are explained, the latter more extensively. The focus here is the factors in the labour market that affect the pension gap.

Chapter three analyses a sample of pseudonymised and individualised data relating to 120,000 insured persons (persons who were not retired) and 30,000 pensioners who were alive on 31 December 2017, which was drawn up by the Pension and Disability Insurance Institute of Slovenia. The data include salary histories of pensioners and insured persons, which to some extent allows for the analysis of differences between men and women in the labour market over a very long period. A special chapter is dedicated to the analysis of the impact of receiving salary compensation on the hourly rate in the future, as men and women differ greatly in the number of days for which they receive compensation. The report concludes with a summary of findings.

2 THE GENDER PENSION GAP

Women and men follow different life paths, which are on the one hand a reflection of their desires and preferences as well as decisions and roles in their private, family and working life, and are on the other hand a reflection of the system, regulatory frameworks and opportunities and factors beyond the control of the individual. The decisions that an individual makes throughout their life, especially in the period of their working life, strongly influence the subsequent period when the individual retires. During retirement, even greater differences between men and women arise. The fact is that women receive lower pensions than men in all EU Member States (European Commission, 2017a; Tinios, Bettio, & Betti, 2015). In 2018, the gender pension gap for pensioners in the EU-28 aged 65 and over was estimated at 30.1%. Studies have shown that the pension gap[2] is due to gender differences in the labour market and social policies and pension systems, which are designed to benefit men more than women (Chłoń-Domińczak, 2017; Samek Lodovici, Drufuca, Patrizio, & Pesce, 2016). The differences in the labour market are mainly a reflection of different decisions and opportunities for women to be present in the labour market due to the reconciliation of work and family life, which affects the amount of their future pension. The difference in the duration of working life, the gender pay gap and differences in work intensity (full-time or part-time employment) are the main indicators of the differences between men and women in the labour market. On the other hand, the pension gap is created due to policies regarding career break compensations and the functioning of pension systems through variously shaped elements of solidarity (redistribution of pensions), pension indexation and determining the retirement age. Depending on what policy is being implemented, the pension gap may narrow or even widen (Chłoń-Domińczak, 2017). The majority of pension systems is still based on lifelong full-time employment and on contributions paid during the period of employment, which is in favour of the breadwinner of the family, primarily the man, who works longer and contributes a higher income than the woman. As a consequence, access to the labour market and participation in the labour market are still crucial for the amount of future pensions (Burkevica, Humbert, Oetke, & Paats, 2015).

Gender equality is one of the fundamental values common to all EU Member States (European Commission, 2018d). European policies, incentives, programmes and activities must include elements that ensure gender equality (Samek Lodovici et al., 2016). Only by treating women and men equally can competitiveness, sustainable development and prosperity be ensured and poverty prevented (European Commission, 2018d; MDDSZ, 2019b). Women entering the labour market are an important factor for the growth and dynamism of the economy, as they increase labour supply and the diversity of skills and competences (European Commission, 2017a; European Parliament, 2013). Women's participation in the labour market and the opportunities available to women and men to reconcile their work and private life play a vital role in achieving long-term high employment rates, equal opportunities for both sexes, equal economic independence (European Commission, 2013; MDDSZ, 2016) and consequently narrower pension gaps.

Society evolves and changes over time. In today's world, demographic changes are an important factor that affects changes in socioeconomic conditions throughout the EU. All these changes and demographic trends, which are mainly reflected in the changed age structure of the population and the aftermath of the economic and financial crisis, which dates back more than 10 years, have forced EU countries to accelerate the transformation of existing policies and systems (especially pension systems), in order to achieve their financial sustainability (Samek Lodovici et al., 2016). The principal task of pension systems is to ensure a sufficient income for the generations in retirement and to prevent poverty among the elderly, as pensions are the main source of income for pensioners in the majority of cases (European Commission, 2018e; Samek Lodovici et al., 2016). In addition, maintaining adequate pensions in an aging society is the key challenge in ensuring sustainable and inclusive growth in the EU, as pensions are not only the main source of income for pensioners but are also an important component of public expenditure (European Commission, 2018e).

2 Throughout this report, *pension gap* refers to the pension gap between men and women, even if this is not written explicitly.

Life in retirement will be drastically different for the generations of today's youth due to the increase in life expectancy and smaller size of younger generations, which in turn results in a smaller working-age population, inequalities in working life and reforms that cut future pensions and tighten the link between contributions and pension entitlement. Gender imbalances are also likely to be exacerbated in the future (European Commission, 2017b; OECD, 2017a, Samek Lodovici et al., 2016).

2.1 Causes of the gender pension gap

The gender pension gap is the result of cumulative inequalities women face over their lives and in various economic, social or cultural domains. After all, gender differences are also the result of stereotypical beliefs and expectations about gender roles (Burkevica et al., 2015). Pension levels are therefore influenced by the decisions women make throughout their lives, as well as by the opportunities they have and the factors beyond their control. Thus, it can be said that the pension gap is the result of both the decisions that accumulate throughout life and the inequality of women.

A review of the de facto gender inequality can thus be the first starting point in finding the causes of the future gender pension gap. A part of the inequality that women face in various areas through different periods of their lives can be explained with the **Gender Equality Index**. The Gender Equality Index, the results of which are annually compiled and made public by the European Institute for Gender Equality, covers six key areas: work, money, knowledge, time, power and health.

Work: The standard of living during retirement is a reflection of actions and decisions made during a person's working life (European Commission, 2015). The significant differences between men and women in terms of participation in the labour market (sectoral and occupational segregation – there are many more women than men in low-paid sectors and occupations), the distribution of working hours (especially part-time for women) and remuneration for work greatly contribute towards differences between men and women that arise and continue in the later period, when a pension replaces the salary that a person received throughout their working life. Employment and income from employment (salary) are thus two important factors that affect the acquisition of a right to a pension and consequently two main causes of a gender pension gap emerging (The Pensions and Population Ageing Team, 2018).

Money: Compared to men, women have less access to financial resources. Because women have a lower financial capacity they are less likely to (be able to) make additional pension savings; a future gender pension gap is consequently created. Lower incomes and resources are associated with a higher risk of living in poverty for women (Burkevica et al., 2015). In addition to pensions, which are the main source of income for pensioners, financial wealth and home ownership also contribute greatly to a pensioner's standard of living. Elderly women are in a much worse position than elderly men in terms of both financial wealth and home ownership (European Commission, 2017b).

Knowledge: In general, more women than men have a tertiary education, but they nevertheless remain employed in less valued and lower-paid jobs, which also contributes to the creation of a gender pension gap. In 2017, 57.6% of tertiary education graduates in the EU-28 were women (Eurostat, 2020o). In 2018, a year later, almost half of European women (45.2%) and just over one third of European men (34.9%) aged 25–34 had a tertiary education (Eurostat, 2020s). Tertiary education graduates in information and communication technologies, engineering, manufacturing and construction were primarily men, while tertiary education graduates in education, social sciences, journalism and information, and health and welfare were primarily women (Eurostat, 2020o). Despite the annual number of women doctoral graduates has been increasing at faster rate compared to men in the EU-28 in recent years, men still represent the majority of PhD holders (52.4%) (European Commission, 2019c; Eurostat, 2020o). On average, women participate in education eight months longer than men (The Pensions and Population Ageing Team, 2018). This is also reflected in shorter duration of working life and consequently in a shorter pension qualifying period, which affects the pension amount.

Time: Available time is a very important factor in creating gender gaps. Unpaid work such as household chores and care for children and the elderly or dependent family members remains a woman's concern in the majority of cases (European Commission, 2018d). Availability and accessibility of public services and infrastructure for childcare and

care for the elderly plays an important part in women's decisions and opportunities regarding the reconciliation of work and family life. If the country does not enable this or if such facilities are too expensive, unsuitable or inaccessible, it is mostly women who stay at home or work only part-time in order to be able to perform caring responsibilities (Burkevica et al., 2015; European Commission, 2018d). Unemployment and part-time employment are reflected in the current lower incomes of women as well as, in the long run, in shorter working life and consequently in lower pensions for women. Objectives set as part of Europe 2020 include two objectives to ensure the availability of quality and affordable childcare facilities, which were already laid down by the EU within the Barcelona objectives in 2002. The objectives are as follows: provide childcare to at least 33% of children aged less than three years and at least 90% of children aged between three years and the minimum compulsory school age (European Commission, 2018b). Greater participation of children in quality formal childcare can relieve some of women's caring responsibilities and increase their participation in the labour market. In 2017, the European Commission introduced the European Pillar of Social Rights, which sets new principles and rights for citizens in the field of ensuring effective and fair labour market and social protection system (European Commission, 2017a). Under this pillar, an initiative was also adopted on the reconciliation of work and private life of working parents and persons providing care for family members who are unable to take care of themselves. One of the key principles of the European Pillar of Social Rights is also providing affordable long-term care services of good quality. Namely, in the EU, long-term care relies heavily on informal care (spouses and children of the care-dependent person, most of whom are women) (European Commission, 2018c). The availability of quality and affordable care services for pre-school children as well as long-term care services are therefore crucial to promoting equality between women and men and achieving greater economic independence for women.

Power: Despite the increase in the number of women in high-level decision-making positions in politics and the economy, women still have less economic and political power than men. According to the European Institute for Gender Equality, the proportion of women sitting in the European Parliament is around 40%, which is above the global average of national parliaments as well as above the average of national parliaments in the EU, where the proportion of women varies greatly from one country to another (EIGE, 2020b). Women occupy about one third (36.9%) of all management positions, while the proportion of female CEOs of the largest companies does not exceed 10% (EIGE, 2020c, 2020a). For most EU Member States, the under-representation of women in management positions and on management boards therefore remains a challenge. Given that there are more women than men with tertiary education in the EU-28, a large part of the potential and capable and necessary human resources remains untapped (European Commission, 2019b). The latter again suggests the under-representation of women in management and high-paid positions (occupational vertical segregation), which in turn results in lower incomes of women and the creation of a future gender pension gap (Burkevica et al., 2015).

Health: Longer life expectancy and the additional healthy life years offer opportunities for people to stay active longer both in private life as well as in the labour market. Women generally live longer than men; however, they also suffer from poor health longer than men. The healthy life expectancy is about the same for men and women – 62 years. It is also interesting to note the differences between men's and women's perception of their health. On average, women, regardless of the age group, perceive their health as poorer than men do. At a younger age, the difference between men's and women's perception is very small; however it increases with age (SORS, 2018b). Women's longevity combined with fewer healthy life years in old age means that elderly women require more healthcare than their male counterparts. However, in some cases healthcare is not as easily affordable for elderly women[3] as it is for elderly men, as women's incomes are on average lower than those of men (Burkevica et al., 2015; OECD, 2017b).

The key areas described above, which form the Gender Equality Index, suggest important disparities between men and women in the labour market in terms of employment, wages and working time.

2.2. Factors in the labour market and gender differences

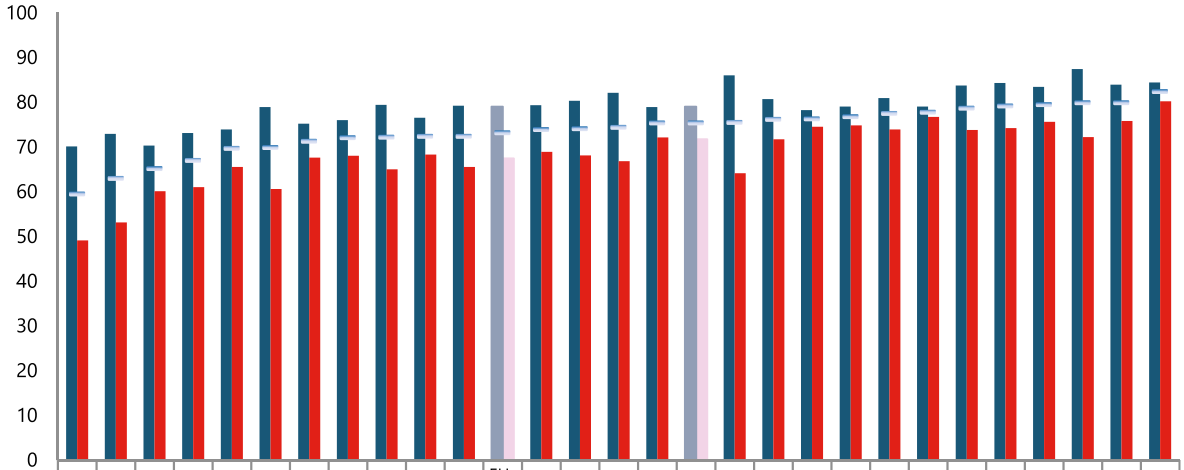
According to Eurostat, **the employment rate** of the active population aged 20–64 in the EU-28 in 2018 was 73.2%, which is the highest recorded average annual employment rate in the EU to date (Figure 1). However, it

3 Even in Slovenia, where public healthcare is available, access to healthcare is associated with certain costs, for example supplementary health insurance, (additional) payment for certain medicinal drugs, (additional) payment for dental services.

is important to note that the average employment rate of European women is still more than ten percentage points lower than the average employment rate of European men (Figure 2). The positive trend of employment growth for women started in 2011, which is two years earlier than for men. Nevertheless, the employment rate for women in 2018 was 67.4% while the employment rate for men was 79% (Eurostat, 2020f).

In 2018, only four EU Member States, Estonia, Germany, Lithuania and Sweden, reached or exceeded the employment rate of 75% for both men and women (this is the target the EU was supposed to reach by 2020). Sweden has had the highest employment rate – more than 75% – for more than a decade (Eurostat, 2020f). Sweden also has by far the highest employment rate of people aged 55–64, which has been 70% or higher since 2007 and in 2018 it reached 78% (Eurostat, 2020i). In Slovenia, the employment rate for women in 2018 was 71.7%, which is above the EU-28 average, while the employment rate for men was 79.0%, which is in line with the EU average. Slovenia is one of the Member States with the low employment gap. In 2018, the employment gap in Slovenia was 7.3 percentage points, which is below the EU-28 average (11.6 percentage points).

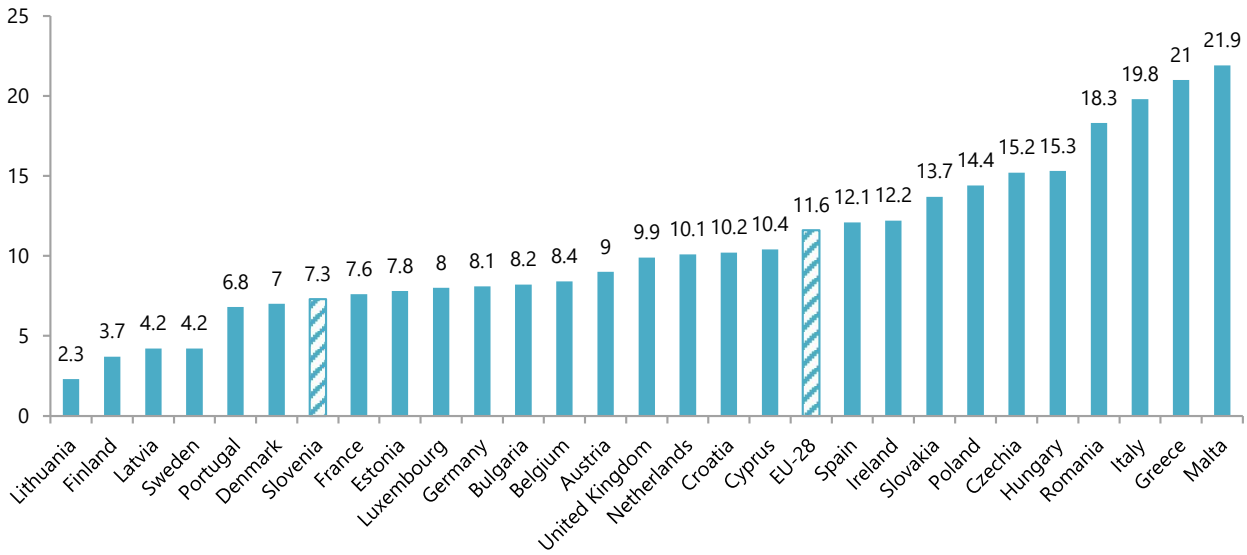
Figure 1: Employment rate of men and women aged 20–64 in the EU-28, 2018 (in %)



	EL	IT	HR	ES	BE	RO	FR	LU	PL	BG	SK	EU-28	CY	IE	HU	PT	SI	MT	AU	FI	LV	DK	LT	UK	NL	EE	CZ	DE	SE
Men	70.1	72.9	70.3	73.1	73.9	78.9	75.2	76.0	79.4	76.5	79.2	79.0	79.3	80.3	82.1	78.9	79.0	86.0	80.7	78.2	79.0	80.9	79.0	83.7	84.3	83.4	87.4	83.9	84.4
Women	49.1	53.1	60.1	61.0	65.5	60.6	67.6	68.0	65.0	68.3	65.5	67.4	68.9	68.1	66.8	72.1	71.7	64.1	71.7	74.5	74.8	73.9	76.7	73.8	74.2	75.6	72.2	75.8	80.2
Total	59.5	63.0	65.2	67.0	69.7	69.9	71.3	72.1	72.2	72.4	72.4	73.2	73.9	74.1	74.4	75.4	75.4	75.5	76.2	76.3	76.8	77.5	77.8	78.7	79.2	79.5	79.9	79.9	82.4

Source: (Eurostat, 2020f)

Figure 2: Gender employment gap[4] in the EU-28, 2018 (in percentage points)



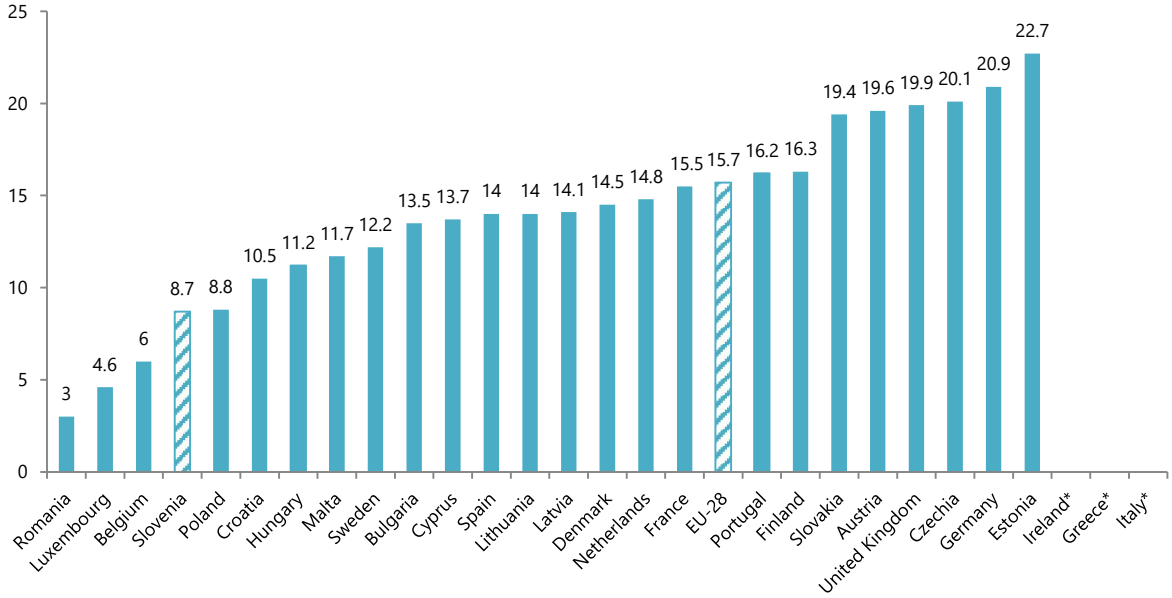
Source: (Eurostat, 2020l)

4 The gender employment gap is defined as the difference between the employment rates of men and women aged 20–64 (SORS, 2019b).

It is important to mention another gap between men and women arising from the labour market, namely the gender pay gap. Differences in men's and women's wage or the **gender pay gap** [5] has been identified and is widespread throughout the EU. The gender pay gap has not narrowed significantly in recent years at the EU level, averaging just under 16%. This means that in the EU Member States, women earn on average 15.7% less per hour than men. The gender pay gap varies significantly across the EU Member States – in 2018, it ranged from 3% in Romania to 22.7% in Estonia (Figure 3). Slovenia is among the countries with the narrowest gender pay gap. In 2009, the gender pay gap in Slovenia was even negative (-0.9%); however by 2018 it rose to 8.7% (Eurostat, 2020m).

To identify the causes of the gender pension gap it is important to understand the factors that create the gender pay gap, as all inequalities that arise during the working life are transferred into the future gender pension gap. Therefore, an important step in narrowing the gender pension gap is a good understanding of the gender pay gap, the factors that cause it, and ways of reducing or preventing it. Despite widespread theories and various studies seeking to contribute to a better understanding of the gender pay gap, a large part of this gap still remains unexplained. The greatest challenge is the complexity of decision-making and of the opportunities that are important for the reconciliation of work and family life. By taking into account the various factors and characteristics of employed men and women (such as age, education, occupation, industry, size of the company, number of working hours, duration of working life, atypical forms of employment and whether the employment is in the public or private sector) which influence the gender pay gap, only one third of the gender pay gap in the EU can be explained. The parts of the explained gender pay gap vary between countries and while a factor may widen the gender pay gap in one country, this same factor may mitigate it in another (Boll & Lagemann, 2018).

Figure 3: Gender pay gap in EU-28, 2018 (in percentage points)



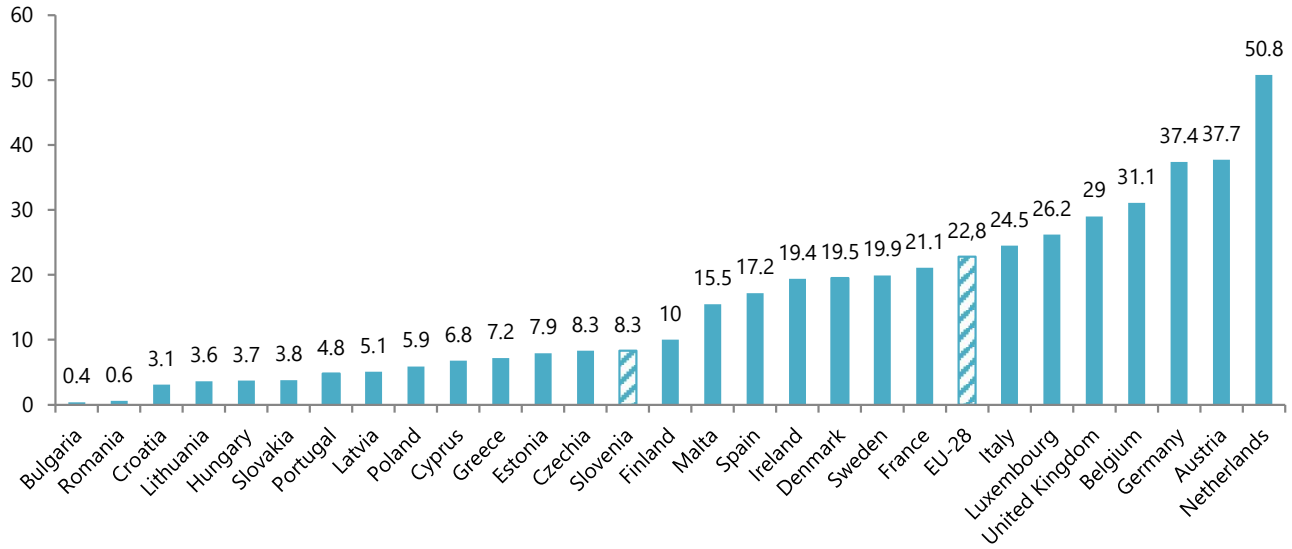
*Note: *N/A*
Source: (Eurostat, 2020v)

The following is a summary of the main findings of a study carried out at the EU-25 level (Austria, Denmark and Ireland were excluded from the analysis due to lack of data), including Norway (Boll & Lagemann, 2018). Sectoral segregation and atypical forms of employment, such as part-time employment and temporary employment, have the greatest impact on the creation of the gender pay gap. In general, women are overrepresented in low-paying industries and vice versa, there is a lower number of women than men in well-paying industries. Part-time employment and temporary employment are more common for women than men. Figure 4 shows the gap in part-time employment between men and women. The part-time employment rate by sex is shown in greater detail in Appendix 1, Figure 1a. In 2018, the gap in part-time employment between men and women in Slovenia was 8.3 percentage points, which was lower that the EU-28 average of 22.8

5 More on the gender pay gap can be found in the chapter titled Gender pay Gap in Appendix 3.

percentage points. Interestingly, the gap is much higher than the EU-28 average in Germany and Sweden, where the employment rate of women is very high (Figure1), which means that a significant number of women are employed, but part-time. In most countries, both of these forms of employment are also associated with lower hourly earnings. Differences in the level of education mitigate the gender pay gap, as women are on average more highly educated than men. The size of the company, employment in the public sector and occupational segregation are three additional factors that mitigate the gender pay gap in most countries. Namely, a higher share of women is employed in larger companies (more than 50 employees) than in smaller companies, which means that on average these women have higher wages. This conclusion is based on previous studies, which found that if the conditions remain unchanged, wages increase with the size of the company. In addition, the public sector predominantly employs women, which also contributes towards narrowing the gender pay gap. On average, occupational segregation is a factor that has a mitigating effect on the gender pay gap; however, the impact of this factor on the gender pay gap varies significantly across the countries. While occupational segregation notably decreases the gender pay gap in Italy, it significantly adds to the gender pay gap in the UK. Some occupations are concentrated in a few sectors and, despite the EU-wide phenomenon of typically female and male occupations, the pay-attractiveness of occupations differs between Member States (e.g. male/female nurse) (Boll & Lagemann, 2018). Considering the summarised general findings of the study, it is important to keep in mind that the impact of each factor on the gender pay gap may vary between countries, while also keeping in mind the limitations of the study (such as low representation of companies with less than 10 employees; the study does not cover all occupations). Therefore, the findings must be interpreted with caution.

Figure 4: Gender gap in part-time employment; ages 20–64, EU-28, 2018 (in percentage points)



Source: Own calculation based on data provided by Eurostat (Eurostat, 2020q)

Despite all these already well-known factors which contribute to the emergence of a gender pay gap in the labour market, about two thirds of the gender pay gap still remains unexplained. In most countries, characteristics or factors »hidden« in the (yet) unexplained part of the gender pay gap are the ones that contribute the most to the gender pay gap. It is very likely that career breaks taken by women due to motherhood and caring responsibilities, as well as favouring men in employment, career opportunities and career advancements represent a large portion of the **unexplained gender pay gap** (European Commission, 2018d).

2.3 Significant causes of gender differences in the labour market

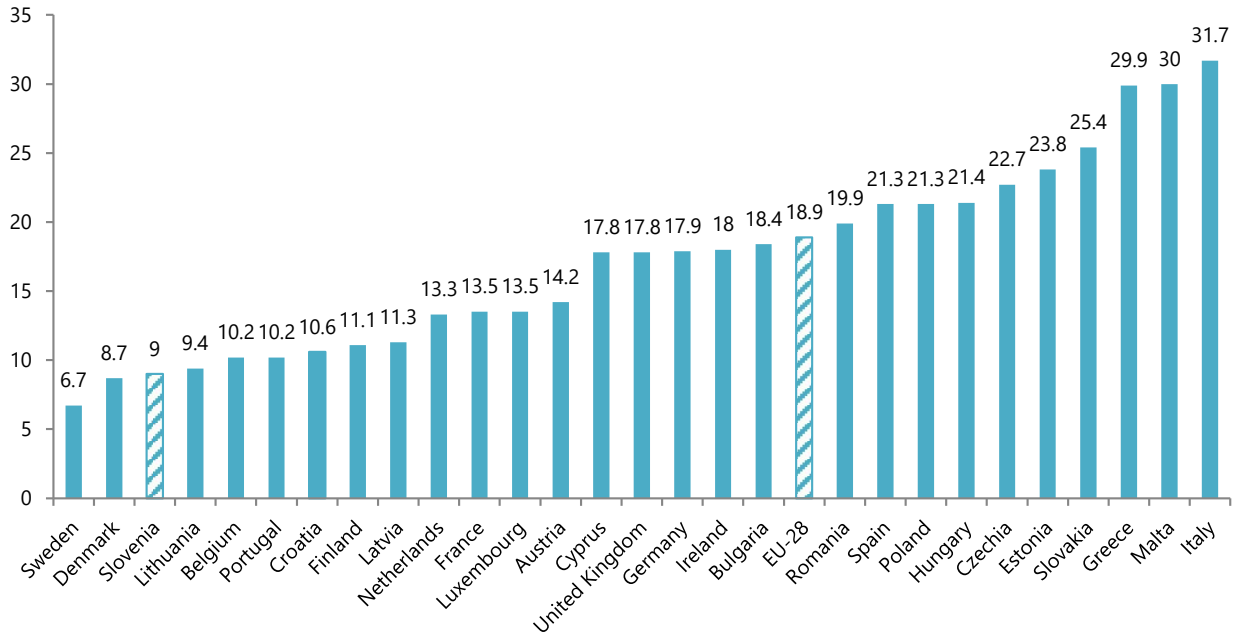
That **motherhood** is a significant factor that can affect the gender pay gap and later also the gender pension gap was confirmed by a study (Samek Lodovici et al., 2016) commissioned by the Committee on Women's Rights and Gender Equality (FEMM) of the European Parliament. Motherhood affects women's employment

and earnings, which has a long-term impact and is reflected in the future pension of women. Due to shorter working lives and lower income, the gender pension gap is higher for mothers than for women without children in several EU Member States (e.g. Denmark, France, Greece, Sweden, Italy, Belgium, Germany) and it only increases with the number of children.

Other more recent studies suggest that it is important to consider motherhood and parenthood when analysing gender inequality and explaining most of the as yet unexplained gender gap (Kleven, Landais, Posch, Steinhauer, & Zweimüller, 2019). In their study, which is based on administrative data for the total population of Denmark between 1980 and 2013, Kleven, Landais and Søgaard (2018) even showed that most of the unexplained difference in the income of men and women can be explained with the birth of the first child. After controlling for some relevant variables (such as education), the incomes of men and women are about the same before they become parents but change significantly afterwards. While after the birth of the first child a woman experiences a drastic and immediate drop in earnings, as explained in greater detail below, this major life event has no impact on the earnings of a man. After the birth of the first child, women's earnings do not return to the level at which they were before parenthood, when the earnings of both men and women are approximately the same. Angelov, Johansson and Lindahl (2016) came to similar conclusions in their study, which was based on the administrative data for the total population of Sweden between 1986 and 2008. They found that compared to the period before parenthood, the difference in income between spouses increased by 28 percentage points in 15 years after the birth of the first child. The gender pay gap also increased accordingly, namely by 10 percentage points. In general, career breaks due to motherhood not only affect the loss of income during the break itself, but also have a lasting impact on lifetime earnings. Mothers who want to return to work after the break have fewer career opportunities and earning prospects (The Pensions and Population Ageing Team, 2018). A study by Kleven et al. (2018), which was based on the data from Denmark, also showed that after the birth of a child, women's preferences regarding employment change compared to men's, as the opportunities for reconciling family and working life become more important to them than pecuniary rewards. After the birth of a child, women start falling behind men in terms of career progression, switch jobs to more "family friendly" companies or to the public sector, which is known to provide flexible working conditions for parents. The study further provides an interesting finding that the lower earnings of a woman due to children are also strongly related to her family's past and the roles of her parents. Women who grew up in more traditional families with a male breadwinner and a female housewife incur larger child penalties when they themselves become mothers, as woman's preferences regarding family and career are formed during her childhood and are based on the gender roles of her parents.

The employment statistics confirm that mothers are at a disadvantage compared to women without children, as the employment rate of women without children is higher than the employment rate of mothers in most EU Member States. In 2018, the employment rate of mothers aged 20–49 with one or two children was on average approximately four percentage points lower than the employment rate of women without children. The higher employment rate of women with children compared to that of women without children is only characteristic of Slovenia, Sweden and Denmark (Eurostat, 2020h). The latter could be attributed to a well-designed system of parental leave and public childcare as well as to a relatively egalitarian-oriented society in both the Scandinavian countries and Slovenia (Kleven et al., 2018; MDDSZ, 2019a, 2019c). As the number of children increases, the employment rate of mothers decreases even further. In 2018, the employment rate of mothers with three or more children was more than 20 percentage points lower than the employment rate of mothers with only one child in five EU-28 Member States (Bulgaria, Germany, Romania, Lithuania and the UK) (Eurostat, 2020h). The situation is however reversed with men, as the labour market participation rate of fathers is on average higher than of men without children. In 2018, the employment rate of fathers aged 20–49 with one or two children was on average higher by 8.2 and 11.8 percentage points, respectively, compared to the employment rate of men without children (Eurostat, 2020h). The difference in the employment rate between mothers and fathers with two children is most significant in Greece, Italy and Malta, while the difference is relatively small in Sweden, Denmark and Slovenia (Figure 5).

Figure 5: Employment gap between fathers and mothers aged 20–49 with two children, EU-28, 2018 (in percentage points)



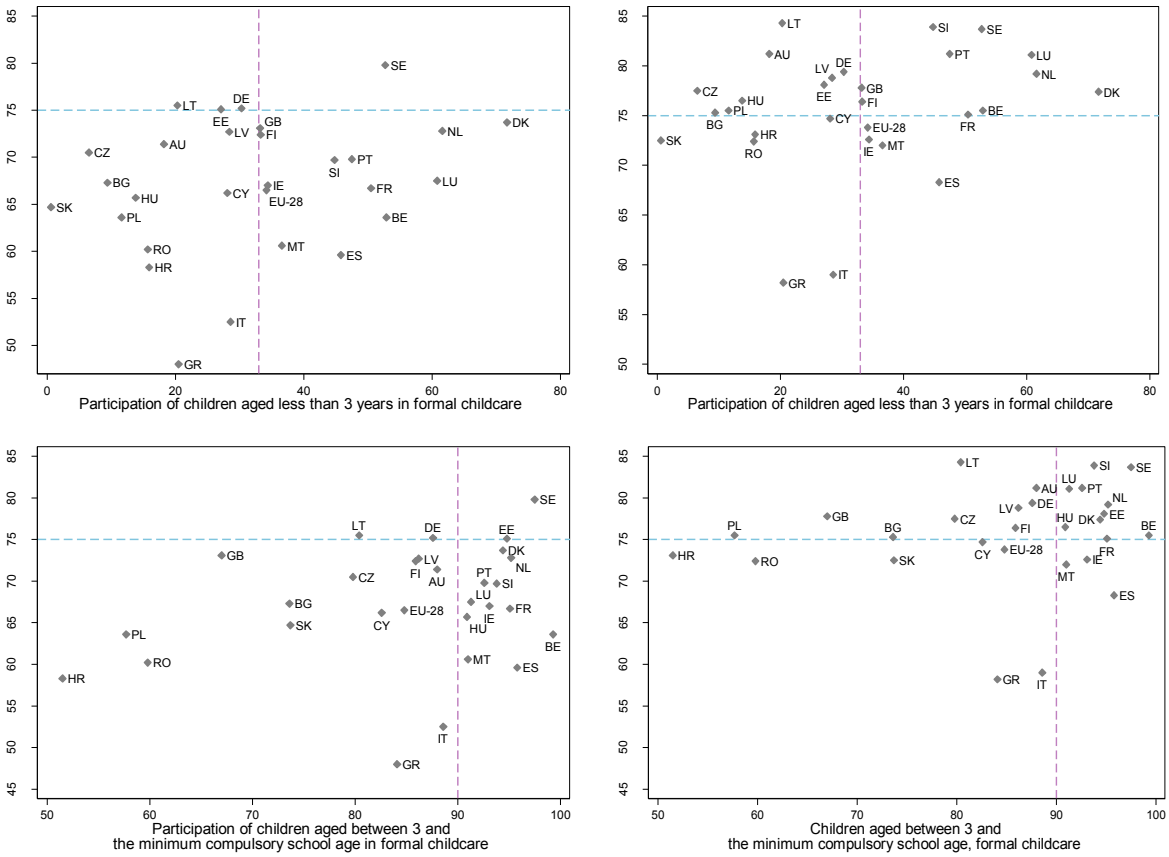
Source: Own calculation based on data provided by Eurostat (Eurostat, 2020 h).

With parents aged 20–49 who are employed part-time there is again a discrepancy between the two genders, as just over one third of mothers with two children (34.6%) and a very low percentage of fathers with two children (4.5%) were employed part-time in the EU-28 in 2018 (Eurostat, 2020r). Current patterns of work activity also suggest that on average 15-year-old women in the EU can expect to be out of work for over six years more compared to men by the time they reach the age of 70. Most of the difference in the duration of working life is the result of the greater workload of women due to household chores and caring responsibilities (The Pensions and Population Ageing Team, 2018). In addition to all of this, it is important to note that the aforementioned data do not reflect the extent to which women's breaks from the labour market due to caring and family responsibilities are voluntary or involuntary.

The proportion of children in formal childcare is also an important factor that affects the employment of mothers, although it is not always entirely clear whether this link depends on a lack of supply or demand (European Commission, 2018b). In 2018, 13 Member States exceeded the Barcelona objective of providing formal childcare to at least 33% of children aged less than three years (Figure 6). In seven countries (France, Spain, Belgium, Luxembourg, Portugal, the Netherlands and Denmark), as many as half or even more children aged less than three years are provided with formal childcare, while the percentage of children aged less than three years in formal childcare is especially low in the in eastern EU countries. In Czechia and Slovakia, it is lower than 10% (Appendix 1, Figure 2a). Despite exceeding the Barcelona objective of the proportion of children aged less than three years in formal childcare at the EU-28 level in 2018, the average employment rate of European women aged 20–64 was relatively low (67.4%). The United Kingdom, Denmark, the Netherlands, Finland and Sweden exceeded the Barcelona objective and achieved a high employment rate of women (over 74%). Sweden even achieved a very high employment rate of women in the 20–64 age group, namely 80.2%.

In the same year, only 12 Member States reached or exceeded the second Barcelona objective, to provide formal childcare to at least 90% of children aged between three years and the minimum compulsory school age (Figure 6). A similar pattern as in children aged less than three years can also be observed in older children. The lowest participation rate in formal childcare for children aged between three years and the minimum compulsory school age is in eastern European countries, while northern and western Member States have the highest participation rates of older children in formal childcare (Appendix 1, Figure 2b).

Figure 6: Employment rate of women and participation of children in formal childcare in the EU-28, 2018 (in %)



Note: The purple vertical line indicates the Barcelona objective of providing formal childcare to at least 33% or 90% of children, while the blue horizontal line indicates the scheduled Europe 2020 objective of an employment rate of at least 75% for the population aged 20–64.

Source: Own calculation based on data provided by Eurostat.

When only taking into account the employment rate of women aged 25–49, the employment situation improves significantly. Women who are mothers with young preschool children are slightly better represented in this narrower age group. In 2018, six countries, again predominantly the northern and western EU Member States, with the exception of Slovenia and Portugal, exceeded both Barcelona objectives and reached an employment rate for women aged 25–49 of more than 75%.

Denmark, Sweden, Portugal and Slovenia are four EU-28 Member States that in 2018 reached or exceeded both Barcelona objectives regarding the provision of formal childcare as well as the Europe 2020 objective of the planned employment rate of the active population aged 20–64. In fact, Sweden is the only country to exceed the employment rate of 75% in women aged 20–64 in 2018, in addition to exceeding both Barcelona objectives. Already in the early 1980s, an increase in the number of women with pre-school children entering the labour market was noticed, and in the 1990s, the employment rate of women with children under the age of seven was even higher than the employment rate of women in general. On the one hand, the trend is probably a result of the favourable Swedish parental leave system with favourable compensations during parental leave and flexibility in taking the leave, and on the other hand it is a result of younger women who, compared to older women, almost all enter the labour market and are no longer just housewives (Angelov et al., 2016).

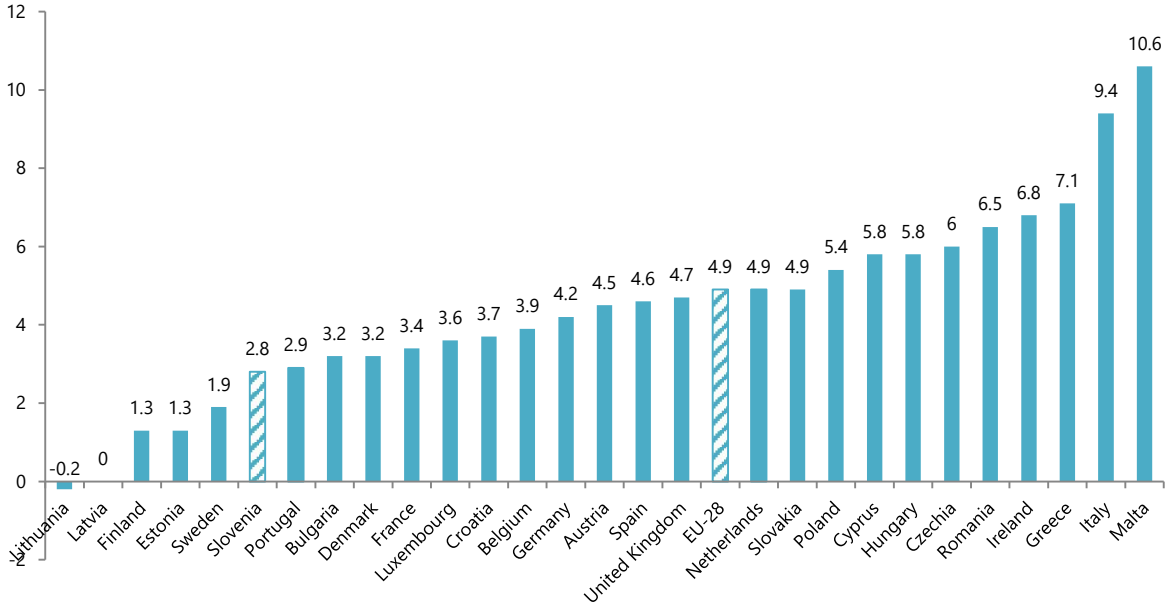
Marital status is another factor that can affect the gender pension gap. In their study, Samek Lodovici et al. (2016) found that, on average, the gender pension gap is much higher for married women than for unmarried women, which include single, divorced and widowed women. They believe that married women may face lower desire and need to work than unmarried women, which is even more evident for women married to high income partners. Moreover, rich men's wives often work less than other women or they do not even work which may further increase the gender pension gap (Samek Lodovici et al., 2016). The interesting findings of this study are also based on the results for each country. The highest gender pension gap for married women was found in Luxembourg and Germany, and the lowest in Estonia, Lithuania and Latvia. These countries are

also among those where the difference between the gender pension gap for married and that for unmarried women was also the largest or rather the smallest. Slovenia was also among the countries with only a small difference between the gender pension gaps for married and unmarried women.

Economic factors such as **tax and benefit systems** also affect the decision about labour market participation and form of employment, and consequently the future gender pension gap. Namely, the functioning of these systems (such as raising tax rates or joint taxation of couples) can deter the second earners in the family, who are most commonly women, from seeking employment. The tax burden on the second earner is the highest in Belgium, Germany, Denmark and Austria (European Commission, 2017c).

Most European countries are increasing and equalising the retirement age for men and women as part of pension system reforms, as well as reducing access to early retirement, or have already done so. However, despite these reforms, the early exit from the labour market remains a major problem in some Member States, and gender differences in the retirement age still persist in some countries in 2020 (in Bulgaria, Austria, Lithuania, Romania, Czechia, Croatia and Poland). In the future, almost all EU-28 Member States expected to have the same retirement age for men and women, with Poland and Romania remaining the only two EU-28 Member States that do not yet provide for the equalisation of the retirement age in the legislation (European Commission, 2018e; European Commission, 2017b). In countries where the retirement age of men and women is not yet legally equalised, this difference is also one of the factors contributing to women having shorter working life, and consequently shorter pension qualifying period and thus lower pensions. The average duration of the working life of a European man is 38.6 years while for a European woman it is 33.7 years (Appendix 1, Figure 3a). Only in seven countries do men reach or exceed 40 years of work – in Sweden, the Netherlands, Denmark, Ireland, Malta, Germany and the UK, while for women this is only the case in Sweden. The lowest expected duration of working life for men in 2018 was in Croatia (34.2 years) and Bulgaria (34.6 years) and for women in Italy (27 years) and Greece (29.2 years). The greatest differences in the duration of working life are in Malta and Italy, where men are expected to work respectively 10.6 and 9.4 years longer than women (Figure 7). On the other hand, the differences in the duration of working lives of men and women are very small or barely noticeable in the Baltic countries. In Estonia, working lives are 1.3 years longer for men than women, in Latvia the working lives of men and women are of the same length, and in Lithuania women's working lives are two months longer than that of men. A small difference in the duration of the working lives of men and women is also characteristic of Finland and Sweden, where it amounts to 1.3 and 1.9 years respectively. Slovenia also belongs to the group of countries with a narrower gap in the duration of working life.

Figure 7: Gender gap in the duration of working lives in the EU-28, 2018 (in years)



Note: The duration of working life is an indication or estimation, of the number of years a person, at the current age of 15, is expected to be in the labour market (i.e. to be employed or unemployed).

Source: Own calculation based on data provided by Eurostat (Eurostat, 2020e).

The **financial and economic crisis**, which hit the global economy in 2008, created additional factors that affect or will affect the creation of the (future) gender pension gap in the EU. The consequences of the crisis and the measures adopted by the EU Member States to contain the crisis have been and will be felt more strongly and for a longer term by women than men. The first effects of the crisis were seen in the labour market, where a sharp decline in employment and a rise of unemployment were recorded throughout the EU. Initially, the crisis affected men to a greater degree than women, as there was a rapid and sharp decline in employment in the industrial sector (construction, manufacturing, transport and storage, etc.), where male workers dominate, while the service sector, dominated by female workers, was affected by the crisis later, but its consequences were longer-lasting. The decline in employment and the increase of precarious forms of employment and part-time employment resulting from the crisis will also have an impact on the future pensions of these people. The additional effects of the crisis arise from anti-crisis measures, as most Member States adopted austerity measures for fiscal balance that have particularly affected women both directly and indirectly. The adopted austerity measures introduced pay cuts and redundancies in the public sector, the consequences of which mostly affected women, as women represent the majority (approximately between 70% and 80%) of public sector employees, especially in education, healthcare and social protection. This had or still has a negative impact on paid-in pension contributions and consequently on lower future pensions and a higher risk of poverty for women. Budgetary austerity was a double blow for women – because of reduced funding for public services and social protection, such as cuts in family benefits, parental benefits, etc. Notably, women are more likely to use public services than men and are mainly the ones receiving social benefits, which are an important source of income for them. All of this reduced the financial independence of women and (again) increased their dependence on other family members, which is again associated with a higher risk of poverty for women. In addition, the measures that (have) reduce(d) the parental benefit send a clear message that unpaid care work is less valuable than paid work, which further contributes to the devaluation and downgrade of care and household work in the private sphere. The European Parliament states that no Member State assessed the impact of these measures from a gender perspective when adopting and implementing them (European Parliament, 2013; Humer & Roksandić, 2013).

The post-crisis period also influenced budget cuts in the social infrastructure, education, childcare, healthcare and care for the elderly and the sick. The insufficient and inadequate provision of such services by the state, or their financial inaccessibility, is another factor that affected women's participation in the labour market. Usually, women are the ones to leave their employment or at least reduce their working hours so that they can provide the services that the state does not provide (European Parliament, 2013). The employment gap, which translates into the future gender pension gap, is therefore especially high for mothers and women caring for dependent or elderly family members who are unable of taking care of themselves (European Commission, 2018d). According to Eurostat, in 2018 almost one third (31.7%) of inactive women aged 20–64 in the EU-28 were inactive due to family or caring responsibilities, while the percentage of men in the same situation was only 4.6%. Of this, 18.5% of women were inactive due to childcare or care for incapacitated adults, while the proportion of men looking after children or incapacitated adults was much lower as well, standing at 2% (Eurostat, 2020p). In 2018 in Slovenia, the proportion of inactive women on the labour market who were inactive because of family or caring responsibilities was almost half that of the EU-28 average and three times lower than the proportion of women who were inactive in the labour market due to looking after children or incapacitated adults.[6]

Despite the relaxation of austerity measures in the public sector, the consequences of austerity measures, which will be reflected in future pensions, especially in women's pensions, remain. Past actions can only serve as good reminders that it is necessary to analyse the effects of new proposals from a gender perspective more carefully and in greater detail when shaping future policies and reforms, in order to reduce such negative consequences in the future.

Finally, the differences between women and men stem from gender **stereotypical beliefs**. The Eurobarometer survey from 2017 showed that the majority of European men (55%)[7] and European women (54%) do not agree that the most important role of a woman is to be a housewife and a mother and to take care (to assume main responsibility for) of her home and family. The majority of European men (52%) and European women (57%) also do not agree that the most important role of a man is as an income provider. However, despite the general opinion of European men and women, the differences between countries regarding the most

6 More information on Slovenia in Chapter 2.5.1.

7 The percentages represent the answers of respondents who tended to disagree or totally disagreed with the statement.

important role of a man and a woman remain substantial. The citizens of the northern Member States (e.g. Sweden, Denmark, the Netherlands) disagree with the stereotypical roles of men and women to a much greater extent than the citizens of the eastern Member States (e.g. Bulgaria, Hungary, Czechia). There are also differences in the perception of stereotypes between generations, as the stereotyped perception of the roles of a man and a woman decreases with the younger generations. The fact that the vast majority of European men and women are in favour of promoting gender equality and eliminating stereotypes is also suggested in their agreement that men should do an equal share of household activities (80% of men and 87% of women strongly agreed or agreed with this statement) and should have a greater role in taking care of their children, including taking parental leave (81% of men and 86% of women strongly agreed or agreed) (European Commission, 2017). Despite the fact that the differences in the roles of women and men decrease with the younger generations and men are becoming more involved in family life (doing unpaid work), the division of household chores and childcare still remains far from equal (European Commission, 2018d). Working women in EU-28 spend on average approximately 13 hours per week more on unpaid work than men. However, these differences vary between countries and are smallest in the northern countries, Sweden, Denmark and Finland, and largest in the southern countries, Malta, Cyprus and Greece. In Slovenia, women spend more than 15 hours per week more on unpaid work than men, which is above the EU-28 average (Eurofound, 2018).

While for the most part both men and women want to be in an egalitarian relationship in which both partners contribute equally in terms of both income and caring responsibilities, many doubt whether such a relationship is even possible. Doubts arise because of today's social and economic conditions, which on the one hand require a significant amount of time for a successful career and on the other hand a significant amount of time for successful parenting. Obstacles on the part of the employers and working conditions also contribute to creating differences. Some men fear that taking leave or working flexible hours could undermine their male credibility among both male and female co-workers and management. Policies regarding employment, working conditions and reconciliation of work and family life can affect men's and women's preferences for career choices and decisions regarding their private or family lives. The key objective of policies for the reconciliation of work and family life is to reduce the institutional barriers for working parents and to enable couples to have an egalitarian relationship with a balance in caring responsibilities and provision of income (Pedulla & Thébaud, 2015). This is where the country plays an important role, as it can help encourage men to be more involved in childcare and to make greater use of paternity or parental leave as well as enables the establishment of family-friendly companies and organisations (MDDSZ, 2016). Positive developments in the direction of narrowing the gender gap between paid and unpaid work because of a well-designed parental leave system are already visible – the gap is narrower in countries where the conditions for taking paternity leave and parental leave for fathers are favourable (European Commission, 2019b). After all, increased parental leave uptake by fathers reduces parental leave uptake by mothers, the length of women's career breaks, and part-time work by women and consequently reduces the gender pay gap. In this way, some of the leading causes of a future gender pension gap can be mitigated (van Belle, 2016).

The traits that society stereotypically perceives as more feminine (e.g. compassion, caring for others, nurturing, etc.) are often taken for granted and therefore undervalued. In addition, stereotypes associated with certain female-dominated occupations still persist and these occupations are consequently undervalued and underpaid. The latter further reduces men's motivation for such occupations (European Commission, 2018d). On average, women earn less per hour than men do for the same occupation. At the EU level, the occupation with the largest difference in the hourly rate (23%) are management positions, while the smallest difference (8%) is in low-skilled occupations such as clerical support workers (office clerks, secretaries, etc.), service and sales workers, and elementary occupations, where the pay is also the lowest (European Commission, 2019b; SORS, 2018b).

Furthermore, the results of a study on the attitude of residents from Denmark, Sweden, the UK and the US towards the forms of employment for women with and without children also provides some interesting findings (Kleven et al., 2018). The prevailing belief of both men and women is that women should work full-time when they are without children – both when they are married and have no children and when the children have grown up and left home. Women who have children of a preschool age should work part-time or stay at home, while women with children in school should work part-time. The only noticeable cross-country difference is that the Scandinavian populations are slightly more in favour to the idea that women with preschool children should work part-time rather than stay at home (Kleven et al., 2018). All these differences that arise from

gender stereotypical beliefs are reflected in different decisions and actions individuals take in different stages of life and impact both the amount of their future pension and the creation of a future gender pension gap.

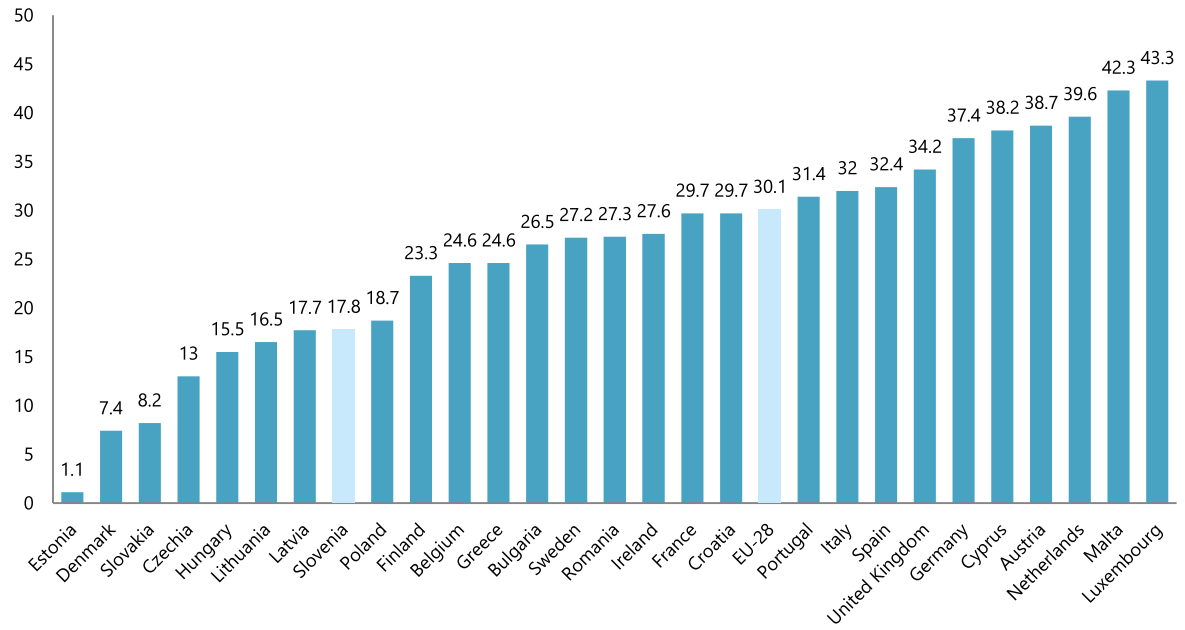
Based on the above, the gender pension gap is mainly a result of accumulated differences that arise from the opportunities the individuals have and the decisions and actions they take throughout their working lives. The gender gap which stems from differences in the employment rate, number of hours worked, and hourly rate, only increases with age. They translate into a »lifetime pay penalty« and a gender pension gap in retirement (European Commission, 2018d). Therefore, pension system reforms are crucial for narrowing or closing the gender pension gap in today's ageing society, as are policies and measures aimed at reducing inequality in the labour market through systemic measures (paternity and parental leave, leave to take care of a sick or elderly family member, a well-functioning care infrastructure and quality childcare as well as long-term care services, etc.), and active and healthy ageing for all, so that a longer active life and later retirement can be achieved (Chłoń-Domińczak, 2017; Kavaš et al., 2015).

2.4 Gender pension gap in the EU

The gender pension gap has only recently gained the attention of academia and policy-makers (Burkevica et al., 2015). The gender pension gap for pensioners aged 65 and over can be found in all EU countries and it only slightly decreased at the EU-28 level in recent years. In 2013, the gender pension gap at the EU-28 level was 33.6%, while in 2018 it was 30.1%. The average gender pension gap depends on the age group of pensioners. The gender pension gap is therefore somewhat wider if the group of pensioners aged 65–79 are taken into account, namely 35.2% in 2013 and 30.3% in 2018 at the EU-28 level (Eurostat, 2020n).[8]

Figure 8 below shows the gender pension gap between male and female pensioners aged 65 and over in the EU-28 countries in 2018. Data show that a female pensioner in EU-28 receives a pension that is on average 30.1% lower than that of a male pensioner. An important indicator of the (in)equality between men and women is the gender gap in pension coverage, which was estimated at 5.5% in 2017. It measures how much higher the percentage of men entitled to a pension is compared to women (European Commission, 2019b).

Figure 8: Gender pension gap between male and female pensioners aged 65 and over in the EU-28 in 2018 (in %)



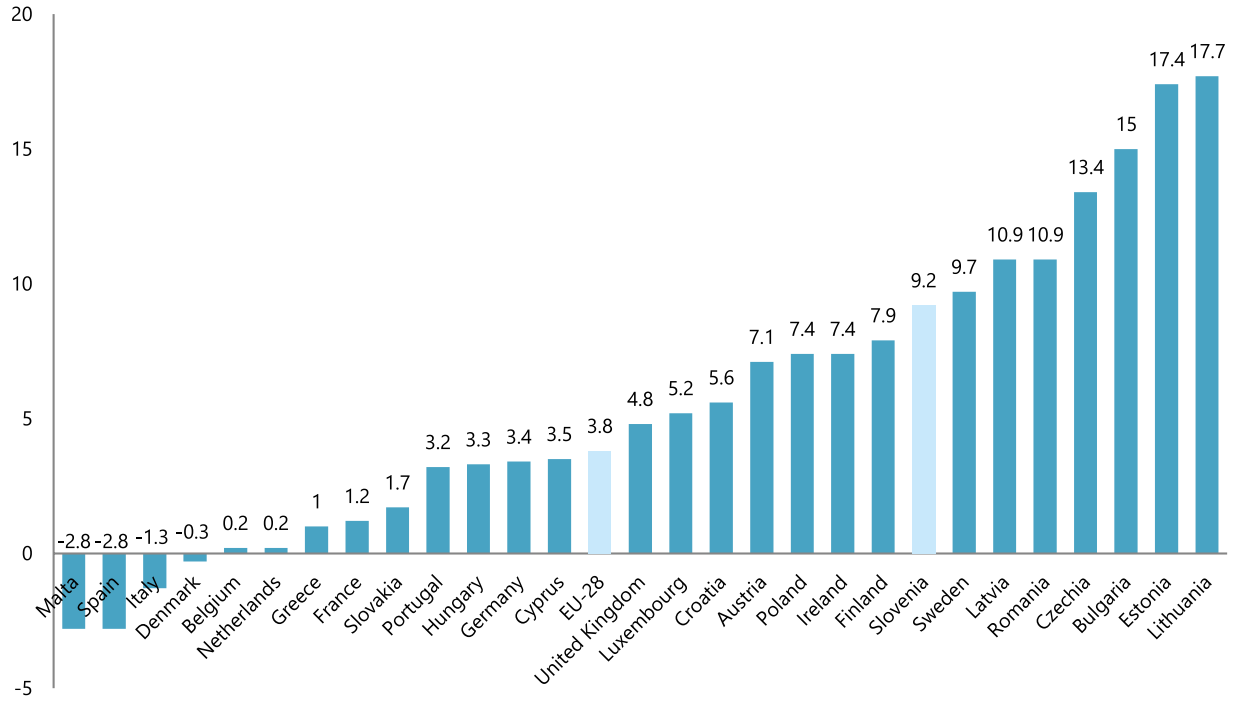
Source: (Eurostat, 2020n)

The gap between the proportion of women and men at risk of poverty and social exclusion also grows with age and is the highest among women aged 75 and over (European Commission, 2018d). The

8 However, there are considerable differences between countries.

at-risk-of-poverty rate for male and female pensioners aged 65 and over has been rising again since 2014 in the EU-28 and stood at 15.5% in 2018: 13.5% for men and 17.2% for women (Eurostat, 2020c). In 2018, the lowest at-risk-of-poverty rate for male and female pensioners was recorded in Slovakia, France, Greece and Denmark, where it was lower than 10% for both men and women. On the other hand, the at-risk-of-poverty rate was higher than 30% for male and female pensioners in Estonia, Latvia, Lithuania and Bulgaria; however, only in Bulgaria did it not exceed 40% for female pensioners (in detail in Appendix 1, Figure 4a). Bulgaria, Estonia in Lithuania are also the EU-28 countries with the largest gap in the at-risk-of-poverty rate between male and female pensioners (Figure 9). In the EU-28, the at-risk-of-poverty rate for all persons aged 65 and over is even slightly higher and on average stands at 16.1% or 13.6% for men and 18.1% for women (Eurostat, 2020b). An important fact that can be deduced from the given data is that the at-risk-of-poverty rate for the elderly, when not only pensioners are taken into account, is higher for women than for men, indicating that there are more women than men who do not receive pensions at all.

Figure 9: Gender gap in the at-risk-of-poverty rate for pensioners aged 65 and over in the EU-28 in 2018 (in percentage points)



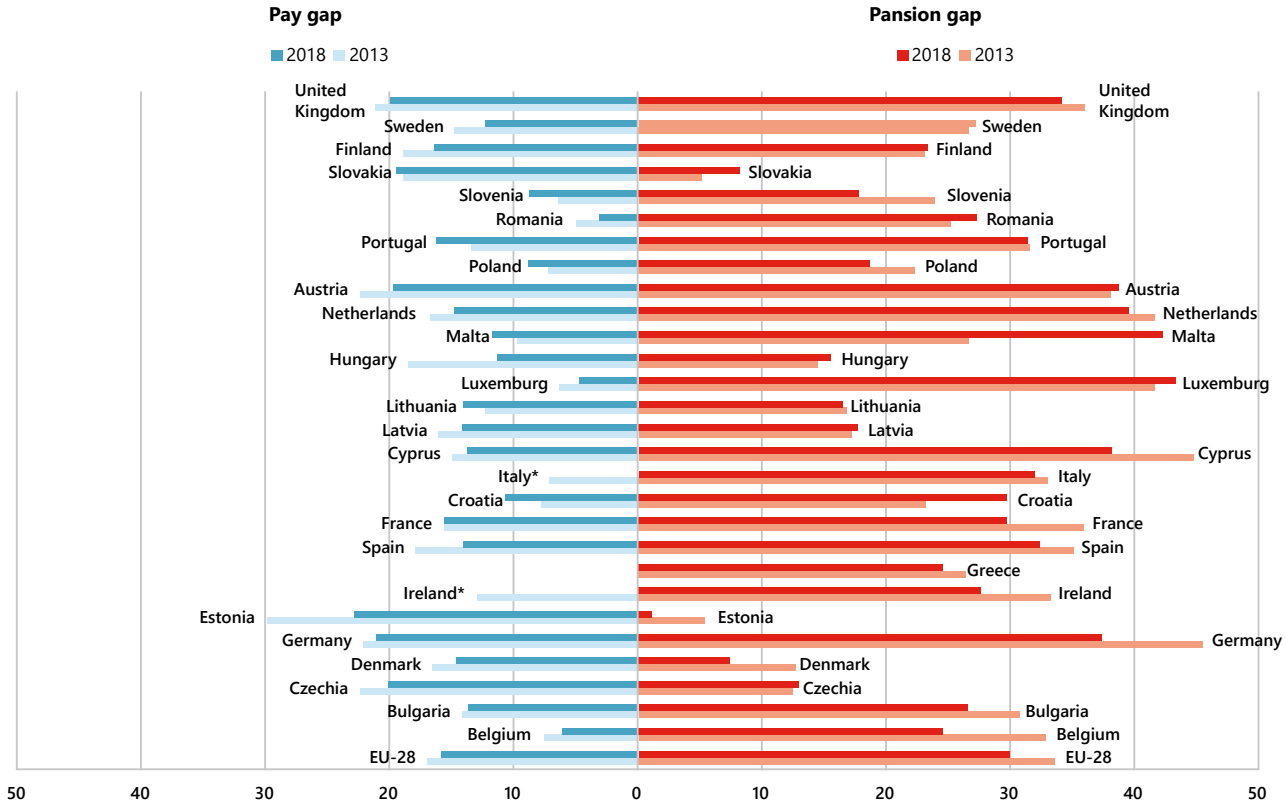
Note: The gender gap in the at-risk-of-poverty rate for pensioners is the difference between the at-risk-of-poverty rate of female pensioners and the at-risk-of-poverty rate of male pensioners.

Source: Own calculation based on data provided by Eurostat (Eurostat, 2020c)

Household type is another relevant factor that affects the living standard of the elderly. In 2018 in the EU-28, 40.4% of women and 22.4% of men over 65 lived alone (Eurostat, 2020d). In addition to receiving lower pensions, female pensioners, who make up the majority of all pensioners, are thus also more likely to live alone than men, making them more exposed to the risk of living in poverty (European Commission, 2018e). Among the EU-28 countries, Estonia has the narrowest gender pension gap; however, it is also the country where the at-risk-of-poverty rate for pensioners is the highest. It is especially high for female pensioners, standing at 59.5% (Appendix 1, Figure 4a). Similar holds true for female pensioners in Slovenia, as despite the below-average gender pension gap, the at-risk-of-poverty rate for female pensioners is higher that the EU-28 average, while the at-risk-of-poverty rate for male pensioners in Slovenia is slightly lower than the European average.

The comparison between the gender pay gap and the gender pension gap (Figure 10) is also interesting, as it suggests that the causes of the gender pension gap do not only stem from the differences in the hourly rate of men and women, but that there are a number of other inequalities between men and women (described in more detail in Chapter 2.1) which affect the creation of a future gender pension gap.

Figure 10: Comparison of gender pay and pension gaps in 2013 and 2018, EU-28 (in %)



Source: Eurostat (Eurostat, 2020m, 2020n)

In her study, Chłoń-Domińczak (2017) analysed the future estimated pension gap in the EU-28 Member States based on the current labour market situation and the current pension systems. For this purpose, she proposed and designed the Forward-looking Gender Pension Gap Index, which covers two domains: the employment gap and pension system compensation. The employment gap reflects various aspects of women's presence on the labour market that affect future pensions, and the pension system compensation covers those characteristics of pension systems that can narrow or widen the pension gap. The results of the study showed that the highest-scoring countries according to the Index, which indicates the lowest risk for the future pension gap, are Denmark, Lithuania, Sweden, Czechia, Finland and Slovenia, while the countries facing the highest risk for future pension gap are Greece, Italy, Spain, Malta and the Netherlands. By dividing the countries into three groups according their index score (high-scoring, medium-scoring and low-scoring countries), the key differences and similarities between countries can be summarized. Even though the Index in the study shows the results for 2013, parallels can be drawn and similar conclusions can be reached, as the countries remain in the same three groups today. Based on a comparison of data from 2013 and the latest available data on the employment rate of women (data for the first quarter of 2019), half-time or full-time employment (data for 2018), gender pay gap (data for 2018) and information on the implemented reforms of the pension system (based on data from the European Semester), it can be concluded that the order of the Member States remains roughly the same as in 2013, despite some improvements, mainly in a higher employment rate for women and a slightly lower gender pay gap.

All countries in the group with the lowest risk for a future pension gap (Denmark, Lithuania, Sweden, Czechia, Finland and Slovenia) have high compensations for career breaks, especially for parental leave. Despite the high value of the Forward-looking Gender Pension Gap Index (from 91.6 to 88.2), there is still room for improvement and thus for reducing the potential pension gap. In Denmark and Sweden, the proportion of women who work part-time is high despite the high employment rate for women. In Lithuania and Finland, the terms for pension indexation are designed in such a way that the pension gap for elderly women increases. In Slovenia and Czechia, the potential of women's employment remains untapped, as despite the high proportion of women working full-time, the countries reach a relatively low employment rate for women aged 50 and over and in Czechia, the employment rate of women under 30 is low as well. Czechia is the only country in the group of high-scoring countries with a high gender pay gap. Lithuania and Czechia are the only countries in this group that will only have the same retirement age for men and women in 2026 and 2037, respectively (European Commission, 2017b).

2.5 Gender pension gap in Slovenia

Slovenia performs relatively well on the indicators for monitoring the progress in the implementation of principles and rights of the European Pillar of Social Rights (European Commission, 2018a, 2019a); however, the inequalities still remain (too) high in some areas. In Slovenia, the significant differences between men and women in terms of participation in the labour market (employment rate, sectoral and occupational segregation), the distribution of working hours (particularly in the case of part-time work), and remuneration for work, which have a considerable impact on the standard of living later in life, are relatively small and are mostly below the EU-28 average. They gender pay gap is among the lowest in the EU, unemployment rate is falling and the employment rate is on the rise; however, the employment rate of older workers is still among the lowest in the EU. In Slovenia, a high proportion of women are employed full-time; however, the burden of caring responsibilities and household chores still falls mostly on women. The difference in the hours spent in unpaid work between men and women in Slovenia exceeds 15 hours per week and is still one of the largest among EU Member States (Eurofound, 2018). The pension gap in Slovenia is also below the EU-28 average, yet the at-risk-of-poverty rate of female pensioners in Slovenia in 2018 remains above the EU-28 average.

In 2015 and 2016, a study was conducted among Slovenians on their attitude towards gender equality (Möller-Slawinsk & Calmbach, 2016). The results of the study, which was based on qualitative (focus groups) and quantitative (telephone survey) methods, showed that in general the traditional perception of gender roles, especially the role of a woman as »a good mother and housewife«, is disappearing among the younger generations. Furthermore, the equality of roles is the ideal family or partnership model for the majority of male (82%) and female respondents (88%), meaning that both the man and woman are employed, receive roughly the same wage and share the household chores, childcare and other responsibilities equally. However, such an ideal model is much easier to achieve in theory than in practice. Household chores and childcare thus still largely remain the woman's responsibility in Slovenia as well (Humer & Panić, 2015; Möller-Slawinsk & Calmbach, 2016).

2.5.1 Factors in the labour market affecting the gender pension gap

In 2018, the **employment rate** of persons aged 20–64 in Slovenia was 75.4%, which is above the EU-28 average (73.2%). The difference in the employment rate of Slovenian men (79%) and women (71.7%) was 7.3 percentage points in favour of men and was also lower than the EU-28 average, where the difference was 11.6 percentage points (Eurostat, 2020f). Also in 2018, family and caring responsibilities were the reasons for inactivity of 17.6% of inactive Slovenian women aged 20–64, which is nearly half less than the EU-28 level (31.7%). Among inactive Slovenian men aged 20–64, the proportion of those inactive due to the same reasons was 5.2%, which is slightly above the EU-28 average (4.6%) (Eurostat, 2020p). Despite the relatively good employment rate in the entire population, the employment rate is low for the 55–64 age group. In the last quarter of 2019, the employment rate for this group was 48.1% (51.6% for men and 44.5% for women), which places Slovenia in the group of Member States with the lowest employment rate of older workers (Eurostat, 2020j).

The **unemployment rate** of the Slovenian population aged 20–64 has been lower than the EU-28 average for almost two decades (Eurostat, 2020u). The unemployment rate of women is higher than the unemployment rate of men. In 2019, the unemployment rates in Slovenia were 5% for women and 4% for men (Eurostat, 2020t).

Being employed is equally important for Slovenian men and women, as employment represent financial independence (Möller-Slawinsk & Calmbach, 2016). Despite both men and women agreeing that both genders are equally suitable for management positions, the proportion of women in management positions in Slovenia is low (Humer & Panić, 2015; Möller-Slawinsk & Calmbach, 2016). Even though Slovenia is among the very top of the EU-28 in terms of the proportion of women in management positions (legislators, senior officials and managers), the proportion of women in this occupational group is still below 50% (EIGE, 2020a; SORS, 2018b). Significant differences are also evident in the employment of clerical support, services and sales, education, and human health and social work activities, which employ more women than men (Eurostat, 2020g; Humer & Roksandić, 2013; SORS, 2019c). Despite the fact that the public sector predominantly employs women, more men than women hold the highest positions (highest-paid positions according to gross earnings). Regarding positions (based on gross earnings) in the private sector, where men are predominantly employed, the difference between men and women in terms of jobs held

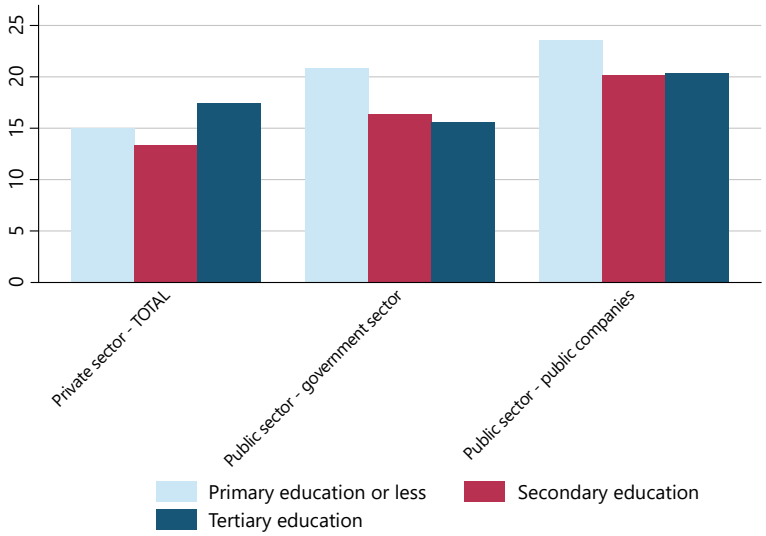
becomes larger in favour of men as positions become more senior (SURS, 2019e). The distribution of jobs in the public and private sectors indicates that **sectoral and occupational segregation** still exist in Slovenia.

According to data for 2017 and 2018, education and human health and social work activities are two of the four or five activities at the very top according to the difference in the average gross earnings of men and women. However, the largest difference in average gross earnings of men and women in Slovenia in both years was in financial and insurance activities (SORS, 2019d, 2020). According to the occupational groups, the gender pay gap in 2017 was the narrowest among clerical support workers and the widest among plant and machine operators and assemblers, service and sales workers, and craft and related trades workers (Figure11).[9] While the gender pay gap in the public sector was the highest for persons with primary or lower education, in the private sector it was the highest among tertiary-educated (Figure 12).

Figure 11: Gender pay gap (in %) by occupation, Slovenia, 2017

Source: SORS, own calculation

Figure 12: Gender pay gap (in %) by education and sector of employment, Slovenia, 2017

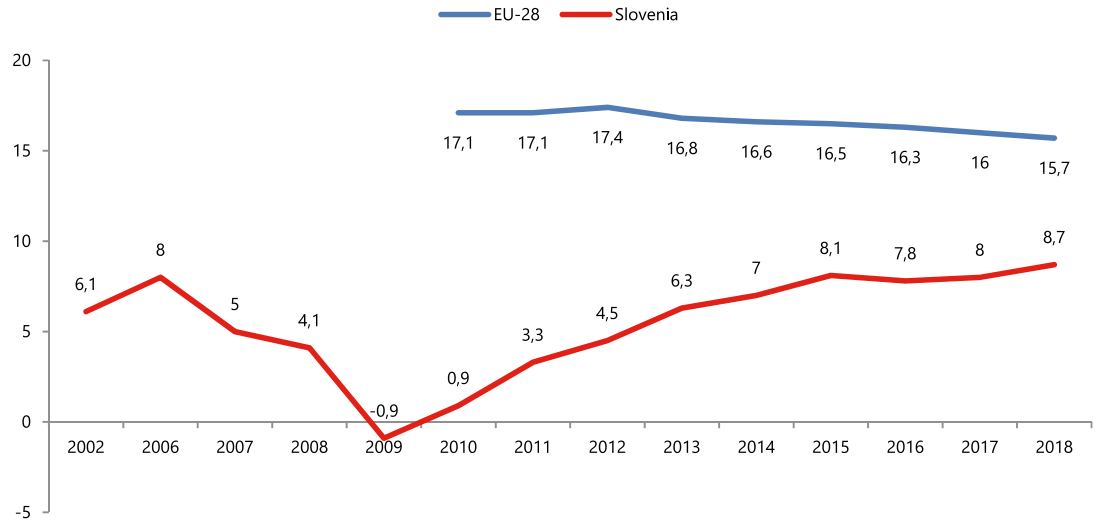


Source: SORS, own calculation

9 A study for Slovenia (Poje, Kanju Mrčela, Tomaskovic-Devey, 2019) reveals that between 2010 and 2015, occupational classification accounted for only 28% of the gender pay gap and that the gender differences in income are generated mainly at the workplace level.

The **gender pay gap** in Slovenia is considerably lower than the EU-28 average; however, the gender pay gap has been rapidly widening in Slovenia, while at the EU-28 level it has been slowly narrowing during the 2010–2018 period, with the exception of 2012 (Figure13). While the gender pay gap in Slovenia was even negative in 2009, it reached 8.7% in 2018, making Slovenia the EU-28 Member State where the gender pay gap widened most in recent years (Eurostat, 2020m).

Figure 13: Gender pay gap, EU-28 and Slovenia (in %)



Note: Data for EU-28 before 2010 not available.
Source: (Eurostat, 2020m)

The proportion of Slovenian women aged 20–64 **absent** from the labour market **due to caring responsibilities** (looking after children or incapacitated adults) is very low. In 2018, it was 6.1% and the third lowest among the EU-28 Member States. Lower absences were only recorded in Romania and Denmark. If this group of women is restricted to women aged 25–49, the proportion for Slovenia is approximately three times higher (19.7%); however, Slovenia remains among the countries with the lowest proportion of women being inactive due to caring responsibilities (Eurostat, 2020p). The employment rate of mothers aged 20–49 is even higher in Slovenia than the employment rate of women without children, which is not characteristic of other EU-28 Member States (Eurostat, 2020h). Career breaks because of young children are not as common among Slovenian women, but there is a growing proportion of women employed **part-time** in the period when they have children (MDDSZ, 2016). In 2009, the proportion of women in Slovenia aged 20–49 with at least one child and employed part-time was 7.6% and it rose to 11.5%[10] in 2018. In the same period at the EU-28 level, the proportion of women aged 20–49 with at least one child and employed part-time decreased by 0.8 percentage point; however the proportion itself remains much higher – 35.2% in 2019 (Eurostat, 2020r). In general, the proportion of women in Slovenia aged 20–64 and employed part-time is well below the EU-28 average; however it is growing faster – in the 2009–2018 period, this proportion increased by 2.2 percentage points in Slovenia and only by 0.7 percentage point at the EU-28 level (Eurostat, 2020q). Of all Slovenian women employed and aged 20–64 in 2018, on average 13.6% were employed part-time, while this percentage was 30.8% in the EU-28. In the same year, 2018, the proportion of men employed part-time averaged at 5.3% in Slovenia and 8% in the EU-28 (Eurostat, 2020q).

Good participation of Slovenian women in the labour market is also stimulated by the accessibility of public childcare, the possibility of morning and afternoon childcare for children in the lower grades of primary school, organised school transport, warm meals for children in kindergartens and schools as well as the possibility of subsidised meals and transport for secondary school students and university students (MDDSZ, 2019a). In addition, Slovenia has a well-designed system of parental leave, which includes a non-transferable right to paternity leave and the right to part-time work due to parenthood, which one of the parents can exercise until the child reaches the age of three or until the youngest child has completed the first grade of primary school (MDDSZ, 2019c).

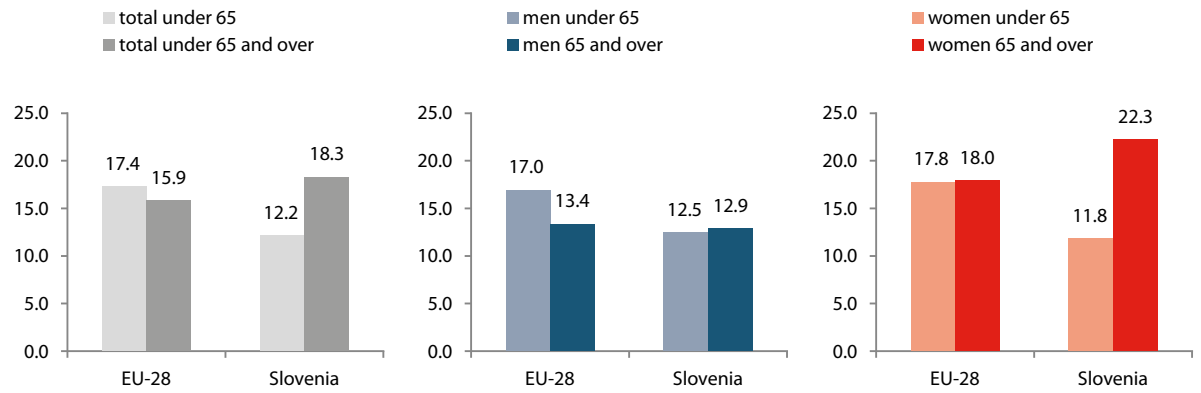
10 Individuals working part-time due to parenthood in Slovenia are, under certain conditions, eligible for payment of social security contributions (on the basis of the proportional share of the minimum wage) for the difference between their actual working hours and full-time work. Thus, the part-time work during the eligibility period of this right has no effect or only minimal effect on the pension in the future.

The inequalities between men and women described above, especially the occupational and sectoral segregation and the gender pay gap, also exist in Slovenia, despite there being more women than men with **tertiary education**. In 2017, 61.3% of Slovenian women and 38.7% of Slovenian men obtained tertiary education (Eurostat, 2020o). The average difference in the number of Slovenian women and men, who annually obtain tertiary education, is relatively high, approximately 20 percentage points, and is above the EU-28 average, which has been around 15 percentage points for the last few years. In 2018, on average 34.5% of women and 23.3% of men in Slovenia aged 15–64 had tertiary education (Eurostat, 2020s).

2.5.2 Gender pension gap by age

The previous chapter describes the inequalities between Slovenian women and men that accumulate throughout life and are reflected in the period of retirement. According to Eurostat, Slovenian women received 17.8% lower pensions than men in 2018 and were at a far greater risk of living in poverty than men, as 21.8% of female pensioners aged 65 and over lived at risk of poverty (Eurostat, 2020c, 2020n). While the **at-risk-of-poverty rate** at the EU-28 level is on average lower for older than for younger generations, the situation in Slovenia is reversed. The at-risk-of-poverty rate at the EU-28 level in 2018 was 17.4% for persons under 65, and 15.9% for persons aged 65 or over, while the at-risk-of-poverty rate in Slovenia in 2018 was 12.2% for persons under 65 and 18.3% for persons aged 65 or over (Eurostat, 2020b). This situation is mainly due to the high at-risk-of-poverty rate for women aged 65 and over. In 2017, it was 22.3% (Figure14).

Figure 14: At-risk-of-poverty rate – a comparison of younger (under 65) and older (65 and over) generations, EU-28 and Slovenia, by sex, 2018 (in %)



Source: Eurostat (Eurostat, 2020b)

The high at-risk-of-poverty rate of elderly women is also due to a great number of elderly women living alone and women receiving relatively low pensions in general. In Slovenia in 2018, 41.7% of women aged 65 and over lived alone while the proportion of men aged 65 and over living alone was 20.9%, which is half less (Eurostat, 2020d). In Slovenia, the average pension is relatively low compared to average salary. The replacement rate for pensions[11], which shows the ratio between the gross pension and the gross pre-retirement income, was 45% in Slovenia in 2018, which is below the EU average of 58% (Eurostat, 2020a). Care must be taken when interpreting this information, as the majority of pensions in Slovenia are not subject to personal income tax and pensions are also exempt from social security contributions, which makes their comparison with other countries difficult. The OECD (2020) published data on the net replacement rate between pension and pre-retirement earnings[12] where in 2018, Slovenia was below the EU-28 average of 63.5% for men with 57.5%. In the same year, the net replacement rate for women in Slovenia was 60%, also lower than the EU-28 average of 63%.

According to the Pension and Disability Insurance Institute, the average net old-age pension in Slovenia in 2019, without the proportioned pension[13]and partial pensions, was EUR 740.17, whereby the female pensioner received on average EUR 696.62 and the male pensioner received EUR 790.01. According to this data the gender

11 The replacement rate for pensions or the replacement ratio is the ratio between the median gross pensions of pensioners aged 65–74 and the median gross income from employment or self-employment of the active working population aged 50–59 (SORS, 2018a; Eurostat, 2020a).

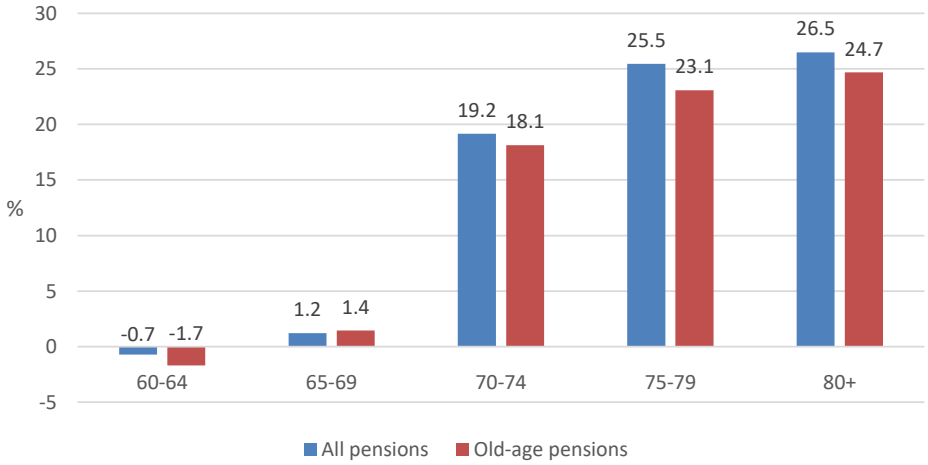
12 The OECD defines the net replacement rate as the individual net pension entitlement divided by net pre-retirement earnings.

13 Pro-rata pensions assessed under the provisions of international agreements (i.e. recipients of these pensions also receive a pension from abroad) are excluded from the calculations because they do not reflect the objective situation and lower the level of the lowest pensions.

pension gap[14] in 2019 was 11.8% (ZPIZ, 2020b). In the previous years, the gender pension gap was slightly higher, namely 12.7% in 2018 (ZPIZ, 2019a) and 13.7% in 2017 (ZPIZ, 2018). The situation in different if only old age pensioners (without proportioned pensions and partial pensions), who retired in 2018 and 2019, are taken into account, as women received higher pensions than men. In 2018, the pensions of new female pensioners were 3.4% higher than the pensions of new male pensioners. In 2019, the difference was 4.2% (ZPIZ, 2020a). This leads to the conclusion that the gender pension gap is mainly a result of pensions from older groups of pensioners.

According to Eurostat data, which are based on EU-SILC data, the gender pension gap[15] for persons aged 65 and over in 2017 was higher than the gender pension gap calculated from the ZPIZ data, as it amounted to 17.8% (Figure 8). The difference arises because of pension-related incomes included in the EU-SILC study. In the EU-SILC data, pensions are split into old-age, widow(er)'s/survivors' and disability pension; however, all other ZPIZ benefits (such as attendance allowance, disability allowance and a yearly bonus for pensioners) are added to the basic amount of pension as well. At the same time, pensions also include disability insurance benefits. For a more detailed analysis of the gender pension gap, the EUROMOD model can be used (Kump, Kalar, & Majcen, 2019), which is a tax-benefit microsimulation model and also provides a good data base for the analysis of the gender pension gap. The EUROMOD model for Slovenia uses the data from EU-SILC; however, greater accuracy is ensured by using the national version of EU-SILC, which enables for amounts of pension to be isolated. The data in Figure 15 support the assumption that the gender pension gap widens with age. While pensions of women are higher than pensions of men in the 60–64 age group, the pensions of women in the 65–69 age group are 1.2% lower. In older age groups, the gender pension gap widens significantly: in the 70–74 age group, the pensions of women are 19.2% lower than the pensions of men, in the 75–79 age group they are 25.5% lower, and for women aged 80 and over, the pensions are 26.5% lower than those of men.

Figure 15: Gender pension gap between all pensioners and old age pensioners in Slovenia by age group, 2017 (in %)



Source: EUROMOD model (Kump et al., 2019), own calculations.

Such a large difference in the gender pension gap by age groups can also be due to the fact that, unlike younger female pensioners, the female pensioners from older age groups were able to retire with shorter pension contribution period under the then applicable pension legislation and therefore received lower accrual rates in their pension assessment.[16] It should also be noted that the gender pension gap is also affected by the method of indexation of pensions, as pensions are indexed to 60% of the increase in the average gross salary and to 40% of the average increase in the cost of living. This means that longer one receives the pension, the lower it is compared to salaries This means that as the age increases, the pension gets lower compared to salary., which affects the pensions of women more than the pensions of men due to the longer life expectancy of women.

If only old-age pensions are considered, the gender pension gap in the older age groups is slightly narrower than when all pensions are considered. This means that lower widow's pensions also contribute to the gender pension gap of older female pensioners to a certain extent.

14 The pension gap is calculated using the following formula: $(1 - \frac{\text{average pension for women}}{\text{average pension for men}}) * 100$

15 This is based on all pensions, not just old-age pensions.

16 There are also other reasons such as lower level of education and the related lower earnings of women, which lead to lower pensions and a higher number of women receiving a widow's pension.

3 LABOUR MARKET ANALYSIS BASED ON THE DATA PROVIDED BY THE PENSION AND DISABILITY INSURANCE INSTITUTE OF SLOVENIA

For the purposes of analysing how individual factors in the labour market affect the gender pension gap, the ZPIZ drew a sample of pseudonymised and individualised data relating to 120,000 insured persons (persons who were not retired) and pensioners who were alive on 31 December 2017.

The insured persons were persons who were covered by insurance up until 31 December 2017 but were not yet retired. After the data were prepared and units with missing data excluded, an analysis was made on the basis of data relating to 89,907 insured persons. Data on insured persons included the following information: gender and year of birth, insurance hours (per week), start and end dates of insurance, reason for the insurance, contribution period, salary, hours of salary compensation, and hours of overtime work.

The data on pensioners are data on persons who were kept by the ZPIZ as pension recipients as at 31 December 2017. For a comprehensive analysis of pensioners, data on 29,996[17] pensioners were combined and collected from:

- the record of the retirement procedure (year of birth, gender, the law and article under which the pension was granted/calculated, type of benefit, pension assessment base, accrual rate, accrual rate increase or decrease, purchase of the pension qualifying period, special qualifying period, years of pension qualifying period completed abroad, amount of partial pension);
- data on the salary history of pensioners (period, salary, hours of regular work, overtime, hours of salary compensation);
- data on beneficiaries of retirement benefits (type of benefit, amount, date of start of payment, date of termination of payment and the reason for termination, the total number of months of receiving the benefit and the total amount of the benefit in 2017).

When analysing the existing data, certain limitations that impacted on the analysis considerably should be taken into consideration:

1. Data on insured persons include information that relates only to periods when individuals were employed or otherwise insured in Slovenia and not to periods when they were employed abroad.
2. Data on insured persons may contain errors, as they will be checked and corrected during the retirement procedure.
3. The insurance basis code enables a (limited) analysis of insurance reasons, such as self-employment, unemployment, parental leave, etc. Despite this, most recipients of parental benefit could not be identified, since the period of receiving parental benefit for employed recipients is recorded as hours of receiving (any kind of) salary compensation, which cannot be distinguished from salary compensation for other reasons (e.g. sickness).

17 The total number of the analysed insured persons and pensioners was somewhat lower than 120,000 as 97 individuals were excluded from the analysis since much of the data relating to them were missing.

4. Data do not enable a cause-and-effect analysis such as the effect of parenthood on salaries, since too little data are available Such analysis would be possible only if additional data would be available: data on the education, occupation, sector of employment and the number of children of an individual. A lower or higher salary may be due to any of the aforementioned factors/decisions and not just the gender and age of the person and hours of receiving salary compensation.
5. Data on pensioners include only data for years when a person was employed at least half of the year and the salaries were included in the calculation of the pension assessment base.
6. For pensioners, there are no data on the reason for insurance in an individual year.
7. For pensioners, there are only data on individuals up to 67 years of age, which means that, on the basis of these data provided by the ZPIZ, an analysis of the gender pension gap in older age groups is not possible.
8. In the analysis, old age pensioners who were at least 59 years old in 2017 were taken into account, which enabled us to exclude »special« cases to the greatest extent possible.

The data enable the analysis of differences between men and women in the labour market despite the aforementioned limitations, which, however, must be taken into consideration in drawing up the conclusions of the analysis.

3.1 Analysis of data on pensioners

Data on the average pension in Table 1 confirm that the gender pension gap in Slovenia is a results of differences in pensions in the older population of pensioners,[18] since the data on the sample of pensioners up to 67 years of age show that the average pension for women in this age group in 2017 is 2.7% higher than the average pension for men. The official data show that in 2017 the gender pension gap in Slovenia amounted to 13.7% if the data provided by the ZPIZ are taken into account or 17.8% if the calculations on the basis of EU-SILC survey are taken into account.[19] However, Figure 15 in Chapter 2.5.2 shows that, in Slovenia, a gender pension gap exists for pensioners aged 70 and above. Because of the character of the sample, which includes only pensioners up to 67 years of age, the analysis focuses only on younger pensioners. The data provided by the ZPIZ and the calculations on the basis of EUROMOD data also confirm that pensions of women aged 60 to 64 years were higher compared to pensions of men in that same age group.

The difference in pensions for men and women (featured in the sample) varies depending on the age group and the legislation under which they retired, since the sample includes a range of very different pensioners. The calculation of the average pension and of other indicators takes into account all pensioners who were between 59 and 67 years old in 2017 and who retired in or after 2000. This means that pensioners who retired under two different legislations and under different conditions are being compared, which is why data on pensioners who retired under the ZPIZ-1 are displayed separately from data on pensioners who retired under the ZPIZ-2.

18 Since the sample of pensioners includes only data on pensioners up to 67 years of age, it is not representative of the entire population of pensioners. In addition, the sample does not enable an analysis of the situation pertaining to pensioners who are over 67 years old.

19 Differences in the estimated gender pension gap are also due to methodological differences and different data bases. More on this in Chapter 2.5.2.

Table 1: The amount of pension, years of pensionable service, pension assessment base and accrual rate for old age pensioners by age in 2017

Age	Old-age pension		Retired under the ZPIZ-2								Retired under the ZPIZ-1							
			Old-age pension		Pension qualifying period		Pension assessment base		Accrual rate		Old-age pension		Years of pensionable service		Pension assessment base		Accrual rate	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
59	655.9	607.1	609.2	647.5	40.0	40.0	1,047	993	58.6	64.1	735.9	560.3	38.0	37.6	966	670	77.5	83.1
60	656.1	615.1	624.5	677.5	40.5	39.7	1,093	1,070	58.3	64.2	719.8	568.3	38.5	37.3	928	684	78.2	83.2
61	640.5	634.8	614.4	746.9	40.5	39.7	1,131	1,230	58.4	64.2	677.6	594.1	38.6	37.2	862	724	77.8	83.2
62	625.4	649.0	603.8	749.3	40.7	39.4	1,118	1,224	58.5	64.4	646.4	636.9	38.9	35.6	845	792	77.9	82.9
63	618.1	650.8	607.1	592.3	40.0	32.9	1,204	986	58.6	58.5	623.3	655.2	39.2	36.5	843	830	77.0	82.6
64	639.2	626.3	615.6	468.0	39.7	31.6	1,238	1,007	58.2	52.4	645.3	640.5	38.9	36.5	881	813	77.1	82.2
65	604.2	631.6	417.2	302.0	32.5	30.9	1,094	964	49.4	49.4	661.9	652.0	38.6	36.6	924	857	77.3	82.1
66	599.6	630.2	343.8	291.0	31.1	23.0	1,075	911	46.7	40.9	668.0	636.9	39.1	34.6	951	857	77.4	80.9
67	594.1	664.5	258.5	290.3	29.2	24.7	1,026	894	44.3	41.3	657.5	671.5	38.9	34.5	959	887	77.1	80.8
Total	619.2	636.0	540.5	638.5	34.9	32.5	1,118	1,078	55.4	61.5	658.0	635.6	38.9	35.6	910	804	77.3	82.2

Note: The pension assessment base is indexed to the average salary growth in 2017.

Source: Data provided by the ZPIZ (2019b), own calculation.

On the basis of these data, it is evident that the pension assessment base of women who retired under the conditions of the ZPIZ-2 is on average 3.6% lower than the pension assessment base of men who retired under that same act, which is due to the fact that they received a lower salary during their employment. These women have fewer years of pensionable service than men, but due to the nature of the Slovenian pension system, the accrual rate for women is considerably higher than that for men, and this is why pensions of women are higher than pensions of men in most age groups. Under the ZPIZ-2 (the Pension and Disability Insurance Act, (ZPIZ-2), 2012), up to 2019, the accrual rate for men was 57.25% for 40 years of pension qualifying period, while the accrual rate for women decreased from 64.25% in 2013 to 63.5% in 2019, but it was still 6.25 percentage points higher than the accrual rate for men. Data in Table 1 show that, on average, the accrual rate for women is 6.1 percentage points higher than the accrual rate for men.[20] The difference between the accrual rate for men and for women is expected to narrow in the future. Under the latest amendment to the ZPIZ-2, the accrual rate for women and men will be equalised by 2025 and will be 63.5% for 40 years of pension qualifying period; the accrual rate for men will increase, and the accrual rate for women will not decrease as planned before the amendment. On the other hand, in 2020, the accrual rate will increase by 1.36% up to a maximum of 4.08% due to care for each born or adopted child[21]. As a rule, a woman is entitled to the additional accrual rate unless the man was the beneficiary of the right to parental compensation for at least 120 days. This means that the accrual rate for women who retire is expected to continue to be higher than the accrual rate for men, but there will be a smaller difference between men and women.

Mention should also be made of another redistributive element of the Slovenian pension system, which, among other things, narrows the gender pension gap: the maximum and minimum pension assessment base. Pensions are calculated as a multiple of the pension assessment base and the accrual rate, which depends on the length of pension qualifying period. If the calculated pension assessment base is lower than the minimal pension assessment base, which is 76.5% of the average monthly salary, the pension is assessed from the minimum pension assessment base. If the calculated pension assessment base is higher than the maximum pension assessment base, which is four times the minimum pension assessment base, the pension is assessed from the maximum pension assessment base. Among persons who retire, a higher share of women than men receive a pension assessed from the minimum pension assessment base (37.6% of all newly retired women and 27.6% of all newly retired men in 2019) and a higher share of men than women receive a pension assessed from the maximum pension assessment base (2.3% of newly retired men and 1.0% of newly retired women in 2019). [22]This means that more women than men have a higher pension than they would have had without this feature of the Slovenian pension system.

A comparison of pensioners who retired under the conditions of the ZPIZ-1 shows that the pension assessment base for women was 11.6% lower than the pension assessment base for men. These women have, on average, completed 3.3 years of pension qualifying period less than men. The difference is slightly higher more than for men and women who retired under the ZPIZ-2 (2.4 years) and results in a lower accrual rate for women. Women have, on average, pensions that are 3.4% lower than those of men, as is not the case with pensioners who retired under the ZPIZ-2. In the group of pensioners who retired under the ZPIZ-1, lower pensions of women are due to the greater difference between the pension assessment base for men and the pension assessment base for women (on average, an 11.6% lower pension assessment base for women who retired under the ZPIZ-1 and, on average, a 3.5% lower pension assessment base for women who retired under the ZPIZ-2) and the smaller difference between the accrual rates for both groups of male and female pensioners (on average, a 6.3% higher accrual rate for women compared to the accrual rate for men under the ZPIZ-1 and an 11% difference in favour of women under the ZPIZ-2).

The lower pension assessment base for women is due to women receiving lower salaries during their emploment, which is shown in Figure 16. Figure 16 also shows **average gross hourly rates by age**, which are

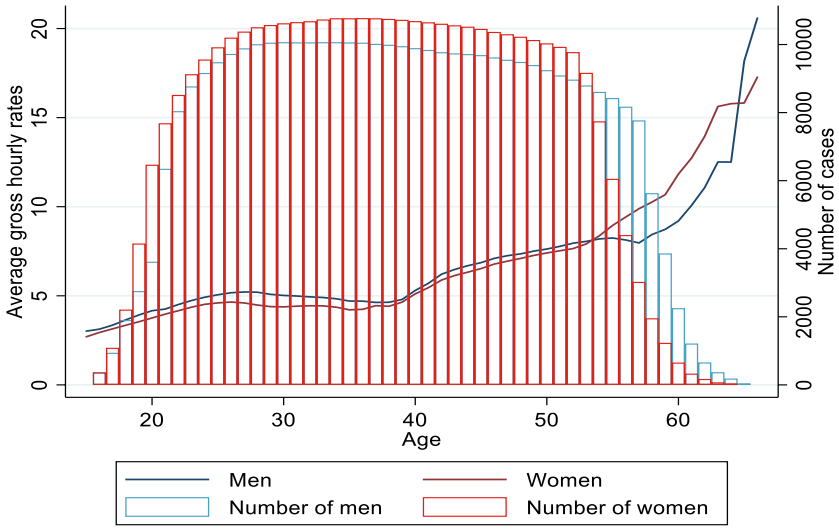
20 In this regard, it should be noted that male pensioners aged 65 or over in 2017 and female pensioners aged 63 or over in 2017 who were featured in the sample retired after having completed a smaller number of years of pension qualifying period, which results in the low accrual rate for these age groups. Since these men and women retired under the ZPIZ-2 after 2013 (mostly in the years that followed), they are featured in the sample among male pensioners aged 65 or over in 2017 and female pensioners aged 63 or over in 2017, in particular those who retired having fewer than 40 years of pension qualifying period and who were not able to retire when they were around 60 years old. However, this does not mean that the accrual rate for pensioners of that age will continue to be that low in the future.

21 Pensioners will be able to choose between the additional accrual rates and the lowering of their retirement age to qualify for a pension due to care for children.

22 Data relate to old-age retirement and disability retirement.

calculated on the basis of data on the salary histories of pensioners. The average gross hourly rate for employees at the age of 20 refers to the average of all pensioners when they were 20 years old, although they reached the age of 20 in different years. The columns show the number of women and men who received a salary at a particular age, which indicates that there is a sufficient number of observances to perform an analysis of salaries (and other characteristics) only for the age group from 20 to 58. Gross hourly rates are adjusted by the consumer price index to the 2017 level, as this is the only way to compare salaries from different periods. On average, women were paid less per hour of work than men of the same age, which is not the case for women aged 54 and over, whose gross hourly rates were on average higher than those of men. In terms of gross hourly rates, women aged 28 lagged behind men of the same age the most, as, on average, their hourly rates were 13.9% lower than those of men. Women in older age groups lagged behind men in terms of gross hourly rates to a lesser extent, since the average gross hourly rate for women aged 35 was 10.4% lower than the gross hourly rate for men of the same age, and the average gross hourly rate for women aged 45 was 4.9% lower than the gross hourly rate for men of the same age. As mentioned above, gross hourly rates for women aged 54 or over were higher than those for men in the same age group. Higher average gross rates for women in older age groups can be attributed to the fact that, when it comes to older women, it is mostly women with higher educations and higher salaries who remain in the labour market. he data should be interpreted with caution, since only hourly rates for women and men of the same age have been compared and no data on the sector of employment, education, occupation, etc., are available.

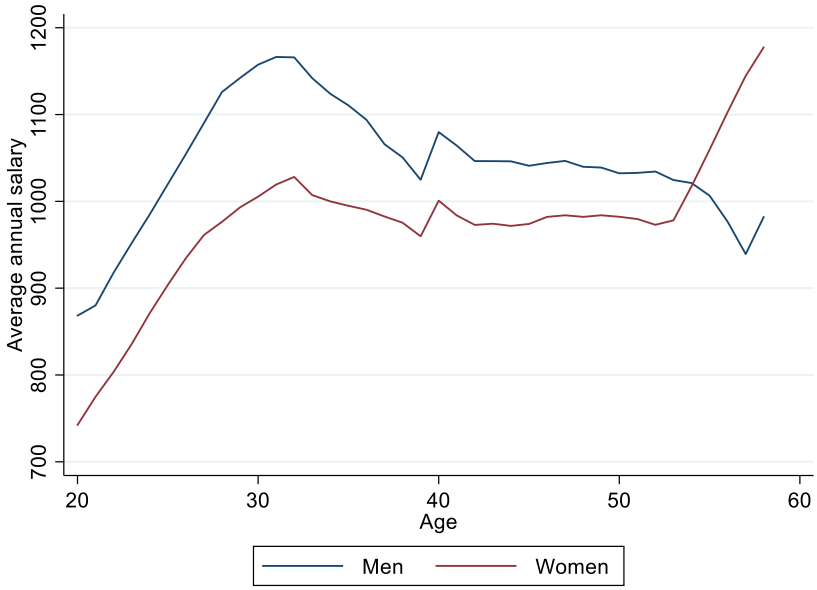
Figure 16: Average gross hourly rates by age, old age pensioners aged 59–66 in 2017



Source: Data provided by the ZPIZ (2019b), own calculation.

Figure 17 shows the fluctuation of the amount that is taken into account in the calculation of the pension assessment base according to the age of pensioners. **The pension assessment base** is calculated as the average of annual amounts from a specific number of most favourable consecutive years of service (the number of years was increasing; currently, the 24 most favourable consecutive years are taken into account). The annual amount that is taken into account in the calculation of the pension assessment base is calculated only for those years when an individual was covered by insurance for at least half of the year; net amounts are taken into account (calculated on the basis of the average tax and contribution rate), and amounts are adjusted to average wage growth. Annual amounts for the calculation of the pension assessment base for men and women increased until their early thirties, but afterwards, their annual amounts decreased; the decrease cannot be attributed solely to age, as the period concerned is the 1980s, which were marked by high inflation and a drop in salaries in real terms. A comparison of men and women shows that the annual amounts for the calculation of the pension assessment base for women at the age of 20 were 14.5% lower compared to the annual amounts for men of the same age. Furthermore, the annual amounts for women at the age of 30 were 13.1% lower than those for men at the same age. Later on, the difference narrowed. The annual amounts for the calculation of the pension assessment base for women at the age of 40 were 7.3% lower compared to the annual amounts for men of the same age; however, the annual amounts for women at the age of 54 and over were higher than those for men in the same age group.

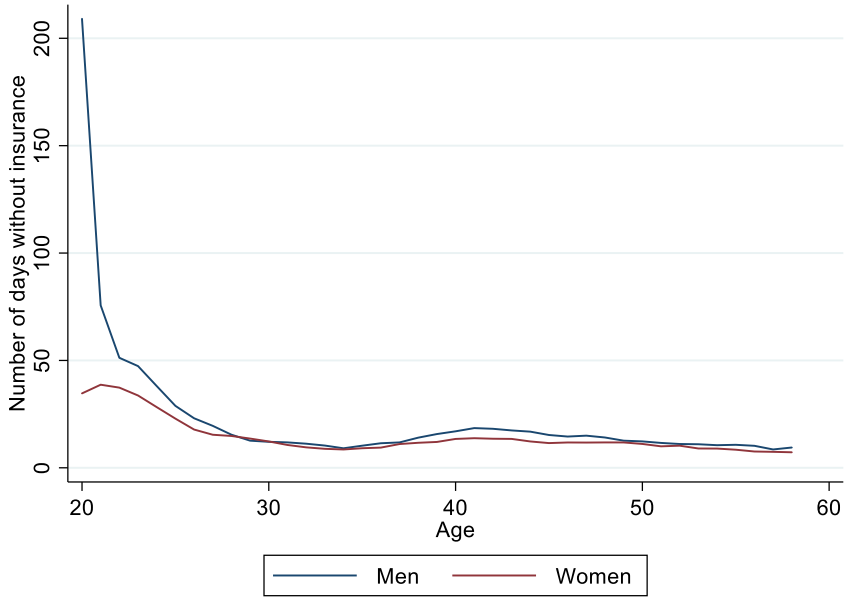
Figure 17: Annual amounts taken into account in calculating the pension assessment base by age, old age pensioners aged 59–66 in 2017



Source: Data provided by the ZPIZ (2019b), own calculation.

The amount of salary is not the only indicator of differences between men and women in the labour market. Figure 18 shows **the average number of days in a year when a person was not covered by insurance**, by age. It shows that the number of days without insurance is higher for men than women; the difference is greatest at the age of 20, which could also be attributed to military service.

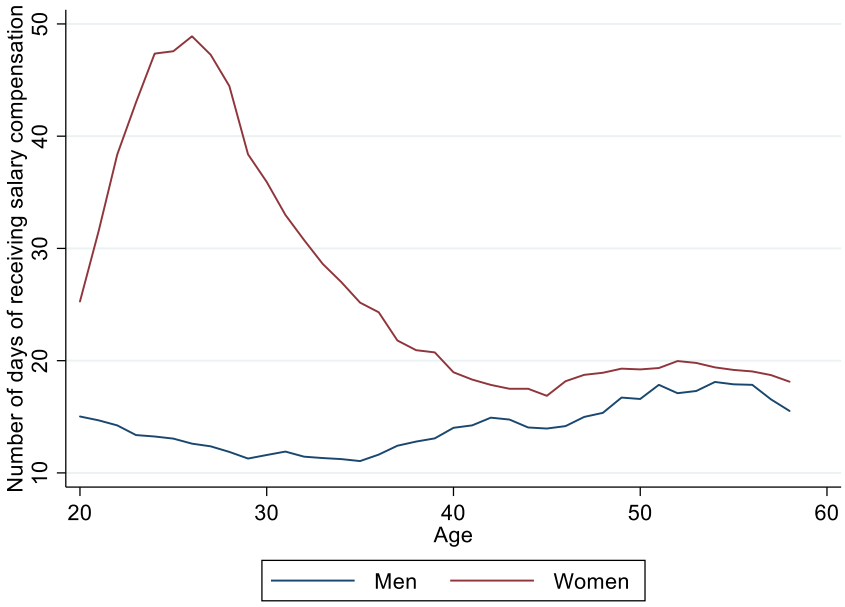
Figure 18: Number of days without insurance, by age, old age pensioners aged 59–66 in 2017



Source: Data provided by the ZPIZ (2019b), own calculation.

On the other hand, the number of days in a year when a person received **salary compensation** during their employment is, on average, much higher for female pensioners than male pensioners (Figure 19). The difference was particularly significant between the ages of 20 to 40, when the number of days of receiving salary compensation was three times greater for women than men, which can be explained by absence from work due to parenthood, as after the end of parental leave, it is mostly women who are more often absent from work due to care for (sick) children.

Figure 19: Number of days of receiving salary compensation, by age, old-age pensioners aged 59–66 in 2017



Source: Data provided by the ZPIZ (2019b), own calculation.

3.2 Analysis of data on insured persons

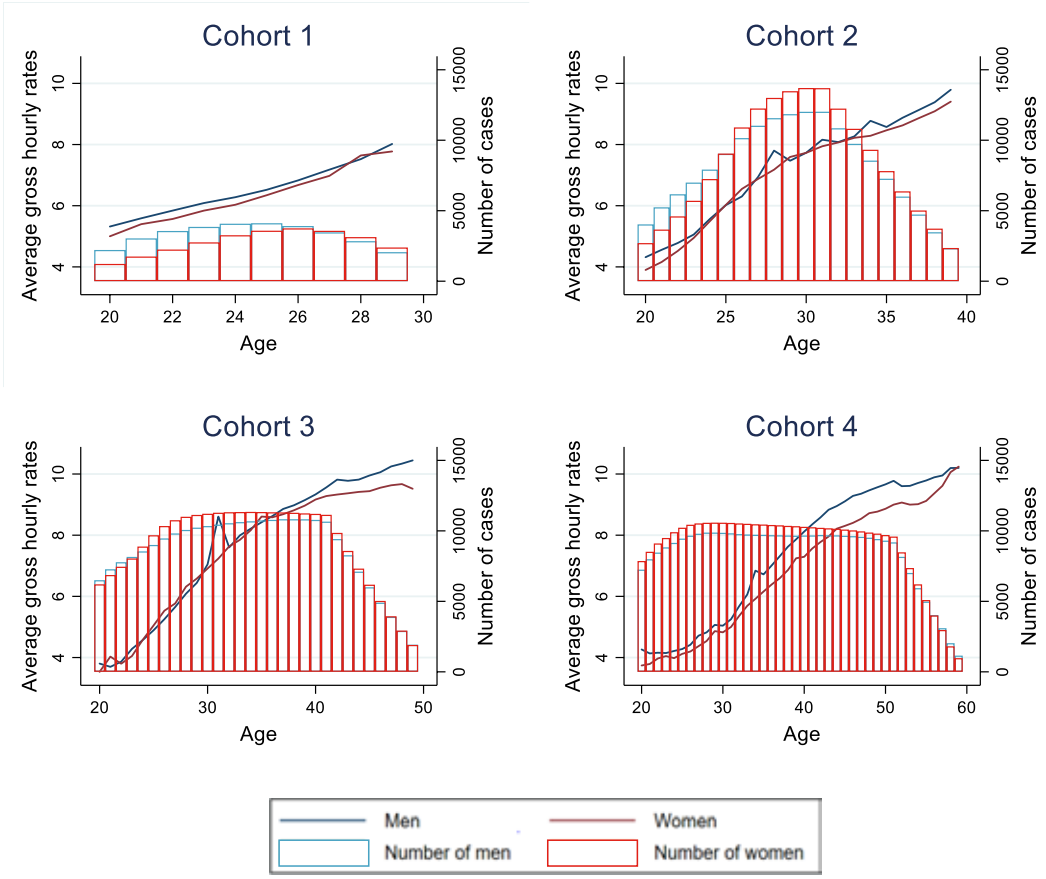
As was the case in pensioners, the situation of insured persons in the labour market at a particular age was analysed. Since the situation for today's thirty-year-olds is different than it was for those who were thirty years old ten, twenty or more years ago, the analysis was performed using the following cohorts:

- Cohort 1: persons aged 20–29 in 2017,
- Cohort 2: persons aged 30–39 in 2017,
- Cohort 3: persons aged 40–49 in 2017,
- Cohort 4: persons aged 50–59 in 2017.

Rather than on absolute values, the analysis of results focuses on the difference between men and women and the difference between different cohorts. For example, absolute values are high when analysing the number of days without insurance, which is because there is no record available for many persons for specific years. Therefore, we assume that they were without insurance for 365 days. Gender difference and the difference between cohorts are more important.

Figure 20 shows **average gross hourly rates** by age and sex for individual cohorts. The columns show the number of men and women at a particular age in a particular cohort. Since Cohort 1 contains a smaller number of persons, any further conclusions regarding this cohort should be made with caution. In addition, there is also a smaller number of persons aged over 38 in Cohort 2, persons aged over 47 in Cohort 3, and persons aged over 56 in Cohort 4, which means that any conclusions regarding these groups of persons should be made with caution. The data show that the hourly rate of women aged 20–29 and 50–59 in 2017 was lower than that paid to men at almost all ages. The hourly rates of women in Cohort 4 further decreased compared to the rates paid to men after these women reached the age of 30. The hourly rates of women aged 30–49 years in 2017 were similar to the rates paid to men. The data show that the hourly rates of women in Cohort 2 after they reached the age of 35 were lower than the rates paid to men and that the same was the case for women in Cohort 3 after they reached the age of 40. However, these statements should be read with caution, since the number of individuals decreases as the age increases, and the differences may be due to the smaller number of units being analysed. In addition to the smaller number of units, the results may be affected by a different structure of persons monitored (e.g. different education).

Figure 20: Average gross hourly rates by cohort, age and sex

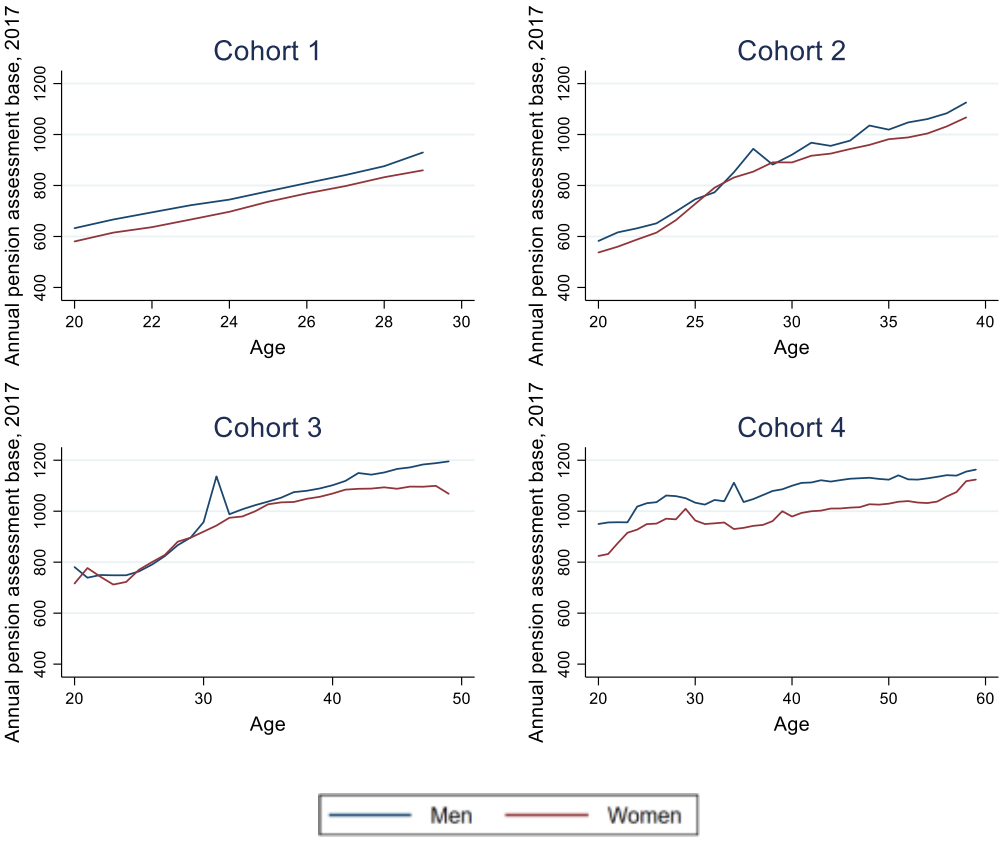


Source: Data provided by the ZPIZ (2019b), own calculation.

Similar conclusions can be made on the basis of Figure 21, which shows the comparison of annual amounts to be taken into account in the calculation of **the pension assessment base** for all four cohorts. Contrary to hourly rates, these amounts are adjusted to average salary growth up to 2017. Women at any age in Cohort 1 and Cohort 2 "earned" less than men for their future pension. The differences are smaller in Cohort 3 and Cohort 4, but the amounts for women are smaller than the amounts for men. The percentage difference between the annual amounts that are to be taken into account in the calculation of the pension assessment base for men and women at a particular age by cohorts varies considerably and does not show a particular pattern. The data show that the amounts that are to be taken into account in the calculation of the pension assessment base upon retirement for women in Cohort 1 and Cohort 2 at the age of 20–29 are considerably lower than the amounts for women at the same age in Cohort 3 and, in particular, Cohort 4.[23] For example, the annual amount that is to be taken into account in the calculation of the pension assessment base for a woman from Cohort 1 at the age of 25 is 4.5% lower than the amount taken into account for a woman from Cohort 3 at the age of 25, and the annual amount for a woman from Cohort 2 at the age of 25 is 5.5% lower than the amount for a woman from Cohort 3 at the age of 25. Differences are smaller when it comes to men, as the annual amount that is to be taken into account in the calculation of the pension assessment base for a man from Cohort 1 at the age of 25 is 1.7% higher than the amount taken into account for a man from Cohort 3 at the age of 25, and the annual amount for a man from Cohort 2 at the age of 25 is 2.4% lower than the amount for a man from Cohort 3 at the age of 25.

23 Higher pension-rating base amounts for men and women in Cohort 4 are also related to the situation in the 1980s, which is shown in Figure 17.

Figure 21: Annual amounts taken into account in calculating the pension assessment base by cohort, age and sex

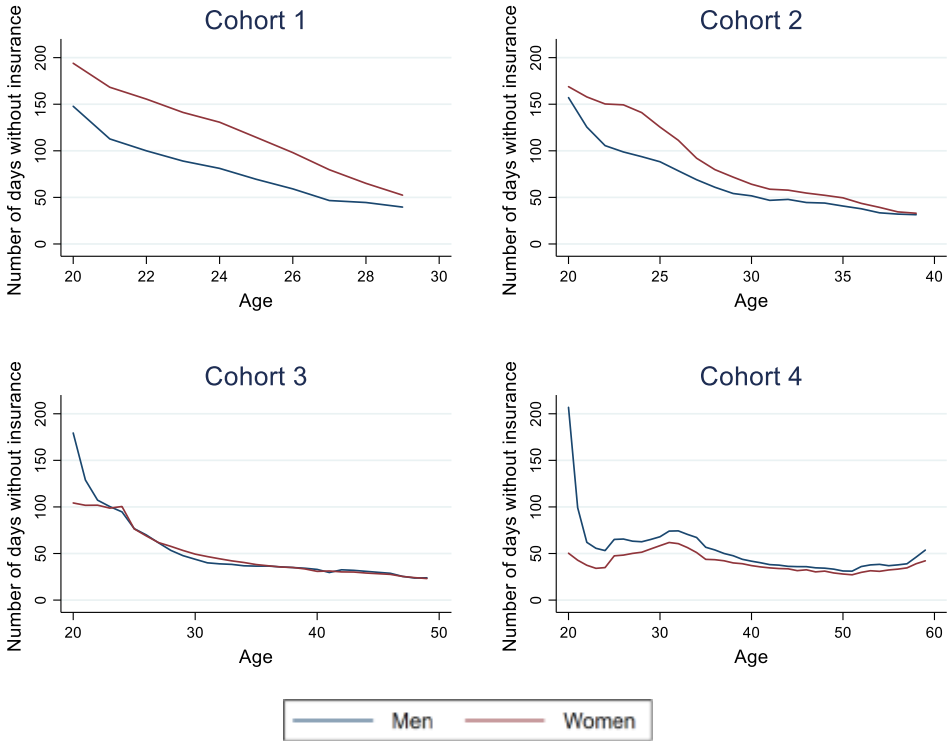


Source: Data provided by the ZPIZ (2019b), own calculation.

The salary level is not the only factor in the labour market that affects the amount of pension in the future; inclusion in the labour market and the number of hours worked per day are also important in this regard. Figure 22 shows **the number of days without insurance[24] in a year by age and sex** for individual cohorts. The number of days without insurance in a year decreased with age, but there are significant differences between men and women. Women and men aged 40–49 in 2017 had, on average, a similar number of days without insurance in a year, whereas women aged 50–59 in 2017 had fewer days without insurance than men in all age groups (by 14 days, on average, which accounted for 25%). The picture is different for cohorts of younger women, as women aged 20–39 in 2017 had considerably more days without insurance than men in the same age groups. Women in Cohort 1 had on average 52% more days without insurance compared to men, and women in Cohort 2 had on average 29% more days without insurance compared to men of the same age. The differences between men and women in these two cohorts were the greatest at the age of 26. The comparison of different generations of women is also interesting, as women in Cohort 1 at the age of 20–29 had on average 120 days without insurance, women in Cohort 2 at the same age had 125 days without insurance, women in Cohort 3 had 83 days without insurance, and women in Cohort 4 had 45 days without insurance. Since 2010, when the crisis was in full swing, women in Cohort 1 and Cohort 2 were aged 33 or less, therefore it could be concluded that, during the crisis, younger women had more difficulties in labor market.

24 The termination of insurance is a consequence of inactivity, unemployment with no right to salary compensation, or other grounds for insurance in another country.

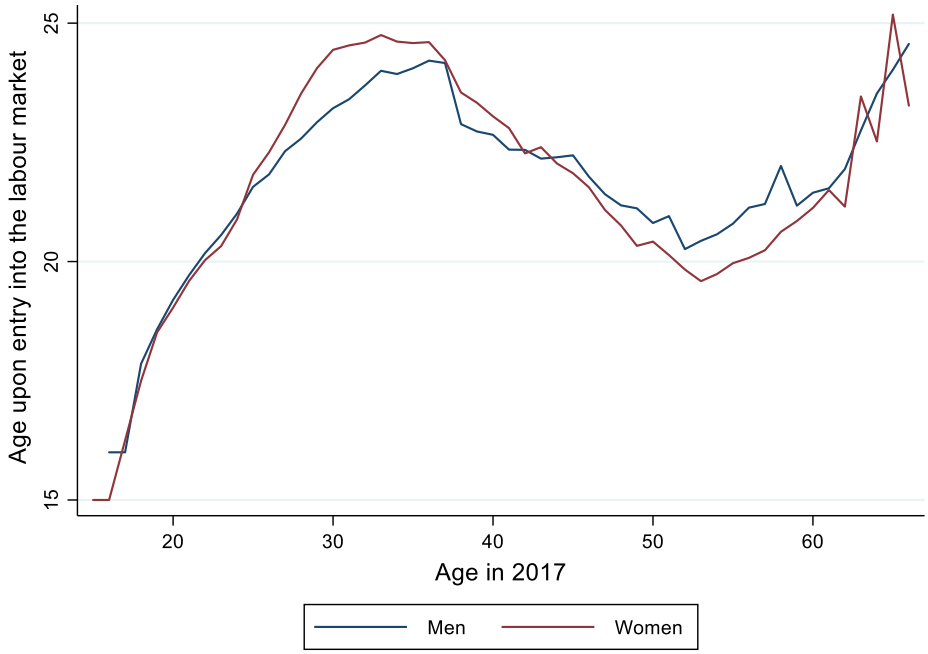
Figure 22: Number of days without insurance in a year by cohort, age and sex



Source: Data provided by the ZPIZ (2019b), own calculation.

Similar conclusions can also be made on the basis of Figure 23, which shows **the average age upon entry into the labour market** by age of men and women in 2017. Women who were aged 25–36 in 2017 entered the labour market on average 0.7 years later than men of the same age, whereas the exact opposite was the case with women aged 45 or over in 2017. These generations of women entered the labour market on average 0.7 years sooner than men of the same age. Women aged 29–31 in 2017 entered the labour market more than a year later than men. These differences can partly be attributed to the financial crisis (in 2010, when the recession was already in full swing, these generations were aged 18–29), as younger women had more difficulties in entering the labour market compared to young men. Another important reason is the fact that more women than men are enrolled in tertiary education, which delays their entry into the labour market.

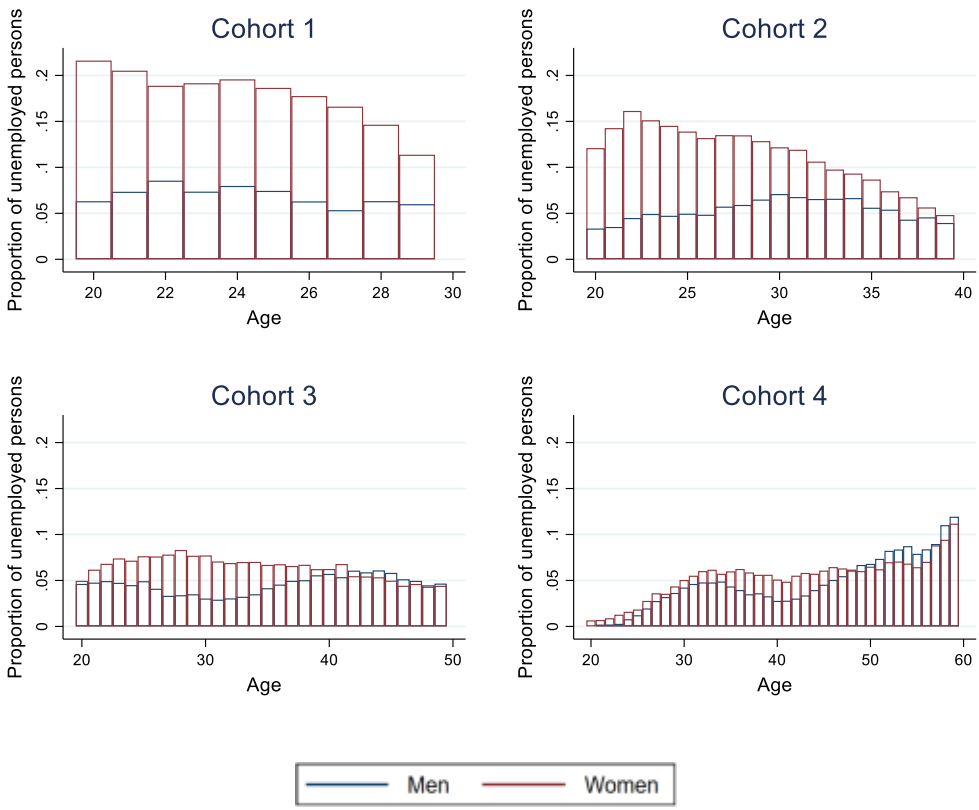
Figure 23: Age upon entry into the labour market by cohort, age and sex



Source: Data provided by the ZPIZ (2019b), own calculation.

Similar conclusions can be made on the basis of Figure 24, which shows **the proportion of unemployed persons.** Unemployed persons were considered to be persons from the sample for whom it was recorded at a particular age that they were not employed, but they were insured on other grounds,[25] as shown in the ZPIZ records; this is why this definition of unemployment is not the same as the official unemployment statistics. Because of the fact that it is mostly women who received parental benefit and parental allowance, and that, therefore, it is mostly women who had their employment terminated before or during the period of receiving parental benefit, the number of unemployed women is disproportionately higher than the number of unemployed men.[26] On the other hand, if these women were excluded from the group of unemployed persons, this would mean that the number of unemployed women would be underestimated, as instead of parental compensation, some of these women (might) have received unemployment benefit. Taking into consideration the aforementioned limitations of data and the related limitations, it can be established that the proportion of young women who were aged 20–29 and unemployed in 2017 is more than 2.6 times the proportion of unemployed men of the same age. The proportion of those in Cohort 1 who had experienced unemployment was 6.8% for men and 17.9% for women. Similarly, for women who were aged 30–39 in 2017, the proportion of unemployed women at the age of 20–30 was considerably higher than the proportion of unemployed men of the same age; the proportion was 5.3% for men and 11.3% for women. After the age of 30, the gap between men and women narrowed. In Cohort 3 and Cohort 4, the proportion of unemployed women at almost all ages (except for women in Cohort 3 aged 42 or over and women in Cohort 4 aged 48 or over) was also higher than the proportion of unemployed men, but the proportions are considerably smaller: 4.6% unemployed men and 6.4% unemployed women in Cohort 3, and 4.7% unemployed men and 5.3% unemployed women in Cohort 4. It is interesting that the difference between the proportion of unemployed men and unemployed women in Cohort 4 is greatest at around the age of 40. This is the period of the 1990s when the economic crisis after Slovenia's independence obviously affected women more than men.

Figure 24: Proportion of unemployed persons by cohort, age and sex



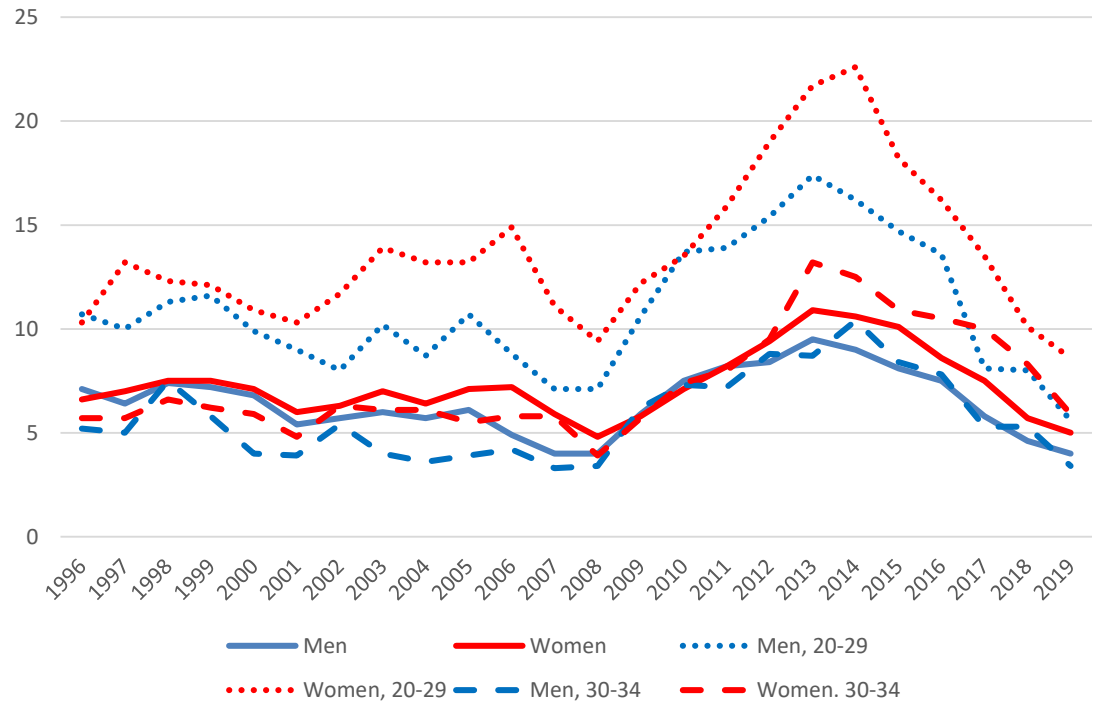
Source: Data provided by the ZPIZ (2019b), own calculation.

25 Recipients of unemployment benefit, unemployed persons who do not receive unemployment benefit, recipients of parental benefit after the termination of employment relationship, recipients of parental benefit with no right to parental leave, recipients of parental allowance, unemployed recipients of disability salary compensation, recipients of partial payment for loss of income, disabled persons out of employment.

26 In the sample, such women are featured to a greater extent after 1994.

Due to differences in the definition and identification of unemployed persons in relation to official unemployment statistics, the ZPIZ sample does not include persons who are unemployed and not insured (they do not receive unemployment benefit and are not insured on any other legal basis). As shown in Figure 25, the difference between the proportion of unemployed persons according to official data and the estimated proportion of unemployed persons on the basis of the ZPIZ sample (Figure 24) is greater for men than women, which is due to the fact that fewer (young) men are insured as recipients of compensation and other benefits related to parenthood. Official data on the unemployment rate (Figure 25) show trends similar to those shown in Figure 24. The unemployment rate was higher for women than men in almost the entire period, and the unemployment rate for young people (aged 20–29) was higher than the overall unemployment rate in the entire observed period from 1996 to 2019. The position of young people deteriorated particularly in the period between 2008 and 2014, and young women were in an even worse position than men. In 2014, the unemployment rate was 9% for all men and 10.6% for all women, and 16.2% for men aged 20–29 and as much as 22.6% for young women. The trend in unemployment in the 30–34 age group is also interesting. Until 2012, the unemployment rate in this age group was close to the unemployment rate for all men and women, and after 2013 the unemployment rate for women in this age group increased considerably. In 2013, the unemployment rate was 10.9% for all women in the population, and as much as 13.2% for women aged 30–34. The markedly higher unemployment rate for women in that age group moved closer to the unemployment rate for all women as late as in 2019, when the unemployment rate was 5% for all women and 5.9% for women aged 30–34.

Figure 25: Unemployment rate by age and gender, Slovenia



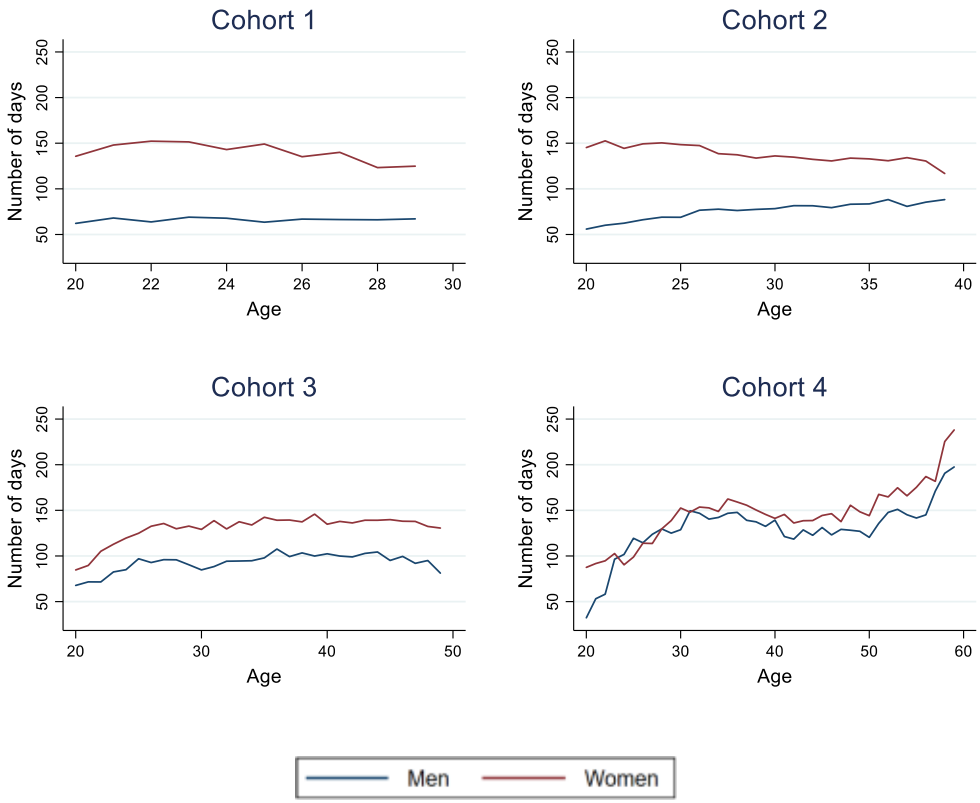
Source: (Eurostat, 2020v)

Figure 26 shows the average **number of days of unemployment** in a year by sex and age. In all cohorts and at (almost) all ages, women were unemployed longer than men of the same age. This conclusion should also take into account differences in the definition of unemployment for men and women.[27] The difference in the number of days of unemployment for men and women is most noticeable in Cohort 1 and Cohort 2. In Cohort 1, women were, on average, unemployed for 140 days, and men for 66 days, which means that women's unemployment lasted 2.1 times longer than men's. In Cohort 2, in the group of persons aged 30–39 in 2017, women were, on average, unemployed for 138 days, and men for 76 days, and the gap between men and women began to narrow after the age of 30. The comparison of women of different generations shows that, at the same age, younger women were unemployed for a longer

27 An unemployed person and the period of unemployment are defined as described in Figure 24.

period of time than older women, which can party be attributed to the fact that the sample comprises women who are without employment, but receive salary compensation and other benefits related to parenthood. Women in Cohort 1 at the age of 20–29 were unemployed for 140 days, women in Cohort 2 at the same age were unemployed for 144, women in Cohort 3 for 117 days, and women in Cohort 4 for 106. The differences between men and women at the age of 20–29 were greater for younger women; the ratio between days of unemployment was 2.1 for men and women in Cohort 1, around 2.1 for men and women in Cohort 2, 1.4 for men and women in Cohort 3, and 1.1 for men and women in Cohort 4. The higher unemployment rate and the longer duration of unemployment for younger women, and the greater differences between men and women of younger generations show that young women are the most affected by the tougher labour market conditions. One of the reasons for this is that younger women are less "appealing" to employers because of parenthood (actual or expected) and, consequently, the expected absence from work due to parental leave, care for a sick child and, in general, the reconciling of work and family life.

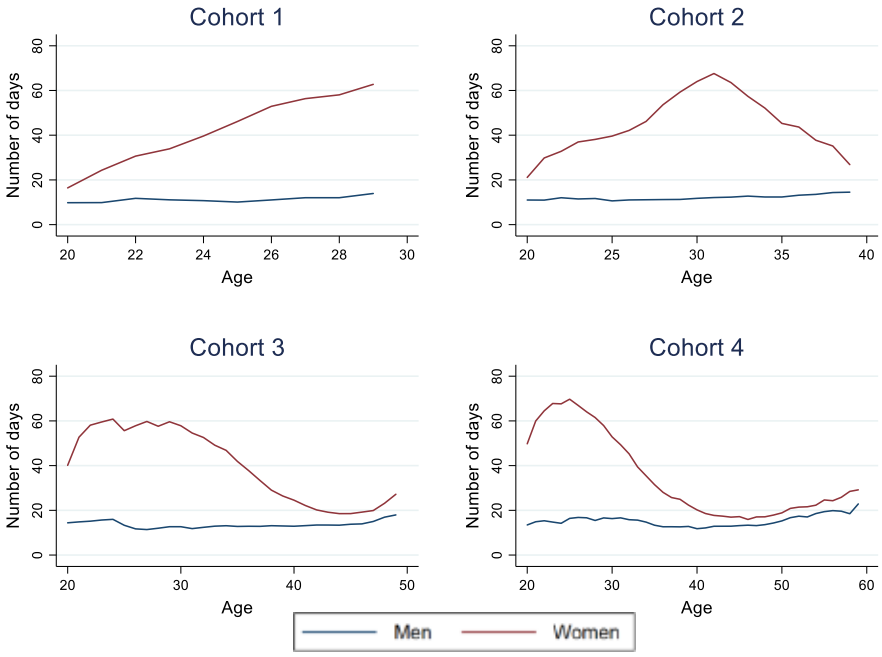
Figure 26: Average number of days of unemployment in a year for unemployed persons by cohort, age and sex



Source: Data provided by the ZPIZ (2019b), own calculation.

Figure 27 shows the average **number of days of receiving salary compensation** in a year by sex and age. In the all four analysed cohorts, women received salary compensation for a considerably higher number of days than men of the same age. In all cohorts, the gap between men and women began to narrow at around the age of 30, and the average number of days of receiving compensation for women came closer to that for men only after the age of 40. Women in Cohort 1 received salary compensation for 42 days in a year on average, and men received salary compensation for 11 days on average. Similar holds true for other cohorts: in Cohort 2, women received salary compensation for 45 days and men for 12 days in a year on average; in Cohort 3, women received salary compensation for 40 days and men for 14 days in a year on average; in Cohort 4, women received salary compensation for 35 days and men for 15 days. It can be concluded with great certainty that this is due to absence from work due to parental leave and childcare; unfortunately, the data on the time of receiving compensation by cause cannot be separated.

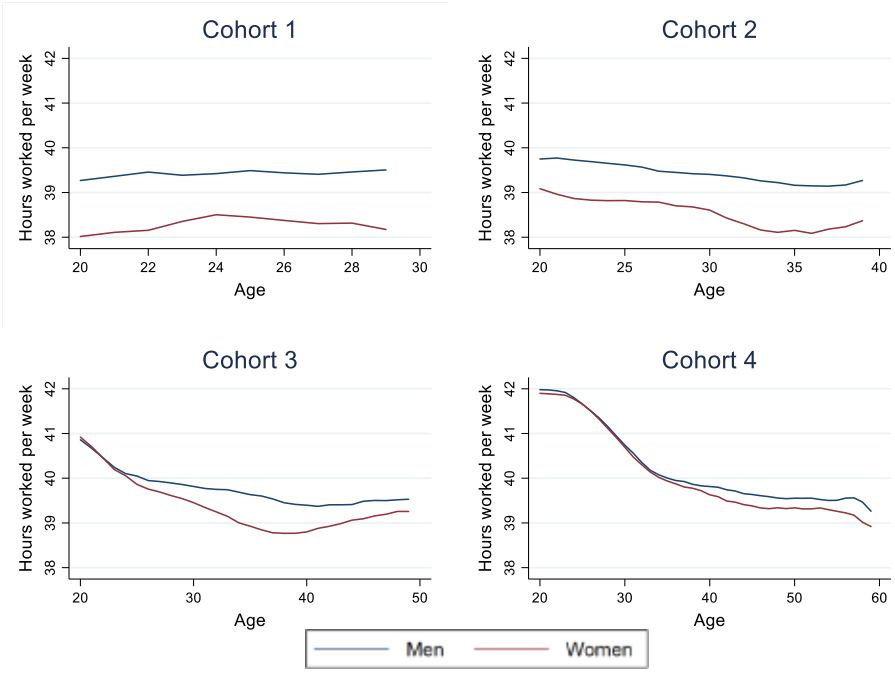
Figure 27: Number of days of receiving salary compensation in a year by cohort, age and sex



Source: Data provided by the ZPIZ (2019b), own calculation.

Women more often work part-time than men, most probably to reconcile work and family life, which is evident from Figure 28. The average number of hours worked per week is lower for women than for men in all cohorts and at all ages. There is a greater difference between the average number of hours worked per week for men and for women in Cohort 1 and Cohort 2, as women in Cohort 1 worked 2.9% of hours per week less than men in the same cohort, and women in Cohort 2 worked 2.2% of hours per week less than men in the same cohort. This can be partly explained by an increasing number of women who work part-time due to parenthood, since the number of persons who have the right to the payment of contributions because they work part-time due to parenthood is increasing (there were 8,979 such persons in 2010 and 14,285 in 2018). In Cohort 3 and Cohort 4, the difference between men and women became more significant at a later age, namely at the age of 30–40 in Cohort 3 and after the age of 40 in Cohort 4. This could be partly due to many companies having reduced working hours during the financial crisis; it is interesting that women had more reduced working hours than men.

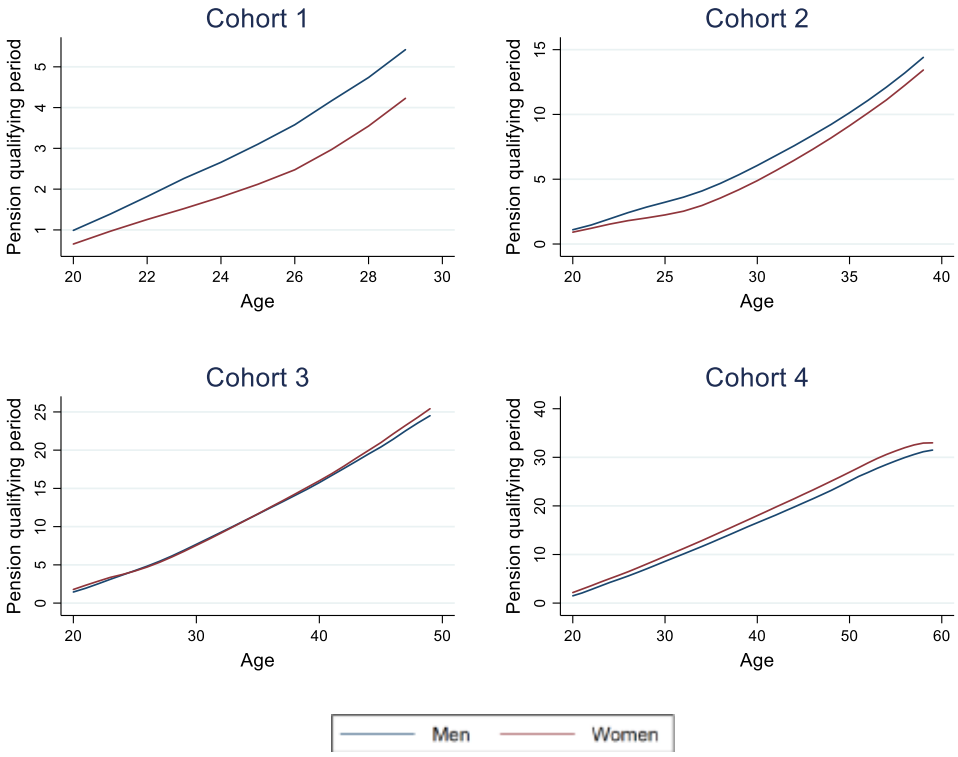
Figure 28: Average number of hours worked per week by cohort, age and sex



Source: Data provided by the ZPIZ (2019b), own calculation.

The differences between men and women when it comes to entry into the labour market, the termination of insurance, periods of unemployment, and reduced working hours affect the differences in the **completed pension qualifying period**, which is summed up in Figure 29. Women in Cohort 1 and Cohort 2 completed fewer years of pension qualifying period than men of the same age; the situation in Cohort 3 and Cohort 4 is different, as women completed more years of pension qualifying period than men. One of the reasons for this is certainly the fact that women in Cohort 3 and Cohort 4 entered the labour market sooner, which is also evident from Figure 23.

Figure 29: Completed years of pension qualifying period by cohort, age and sex

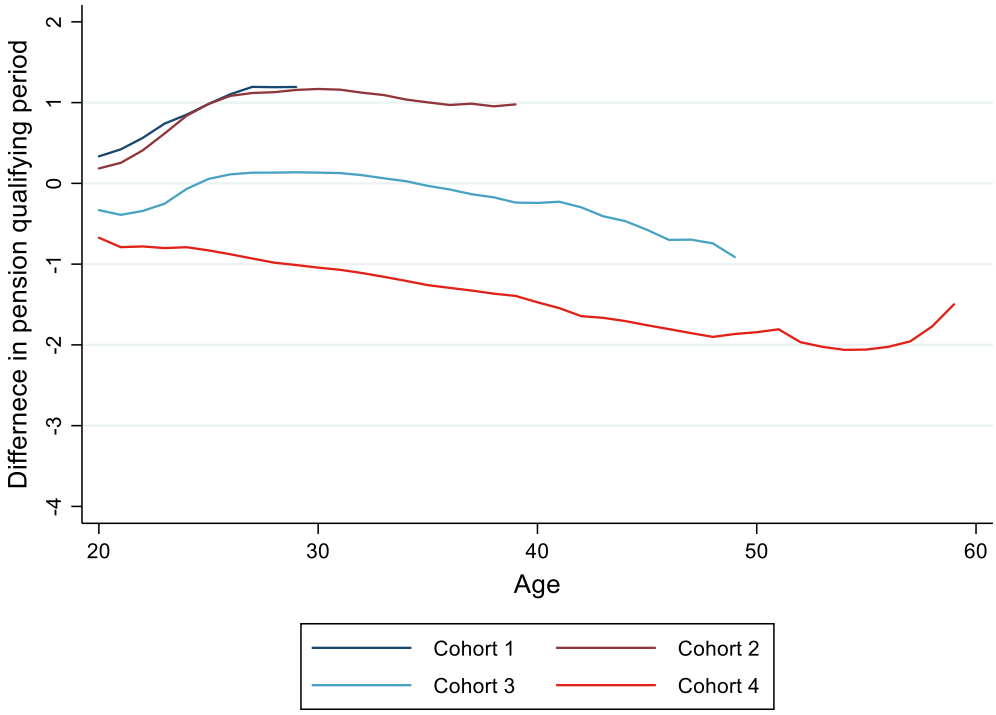


Source: Data provided by the ZPIZ (2019b), own calculation.

The difference in the completed years of pensionable service is explained even better in Figure 30, which shows **the difference in the average years of pension qualifying period for men and women** at the same age by sex and by cohort.[28] It is evident that the difference in the completed years of pension qualifying period for men and women is greatest in Cohort 1, since men at the age of 29, on average, completed one year (1.2 years) of pension qualifying period more than women of the same age. The situation is similar in Cohort 2, as men at the age of 39 completed on average one year (0.98 years) of pension qualifying period more than women of the same age. In Cohort 3 and Cohort 4, however, women completed more years of pension qualifying period than men of the same age. Women in Cohort 3 at the age of 49 completed on average 0.9 years of pension qualifying period more than men, and women in Cohort 4 at the age of 59 completed on average 1.8 years more years of pension qualifying period than man. Women in these cohorts entered the labour market sooner than men, which can be partly attributed to the fact that more men than women were enrolled in higher education.

28 The years of pensionable service completed in Slovenia.

Figure 30: Difference in the completed years of pension qualifying period by cohort, age and sex



Source: Data provided by the ZPIZ (2019b), own calculation.

The results indicate that the position of young women in the labour market is deteriorating, but the data do not provide enough information to make firm conclusions on this. The biggest problem is the absence of data on education, sector of employment and occupation, and data that would enable the identification of the cause of receiving compensation. On the basis of such complex data, it would be possible to explain with greater certainty the differences between men and women and the causes of these differences.

3.3 Analysis of the impact of receiving salary compensation on the hourly rate in the future

To analyse how receiving salary compensation affects the hourly rate, the data provided by the ZPIZ on insured persons aged 20–40 who were employed full-time for a year were used. For every individual, the most prolonged period of consecutive years of full-time employment without interruptions (i.e. without periods of unemployment and part-time employment) is taken into account. On the basis of the number of hours for which an individual received wage compensation, the number of days of receiving compensation was calculated and a binary variable was created that marks persons who received compensation for more than 90 days in each observed year. As shown in Table 2, the thus obtained sample included 41,388 men and 41,180 women. Of this, 55.2% of women and 12.3% of men received compensation for more than 90 days in at least one of the observed years.

Table 2: Number of observations and the percentage of persons receiving compensation for more than 90 days

Sex	No. of persons	Percentage of persons receiving compensation for more than 90 days
Men	41,388	12.3
Women	41,180	55.2

Source: Data provided by the ZPIZ (2019b), own calculation.

In calculating the impact of receiving compensation on the hourly rate, the methodology of event study outlined by Kleven at al. (2019) was used, which is based on potential changes in the hourly rates of persons who received salary compensation for more than 90 days compared to persons of the same gender who did not receive compensation or received it for a shorter period. For every person who received compensation for more than 90 days in a year, *t = 0* marks the year in which they received compensation for more than 90 days for the first time. For other persons, *t = 0* marks a randomly selected year in the observed period. All other observed years were marked relative to the period *t = 0*. The variable *t* thus measures event time. The evolution of the hourly rate is then studied as a function of event time:

$$w_{ist}^{n} = \sum_{j\neq -1} \alpha_j \boldsymbol{I}[j = t] + \sum_k \beta_k^n \boldsymbol{I}[k = age_{is}] + \sum_y \gamma_y^n \boldsymbol{I}[y = s] + \upsilon_{ist}^{n},$$

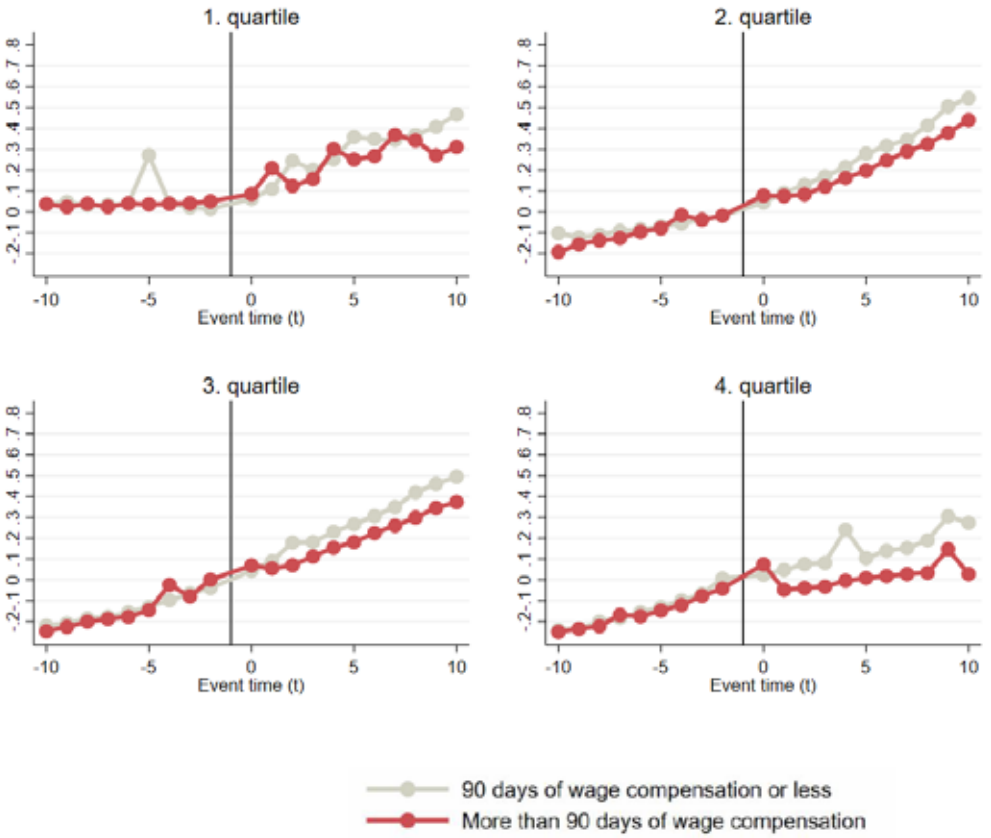
where w_{ist}^{n} is the hourly rate for individual *i* of group *n* (e.g. a group of women who received compensation for at least 90 days in the observed period) in year *s* and at event time *t*. The regression includes event time dummies (first term on the right-hand side), age dummies (second term) and year dummies (third term) as explanatory variables. The event time dummy at *t = -1* was omitted, which means that the event time coefficients measure the impact of receiving compensation relative to the year before the (potential) event in year *t = 0*. By including age dummies, we control for life-cycle trends, and by including year dummies, we control for time trends such as business cycles. The estimated effects were converted into percentages using the formula:

$$P_t^g = \frac{\hat{\alpha}_t^n}{E[\widetilde{w}_{ist}^n | t]},$$

where $\widetilde{w}_{ist}^{n}$ is the predicted hourly rate when omitting the contribution of the time event dummies. Hence $\widetilde{w}_{ist}^{n}$ captures the impact of receiving compensation for more than 90 days as a percentage of the hourly rate of those who received salary compensation for 90 days or less for year *t*. In order to avoid any excessive influence of the upper or lower part of the distribution on the calculated percentage effects, they are calculated separately by quartiles of the hourly rate.

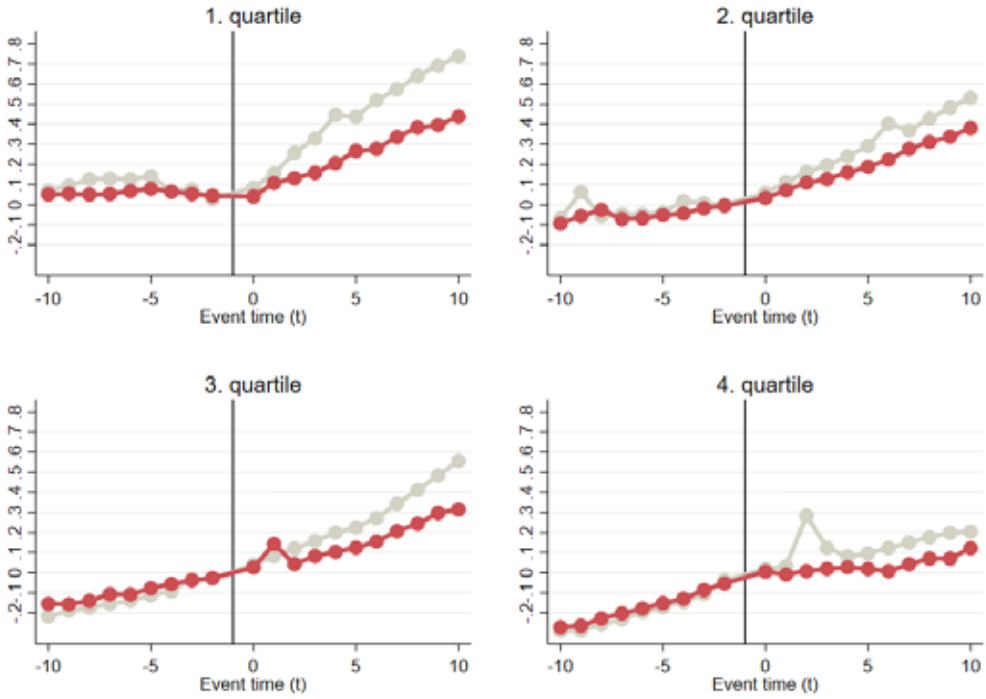
Figure 31 and Figure 32 show the results for men and women. The red line shows the trend in the hourly rate (measured by the percentage change relative to time *t = -1*) for those persons who received compensation for more than 90 days, and the grey line shows the movement of the hourly rates of other persons. Time 0 indicates the year in which the persons shown with the red line received compensation for more than 90 days. The vertical line indicates the year just before this event, i.e. the year against which the percentage change in the hourly rate is measured. The graphs show no significant difference in the trends in the hourly rate for the first group and the second group of persons up to one year before the event, as the lines coincide for both men and women in almost all observed years and quartiles. After the year in which some persons received compensation for more than 90 days, the hourly rates of those who received compensation for more than 90 days begin to differ from the hourly rates of other individuals – in most cases, the hourly rate of those persons increases more slowly (the red line is below the grey line). It should be noted that, due to a lack of data (on causes of receiving compensation, the education of an individual, etc.), the results should not be interpreted as a cause-and-effect relationship between the receiving of compensation and the hourly rate. It can only be concluded that the results suggest a negative relationship between longer absences and the hourly rate, as in all cases, except for women in the first quartile, the percentage change in the hourly rate relative to event time *t = -1* is smaller for those who received compensation for more than 90 days than for those who did not. The largest difference in the hourly rate between those who received compensation for more than 90 days and others is for men in the first quartile. However, it should be stressed that the number of men who received compensation for more than 90 days in an observed year is considerably smaller compared to the number of women.

Figure 31: Impact of receiving compensation on the hourly rate, women



Source: Data provided by the ZPIZ (2019b), own calculation.

Figure 32: Impact of receiving compensation on the hourly rate, men



Source: Data provided by the ZPIZ (2019b), own calculation.

Based on this analysis and the fact that women receive more compensations than men (Figure 27), it could be concluded that there is a possibility that, on average, the larger number of days of receiving compensation has a negative impact on the hourly wage of women.

4 CONCLUSION AND FUTURE CHALLENGES REGARDING THE GENDER PENSION GAP

The gender pension gap is the percentage by which women's pension income is lower than men's. The amount of pension is influenced by the decisions of women and their ability to reconcile their professional and private or family life throughout their lives, so it could be said that the gender pension gap is the result of accumulated lifelong decisions as well as disparities and the inequality of women (for example, women have lower salaries, are more exposed to unemployment and spend more time in unpaid work compared to men).

The gender pension gap for pensioners aged 65 and over is present in all EU countries and decreased at the EU-28 level in recent years from 33.6% in 2013 to 30.1% in 2018. In Slovenia, the gender pension gap is smaller; in 2018, it stood at 17.8% according to Eurostat data. The gender pension gap can be calculated on the basis of different data sources, which give us different estimates of the size of the pension gap. The data provided by the Pension and Disability Insurance Institute of Slovenia, which enable the calculation of the gender pension gap on the basis of pensions without other benefits (without taking into account any other income received by individuals from the Pension and Disability Insurance Institute), show that the gender pension gap for old age pensioners in Slovenia is even smaller, standing at 13.7% in 2017. The gender pension gap for old-age pensioners in Slovenia has been narrowing; in 2019, it amounted to 11.8%. The narrowing of the gender pension gap is due to the inflow of new pensioners, of whom women have on average higher pensions than men. Under the ZPIZ-2, which was in force until the end of 2019, the accrual rates were higher for women than men, which led to higher pensions for women despite the fact that women's pension assessment bases were on average lower than men's due to their lower salary during their employment. The amount of pension also depends on the minimum and maximum pension assessment base, an important redistributive element of the Slovenian pension system. Pensions are calculated as a multiple of the pension assessment base, which depends on the amount of salary received during working life, and the accrual rate, which depends on the years of pension qualifying period. If the calculated pension assessment base is lower than the minimal one, the pension is assessed from the minimum pension assessment base. Among persons who retire, a higher share of women than men receive a pension assessed from the minimum pension assessment base (37.6% of all newly retired women and 27.6% of all newly retired men in 2019), which means that more women than men have a higher pension than they would have had without that element of the pension system. The current gender pension gap is due to differences in pensions between older male and female pensioners who retired in the past and is higher in older age groups. One of the reasons for this is also the pension legislation in the past, as older female pensioners were able to retire having completed fewer years of pension qualifying period than male pensioners under the legislation in force at the time, which resulted in lower pensions for those women compared to men. EUROMOD data, on the basis of which the gender pension gap can be estimated taking into account all types of pensions (old-age, disability, and widow's pensions), show that in 2017, women aged 60–64 had 0.7% higher pensions than men of the same age, and women aged 65–69 had 1.2% lower pensions compared to men. At the age of 70 and over, the gender pension gap was considerably higher: 19.2% in the 70–74 age group, 22.5% in the 75–79 age group, and 26.5% in the 80 and over age group. The higher gender pension gap in older age groups is associated with the higher proportion of recipients of widow's pensions, which, as a rule, are lower than old-age pensions.

The gender pension gap is built throughout life, which is why the position of women in the labour market is very important. In Slovenia, the differences between men and women in terms of participation in the labour market (employment rate, sectoral and occupational segregation), the distribution of working hours (particularly in the case of part-time work), and remuneration for work, which have a considerable impact on the standard of living later in life, are relatively small and are mostly below the EU-28 average. The gender pay gap

is lower than the EU average; the unemployment rate is falling and the employment rate is increasing. In Slovenia, a high proportion of women are employed full-time; however, caring responsibilities and household chores still fall mostly to women. The difference in the hours of unpaid work between men and women in Slovenia exceeds 15 hours per week and is still one of the largest among EU Member States.

A more detailed examination reveals that inequalities between men and women in the labour market exist, despite the fact that the main indicators for Slovenia are favourable compared to other EU Member States. Despite the fact that the public sector predominantly employs women, more men than women hold the highest-paid jobs. In the private sector, where men are predominantly employed, the difference between men and women in terms of jobs held becomes larger in favour of men as positions become more senior. The distribution of jobs in the public and private sectors indicates that sectoral and occupational segregation still exist in Slovenia. The gender pay gap is considerably lower in Slovenia than the EU-28 average; however, in Slovenia, the gender pay gap is rapidly widening (despite the increase in the number of women with tertiary education), while at the EU-28 level, it is slowly narrowing. The reasons for the increase in the gender pay gap should be carefully examined in a special study to determine how the gender pay gap varies by occupation, by sector, by age group and in relation to other demographic variables.

The analysis of the position of women in the labour market on the basis of the sample of pseudonymised and individualised data relating to female and male pensioners and insured persons showed that other inequalities might also exist between men and women in the labour market. Unfortunately, on the basis of the currently available data (they do not include data on education, occupation, sector of employment, the cause of receiving salary compensation, etc.), it is not possible to say with certainty that the differences between men and women (in terms of salary, the position in the labour market, and pensions) are due solely to inequalities between men and women and not to other important factors, and therefore it is possible to only point to the possible inequalities.

Data indicate that particularly younger generations of women could be in a more unequal position compared to men of the same age. Women who were aged 20–29 and 30–39 in 2017 had, on average, a considerably higher number of days without insurance than men of the same age. These women also entered the labour market later compared to men; a higher proportion of these women were unemployed and experienced longer periods of unemployment. Women aged 40 or over in 2017 were also at a disadvantage compared to men, but to a lesser extent than younger women. These inequalities are also reflected in the completed years of pension qualifying period, as on average women under the age of 40 completed one year of pension qualifying period less than men of the same age. The results should be interpreted with caution, as this difference could partly be explained by a higher percentage of women enrolled in tertiary education, which delayed their entry into the labour market.

The data also showed that women receive salary compensation much more often than men of the same age, particularly when they are under 40, which is most likely due to absence from work due to parental leave and care for sick children. The analysis of the impact of the number of days of receiving compensation on the future hourly rate showed that there is a possibility of a negative correlation between longer periods of being absent from work and receiving salary compensation and the hourly rate. The gender pay gap could therefore be partially explained by the fact that women more often receive salary compensation. It should be noted once again that, due to lack of data (on causes of receiving compensation, the education of an individual, etc.), the results should not be interpreted as a cause-and-effect relationship between the receiving of compensation and the hourly rate.

Considering that the current generations of female pensioners enter the pension system with higher pensions than male pensioners, it can be expected that the gender pension gap in Slovenia will continue to narrow. The gender pension gap will also narrow because of the changed structure of male and female pensioners; the proportion of female pensioners who retired after having completed fewer years of pension qualifying period compared to men will decrease and the proportion of female pensioners who retire under the same conditions as men will increase. For at least the next couple of years, female pensioners will retire with higher pensions than male pensioners, since the currently higher accrual rate for women more than compensates for women's lower salaries during their working years. With the latest amendment to the ZPIZ-2, which equalises the accrual rates for men and women by 2025, the situation will change slightly, but without the use of

appropriate tools (a microsimulation model), the overall effect of all the changes cannot be predicted. After 2020, it is mostly women (under certain conditions, also men) who are entitled to the increase in the accrual rate by 1.36% up to a maximum of 4.08% due to care for each child. This means that the accrual rate for women who retire is expected to continue to be higher than the accrual rate for men, but the difference between the accrual rates will be smaller. The impact of amendments to the pension legislation on the gender pension gap will be the result of the cumulative effects of two measures, namely the equalising of the accrual rates for men and women and additional accrual rates due to childcare, which will be mostly claimed by women. When women who were under the age of 40 in 2017 enter the pension system, they are expected to receive lower pensions because they will have fewer years of pensionable service compared to men; this, in turn, will have a negative impact on the gender pension gap.

The previous amendments to the pension legislation which equalised the conditions for retirement for men and women, thus abolishing early retirement for women which led to lower pensions for women compared to men, also contributed positively to the narrowing of the pension gap between men and women. The narrower gender pension gap in Slovenia in comparison to most other European countries is also due to the high participation of women, particularly those with children, in the labour market. This is also ensured by systems that support the reconciliation of work and family life, such as the well-established system of maternal, paternal and parental leave with high salary compensation, the right to part-time work due to parenthood, the accessibility of public childcare, the possibility of morning and afternoon childcare for children in the lower grades of primary school, organised school transport, warm meals for children in kindergartens and schools, the possibility of justified absence from work and salary compensation in case of the child's sickness. To eliminate the gender pension gap, or prevent or reduce it as effectively as possible, it is essential to monitor the position of women in the labour market, the gender pay and pension gap, and to ensure the equal status of women throughout life. Important recommendations are:

1. **Maintaining systems** that enable **the reconciliation of work and family life** and ensure the high participation of women in the labour market and **adapting** them to the changed circumstances.
2. It is necessary to take **measures to ensure the equal opportunities of men and women in the labour market**, particularly during economic crises, since data show that women are more exposed to unemployment than men during crises.
3. It is necessary to take measures to **encourage the employment of young women**, since data show that the position of young women in the labour market has deteriorated.
4. It is necessary to establish and keep a **database** containing data on salary histories (kept by the ZPIZ) and data on education, employment (occupation, sector of employment), and other demographic data (birth, partners, household) which are kept in different statistical data sources and are also collected by the Statistical Office of the Republic of Slovenia. In addition to establishing an appropriate database, it is necessary to undertake regular research work in this area, i.e. scientific research work and regular applied research in order to **prepare appropriate expert bases** which will serve as the basis for making corrections and amendments to the legislation and for the **regular monitoring and analysing of the functioning of the system and the effects of the measures taken**.
5. It is necessary to **analyse the widening gender pay gap in Slovenia** on a regular basis and look for causes of that widening in order to be able to develop appropriate measures to prevent the gender pay gap.
6. When the accrual rates for men and women are equalised and additional percentages due to childcare and other announced amendments to the pension legislation introduced, the effects of the amendments on **the gender pension gap** will need to be **closely monitored** on a regular basis both in the short and long term.

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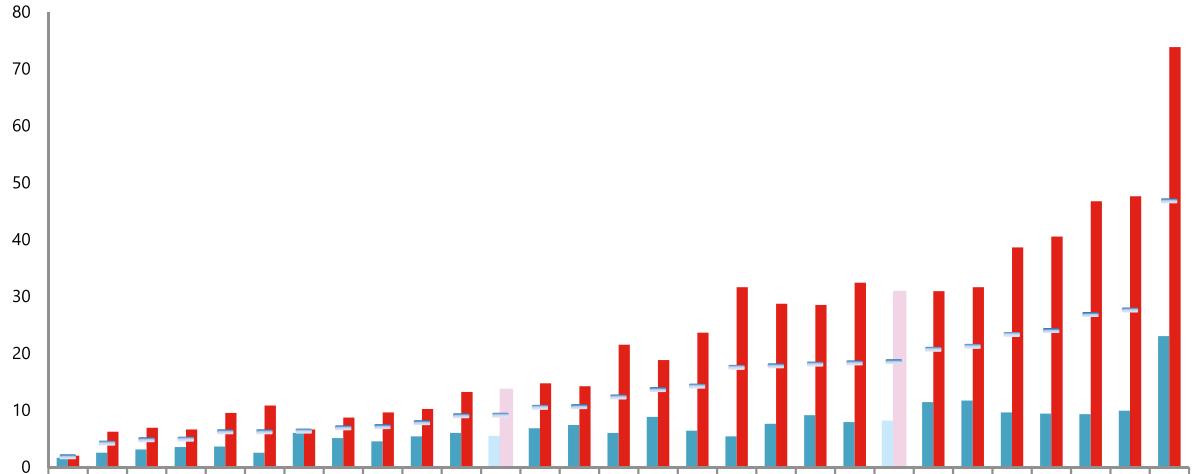
APPENDIX

APPENDIX 1

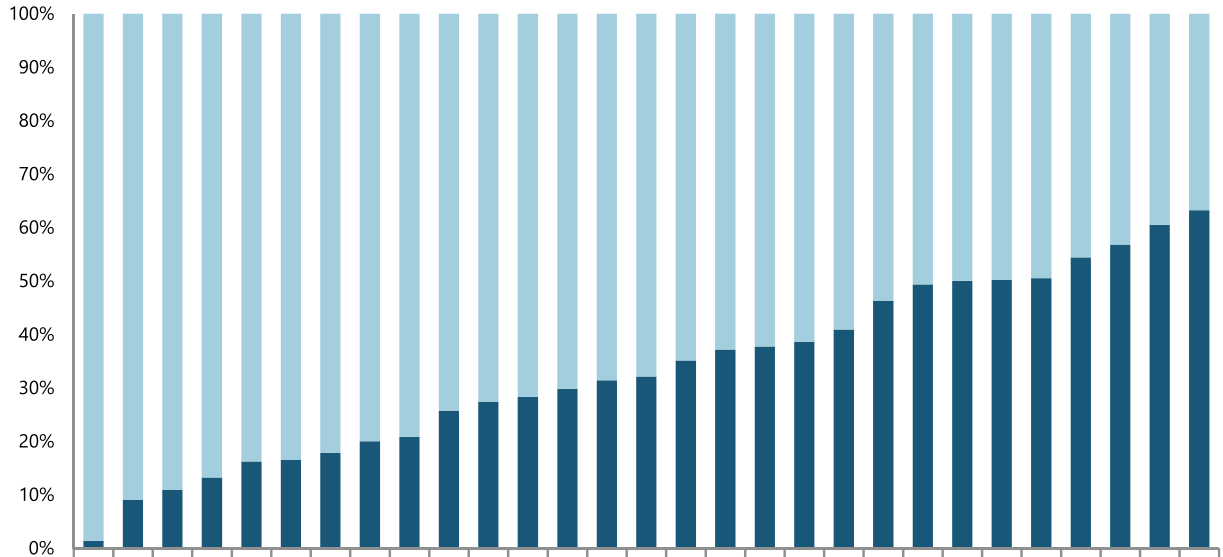
Figure 1a: Proportion of men and women in part-time employment aged 20–64, EU-28, 2018 (in %)



	BG	HU	SK	HR	PL	CZ	RO	LT	LV	PT	EL	SI	EE	CY	MT	FI	ES	LU	FR	IE	IT	EU-28	DK	SE	UK	BE	DE	AU	NL
Males	1.6	2.5	3.1	3.5	3.6	2.5	6.0	5 1	4.5	5.4	6.0	5.3	6.8	7.4	6.0	8.8	6.4	5.4	7.6	9.1	7.9	8.0	11.4	11.7	9.6	9.4	9.3	9.9	23.0
Females	2.0	6.2	6.9	6.6	9.5	10.8	6.6	8 7	9.6	10.2	13.2	13.6	14.7	14.2	21.5	18.8	23.6	31.6	28.7	28.5	32.4	30.8	30.9	31.6	38.6	40.5	46.7	47.6	73.8
Total	1.8	4.2	4.8	4.9	6.2	6.2	6.3	6 9	7.1	7.8	9.0	9.1	10.5	10.6	12.3	13.6	14.2	17.5	17.8	18.1	18.3	18.5	20.7	21.2	23.3	24.0	26.8	27.6	46.8

Source: (Eurostat, 2020q)

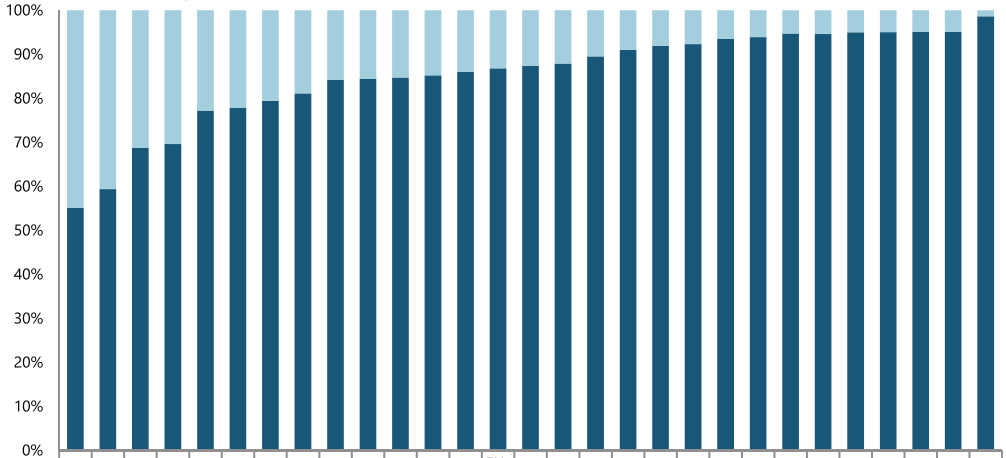
Figure 2a: Proportion of children under three years of age cared for by formal and informal arrangements, EU-28, 2018 (in %)



	SK	CZ	PL	RO	BG	HU	HR	AU	LT	IT	LV	EE	DE	CY	MT	EU-28	FI	IE	UK	EL	SI	SE	FR	PT	ES	BE	NL	LU	DK
informal arrangements	98.6	90.9	89.2	86.8	83.8	83.5	82.2	80	79.2	74.3	72.6	71.7	70.2	68.6	67.9	64.9	62.9	62.3	61.4	59.1	53.7	50.7	50	49.8	49.5	45.6	43.2	39.5	36.8
formal arrangements	1.4	9	10.9	13.2	16.2	16.5	17.8	20	20.8	25.7	27.4	28.3	29.8	31.4	32.1	35.1	37.2	37.7	38.6	40.9	46.3	49.4	50	50.2	50.5	54.4	56.8	60.5	63.2

Source: (Eurostat, 2020k)

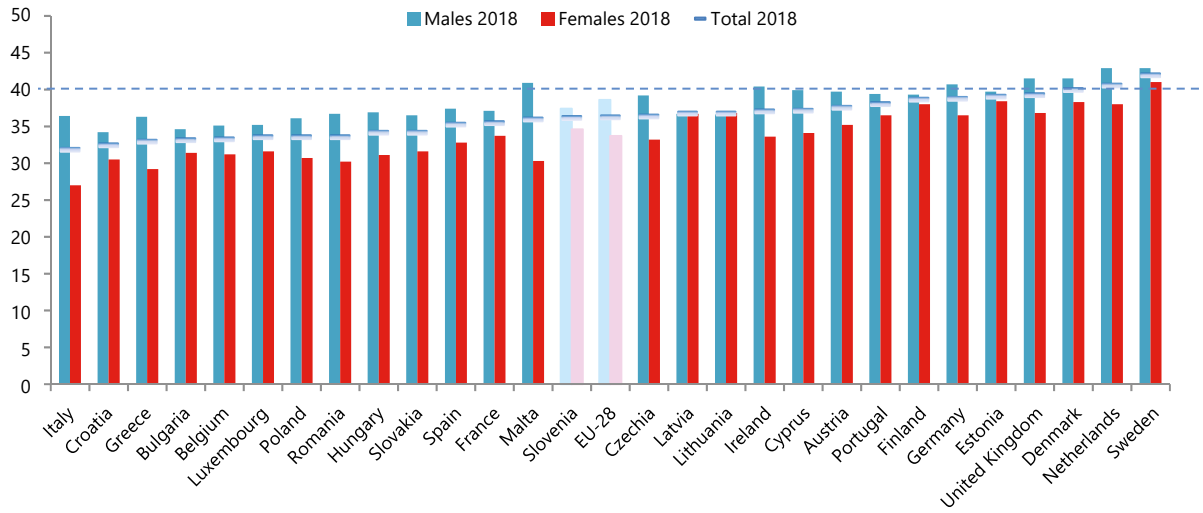
Figure 2b: Proportion of children aged between three years and the minimum compulsory school age cared for by formal and informal arrangements, EU-28, 2018 (in %)



	HR	PL	SK	UK	RO	BG	CZ	LT	MT	AU	NL	FI	CY	EU-28	LV	LU	DE	IT	HU	SI	EE	PT	EL	FR	ES	DK	IE	SE	BE
informal arrangements	44.9	40.7	31.3	30.4	22.8	22.2	20.6	18.9	15.8	15.6	15.3	14.8	14.0	13.2	12.6	12.1	10.5	9.0	8.1	7.7	6.5	6.1	5.3	5.4	5.0	5.0	4.9	4.9	1.4
formal arrangements	55.1	59.4	68.7	69.6	77.2	77.8	79.4	81.1	84.2	84.4	84.7	85.2	85.9	86.8	87.3	87.9	89.5	91	91.9	92.3	93.5	93.9	94.7	94.7	94.9	95.1	95.1	95.1	98.7

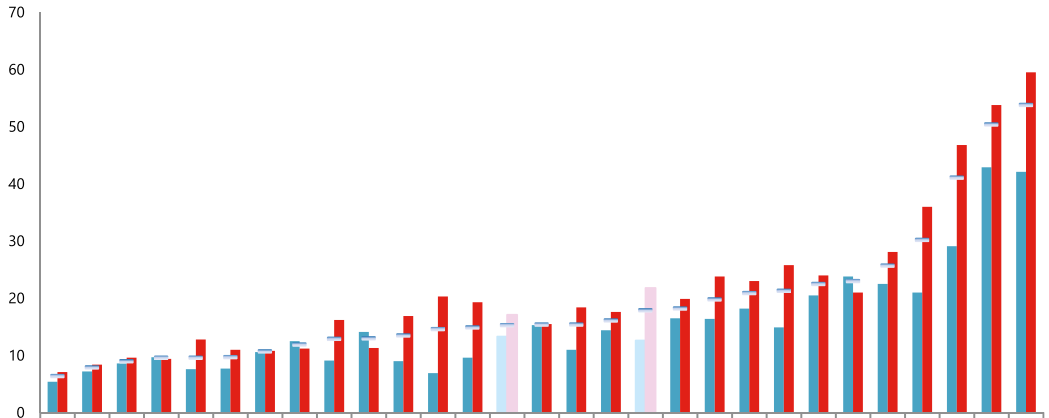
Source: (Eurostat, 2020k)

Figure 3a: Duration of working life, EU-28, 2018



Source: Eurostat (Eurostat, 2020e)

Figure 4a: At-risk-of-poverty rate for male and female pensioners aged 65+, EU-28, 2018 (in %)



	SK	FR	EL	DK	LU	HU	NL	IT	AU	ES	FI	CZ	SE	EU-28	BE	PL	PT	SI	DE	IE	UK	RO	CY	MT	HR	BG	LT	LV	EE
Males	5.4	7.2	8.6	9.7	7.6	7.7	10.6	12.5	9.1	14.1	9.0	6.9	9.6	13.3	15.3	11.0	14.4	12.6	16.5	16.4	18.2	14.9	20.5	23.8	22.5	21.0	29.1	42.9	42.1
Females	7.1	8.4	9.6	9.4	12.8	11.0	10.8	11.2	16.2	11.3	16.9	20.3	19.3	17.1	15.5	18.4	17.6	21.8	19.9	23.8	23.0	25.8	24.0	21.0	28.1	36.0	46.8	53.8	59.5
Total	6.4	7.9	9.0	9.6	9.6	9.7	10.7	11.9	12.9	13.0	13.5	14.6	14.9	15.3	15.4	15.4	16.1	17.9	18.2	19.8	20.9	21.3	22.5	23.0	25.7	30.2	41.1	50.4	53.8

Source: Eurostat (Eurostat, 2020c)

APPENDIX 2

An overview of significant gender gaps by EU-28 Member State, 2018

Tertiary gender education gap:

- in all EU-28 Member States, with the exception of Germany and Austria, the proportion of women aged 15–64 who have tertiary education is higher than the proportion of men of the same age with the same level of education

Gender employment gap:

- in all EU-28 Member States, the proportion of employed women is lower than the proportion of employed men

Gender gap in part-time employment for persons aged 20–64:

- in all EU-28 Member States, the proportion of women aged 20–64 working part-time is higher than the proportion of men aged 20–64 working part-time

Gender gap in the duration of working lives:

- in all EU-28 Member States, with the exception of Latvia and Lithuania, women have shorter working lives than men

Difference between formal and informal childcare arrangements for children aged less than three years:

- in all EU-28 Member States, with the exception of Denmark, Netherlands, Portugal, Luxembourg, Belgium, Spain, and France, informal childcare arrangements are more prevalent for children aged less than three years

Difference between formal and informal childcare arrangements for children aged between three years and the minimum compulsory school age:

- in all EU-28 Member States, formal childcare arrangements are more prevalent for children aged between three years and the minimum compulsory school age

Gender gap in the career break due to family responsibilities or caring responsibilities, persons aged 20–64:

- in all EU-28 Member States, women more often take a career break due to family responsibilities or caring responsibilities compared to men

Gender gap in the career break due to childcare or care for incapacitated adult, persons aged 20–64:

- in all EU-28 Member States, women more often take a career break due to childcare or care for incapacitated adult compared to men

Gender pay gap:

- in all EU-28 Member States, women receive lower hourly rates of pay than men

Gender pension gap:

- in all EU-28 Member States, women receive lower pensions than men

Gender gap in the at-risk-of-poverty rate for male and female pensioners aged 65+:

- in all EU-28 Member States, with the exception of Denmark, Malta, Spain, and Italy, female pensioners aged 65 and over are more likely to experience poverty than male pensioners aged 65 or over

Table 1a: An overview of significant gender gaps by EU-28 Member State, 2018

	Tertiary education gap, persons aged 15–64[1]	Employment gap, persons aged 20–64[1]	Gender gap in part-time employment, persons aged 20–64[1]	Gender gap in the duration of working lives[1]	Childcare for young children[2]	Childcare for older children[2]	Gender gap in the career break due to family responsibilities or caring responsibilities, persons aged 20–64[1]	Gender gap in the career break due to childcare or care for incapacitated adult, persons aged 20–64[1]	Gender pay gap[3]	Gender pension gap, persons aged 65+[4]	Gender gap in the at-risk-of-poverty rate for pensioners aged 65+[1]
EU-28	**-4.3**	**11.6**	**-23.0**	**4.9**	**-29.8**	**73.6**	**-27.1**	**-16.5**	**15.7**	**30.1**	**3.8**
Belgium	-7.4	8.4	-31.1	3.9	8.8	97.3	-20.1	-9.7	6	24.6	0.2
Bulgaria	-10.8	8.2	-0.3	3.2	-67.6	55.6	-23.5	-17.2	13.5	26.5	15.0
Czechia	-3.7	15.2	-8.5	6.0	-81.9	58.8	-37.0	-35.6	20.1	13.0	13.4
Denmark	-9.6	7	-19.5	3.2	26.4	90.1	-4.9	No data	14.5	7.4	-0.3
Germany	3.9	8.1	-37.5	4.2	-40.4	79	-25.6	-19.0	20.9	37.4	3.4
Estonia	-18.1	7.8	-7.1	1.3	-43.4	87	-37.8	-33.5	22.7	1.1	17.4
Ireland	-7.5	12.2	-19.7	6.8	-24.6	90.2	-39.7	-23.1	No data	27.6	7.4
Greece	-3.1	21	-7.5	7.1	-18.2	89.4	-24.9	-7.9	No data	24.6	1.0
Spain	-5.2	12.1	-17.0	4.6	1.0	89.9	-36.9	-13.0	14	32.4	-2.8
France	-5.2	7.6	-21.8	3.4	0.0	89.3	-15.6	-15.6	15.5	29.7	1.2
Croatia	-6.0	10.2	-2.2	3.7	-64.4	10.2	-22.6	No data	10.5	29.7	5.6
Italy	-5.2	19.8	-24.3	9.4	-48.6	82	-32.0	-15.6	No data	32.0	-1.3
Cyprus	-10.2	10.4	-6.6	5.8	-37.2	71.9	-49.0	No data	13.7	38.2	3.5
Latvia	-15.8	4.2	-5.8	0.0	-45.2	74.7	-12.8	No data	14.1	17.7	10.9
Lithuania	-13.8	2.3	-3.7	-0.2	-58.4	62.2	-18.3	-10.4	14	16.5	17.7
Luxembourg	-2.2	8	-29.6	3.6	21.0	75.8	-22.2	-10.9	4.6	43.3	5.2

Continuation of Table 1a

	Tertiary education gap, persons aged 15–64[1]	Employment gap, persons aged 20–64[1]	Gender gap in part-time employment, persons aged 20–64[1]	Gender gap in the duration of working lives[1]	Childcare for young children[2]	Childcare for older children[2]	Gender gap in the career break due to family responsibilities or caring responsibilities, persons aged 20–64[1]	Gender gap in the career break due to childcare or care for incapacitated adult, persons aged 20–64[1]	Gender pay gap[3]	Gender pension gap, persons aged 65+[4]	Gender gap in the at-risk-of-poverty rate for pensioners aged 65+[5]
Hungary	-6.2	15.3	-3.6	5.8	-67.0	83.8	-28.9	-27.2	11.2	15.5	3.3
Malta	-2.7	21.9	-18.0	10.6	-35.8	68.4	No data	No data	11.7	42.3	-2.8
Netherlands	-1.9	10.1	-51.5	4.9	13.6	69.4	-14.4	-11.3	14.8	39.6	0.2
Austria	0.6	9	-37.4	4.5	-60.0	68.8	-25.3	-10.9	19.6	38.7	7.1
Poland	-10.7	14.4	-6.3	5.4	-78.3	18.7	-28.9	-19.6	8.8	18.7	7.4
Portugal	-9.7	6.8	-5.6	2.9	0.4	87.8	-19.3	-9.0	16.2	31.4	3.2
Romania	-2.4	18.3	-0.2	6.5	-73.6	54.4	-31.7	No data	3	27.3	10.9
Slovenia	**-11.2**	**7.3**	**-7.7**	**2.8**	**-7.4**	**84.6**	**-12.4**	**-5.3**	**8.7**	**17.8**	**9.2**
Slovakia	-6.8	13.7	-4.1	4.9	-97.2	37.4	-32.2	-32.8	19.4	8.2	1.7
Finland	-13.3	3.7	-9.9	1.3	-25.7	70.4	-16.9	-16.5	16.3	23.3	7.9
Sweden	-12.2	4.2	-21.0	1.9	-1.3	90.2	-8.7	-8.5	12.2	27.2	9.7
United Kingdom	-4.5	9.9	-29.6	4.7	-22.8	39.2	-29.4	-24.2	19.9	34.2	4.8

[1]The calculations are based on the difference between men and women.

[2] The calculations are based on the difference between formal and informal childcare arrangements.

[3]The calculation is based on the following formula: $(1 - \frac{\text{average gross wage per hour for women}}{\text{average gross wage per hour for men}}) * 100$

[4]The calculation is based on the following formula: $(1 - \frac{\text{average pension for women}}{\text{average pension for men}}) * 100$

[3]The calculation is based on the difference between men and women.

Source: Based on Eurostat data

APPENDIX 3

Gender pay gap

The right to equal payment has been enshrined in international legal acts since 1948, but despite this, the gender pay gap still remains. Having narrowed significantly in the last few decades of the 20th century (Blau & Kahn, 2000), the gender pay gap is currently narrowing at a slower pace. On the basis of Eurostat data on trends in the gender pay gap, it is evident that, at the EU-28 level, the gender pay gap has been slowly narrowing in recent years, standing at 16% on average. On the basis of the same data, we can see that the gender pay gap in Slovenia is very small. However, we can also see that the gender pay gap in Slovenia has been widening since 2009, with the exception of 2016 (see Figure 13). In addition, when we compare wages by sex, industry, occupation, and position in a company, the gender pay gap in Slovenia becomes considerably higher (Poje & Roksandić, 2013). The data that indicate that the gender pay gap is widening raise the following question: *Why are there differences between the wages of men and women and what are the key factors affecting the emergence and widening of the gender pay gap in Slovenia and, consequently, the gender pension gap?*

The gender pay gap is an indicator measured in all EU Member States on the basis of the Structure of Earnings Survey – SES, which is conducted every four years on the basis of annual data provided by every EU Member State (Boll & Lagemann, 2018). Every year, Eurostat calculates and publishes an unadjusted gender pay gap, which means that the indicator does not take into account any factors of employed men and women that could explain part of the gender pay gap, thus giving a general picture of gender inequality in the labour market (Poje & Roksandić, 2013). The unadjusted gender pay gap is calculated as the difference between the average gross hourly earnings of men and women expressed as a percentage of the average gross hourly earnings of men (SORS, 2019a).

Based on the literature review presented in Chapter 2.1, it can be concluded that the socio-economic characteristics of individuals, together with human capital and labour market factors, are key in creating the gender pay gap. Human capital is most often expressed as knowledge and experience measured on the basis of the educational attainment level or the number of years of education and on the basis of years of employment or duration of working life. It has been long known that education and work experience are the characteristics of an individual that contribute to differences in wages (Blinder, 1973). In addition to human capital, the socio-economic characteristics of individuals, which are included in studies in a variety of ways, are taken into consideration as factors that contribute to explaining the gender pay gap. Gender, age, race, place of residence (city or rural area), number of years of employment with the current employer, etc. are personal data that are often taken into consideration as factors contributing significantly to the level of pay.

As far back as 50 years ago, Cohen (1971) examined the differences in the wages of men and women. In his study, using a multiple regression analysis, he analysed the impact of the years of employment (duration of working life), participation in the trade union, educational attainment level, gender and race on the wages. In his analysis, Cohen (1971) also took into account fringe benefits in the form of an independent multiple regression equation, such as health insurance, life insurance, pension programme, profit sharing, stock option, free meals or discount on meals, free products or services or discount on products or services, the average number of days of paid leave, and the average number of days of sick leave. The author pointed out the impact that maternity leave and absence from work due to caring responsibilities might have on the wages, but these data were not available at the time of the study. With the studied variables, Cohen (1971) explained slightly less than half of the gender pay gap. Cohen (1971) attributed the unexplained part of the difference in the pay of men and women mostly to the high concentration of women in lower paid jobs, which may be due to various reasons (women do not participate in job training as often as men do; women have a greater desire for flexible working hours; dangerous jobs and jobs with poor conditions are dominated by men). The author also touches on discrimination, which is also likely to contribute to the unexplained part of the gender pay gap. However, it is important to mention that he believes that there is a small probability that the entire unexplained part of the gender pay gap between men and women with the same employment could be due to discrimination.

On the basis of past studies, it can be concluded that the usual or traditional variables that reflect human capital– education and work experience – explain a relatively small part of the gender pay gap today. This is due to higher educational attainment and more years of work experience among women. On the other hand,

despite decreasing, the differences between men and women by occupation and by sector or industry still explain a relatively large part of the gender pay gap (Blau & Kahn, 2017). This is why the impact of the sector of employment or industry or occupation on the level of pay is taken into account in the analysis in many studies. One such study was conducted by Albæk, Larsen and Thomsen (2017), where the gender pay gap in the public and private sectors on the basis of segregation in the labour market was examined. In this study, the authors expressed segregation as the proportion of women employed in a particular occupation or industry, and more narrowly, as the proportion of women employed within the same establishment/company at the same address, and as the proportion of women employed in the same occupation within the same establishment/company (job cells). They established that segregation plays a substantially more important role in accounting for the gender wage gap in the public sector than in the private sector.

A Slovenian study (Roter, Lindič, & Vodopivec, 2017) also confirmed the importance of separating the public sector from the private sector when analysing the causes of the gender pay gap. In addition, the study also highlights the importance of comparing occupations that exist in both the public and private sectors (comparable occupations), as the results could be misleading if all occupations were included.

Studies examining the functioning and outcomes of the labour market between groups can be found frequently in the literature. The most commonly used method for calculating inequalities in the labour market or analysing pay inequality between two groups is the Blinder–Oaxaca decomposition (Blinder, 1973; Oaxaca, 1973). The Blinder–Oaxaca decomposition divides the gender pay gap between two groups into a part that is explained by variables/factors (such as human capital and other observed socio-economic characteristics) and a part that cannot be accounted for by the variables/factors that have been taken into account. This »unexplained« part is often used as a measure for discrimination. In addition to discrimination, this part includes the impact of all variables/factors that were not taken into account in the calculation. Usually, these are factors about which no data are available or which are difficult to measure (e.g. productivity, poor working conditions, etc.), which can lead to overestimating or underestimating the presence of discrimination. That is why it is necessary to be aware that an estimate of discrimination obtained on the basis of the Blinder–Oaxaca decomposition is a proposed estimate of discrimination, not a final estimate of discrimination (Blau & Kahn, 2017; Jann, 2008). The unexplained part underestimates discrimination even when, for example, experience, occupation, sector or any other explanatory variable is affected by discrimination. In order to solve this problem, studies have emerged that focus on more homogeneous groups (e.g. only a group of people working in a particular occupation, scientific field, etc.), for which more detailed data are available (grade point averages, form and size of the company, etc.) and where there are fewer unobserved variables (Blau & Kahn, 2017). The other group of studies focused on experimental methods (laboratory and field experiments). An example of such a study is the study conducted by Correll, Benard & Paik (2007), who, on the basis of laboratory and field experiments, established that women are discriminated against in the case of parenthood because employers prefer to hire women without children over mothers despite the fact that they have equal levels of competence and knowledge; men, on the other hand, are not discriminated against, and in certain cases, fathers might even experience advantages (Correll et al., 2007). However, such studies have shortcomings in that the results cannot be generalised outside the group or to the entire population (Blau & Kahn, 2017).

In the studies of the OECD (2017b) and the Bank of Slovenia (Roter et al., 2017), the Blinder–Oaxaca decomposition was used to analyse causes contributing to wage differences. The variables taken into account in the OECD's study (2017b) were: short-hours (less than 30 hours per week), long-hours (more than 50 hours per week), employee characteristics (age, educational attainment, parenthood status) and employment characteristics (occupation and industry). They found that most of the gender pay gap cannot be explained by the observed variables. The majority of the gender pay gap remains unexplained, which suggests that behaviour, social rules, institutions, and discrimination play an important role in creating the gender pay gap.

In the study of the Bank of Slovenia (Roter et al., 2017), the gender pay gap in the private and public sector were analysed on the basis of the EU-SILC individual-level data. The following characteristics of individuals were taken into consideration: gender, marital status, type of employment (full-time or part-time employment), sector of employment (public or private sector), education, age, and occupation. The results of the study showed that in low-paying occupations, most of the difference in pay could not be explained by the individuals' characteristics that were taken into account, while in high-paying occupations, the majority of the

gender pay gap was explained by the observed characteristics. The presence of trade unions, negotiating power, productivity, job security, personal skills, allowances/benefits, and work motivation are just some of the factors listed in the study as factors that can, in addition to the characteristics of the individual, contribute to creating a gender pay gap and are "hidden" in the part of the gender pay gap that remains unexplained.

On the basis of data obtained from three companies and own calculations of gender pay gaps, Poje and Roksandić (2013) attempted to find whether there are differences between the earnings of Slovenian women and men working in the same occupation and at the same company. They found that differences in wages are due to direct discrimination against women. This is because certain employer acts provide for attendance allowances to which women are not entitled to in a much greater extent than men, as women are more often absent due to childcare or care for a family member who is (no longer) able to take care of themselves. The latter is also related to fewer opportunities for promotion and moving up to higher pay grades. In addition, they found direct discrimination in rewarding work performance, as certain employers make performance-related bonuses conditional on the absence of sick leave.

Early studies focused mostly on explaining the gender pay gap in terms of the role of human capital and discrimination. However, the reduction and disappearance of differences in human capital between men and women and the introduction of anti-discrimination policies suggest that the explanation for the remaining gender pay gap lies elsewhere (Kleven et al., 2018). The unexplained part of the gender pay gap reflects not only discrimination, but also other unobserved factors that also affect the gender pay gap (Blau & Kahn, 2000). In addition to gender-specific factors, policies such as non-discrimination policy and family leave policy, in particularly the system of parental leave, have an important impact on the gender pay gap (Blau & Kahn, 2017). The introduction of parental leave, which is still mostly taken by women despite the fact that men also have the possibility of taking it, can have two consequences. On the one hand, this policy can contribute to increases in women's earnings, as it increases women's commitment to the company, which in turn increases both their and the employer's willingness to invest more in on-the-job training for women. On the other hand, such measures may prolong temporary absence from the labour market due to parenthood, which has a negative impact on the wages (Blau & Kahn, 2001). Ruhm (1998) found in his study that compensation in the case of taking parental leave has a positive impact on women's employment. He also found that a short period of absence due to parental leave has a negligible impact on the wages, while a long period of absence due to parental leave has a negative impact on the wages.

Another important factor that has recently received particular attention in explaining the gender pay gap and the gender pay gap between women with children and women without children is the impact of the number of children on woman's wage (Blau & Kahn, 2000). Despite the introduction of policies directed towards the reconciliation of work and family life and reduction of differences between men and women, women still tend to devote more of their time to household chores and childcare compared to men. In addition, despite the fact that there is less discrimination, there is still statistical discrimination against women (e.g. generalising to all women that they will be absent from work more than men due to parenthood and childcare). In their study, Angelov et al. (2016) analysed the impact of the firstborn child on the level of earnings. They compared the income and wages of women to those of their male partners before and after their child was born. In so doing, they captured the observed and unobserved factors of both partners and the short-term and long-term impact of parenthood. The results showed that, 15 years after the birth of the first child, the income gap (annual income from employment) and the gender pay gap (monthly wage of full-time employees) between men and women increased by 32 and 10 percentage points respectively. The impact of parenthood can be seen in the career breaks of mothers due to childbirth – maternity or parental leave and in their long-term upbringing and childcare responsibilities, due to which they are often employed part-time. In their study, Kleven et al. (2018) were looking for an answer why the gender pay gap still exists, considering that women now have the same or even higher levels of education than men and that antidiscrimination policies have been introduced. They believe that the answer lies in children. The effects of children on the careers of women relative to men are large and have not changed over time (Kleven et al., 2018).

The OECD's study (OECD, 2017b) states that traditional factors such as age, education, occupation and industry are becoming less important in explaining the gender pay gap. The proportion of women in highest-paid jobs is becoming an important factor in explaining a part of the gender pay gap. The under-representation of

women in highest-paid jobs accounts for a growing proportion of the explained gap.

Blau and Kahn (2017) also drew attention to the aforementioned challenge. Based on the literature review and prior studies, they established that, in the labour market, the gender pay gap declines much more slowly at the top of the wage distribution than at the middle or bottom. At the same time, the gender pay gap is noticeably higher at the top of the wage distribution (Blau & Kahn, 2017). Therefore, when analysing and explaining the gender pay gap, it is important to look at differences by pay grades.

In terms of examining labour market factors, the existing studies could be divided into two major groups. On the one hand, there is a group of studies that aim to explain the gender pay gap on the basis of gender segregation in the labour market and, on the other hand, there is a group of mostly recent studies that aim to explain the (still) unexplained part of the gender pay gap by analysing the impact of policies aimed at reconciling work and family life and the associated disadvantage of women, particularly mothers, in terms of having equal conditions in the labour market compared to men (motherhood penalty or child penalty).

It should also be mentioned that, recently, researchers and economists have focused on studying psychological, non-cognitive components or »soft skills«, such as personality, motivation and preferences in relation to gender differences in the labour market. Research has shown that, in comparison to men, women are less inclined to negotiate, compete and take risks, have lower self-esteem and self-confidence, and attach less value to money, which, in turn, results in women having lower wages and being under-represented in top positions. The latter characteristics can have a direct and indirect impact on wages and thus on the explained part of the gender pay gap. Based on prior studies where the psychological factors of individuals were included in the analysis, it can be concluded that gender differences in soft skills account for a small to moderate portion of the gender pay gap (Blau & Kahn, 2017).

On the basis of the study conducted by Blau & Kahn (2017), who provided an overview of the existing literature on the gender pay gap, and other studies conducted by Ruhm (1998), Budig and England (2001), Allen and Sanders (2002), Huffman (2004), Angelov et al. (2016), Sigle-Rushton and Waldfogel (2007), Bergene (2016), Albæk et al. (2017), Bach, Chernozhukov and Spindler (2018), Boll and Lagemann (2018), Kleven et al. (2018), Kleven et al. (2019), Table 1b sums up the factors or variables that were variously included in individual studies to explain the gender pay gap.

Table 1b: Variables examined in explaining the gender pay gap

Human capital or the socio-economic characteristics of individuals[1]	**Characteristics of the labour market**	**Personality traits**
Education[2] Experience[3] Sex Age Place of residence (city region) Race Employed, born in a foreign country Employed, with disability status Marital status Parenthood Number of children First child's year of birth	Sector[4] Industry[4] Occupation[5] Number of working hours Number of years at the current employer Number of employees in the company Company location Type of employment contract Employment rate or full-time/part-time employment Employment rate for women by age group Unemployment rate by age group	Self-esteem Self-confidence Importance of money/work Importance of family Inclination to take risks Locus of control Big five personality traits – extroversion, agreeableness, conscientiousness, neuroticism, openness

Note: [1]The characteristics of the individual are (may be) important factors in considering the impact of stereotypes on the wages or the gender difference in wages.

[2] An important turn in the educational attainment level→ In the past, men went to school longer and achieved higher levels of education than women, and today the situation is reversed – women, on average, go to school for longer and achieve higher levels of education compared to men.

[3] The difference in years of experience between men and women is narrowing, but women still lag slightly behind men.

[4] The existence of sectors and industries where women are over-represented, which results in lower salaries.

[5] Women are still paid less than men for equal work.

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