Active and Healthy Ageing for Active and Healthy Old Age

WP3 analytical report of the AHA.SI project
ANALYSIS

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1. INTRODUCTION

An ageing population brings important challenges at the level of individual, company and the society as a whole. Ageing of the population will thus have a significant impact on the Slovenian economy, since ageing of the labour force and other social changes pose numerous challenges of adjustments to organisations, employees and all social partners (ageing labour force, labour shortages, new methods of operation, new markets).

To prepare appropriate measures, the appropriate analyses, which are the subject of this report, were prepared within the scope of the AHA.SI project. The report has the structure as follows. After the introduction, demographic projections for Slovenia are presented and the assumptions described in detail in the second chapter. The third chapter deals with the Slovenian public opinion with regard to the attraction of labour participation and a motif to retire. The findings are based on the SHARE research[1], European Social Survey and Fifth European Working Conditions Survey for Slovenia. The pension scheme is a topic of the fourth chapter, where a dynamic micro-simulation model is briefly described and the assessment of the impact of the ageing of population on the pension payment given. The fifth chapter moves over to the field of labour market and presents the situation in the European Union and Slovenia with the emphasis on the people older than 55 years.

2. DEMOGRAPHIC CHANGES AND PROJECTIONS

The knowledge of demographic situation and expected changes is necessary in terms of planning the measures to be taken in the labour market, as well as to plan necessary adjustments of the pension scheme. In calculating the future trend of pension payments and gross domestic product, the latest demographic projections from Eurostat, designated EUROPOP2013, announced in 2014, were used. Eurostat prepares demographic projections every few years – the previous were designated with EUROPOP2010 and announced in 2011. On the basis of these projections, the calculations of the Ageing Working Group (AWG) always relate to them.

In the last demographic projections (EUROPOP2013), in addition to the basic variant of projections, four additional variants are presented showing the sensitivity to other kind of trend regarding the assumptions of fertility rate, mortality rate and migrations. In this way, the sensitivity of results is shown in the case of different future trend as assumed in the basic variant. The study will present the results of all five Eurostat variants and some our further variants.

First, the study presents the trend of mortality rate, fertility rate and migrations in the past and their assumed evolution in the future. Then the assumed evolution of these categories in the future is used to calculate demographic indicators that are topical from the pension scheme perspective. Demographic projections thus present us the input data for the simulations of pension expenditures.

2.1   Mortality rate

In the basic variant of EUROPOP2013 demographic projection that will be used also in our simulations of pension expenditures, the further extension of life expectancy for women as well as (or even more) for men is assumed. Life expectancy of women at birth is expected to increase from 83.1 years in 2013 to 85.4 years in 2030 and then to 88.9 in 2060. The figures for men are also expected to take an increasing trend from 77.2 years in 2013 to 80.0 years in 2030 and 84.3 years in 2060. In the period from 2013 to 2060, the life expectancy at birth would increase by 5.6 years for women and 7.2 years for men.

The mortality rate in Slovenia in the last two decades decreases with a significantly faster tempo as assumed by the presented EUROPOP2013 projections for the future. Lower mortality rate is reflected in longer life expectancy. Life expectancy at birth in 1992 was 69.6 years for men and 77.6 years for women. By 2002 the value increased to 72.6 years (i.e. by 3 years in a decade) for men, and 80.5 years (i.e. 2.9 years per a decade) for women. In 2012, the value was 77.1 years for men and 83.3 years from women (Eurostat, 2014). This means that the life expectancy in one decade increased by 2.8 years for women and a high 4.5 years for men; the life expectancy calculated for both genders together thus increased by 3.7 years in a decade (from 76.6 in 2002 to 80.3 in 2012). In other words, the life expectancy at birth extended by almost 9 hours per day in the respective period.

The described fast increase of life expectancy in Slovenia is faster than in the majority of other developed countries. All past Eurostat and national population projections in Slovenia showed that the rate of longevity was underrated. The actual increase in life expectancy was every time higher as anticipated in the projections. These EUROPOP2013 population projections also anticipate a significantly higher life expectancy already at the baseline as the past EUROPOP2010 population projections forecast for 2013.

Thus, it should not come as a surprise if the life expectancy in Slovenia in the next decade increases at the higher rate than anticipated in the Eurostat projections (in the 2013–2023 period the increase of 1.4 years for women and 1.7 years for men is foreseen). Technically speaking, Eurostat assumes for all countries a uniform mathematical function of transition from the current level of life expectancy by individual countries to the technically set objective level in 2150, when all countries are foreseen to reach the same level (it is only a technical assumption, while the projections were made only by 2080 when only a certain level of levelling of life expectancy in individual countries is to be attained). The speed of the increase of longevity, as projected by Eurostat, is closer to an average speed of extension of life expectancy in developed countries in the initial years of projections, and less in countries, such as Slovenia, where the life expectancy currently increases faster.

2.2 Fertility rate

After the World War II, between 32,000 and 36,000 live births per year were delivered in Slovenia, then the number of live births per year were around 30,000 by the beginning of 1980-s (see Figure 2.1). In the next two decades, the fertility rate significantly dropped and felled to only 17,000 live births in 2003.

Figure 2.1: The trend in the number of live births (thousands) in Slovenia in the 1955–2013 period
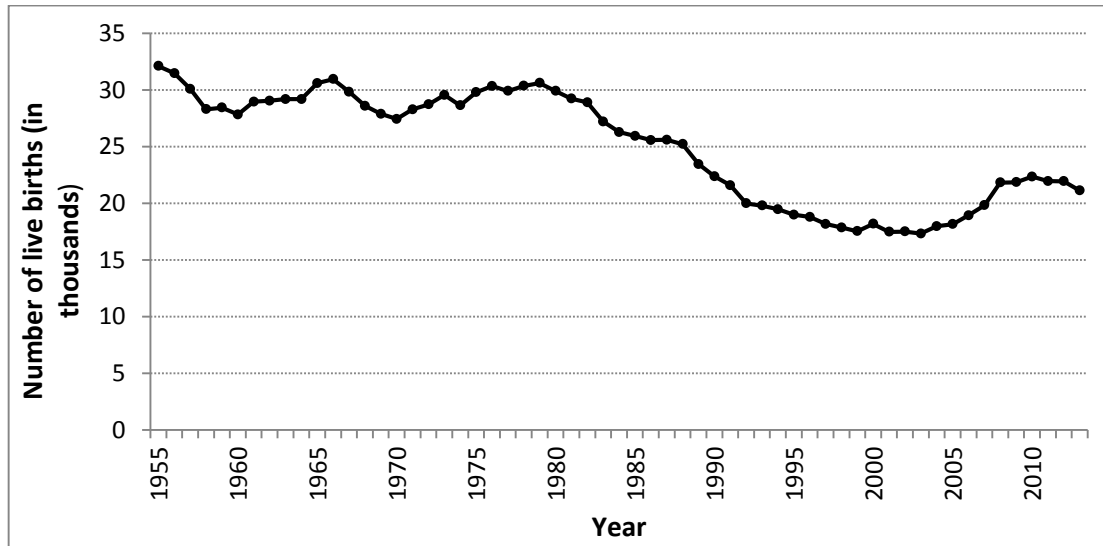
Source: Statistical Office of the Republic of Slovenia, 2014.

The total fertility rate also took a similar trend. This indicator indicates the number of children a woman would give birth to during her fertility period according to the fertility by individual age classes from the studied year. The total fertility rate indicates, whether the fertility provides a long-term regeneration of population at the absence of migrations. For the population to regenerate in the developed countries, a woman would have to give birth to 2.1 children during her fertility period. The trend of the number of live births per woman is shown in Figure 2.2.

Figure 2.2: The trend of the total fertility rate (number of children born by a woman during her fertility period according to the fertility rate in the observed year) in Slovenia in the 1955–2013 period
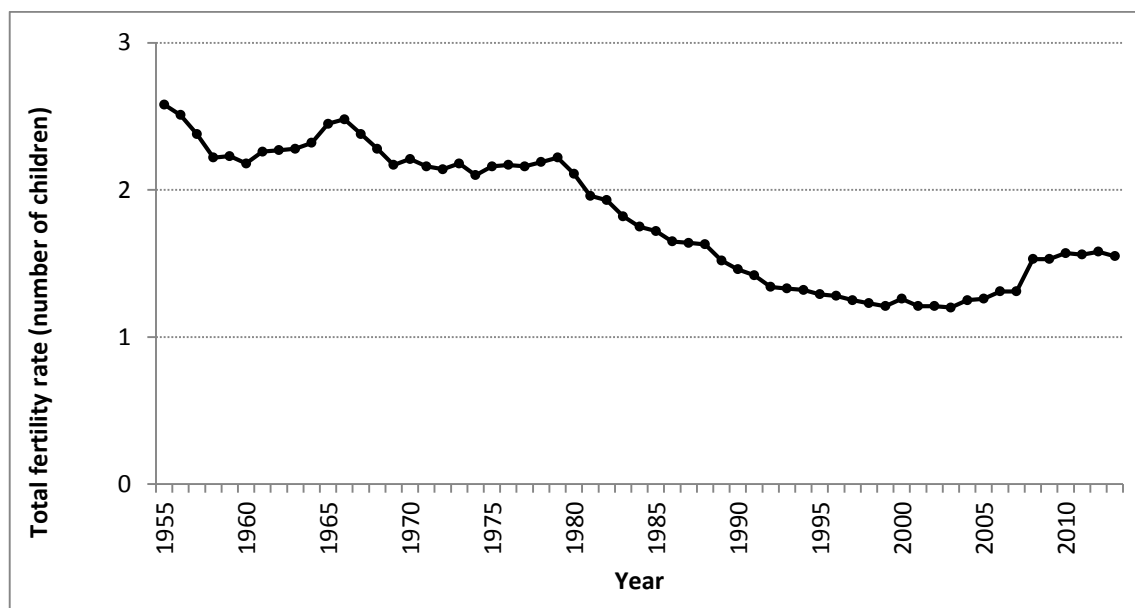
Source: Statistical Office of the Republic of Slovenia, 2014.

As it may be seen from the figure above, the total fertility rate was only 1.2 children in 2003. At that time, this was one of the lowest rates in the whole world. During the 2003–2008 period, it increased to 1.53 children per woman before stabilising at the rates between 1.5 and 1.6. The last available data refers to 2013 and is 1.55 children.

To a great extent, the fertility rate trend shown may be explained by postponing the births in women's higher age class which is indicated in Figure 2.3. In 1984, the average age of a mother delivering a child was 25.3 years, whereas it significantly increased to 30.1 years in 2008. The average age of mother delivering a child thus increased by 0.2 year per year in average in the respective period of 25 years. This means that in average 20% less children were born per year than usual, since every fifth female fertility was postponed to a year older age. Thus, in the beginning of 1990s, for example, 20,000 children were born per year instead of 25,000 if the births had not been delayed to an older age. Each youth generation that enters the labour market today is thus approximately 20% or 5,000 persons smaller as it would be the case – and this every year! Thus, in this regard we will have approximately 25-times by 5,000, i.e. 75,000 less persons in the working age as it would be the case otherwise. The number of women in fertility period will also be lower respectively, which will have a negative impact on the number of live births in the next decades.

Figure 2.3: Trend of the average age of a woman upon delivering a child in Slovenia in the 1955 – 2013 period
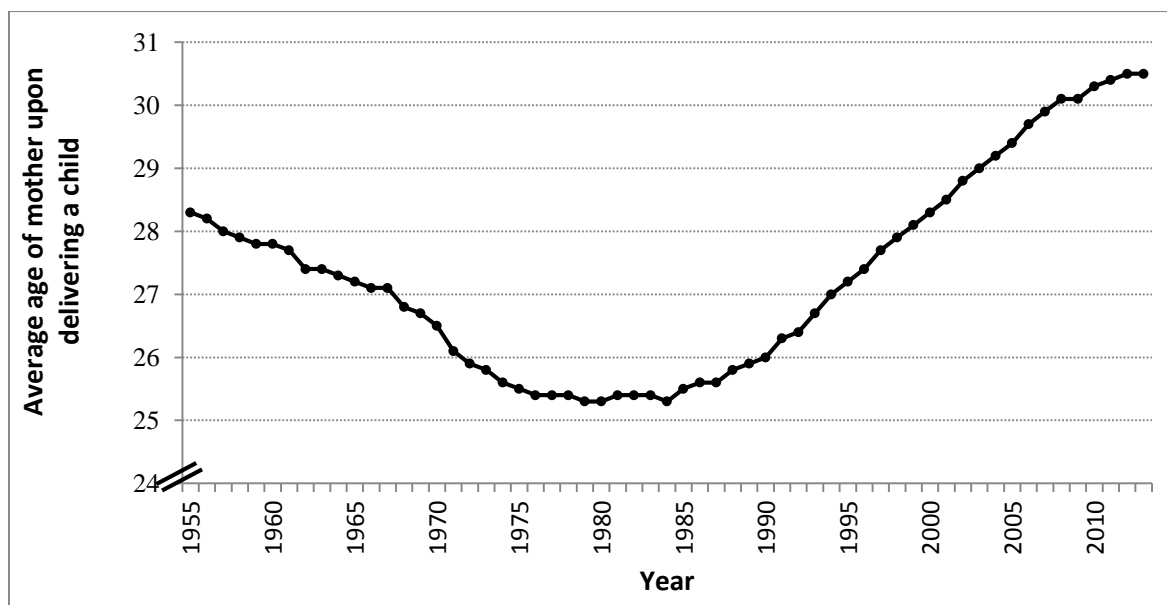
Source: Statistical Office of the Republic of Slovenia, 2014.

As shown in Figure 2.3, the postponement of births slowed down in the recent years, which was according to the experience from other, more developed countries (attaining the threshold of 30 years some time ago) also to be expected. This deceleration explains a higher level of the total fertility rate that we are witnessing in the recent years (according to the minimum in 2003).

As shown in Figure 2.2, in Slovenia, the fertility rate in the last 25 years is under 1.6 children per woman. This means that the fertility rate is below the threshold that would provide the regeneration of population. The EUROPOP2013 assumes that the fertility rate will gradually increase in the future – from 1.59 in 2013 to 1.75 by 2060 (Eurostat, 2014).

In the past, the similar low level and form of the fertility rate trend was also recorded by East European Countries or the ex-socialist countries, whereas the average in the European Union has never dropped to such low level, since the minimum was 1.5 children per woman, while currently it is 1.6 children per woman – Slovenia has now drawn closer to this EU average. The highest fertility rate in the European Union is recorded in France and Scandinavian countries – between 1.7 and 2.0 children per woman.

2.3   Migrations

From 1993 to 2006, the net migrations in Slovenia ranged about 2,500 persons per year, meaning that every year approximately 2,500 people more immigrated than emigrated. Between 2007 and 2009, the net immigrations reached almost 15,000 people per year. After the crisis struck in 2010, the number of such immigrations fell significantly, since only 700 persons per year immigrated (net value) in average during the 2010–2013 period. In the first three quarters of 2014, the net

migrations were even slightly negative, meaning that more persons moved from than to Slovenia (Statistical Office of the Republic of Slovenia, 2015a, 2015b, 2015c).

Eurostat in its EUROPOP2013 population projections assumes that by 2060 4,000 to 6,000 more people will move to than from Slovenia every year. Actually, the average for the 1993–2009 period was the same, i.e. 5,000 immigrants per year, mainly, as mentioned, due to higher net immigrations in the 2007–2009 period. Since these values are significantly lower in recent years, the question poses whether Slovenia will manage to attract such number of net immigrants every year in the future. As it will be shown in this document, the assumption on net migrations has an important impact on the number and age structure of the population. If there are no assumed net immigrations to Slovenia in the future, the ageing of the population would be much more intense. At the same time it is indicated that also a different assumption on the net migrations in the next two decades has an important impact on the results – the latest EUROPOP2013 projections the assumption is significantly different from the previous EUROPOP2010 projections.

2.4 The existing age structure of the population

In addition to the assumed future trends of mortality, fertility and migrations, also the existing age structure of the population will play a crucial role on the demographic projections. The existing age structure of the population is the result of mortality, fertility and migrations in the past decades. It is given and currently very unfavourable in Slovenia from the economic point of view. As it will be presented below, numerous generations, born in the period of high fertility rate ('baby-boom') after the World War II, are starting to retire. On the other hand, the generations born in the period of low fertility rate and thus not so numerous are starting to enter the labour market and fertility period. Together with the high and increasing life expectancy, we will witness a notable ageing of the population in the future, also in the case of potential favourable fertility and migration trends. Thus, the pressure on the public financial system may only be mitigated with migrations and high fertility rate, but not eliminated or solved.

2.5 EUROPOP2013

In 2014, Eurostat presented new EUROPOP2013 population projections. It drew them up for the EU Member States, Iceland, Norway and Switzerland (Eurostat, 2014). It is a standing practice of drawing up new population projections which takes place every two to three years. The latest were drawn up for the period up to 2080, while the past projections were made up to 2060. The key user of these Eurostat projections is the European Commission, more precisely the Ageing Working Group (AWG) working within the scope of the Economic Policy Committee (EPC). The AWG group analyses a long-term sustainability of expenditures for pensions, health system and long-term care, as well as for unemployment and education, i.e. the expenditures related to the ageing of population.

Figure 2.4 shows the age structure of the population in Slovenia in 2013 by applying the age pyramid. The left side shows the distribution of men by individual age classes, while women are distributed on the right. It shows that the most numerous generations are aged between 30 and 60 years.

Figure 2.4: The age pyramid of the population in Slovenia on 1 January 2013 (male left, female right)
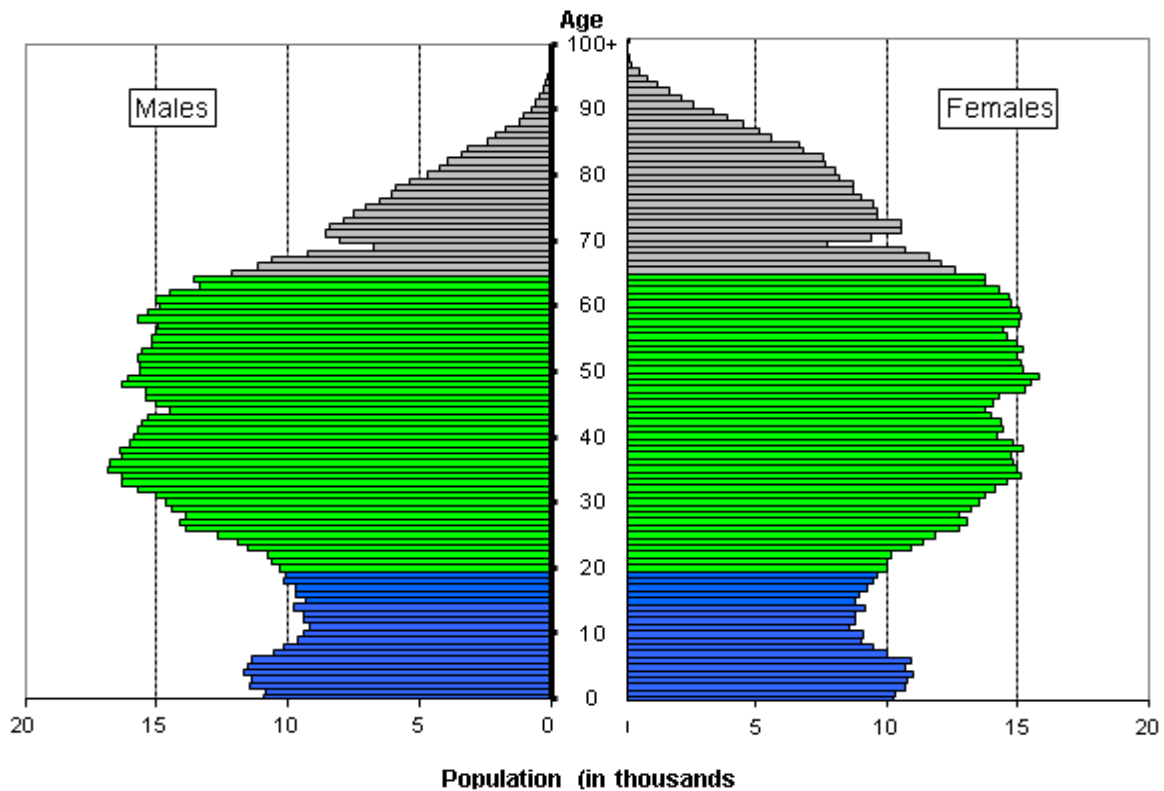
Source: Eurostat, 2014 (EUROPOP2013).

In high age classes, the number is lower due to the mortality that rapidly increases in the respective classes. In the age classes under 30 years, the low number of population is the consequence of the described decrease of fertility rate after 1980, reaching its minimum in 2003. In 2013, shown in the figure, the lowest number of population is thus seen in the age about 10 years. Somewhat higher number of the population in the 0–5 years age class is the result of a higher fertility rate in the last couple of years, as described above.

As seen from Figures 2.1 and 2.2, the trend of the number of live births in the past was similar to the level of fertility rate expressed by the total fertility rate. The trend was also similar since the number of women in fertility age was relatively stable. Figure 2.5 shows the trend of the number of women aged 20–39. The fertility period for women is defined with the age range from 15 to 49 years in the demography, but there are not many births delivered in the bottom and top section of this interval. In 2013, 97.4% of all births pertained to the age ranging from 20 to 39 years. At the same time, the trend of the number of women aged 25–34 years is shown: i.e. the sum of two 5-year age classes with the highest fertility rate. In 2013, the women aged 25–34 years delivered a high 69.2% of all children born in Slovenia in that year.

Figure 2.5 shows that the number of women aged 25–34 years will significantly drop by 2030 – from about 150,000 before 2010 to 100,000 by 2030, i.e. a one third decrease. This will cause that the number of live births, starting to increase after 2003, will begin to drop again – despite the

fact that Eurostat in its population projections assumes the increase of fertility rate in terms of the average number of children born per woman during her fertility period.

Figure 2.5: The number of women aged 20–39 years and 25–34 years; actual values of the 1980–2013 period and the projection for the 2014–2060 period (medium variant of the EUROPOP2013 projections)
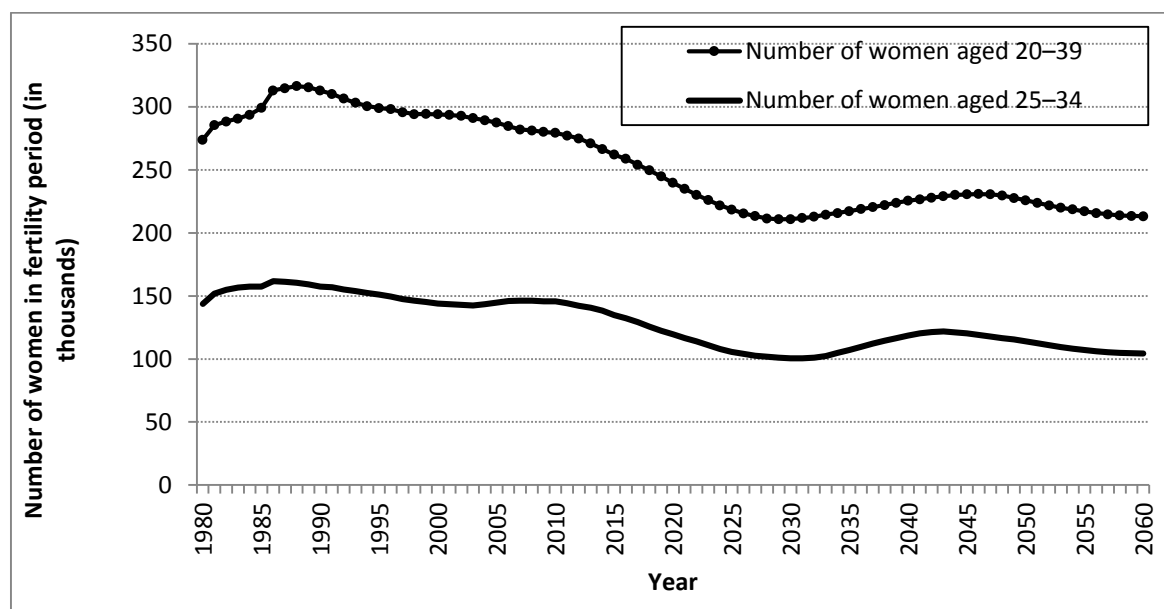
Source: Statistical Office of the Republic of Slovenia, 2015: Eurostat, 2014.

The negative impact on the number of live births due to less women in the fertility period will be much more powerful than the positive impact of the increasing number of children per woman. Thus, by 2030 we will witness a decrease in the number of births. This is also evident in Figure 2.6 showing the age structure in 2030 – number of children aged 0–20 year will be presumably constantly decreasing. After 2030, the number of women in the age class 25–34 years will stop to decrease and thus also the number of live births.

Figure 2.6 shows the far-reaching demographic consequences due to very low fertility rate that has been recorded in Slovenia over past two or three decades. First, there is the direct effect of a decreasing number of children due to low fertility rate as such. When the small generations of girls reach the fertility period, there is also a negative impact on the number of live births through the low number of women in fertility period.

Figure 2.6: The age structure of the population in Slovenia on 1 January 2030 (medium variant of EUROPOP2013 projections)
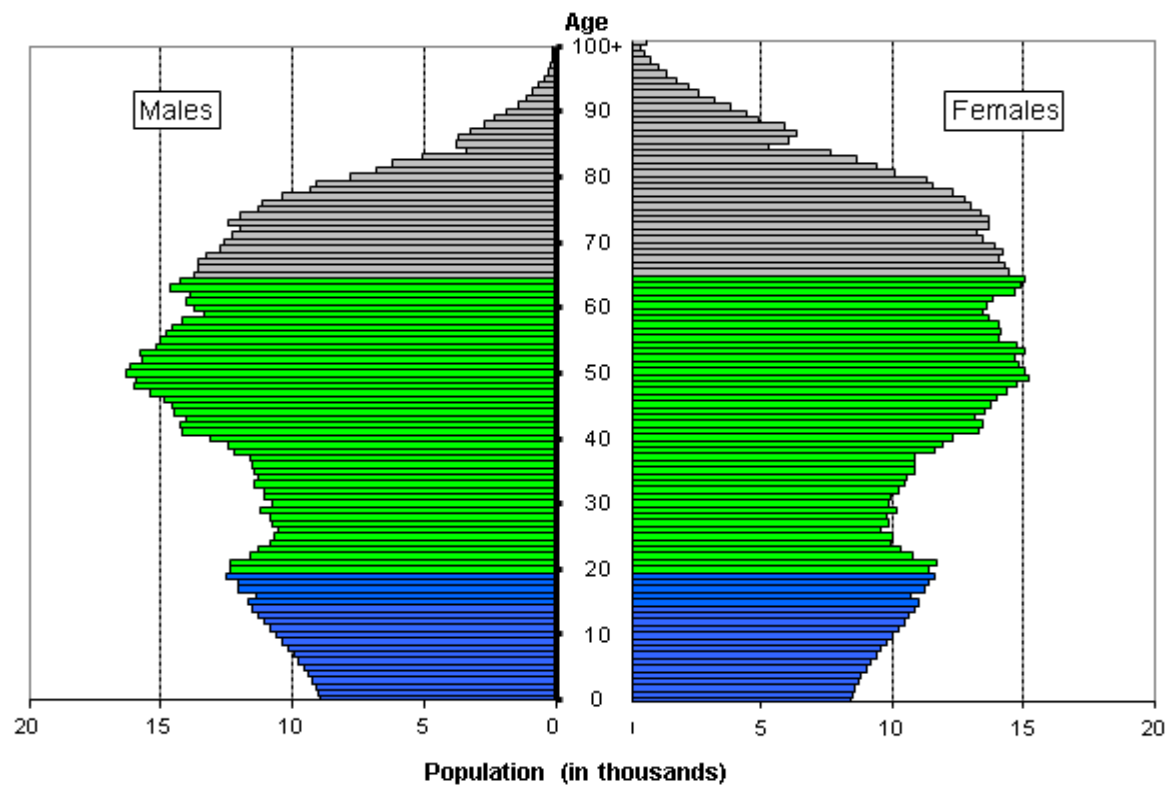
Source: Eurostat, 2014 (EUROPOP2013).

In Figure 2.7, showing the projection of the Slovenian population for 2050, this is reflected in small number of population aged around 50 as well as 20 years.

Figure 2.7: The age structure of the population in Slovenia on 1 January 2050 (medium variant of EUROPOP2013 projections)
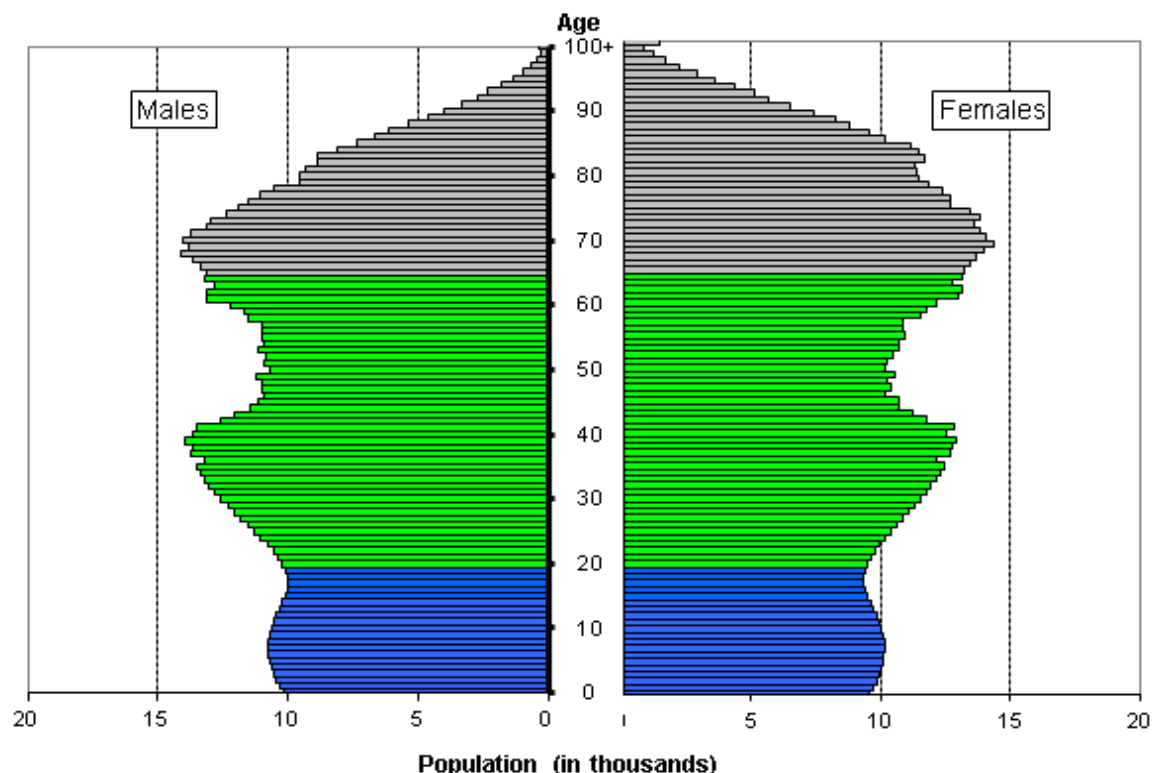
Source: Eurostat, 2014 (EUROPOP2013).

With an additional delay of 20–30 years, the number of people at the labour market also respectively drops as the smaller generations start to enter the labour market. Negative demographic effects on the labour market and the sustainability of public financial system may thus 'stem from' the over half a century distant past or low fertility rate of that time.

The generations, born in the last 25 years (when Slovenia registered the total fertility rate under 1.6 children per woman), are actually already entering the labour market and will present an increasing share in the total number of employees in the future, thus causing the number of employees to fall due to demography. On the other hand, the big 'baby-boom' generations, born in the period of high fertility rate after the World War II, increasingly retire. As seen from the age pyramids, the number of persons entering the age of 20–64 let, will even be smaller than the number of persons retiring from this working age. Together with fast increase of life expectancy, the share of population aged 65 years and more (65+) will grow increasingly in the future.

As already mentioned, on the basis of the past trends of migrations, Eurostat assumes that between 4,000 and 6,000 persons more will immigrate to Slovenia as they will emigrate from it during the period of projections. However, these high positive values could only mitigate the ageing of population, and not stop it. It is however true, as it will be shown, that without net positive immigration the ageing of population of Slovenia would be even more evident in the future. Since the immigrants are mainly the young people, the net migrations increase the number of active working population and thus reduce the share of old people and load on the

public financial system. Table 2.1 thus collectively shows the trend of the number of population by individual age groups that are relevant from the economic perspective: a) the young aged 0–19 years who are normally not yet working in the developed countries, b) working contingent aged 20–64 years, the majority of which is active workers, and c) older than 65, who are normally retired. While Table 2.1 shows the trend in the selected years, Figure 2.8 also shows the trend of shares for all intermediary years in the 1980–2060 period.

Table 2.1: Number of population in Slovenia by individual age groups; actual values in the 1980–2013 period and the projections for the 2014–2060 period (medium variant of EUROPOP2013 projections)

	1980	1990	2000	2010	2020	2030	2040	2050	2060
	Number of population by individual age groups								
P_{0-19}	583245	559355	456145	393342	415505	406290	383348	405090	408511
P_{20-64}	1087063	1224878	1255897	1316712	1241943	1158303	1115021	1046007	1031963
P_{65+}	214169	213857	278230	339207	430428	522518	580098.5	618296	599208
Total	1884477	1998090	1990272	2049261	2087876	2087111	2078467	2069393	2039681
	Share of population in individual age groups according to the total population number								
P_{0-19}	30.9	28.0	22.9	19.2	19.9	19.5	18.4	19.6	20.0
P_{20-64}	57.7	61.3	63.1	64.3	59.5	55.5	53.6	50.5	50.6
P_{65+}	11.4	10.7	14.0	16.6	20.6	25.0	27.9	29.9	29.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistical Office of the Republic of Slovenia, 2014: Eurostat, 2014 (EUROPOP2013).

As shown in Table 2.1, the number of population during the period of projections will slightly increase, and drop back to the approximately the same level as of 2013 by 2060. Regarding the trend of the number of population, the Eurostat projections thus forecast only minimum changes.

Big changes are expected to occur in the population age structure, namely regarding the share of population in the active working age (20–64 years) and the share of old people (aged 65 let or more). In 2013, the population in the working age represented almost two thirds (63.4%) of the total population, and this share is expected to reduce by 2050 to only around one half (50.5%) of the total population and stabilise at this level. On the other hand the share of the older people (older than 65) is expected to increase from 17.3% in 2013 to 29.9% of the entire population in 2050 and than stabilise. The share of older population is thus projected to be almost doubled in the next 35 years.

Table 2.1 and Figure 2.8 display that the share of the young aged 0–19 years gradually decreased from 30% in 1980 to 20% in 2005 and stabilised at this level. It is expected to be around current 20% during the whole period of projections, i.e. by 2060. The changes in shares are thus assumed also in the age groups of 20–64 years (the share will decrease significantly) and 65+ (the share will increase significantly), whereas the share of young (0–19 years) will remain approximately the same.

Figure 2.8: Share of population in Slovenia by individual age groups; actual values in the 1980-2013 period and the projections for the 2014-2060 period (medium variant of EUROPOP2013 projections)
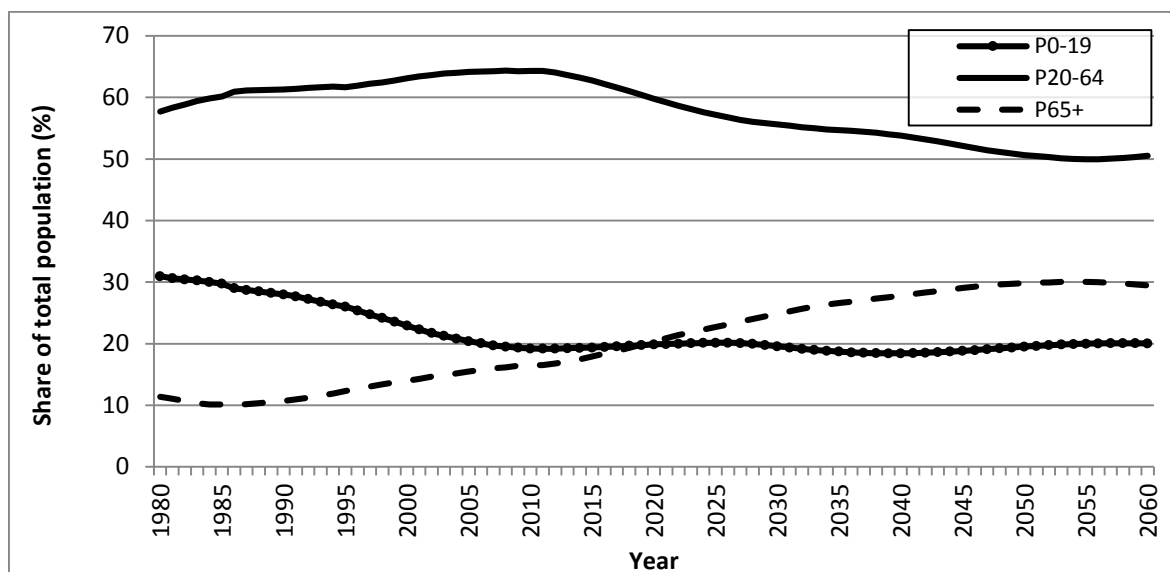
Source: Eurostat, 2014 (EUROPOP2013); own calculations.

2.6 The comparison of the latest results of EUROPOP2013 with the previous demographic projections (EUROPOP2010)

Although Eurostat prepares demographic projections every two to three years, the results of the latest demographic projections from 2014 (EUROPOP2013) are significantly different from the results of the previous demographic projections from 2011 (EUROPOP2010). The designation in the title of projections denotes the year in which the projections started to be drawn up, i.e. usually a year before they are finalised and published.

It will be shown below, what are these differences and to what extent they are a consequence of the changed assumption regarding the trend of future mortality rate, to what extent a consequence of the changed assumption regarding the fertility rate and to what extent a consequence of the changed assumption regarding migrations.

In regard to the mortality rate, it was shown that in 2013 the achieved life expectancy was actually higher than assumed in the EUROPOP2010 projections. Figure 2.9 thus shows the higher baseline life expectancy in 2013 than it was assumed by EUROPOP2010 for 2013. EUROPOP2013 also shows slightly higher target values that are technically set for 2150. Compared to the previous projections, the latter assume a higher life expectancy for the whole 2013–2060 period. Due to the assumption that people will live longer, also a higher share of population older than 65 (65+) is expected. There are no noticeable differences expected in lower age groups since their mortality rate is significantly lower than in the 65+ age group.

Figure 2.9: The assumption regarding the future trend of life expectancy at birth according to the EUROPOP2010 and EUROPOP2013 population projections for the 2014-2060 period
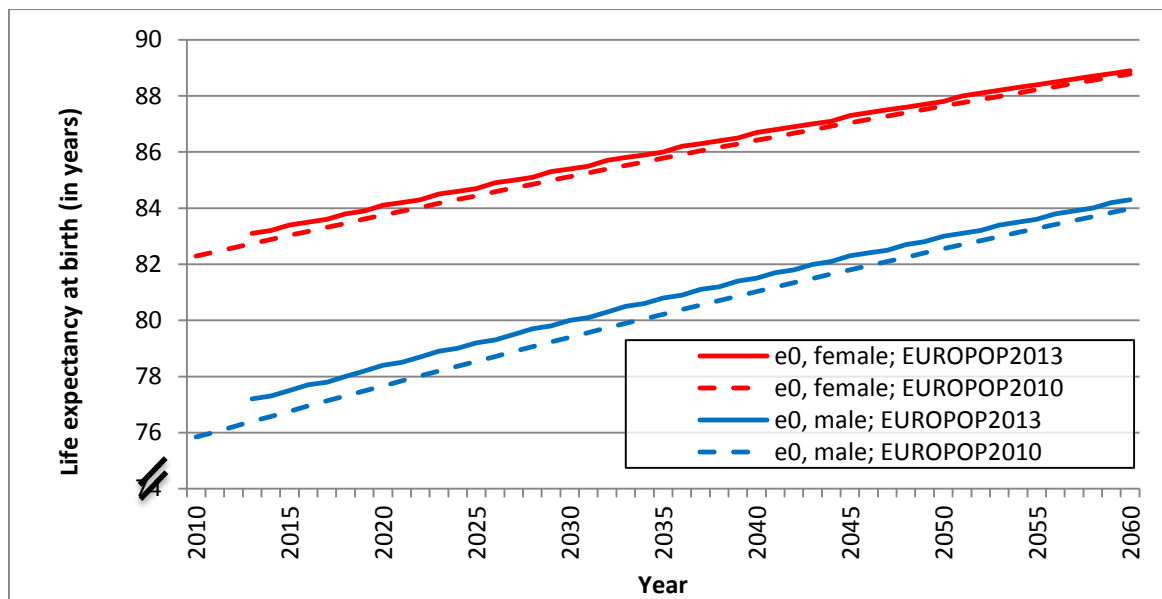
Source: Eurostat, 2011 (EUROPOP2010); Eurostat, 2014 (EUROPOP2013).

Figure 2.10: Eurostat projections regarding the future trend of the total fertility rate according to the EUROPOP2010 and EUROPOP2013 population projections for the 2014-2060 period
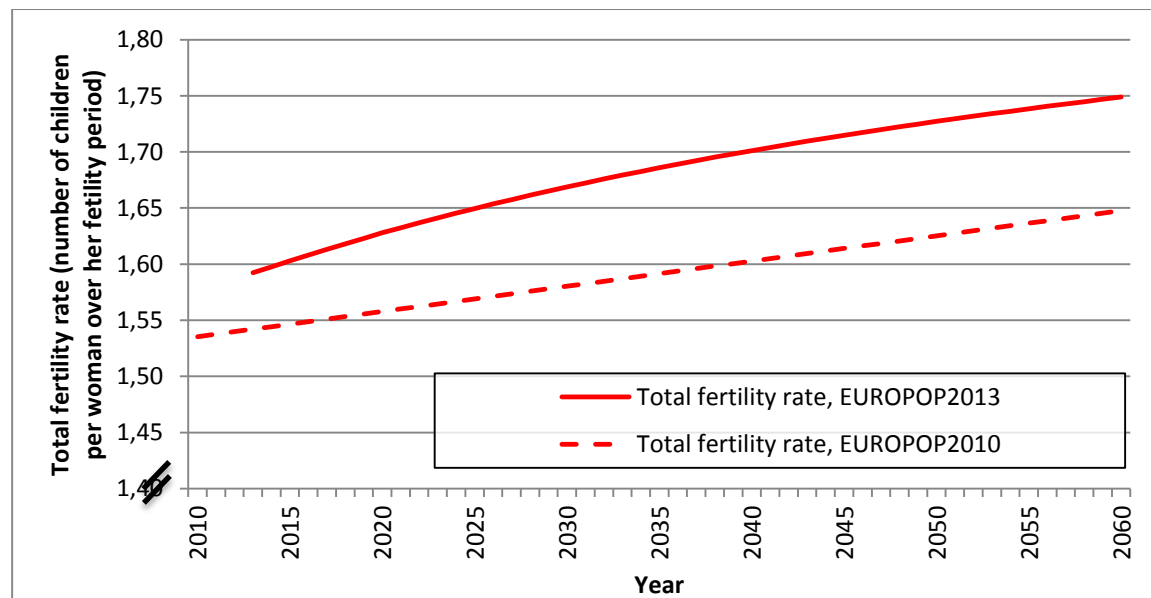
Source: Eurostat, 2011 (EUROPOP2010); Eurostat, 2014 (EUROPOP2013).

Regarding the fertility rate, Eurostat assumed significantly higher values in the latest EUROPOP2013 projections than in the previous projections. In terms of the fertility rate, it was also shown that the actual level in 2013 is higher than the level assumed in EUROPO2010. Thus, the latest data on the actual fertility rate level was used as a baseline in the EUROPOP2013

projections. At the same time, Eurostat in its latest projections also set higher target values, the fertility rate will be gradually coming close by 2150 according to the mathematical function. Thus it is now assumed, that the level of the total fertility rate will increase to 1.75 children by 2060, while the previous EUROPOP2010 projections foresaw 1.65 children for the same year. From the perspective of our analysis it is thus expected that the higher fertility rate in the latest projections mitigates the ageing of population.

Migrations are the most uncertain assumptions in demographic projections. It turns out that the assumption regarding migrations has a specifically strong impact on changes of the results of the latest EUROPOP2013 demographic projections compared to the previous EUROPOP2010 projections, indicated in Figure 2.11.

Figure 2.11: The assumptions on the future trend of the number of net immigrants in the previous demographic projections (EUROPOP2010) and the latest demographic projections (EUROPOP2013) for the 2014-2060 period
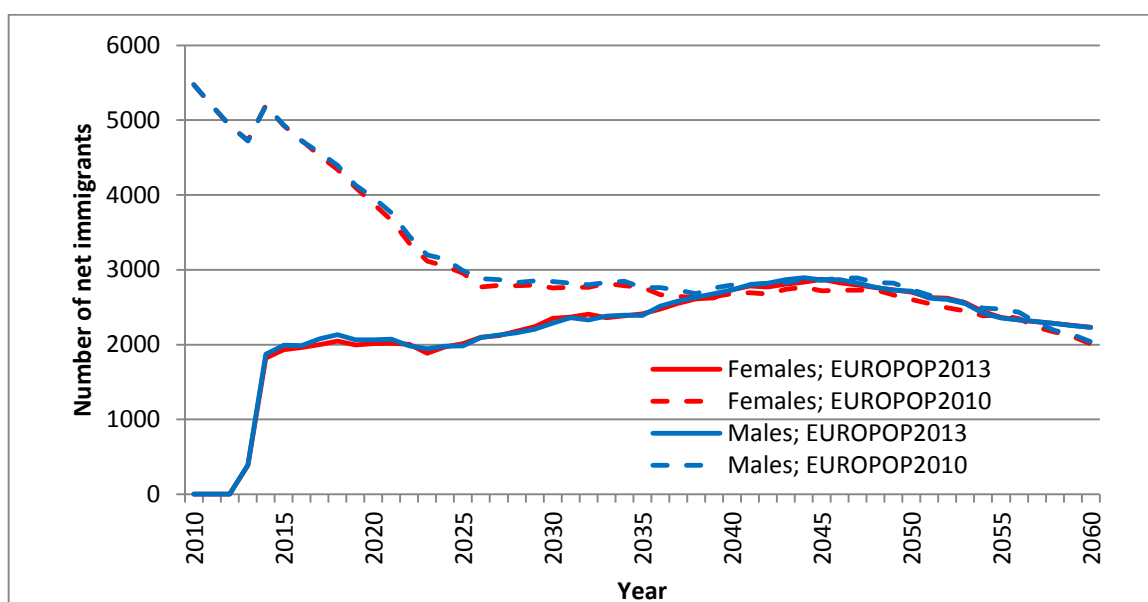
Source: Eurostat, 2011 (EUROPOP2010); Eurostat, 2014 (EUROPOP2013).

In the 2007–2009 period, Slovenia recorded very high net migrations – almost 15,000 more people immigrated than emigrated. On the basis of this events, Eurostat in the previous EUROPOP2010 demographic projections assumed that the initial years of projections witnessed over 10,000 net immigrants per year, and these values are supposed to be gradually decreasing to approximately 6,000 net migrations per year by 2025 (Figure 2.11). In the 2010–2012 period, the net migrations significantly dropped – the average for the respective three years was 700 net immigrants per year. Eurostat took this into account in the latest EUROPOP2013 projections and reduced the assumptions about the net migrations in the initial period of projections to approximately 4,000 net migrations per year.

The age structure of the immigrants indicates that immigrants are predominantly young people aged between 20 and 35 years (Figure 2.12). Thus the impact of migrations to the slowing down of the ageing of population is positive.

2.12: Eurostat assumptions regarding the distribution of net migrations by age and sex in 2013
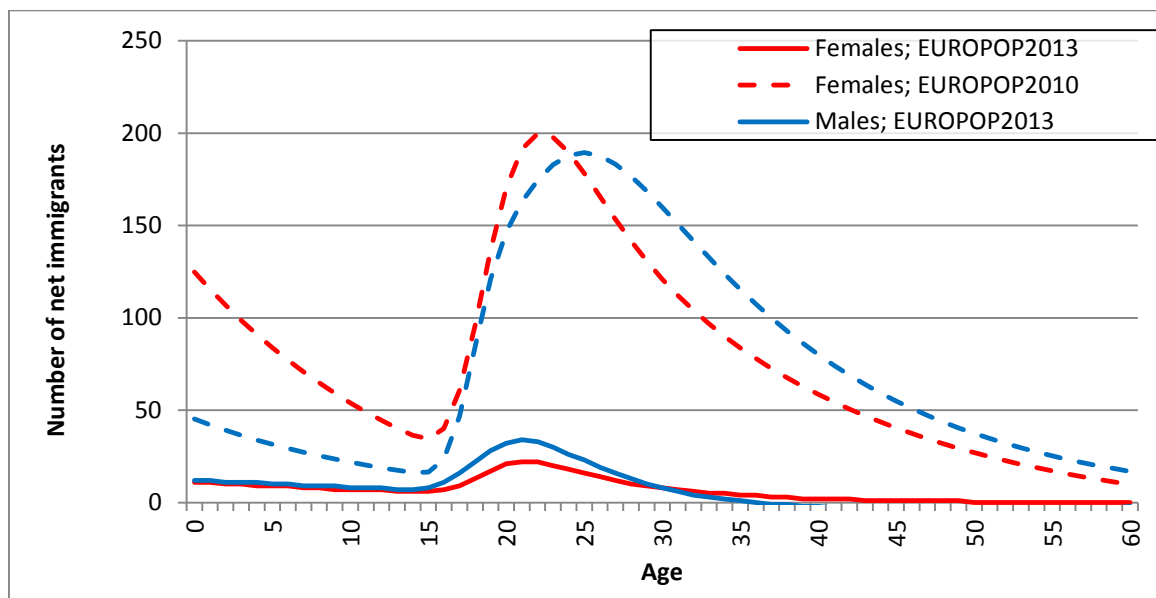
Source: Eurostat, 2011 (EUROPOP2010); Eurostat, 2014 (EUROPOP2013).

Figure 2.13 shows the trend of the share of population aged 65 or more according to the latest Eurostat projections (EUROPOP2013) and previous Eurostat projections (EUROPOP2010).

Figure 2.13: Projections of the share of the 65+ population in the total population (in %); Slovenia, EUROPOP2010 and EUROPOP2013
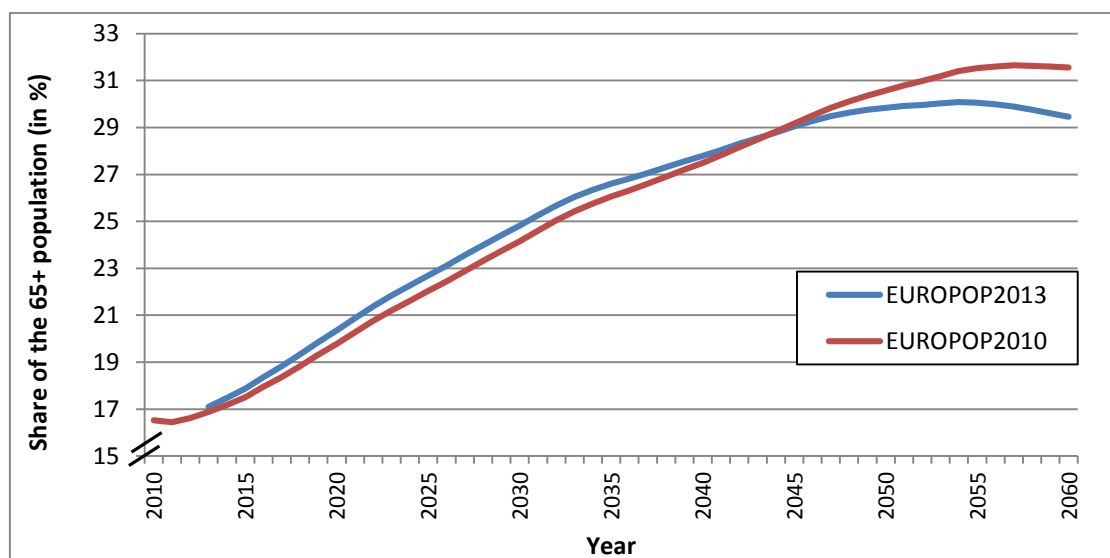
Source: Eurostat, 2011 (EUROPOP2010); Eurostat, 2014 (EUROPOP2013).

Since the assumed number of net immigrants in EUROPOP2013 is significantly lower, the share of older populations (and consequently also the share of expenditures for pensions in GDP) by 2045 is higher than it would be if there were more net immigrants (this was also an assumption in EUROPOP2010). After 2045, the transition of these immigrants started in EUROPOP2010 (20–35 year olds from the initial periods of projections) to the 65+ age group. In the EUROPOP2013 projections there is no such impact, since the assumed net migrations in the initial period of projections are significantly lower. In the latest EUROPOP2013, there is no high net migrations in the period by 2045, therefore the share of 65+ population is higher by this year (and thus also the pressure on the pension fund) as it is the case in the previous projections, while at the end of the period of projections their share is significantly lower.

To show the impact of an individual assumption (mortality rate, fertility rate, migrations) on this changed result, one assumption in our calculations was changed at a time in the transfer from the EUROPOP2010 to EUROPOP2013 result. The focus was placed only on the result of the share of population of 65 or more years old in 2060, when there is also the biggest difference between both projections:

- As presented, EUROPOP2013 compared to EUROPOP2010 assumes that the life expectancy will further increase as stated in the previous version of projections: in this regard the share of 65+ population is additionally increased, namely for somewhat less than 0.3 percentage point.
- Due to the higher assumed fertility rate in EUROPOP2013 compared to EUROPOP2010, the share of 65+ population in 2060 would be around 1.0 percentage point lower than as per EUROPOP2010.
- Due to lower net migrations according to EUROPOP2013 in the initial period of projections, the share of 65+ population in 2060 is about 1.3 percentage point lower than in EUROPOP2010.

The total net impact of all three assumptions (mortality rate, fertility rate and migrations) is **about 2.1 percentage point lower share of 65+population** in the total population (29.5% instead of 36.6%) in 2060, which is then **reflected in about 1.5 percentage point lower share of pensions in the GDP in 2060** compared to the previous demographic projections. Since it is a big and important difference that significantly changes also the projections of pension expenditures, it was analysed and presented in detail.

2.7 Sensitivity of results to individual assumptions of demographic projections

Thus, the result of demographic projections is affected by the fertility rate, mortality rate and migrations; and also the existing demographic structure which is a result of three foregoing demographic processes in the past. Different variants of the projections, with one of the assumptions changed at a time, will be presented below. Thus we would get an idea how the results are sensitive to each of these assumptions. Thus we can see, how we may impact on the future trends of the number and structure of population if we succeeded in affecting the individual assumption – i.e. the impact on fertility rate and net migration.

As an integral part of EUROPOP2013, Eurostat prepared 5 different variants of projections:
- basic variant of projections,

- variant with a higher life expectancy,
- variant with a lower fertility rate,
- variant with lower migrations,
- variant without migrations.

As already mentioned, in this respect only one assumption at a time is changed which is included in the denomination of a variant while the remaining two assumptions stay the same as in the basic variant. It is shown that in all variants prepared by Eurostat, the parameters are always negatively-oriented in terms of the sustainability of the pension system. The purpose of these variants is to show the danger of additional criticality of the ageing of population if individual assumptions were less favourable as in the basic variant.

In regard to the above-stated variants, the results of Eurostat projections were used and some other further variants additionally calculated. The same software and other assumptions as in the background of calculations were used. In addition to the trend of aggregate values regarding the fertility rate, mortality rate and migrations, the background calculations also include age distribution of fertility rate (by women's age), age-gender distribution of migrations and also in assuming the extension of life expectancy it is in the background of distributions, of how the mortality rate will decrease by individual age classes. Every of the stated distributions is generally different in every calendar year of projections.

In additional variants, the same deviation of an individual assumption was assumed (fertility rate, mortality rate and migrations) from the basic variant, only in the opposite direction. In the first additional variant, it is thus assumed that the fertility rate would be higher than in the basic variant; in the second additional variant it is assumed that the mortality rate would be lower than in the basic variant; in the third additional variant it is assumed that the net migrations would be higher than in the basic variant. As opposed to Eurostat, which each time assumed the sensitivity of results in the negative direction (in terms of the ageing of population and thus the pressures to the sustainability of the pension system), the reflected deviation into the positive direction is also examined in these assumptions.

As a point of interest, the 'Fertility rate immediately to 2.1' variant will be added, where it is assumed that the fertility rate immediately increases to the level of 2.1 children[2], which is required for the population to regenerate in long-term and remains at this level by 2060. It is an unrealistic variant, but we try to show the impact of the high level of fertility rate to the number of population, and mainly on the slowing down of the ageing of population and sustainability of the pension system. Often it is expected that the high fertility rate might save the problem of ageing in the next few decades, while actually the impact of so unrealistic high fertility rate is very restricted. Table 2.2 recapitulates the assumptions used in the special variant.

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[2] In developed countries, such as Slovenia, the level of fertility rate for the regeneration of population is needed, expressed precisely to two decimal points, 2.07 children per woman during the fertility period. This value was also used in our calculations. A good 2.0 children is required since less girls are born (per 100 boys about 94 to 95 girls are born). Thus women in their fertility rate should in average deliver more than 2 children to deliver one girl in average and thus replace themselves. The fertility rate should also be higher than 2.0 since some women die before reaching the end of their fertility period. However, the mortality rate of women by this age is very low in developed countries, so that the impact of this factor is minimum.

Table 2.2: Variants of demographic projections – values at the beginning of the period of projections and in 2060

Variant	Life expectancy at birth (number of years)				Fertility rate (number of children per woman)		Net migrations (number of persons per year)	
	2013		2060		2013	2060	2015[*]	2060
	Male	Women	Men	Women				
Basic variant	77.2	83.1	84.3	88.9	1.59	1.75	3924	4462
Fertility rate: high	77.2	83.1	84.3	88.9	1.59	2.10	3924	4462
Fertility rate: low	77.2	83.1	84.3	88.9	1.59	1.40	3924	4462
Life exp.: high	77.2	83.1	86.3	90.9	1.59	1.75	3924	4462
Life exp.: low	77.2	83.1	82.3	86.9	1.59	1.75	3924	4462
Migrations: high	77.2	83.1	84.3	88.9	1.59	1.75	4702	5346
Migrations: low	77.2	83.1	84.3	88.9	1.59	1.75	3146	3578
Migrations: 0	77.2	83.1	84.3	88.9	1.59	1.75	0	0
Fertility rate immediately to 2.1	77.2	83.1	84.3	88.9	2.07	2.07	3924	4462

Note: *due to unrepresentative low values in 2013 and 2014, the value of 2015 is shown.
Source: Eurostat, 2014 (EUROPOP2013).

2.8 Results of alternative variants of demographic projections

The results obtained by individual variants of demographic projections indicate that the number of population in Slovenia in 2060 is expected to be at the current level; in the intermediate period, it is expected to increase somewhat and then fall approximately to the present level. In individual variants the number of population is slightly different, but with the exception of the variant with zero net migrations and non-realistic 'Fertility rate immediately to 2.1' variant, the results are rather similar. Out of the shown variants, the assumption on the life expectancy has the lowest impact on the number of population, the variant with high or low migrations has somewhat higher impact, and low and high fertility rate with even higher impact. The variant assuming that the net migrations would be zero in the next year indicates the higher deviation, i.e. the same number of population is expected to immigrate in Slovenia than emigrate from Slovenia. In this case, the number of population would fall for about 350,000 people between 2013 and 2060 in Slovenia – i.e. to 1.7 million. According to the "Fertility rate immediately to 2.1" variant, the number of population in the 2013-2060 period would grow by 280,000 to around 2.3 million.

Figure 2.14: The future trend of number of population in Slovenia by individual variants of demographic projections (in millions)
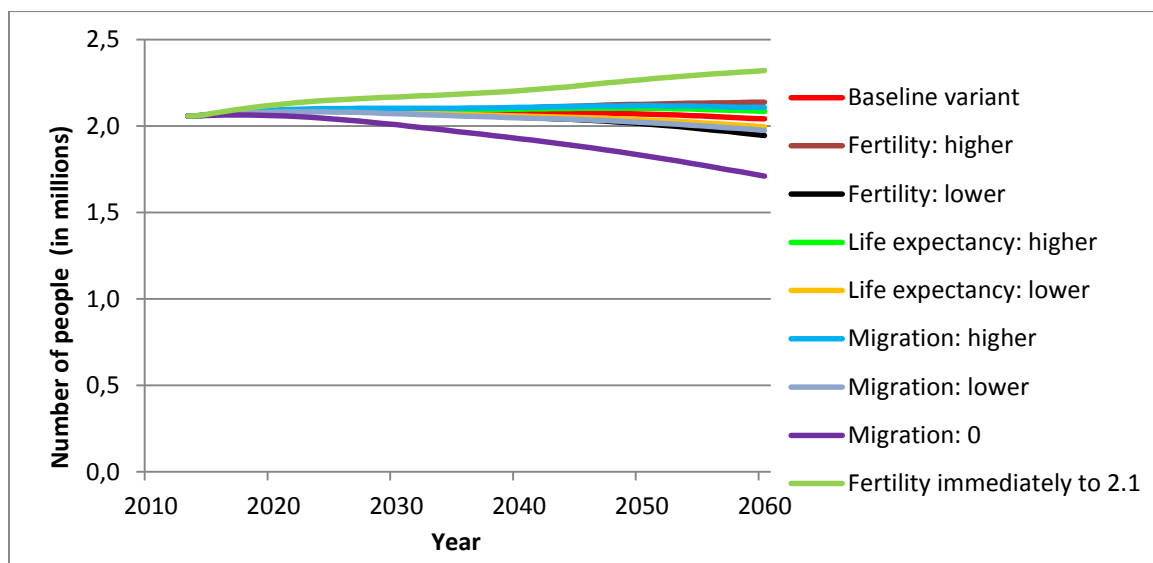
Source: Eurostat, 2014 (EUROPOP2013).

Despite the relative similarity of results of projections by individual variants (exceptions being the variant without migrations and 'Fertility rate immediately to 2.1' variant), the age structure of population will significantly change in the future accordingly. Figure 2.15 shows that the share of 65+ population will strongly increase in all presented variants. While the share of 65+ population was around 17% in 2013, it is expected to grow to approximately 30% by 2050 and stabilise at that level or even dropp somewhat. Similar to the higher fertility rate positively affecting the number of population, it has a positive impact on the slowing down the ageing of population in this case. This positive effect this time is also stronger than the impact of higher net migrations that also positively affect the slowing down of ageing of population. The strongest impact is the higher life expectancy that hastens the ageing of population. Again, the variant without migrations is the most different from other variants. Without net migrations, the ageing of population would be significantly more intensive in the future. According to the medium variant, the share of 65+ population would be almost 5 percentage points higher in 2060 (Figure 2.15), i.e. around 35% instead of 30%. If Slovenia has a negative immigrations-emigrations ratio, the share of 65+ population would be more than a third of total population in 2060. Also in the non-realistic variant of the immediate increase of the fertility rate to 2.1 children, the share of 65+ population would still increase from 17% in 2013 to 27% in 2050. Even that high fertility rate in the next couple of decades could not slow down a quick increase of the share of 65+ population.

Figure 2.15: Projections of the share of the 65+ population in the total population (in %)
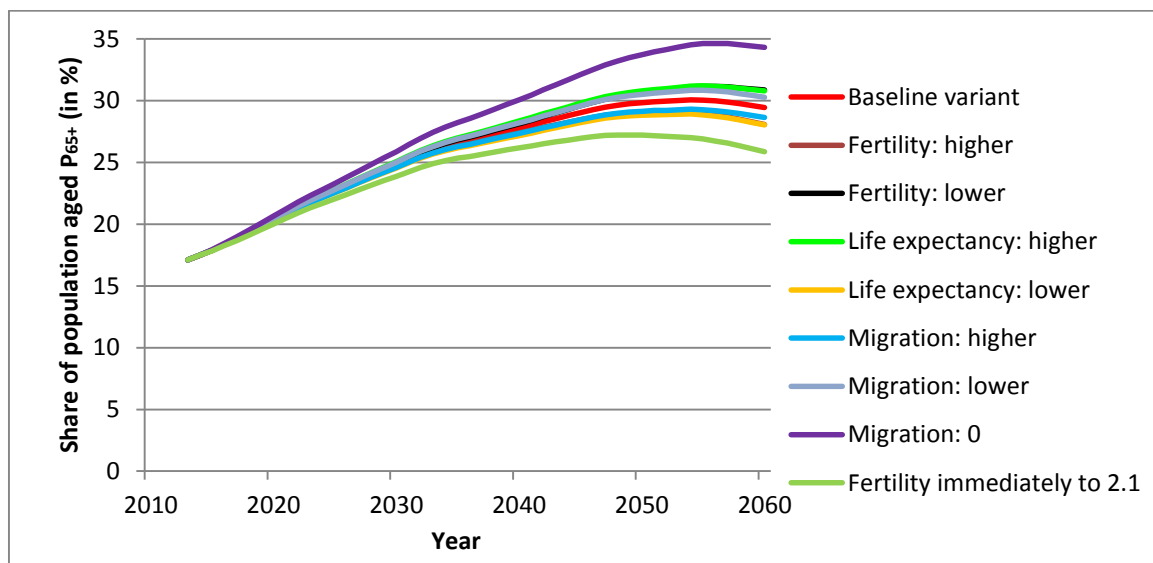
A strong increase of the share of old population is forecast by all presented variants, in particular the results are similar in the first two decades of projections. Even if we combine assumptions that would with two or even three assumptions (fertility rate, mortality rate and migrations) slow down the ageing of population, the result would still indicate a strong ageing of population. At the same time, such an optimistic variant is highly unlikely. On the other hand, the combination of assumption in the unfavourable direction in terms of ageing (i.e. lower fertility rate, higher life expectancy and lower net migrations) would lead to a significantly higher ageing of population. This variant is also regarded as highly unlikely. Combinations, where we would always change by two assumptions at the same time, would be between two above-stated extremes. For the transparency reasons, all these variants are not shown, while the result would be a sum of individual deviations of individual variants from the basic variant of projections and simultaneous interaction of individual assumptions.

The share of 65+ population is crucial from the perspective of the pressure on the sustainability of the pensions system. However, it is at the same time important how the share of population in the working contingent (working age) is moving; i.e. the people paying contributions, from which the pensions expenditures are predominantly financed. The Figure 2.16 shows how many people aged 65+ there are per 100 people aged 20–64. We establish that the P65+/P20–64 share (times 100) in the basic variant in the 2013–2050 period increase from 27 to around 60. Also in other variants, the share is strongly increased and there is only a relatively small fluctuation around the basic variant. Somewhat more prominent is the non-realistic 'Fertility rate immediately to 2.1' variant. This result thus indicates that the increase of fertility rate has a positive impact on this ratio only in the long time period. In the first twenty years, it has no positive impact whatsoever, since the higher number of live births does not enter the labour market yet. On the other hand, the P65+/P20–64*100 share is lower only by 4 persons per 100 persons in 2050 according to the described assumptions. The expectation that the higher fertility rate in the next decades could significantly reduce the pressure of ageing of population on the pension scheme is thus

unjustified. In this case the variant without net migrations also deviates the most, since in this case there would be 70 persons aged 65+ per 100 aged 20–64 in 2050.

Figure 2.16: The projections of the number of 65+ population per 100 people aged 20–64
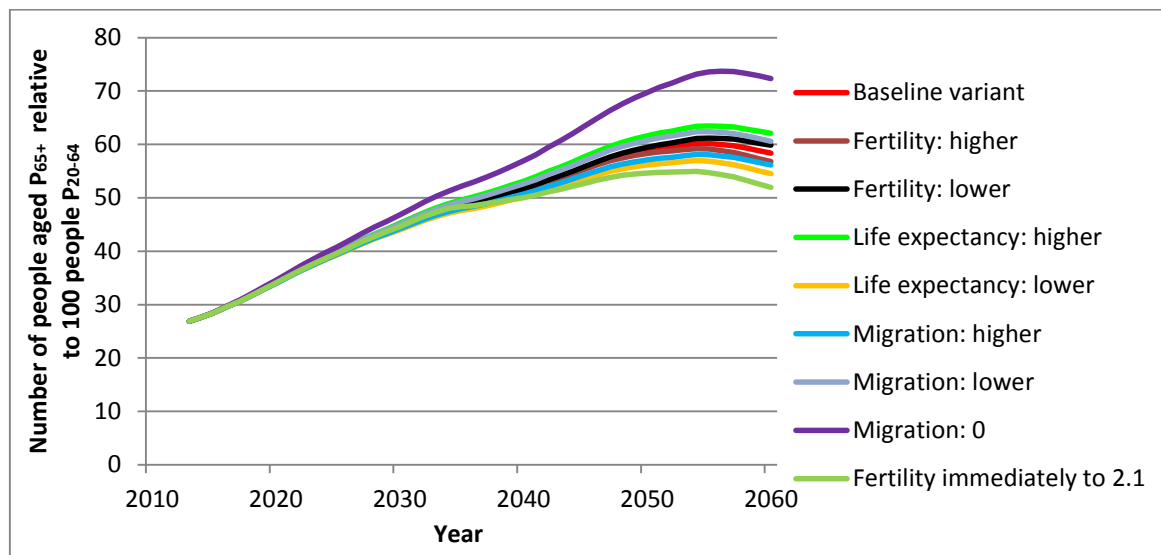
Source: Eurostat, 2014 (EUROPOP2013).

All presented variants forecast fast ageing of the population in the future, since in addition to the future trends of fertility rate, mortality rate and migrations the existing age structure of the population is crucial. The age structure of the population is the consequence of the past effects of fertility rate, mortality rate and migrations. It is given, meaning that it cannot be changed and will cause fast ageing of population in Slovenia in the future. As already shown from the pyramid in Figure 2.4, the smaller generations, born in the last 25 years when the fertility rate was 1.6 children per woman, will enter the labour market and the fertility period in the next years. On the other hand, the numerous generations, born in the baby boom period after the World War II, start to transfer from the working age to the pension, while at the same time their life expectancy is quickly expanded. Demographic processes have a great persistence: when lasting for a long period – e.g. decades of low fertility rate and quick extension of life expectancy, which we witness in Slovenia – they have a strong and anticipated impact on the age structure of the population for the next couple of decades.

As highlighted by the variant without net migrations, the ageing of population will be fast even if 4,000 to 6,000 (young) people more would immigrate than emigrate every year. If there is no net immigrations – the number of immigrants is approximately the same as the number of emigrants (this is happening recently) – the ageing of population of Slovenia will be even significantly stronger by 2050.

3. ATTRACTION OF WORKING ACTIVITY AND MOTIFS FOR RETIREMENTS IN SLOVENIA

Of all countries, Slovenia stands out by very early retirements. It was actually shown that in the majority of cases people retire immediately when the retirement is possible without the reductions (maluses). This is shown in the diagram below, indicating that over 70% of pensioners retired immediately after they fulfilled the conditions for old-age pension, while almost 15% of pensioners opted for the options of early retirement. Health-related reasons are also among the important reasons for retirement.

Figure 3.1: Reasons for retirement in Slovenia, 2011
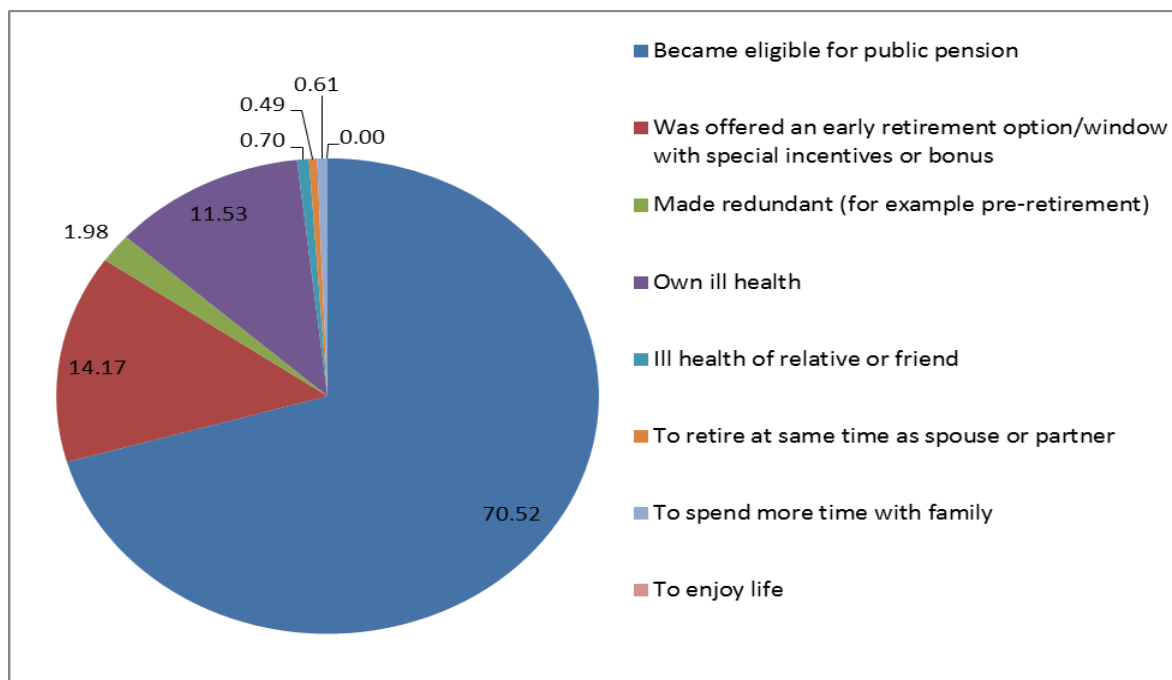
Source: Börsch-Supan, A. (2013). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 4. Release version: 5.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w4.500 3, , own calculations.

Slovenia is in this respect very similar to Austria, where the retirement age is also at such low level and the motifs for a longer activity in the labour market are small. Therefore, there are very similar reasons for retirement in Austria, while in Germany and in the Netherlands the retirement of the spouse, family and enjoying the life are also among the important reasons (see Figure 3.2).

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[3] Interdisciplinary and international panel base of micro-data on health, socio-economic status, family and social network of more than 86,000 individuals older than 50 years.

Figure 3.2: Reasons for retirement in the Netherlands, Austria and Germany (50 years or more), 2011

Netherlands

- 38.19
- 37.49
- 3.53
- 6.07
- 0.99
- 1.75
- 3.88
- 8.10

Austria

- 71.36
- 3.96
- 1.24
- 19.27
- 0.67
- 1.07
- 1.37
- 1.05

Germany

- 45.96
- 18.80
- 6.81
- 16.37
- 1.26
- 0.92
- 4.88
- 5.00

Legend:
- Became eligible for public pension
- Was offered an early retirement option/window with special incentives or bonus
- Made redundant (for example pre-retirement)
- Own ill health
- Ill health of relative or friend
- To retire at same time as spouse or partner
- To spend more time with family
- To enjoy life

Source: Börsch-Supan, A. (2013). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 4. Release version: 5.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w4.500, own calculations.

Explicit tendency of Slovenians to retire immediately after the retirement conditions are met is also evident from Table 3.1 and Table 3.2, on the basis of which the expectations may be confirmed that the wish for retirement is statistically significantly higher upon the low satisfaction at the workplace. However, it is surprising that more than a half of the respondents who are c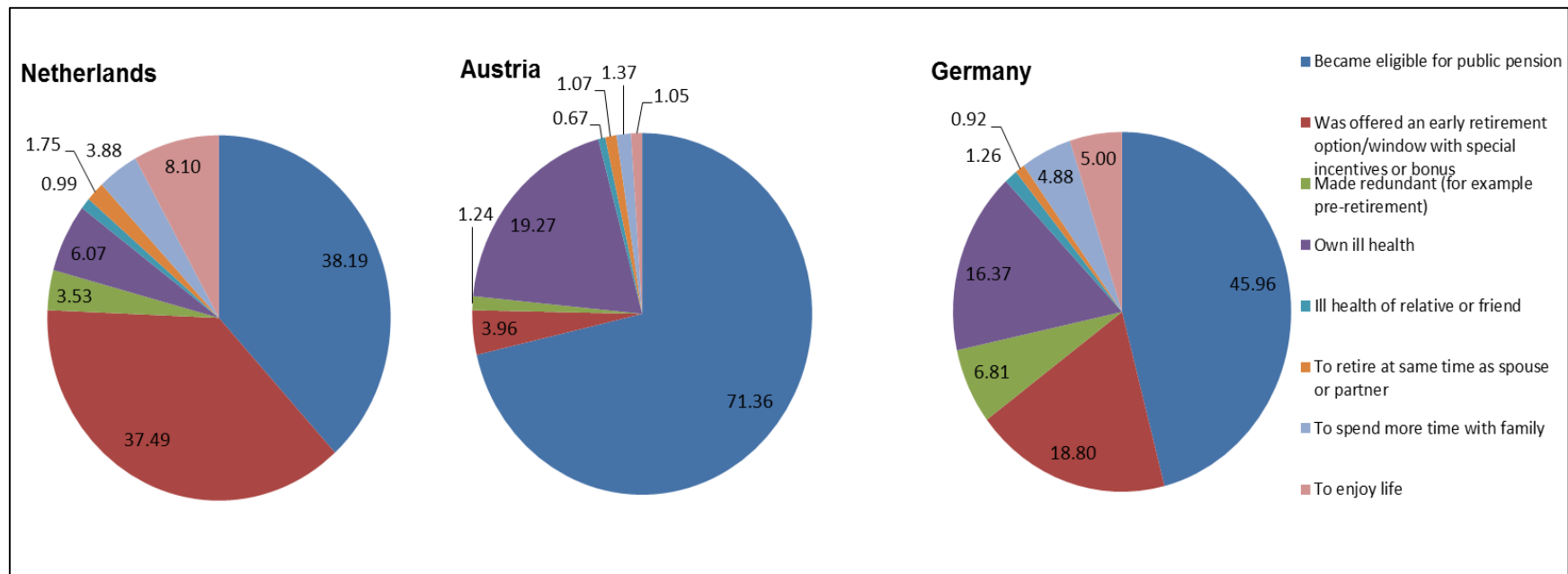ompletely satisfied with their job, and almost 80% of those who are satisfied with their workplace plans to retire immediately after their retirement conditions are fulfilled. If we compare Slovenia to other countries included in the SHARE research, we see that in that case the share of people (completely) satisfied with their job who want to retire as soon as the conditions are met is significantly lower. In other countries in average less than a third of people satisfied with their job and approximately a half of people who are satisfied wants to retire as soon as the retirement conditions are fulfilled. The wish for retirement in average in other countries among the people who are unsatisfied with their jobs is also smaller than in Slovenia.

Table 3.1: The wish for the retirement according to the job satisfaction and gender, Slovenia and other countries (50 years and more), 2011

MALE, ONLY SLOVENIA, 4th WAVE	Wish to retire as soon as possible		
I am satisfied with my job	No	Yes	
Strongly agree	47.46% (28)	52.54% (31)	100% (59)
Agree	22.28% (41)	77.72% (143)	100% (184)
Disagree	20.00% (3)	80.00% (12)	100% (15)
Strongly disagree	0.00% (0)	100.00% (3)	100% (3)
	27.59% (72)	72.41% (189)	100% (261)
Pearson chi2(3)	=	15.8285	Pr=0.0010
Cramér's V	=	0.2463	

FEMALE, ONLY SLOVENIA, 4th WAVE	Wish to retire as soon as possible		
I am satisfied with my job	No	Yes	
Strongly agree	45.12% (37)	54.88% (45)	100% (82)
Agree	19.62% (31)	80.38% (127)	100% (158)
Disagree	16.67% (2)	83.33% (10)	100% (12)
Strongly disagree	25.00% (1)	75.00% (3)	100% (4)
	27.73% (71)	72.27% (185)	100% (256)
Pearson chi2(3)	=	18.3078	Pr=0.0000
Cramér's V	=	0.2674	

MALE, ALL COUNTRIES, 4th WAVE	Wish to retire as soon as possible		
I am satisfied with my job	No	Yes	
Strongly agree	68.61% (2,175)	31.39% (995)	100% (3,170)
Agree	49.78% (1,810)	50.22% (1,826)	100% (3,636)
Disagree	27.58% (107)	72.42% (281)	100% (388)
Strongly disagree	28.92% (24)	71.08% (59)	100% (83)
	56.56% (4,116)	43.44% (3,161)	100% (7,277)
Pearson chi2(3)	=	413.902	Pr=0.0000
Cramér's V	=	0.2385	

FEMALE, ALL COUNTRIES, 4th WAVE	Wish to retire as soon as possible		
I am satisfied with my job	No	Yes	
Strongly agree	70.06% (2,534)	29.94% (1,083)	100% (3,617)
Agree	51.94% (2,075)	48.06% (1,920)	100% (3,995)
Disagree	26.25% (137)	73.75% (385)	100% (522)
Strongly disagree	14.29% (16)	85.71% (96)	100% (112)
	57.75% (4,762)	42.25% (3,484)	100% (8,246)
Pearson chi2(3)	=	578.9007	Pr=0.0000
Cramér's V	=	0.265	

In terms of the wish for immediate retirement, the education also plays an important role in Slovenia, since the respondents with the tertiary education wish to retire as soon as it is possible less frequently. One third of Slovenian respondents with tertiary education who are completely unsatisfied with their job even does not want to retire at the first opportunity. Still the wish for retirement as soon as it is possible for all educational levels is higher in Slovenia than in other countries in average.

Table 3.2: The wish for the retirement according to the job satisfaction and education, Slovenia and other countries (50 years and more), 2011

PRIMARY EDUCATION OR LESS, ONLY SLOVENIA, 4th WAVE

I am satisfied with my job	Wish to retire as soon as possible		
	No	Yes	
Strongly agree	33.33% (6)	66.67% (12)	100% (18)
Agree	8.11% (3)	91.89% (34)	100% (37)
Disagree	0.00% (0)	100.00% (3)	100% (3)
Strongly disagree	0.00% (0)	100.00% (1)	100% (1)
	15.25% (9)	84.75% (50)	100% (59)
Pearson chi2(3)	=	6.7327	Pr=0.081
Cramér's V	=	0.3378	

SECONDARY EDUCATION, ONLY SLOVENIA, 4th WAVE

I am satisfied with my job	Wish to retire as soon as possible		
	No	Yes	
Strongly agree	33.78% (25)	66.22% (49)	100% (74)
Agree	15.27% (31)	84.73% (172)	100% (203)
Disagree	13.64% (3)	86.36% (19)	100% (22)
Strongly disagree	0.00% (0)	100.00% (3)	100% (3)
	19.54% (59)	80.46% (243)	100% (302)
Pearson chi2(3)	=	13.1207	Pr=0.0040
Cramér's V	=	0.2084	

TERTIARY EDUCATION OR HIGHER, ONLY SLOVENIA, 4th WAVE

I am satisfied with my job	Wish to retire as soon as possible		
	No	Yes	
Strongly agree	69.39% (34)	30.61% (15)	100% (49)
Agree	37.25% (38)	62.75% (64)	100% (102)
Disagree	100.00% (2)	0.00% (0)	100% (2)
Strongly disagree	33.33% (1)	66.67% (2)	100% (3)
	48.08% (75)	51.92% (81)	100% (156)
Pearson chi2(3)	=	16.1212	Pr=0.0010
Cramér's V	=	0.3215	

PRIMARY EDUCATION OR LESS, ALL COUNTRIES, 4th WAVE

I am satisfied with my job	Wish to retire as soon as possible		
	No	Yes	
Strongly agree	55.76% (474)	44.24% (376)	100% (850)
Agree	41.38% (564)	58.62% (799)	100% (1,363)
Disagree	23.78% (44)	76.22% (141)	100% (185)
Strongly disagree	21.88% (7)	78.13% (25)	100% (32)
	44.81% (1,089)	55.19% (1,341)	100% (2,430)
Pearson chi2(3)	=	87.6094	Pr=0.0000
Cramér's V	=	0.1899	

SECONDARY EDUCATION, ALL COUNTRIES, 4th WAVE

I am satisfied with my job	Wish to retire as soon as possible		
	No	Yes	
Strongly agree	66.01% (1,511)	33.99% (778)	100% (2,289)
Agree	50.32% (1,404)	49.68% (1,386)	100% (2,790)
Disagree	29.46% (109)	70.54% (261)	100% (370)
Strongly disagree	22.08% (17)	77.92% (60)	100% (77)
	55.03% (3,041)	44.97% (2,485)	100% (5,526)
Pearson chi2(3)	=	268.0706	Pr=0.0000
Cramér's V	=	0.2203	

TERTIARY EDUCATION OR HIGHER, ALL COUNTRIES, 4th WAVE

I am satisfied with my job	Wish to retire as soon as possible		
	No	Yes	
Strongly agree	74.32% (1,285)	25.68% (444)	100% (1,729)
Agree	58.76% (922)	41.24% (647)	100% (1,569)
Disagree	35.71% (55)	64.29% (99)	100% (154)
Strongly disagree	20.59% (7)	79.41% (27)	100% (34)
	65.09% (2,269)	34.91% (1,217)	100% (3,486)
Pearson chi2(3)	=	180.5794	Pr=0.0000
Cramér's V	=	0.2276	

Source: Börsch-Supan, A. (2013). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 4. Release version: 5.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w4.500, own calculations.

The attitude to the possibility of later retirement is also indicated in the answer to the question of what is the probability of a full-time job at the age of 63 (Figure 3.3). In Slovenia, the share of respondents (aged 50 or more) thinking that this will not be possible is by far the highest, since almost one half of respondents gives no option to the full-time job at the age of 63. The comparison between Slovenia and Austria, also faced with low retirement age, is interesting, since in Slovenia the share of those who do not see themselves employed is higher, while the share of those who see employment as plausible is lower.

Figure 3.3: Thinking about your work generally and not just your present job, what are the chances that you will be working full-time after you reach age 63? (50 years or more)
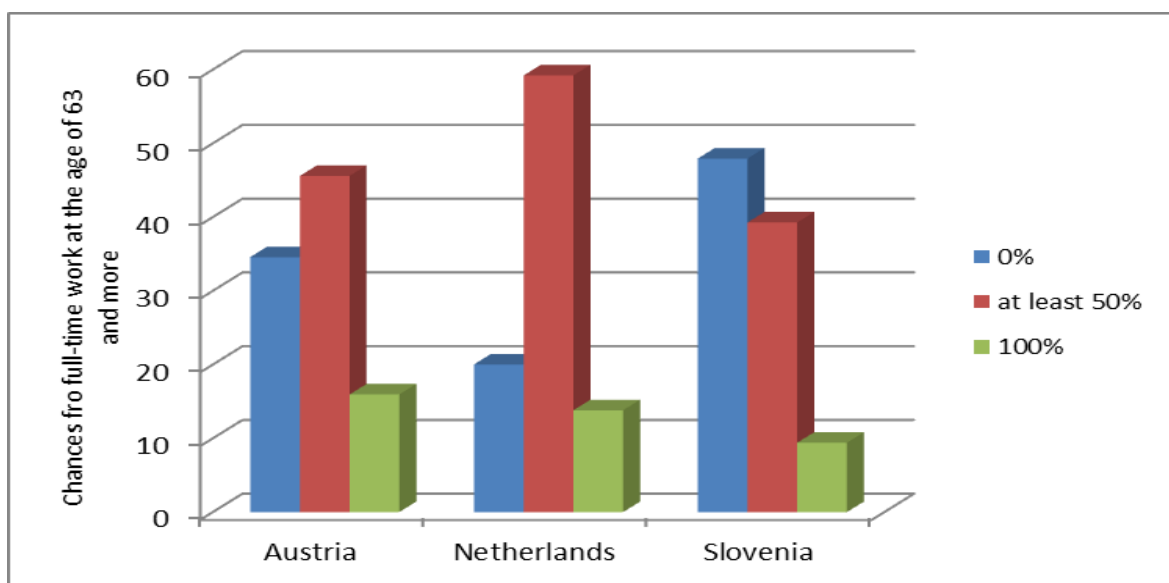
Source: Börsch-Supan, A. (2013). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 4. Release version: 5.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w4.500, own calculations.

Figure 3.4: Do you think that at the age of 60 you will be able to carry out the same job as you perform today?
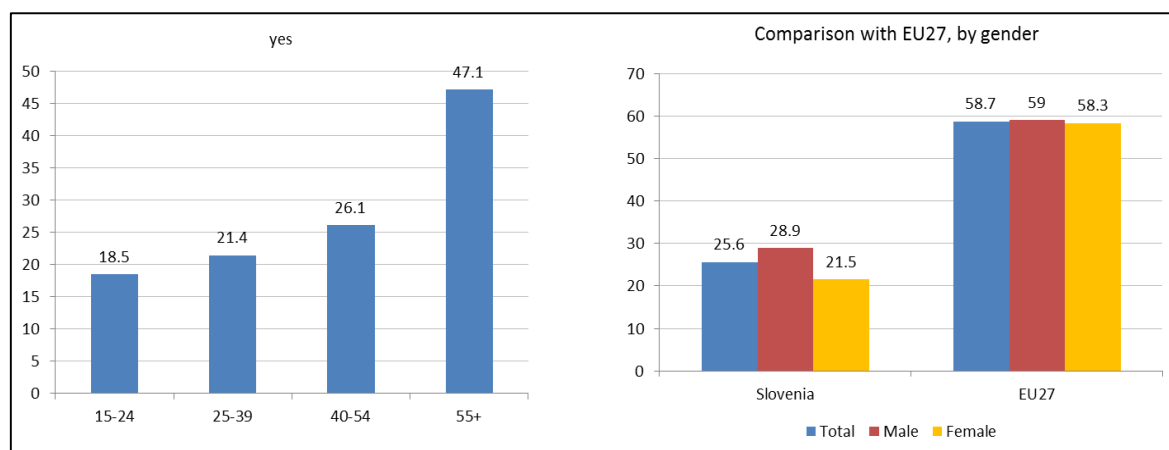
Source: Ignjatovič, Mrčela, 2014 (on the basis of the Fifth European Working Conditions Survey for Slovenia).

Figure 3.4 clearly shows that the share of those thinking that they will be able to work after the age of 60 is higher in the higher age classes, but the general public opinion in Slovenia is poorer than in the EU in average. Similar results of the European Social Survey from 2006 in Figure 3.5 show that the perception of the ideal retirement age is lower in Slovenia than in other countries.

Figure 3.5: The ideal retirement age in the European countries, 2006
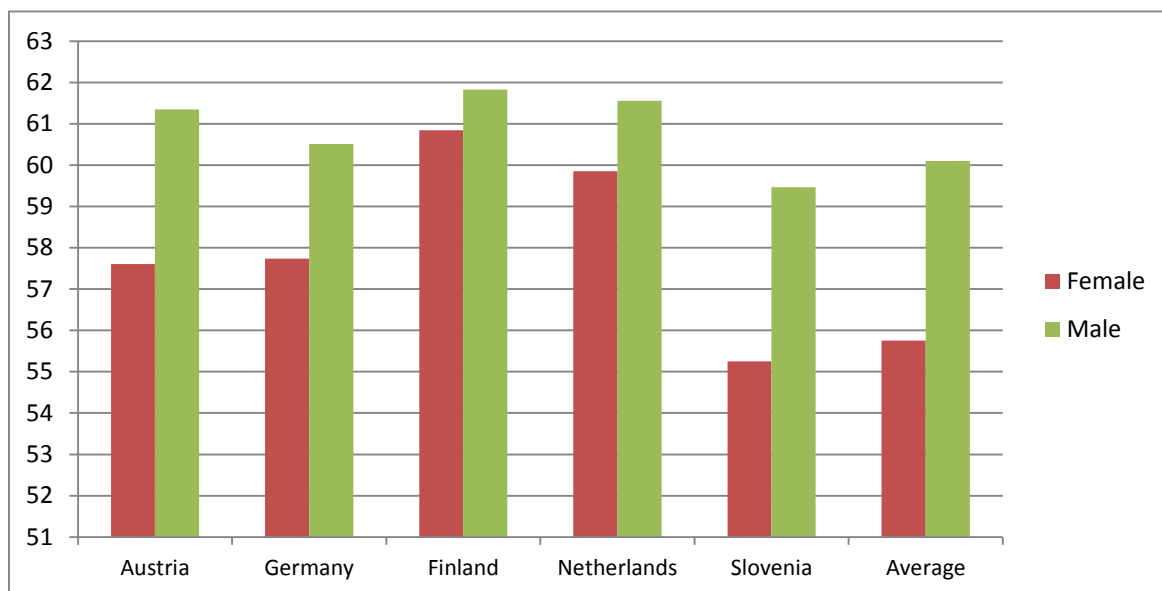
Source: ESS Round 3: European Social Survey Round 3 Data (2006), own calculation.

Regarding the general public opinion shown by the survey results the question is being posed if the Slovenians are actually aware of the demographic changes we are witnessing and the consequences thereof for the sustainability of the pension system in the future. Within the scope of the European Social Survey, the question was asked in 2008 if the country could afford the pension expenses in ten-year time and what would happen with the pensions. The replies (Figure 3.6) indicate that the Slovenians were already in 2008 aware of the problem of the future pension burden and more than a half of the respondents replied that the pension should be lower (the higher share of such replies was higher only in Germany and France), and almost 40% that there would be no option of the increase of pensions. Compared to other Member States it may be said that the Slovenians are greater realists than other Europeans.

Figure 3.6: What kind of pension the state may afford in ten-years time, 2008
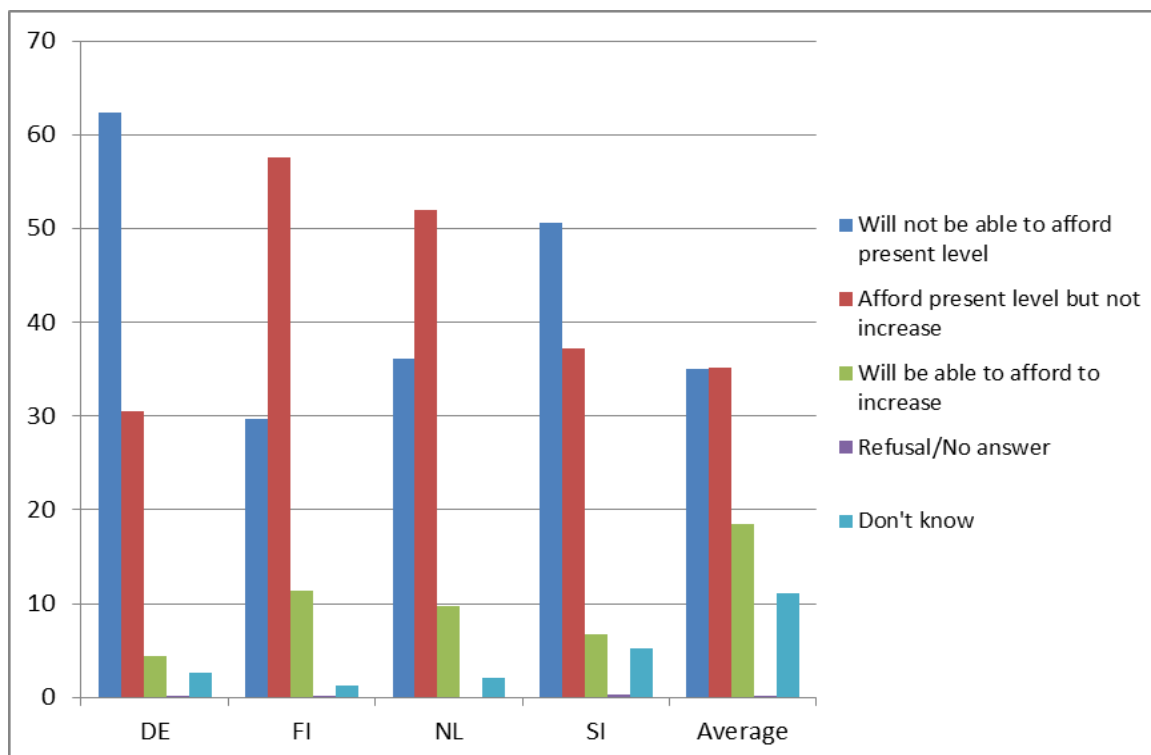
Source: ESS Round 4: European Social Survey Round 4 Data (2008), own calculation.

Figure 3.7: The share of the employed or self-employed who constantly or most of the time experience stress at the work place, 2010
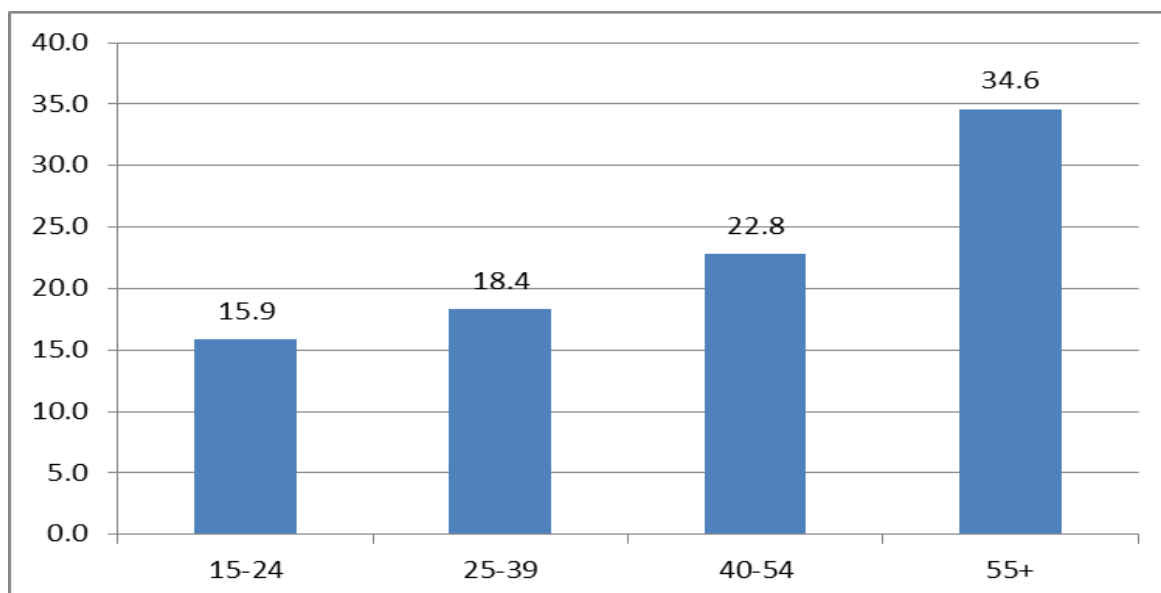
Source: European Working Conditions Survey, 2010, own calculation.

It is obviously that the Slovenians are very disinclined to working at the older age. On the basis of the workshops conducted with different stakeholders, it was frequently pointed out that the

causes for this lie in the exhaustion, lack of competences or lack of training at the workplace at the older age, unsuitable working conditions for the older and inappropriate relations as well. On the basis of the Fifth European Working Conditions Survey for Slovenia it may be established that the experiencing stress at the older age groups is higher (Figure 3.7). On the other hand, the share of the employed or self-employed who believe that their immediate superiors respect them (Figure 3.8) is significantly lower for the 55+ age group compared to the younger respondents. The results of the survey do not indicate that requirements at the work place strongly contribute to the stress (Figure 3.109).

Figure 3.8: The share of the employed or self-employed who believe that their the immediate superior respects them
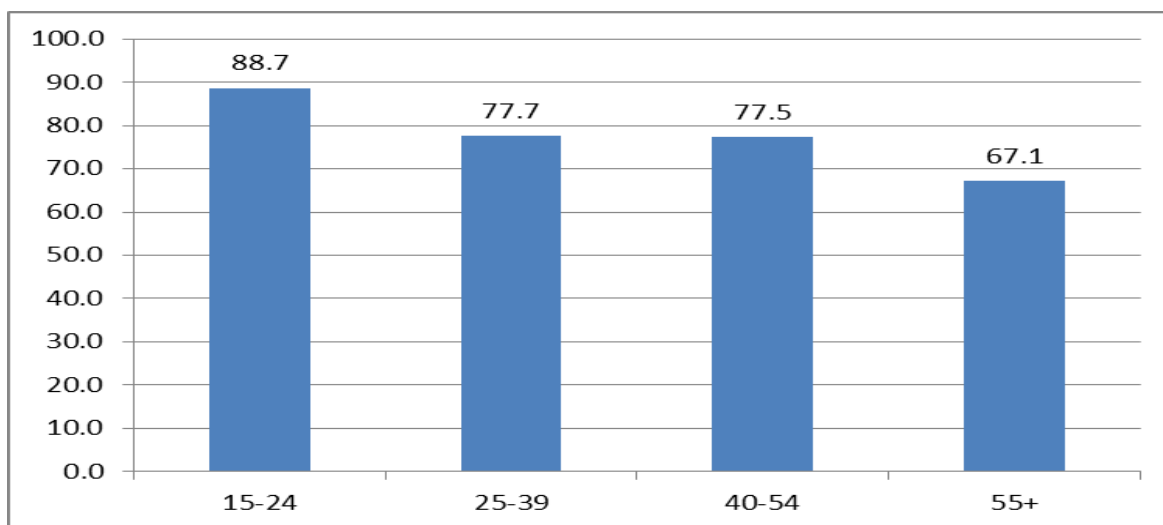
Source: European Working Conditions Survey, 2010, own calculation

Figure 3.9: The opinion on the requirements at the workplace
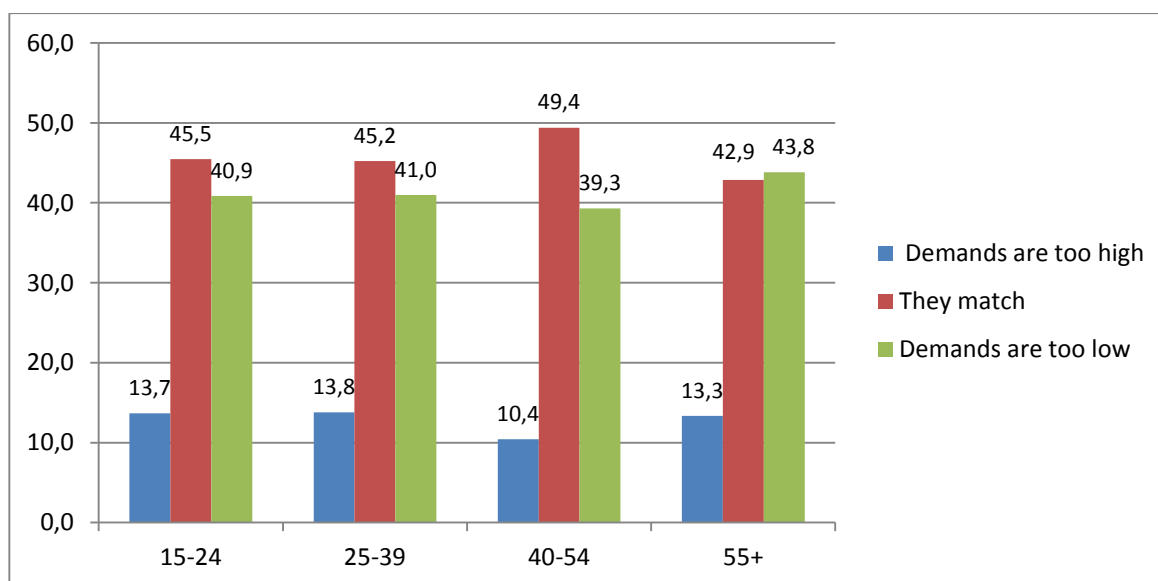
Source: European Working Conditions Survey, 2010, own calculation.

Figure above implies that the share of those who think that the requirements are too high is not much higher in the 55+ age group than from the share in the age groups up to 40 years. On the other hand the highest share of respondents in the 55+ age group thinks that the requirements are too low. Figure 3.10 indicates that by increasing the age the share of the employed who lack the time to finish their work at the workplace increases, albeit relatively very low.

Figure 3.10: The share of the employed who rarely or never have enough time to finish their work at the workplace
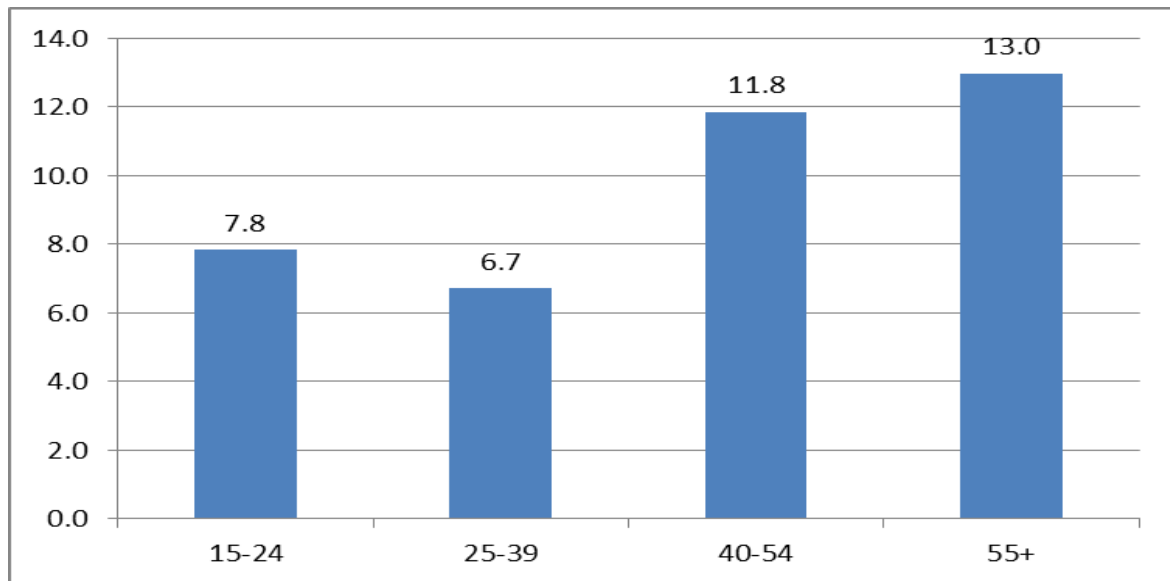
Source: European Working Conditions Survey, 2010, own calculation.

Figure 3.11: Satisfaction with working conditions
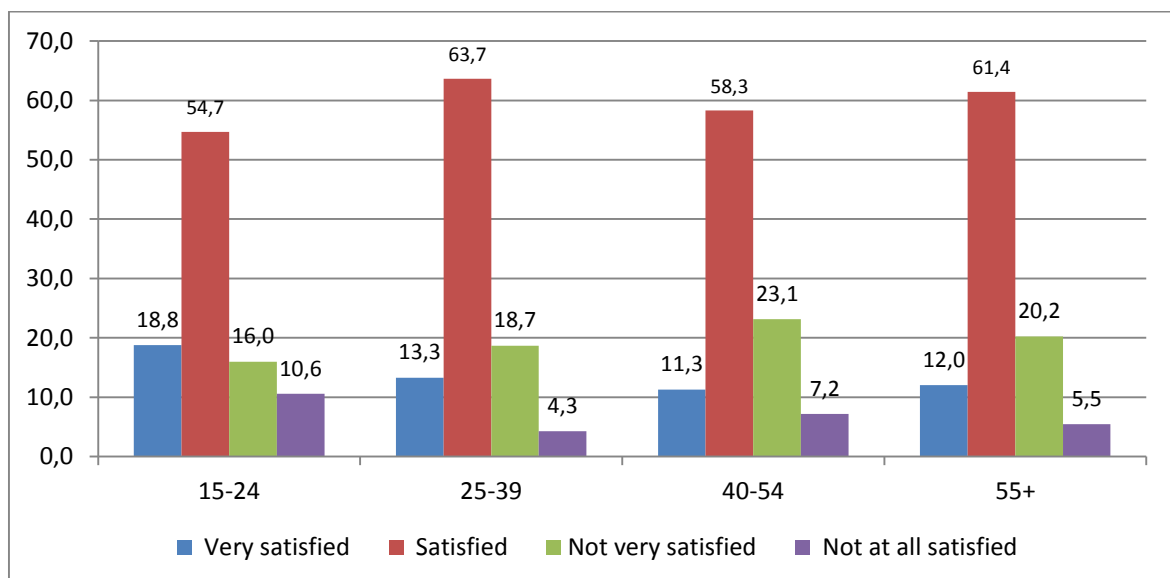
Source: European Working Conditions Survey, 2010, own calculation.

The percentage of the respondents aged 55 who are satisfied or very satisfied with working conditions is higher than the share in the 40-54 age group. The share of persons from the 55+ age

group is also higher who think that their work has positive impact on the health, while the lower share believes that their work negatively affects their health (see Figure 3.12).

Figure 3.12: Does the work affect your health?
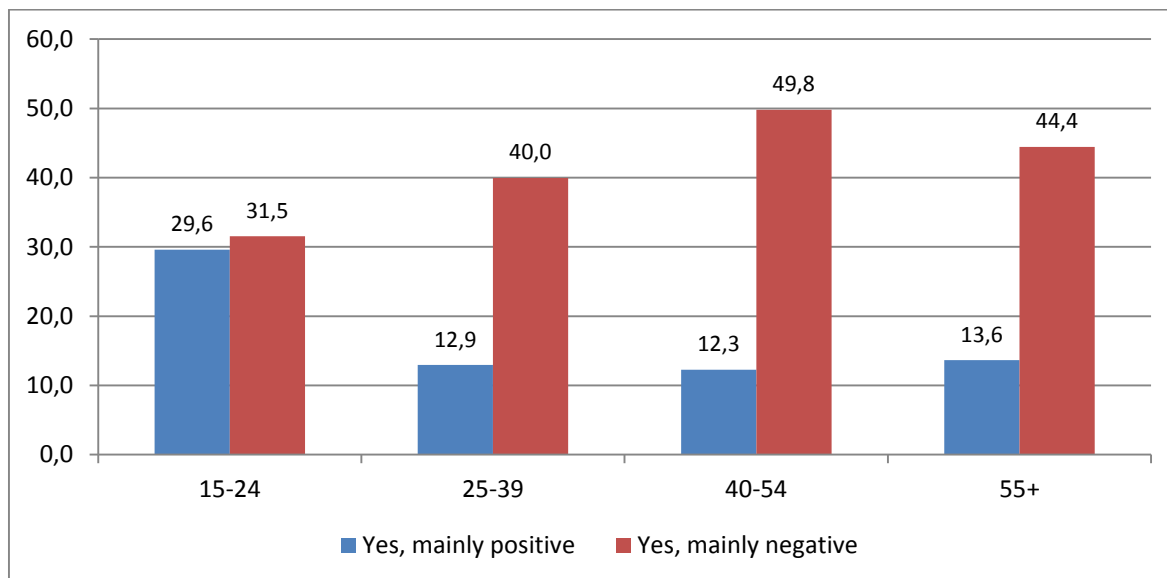
Source: European Working Conditions Survey, 2010, own calculation.

On the basis of the observed research it may be recapitulated that the wish for retirement emerges in Slovenia as soon as all retirement conditions are met, even if the employed are satisfied with their workplace. Compared to other countries, the significantly lower share of respondents feels capable to work after the age 60 or 63 years. It cannot be said that the satisfaction with working conditions in the 55+ age group is lower compared to the younger, but with the age the feeling of stress at the workplace increases, the share of persons grows who think that they do not have sufficient time to perform tasks at workplace, and the share of persons who believe that their immediate superior respects them decreases. It is interesting that in the 55+ age group compared to the 40-55 age group there is a higher share of those who think that the work has a positive impact on the health and the lower share of those who think the opposite. In the interpretation of results, one must always also consider the fact that many persons in the 55+ age group are already retired and only those who see great pleasure in work stay active in the labour market.

4. RETIREMENT

In Slovenia, we are witnessing a rapid ageing of the population that will only continue more intensively in the future according to the demographic projections. The long-term sustainability of the systems funded on the principle of the constant coverage are becoming ever more present, in particular the sustainability of pension system, health system and system of the long-term care. The care for the long-term sustainability of systems has become one of the core activities of the international institutions. From the aspect of our analysis, the analyses and projections of the European Union are important, in particular the analyses of the Ageing Working Group (AWG),

which constantly monitors the long-term sustainability of expenditures for pensions, health, long-term care, education and unemployment. In particular, the current conditions call for action, mainly due to economic crisis that additionally intensified the demographic pressure on the public-financial system.

Slovenia, with the new Act (ZPIZ-2), made an important move to changing the pension system. Legally defined retirement age will gradually increase also for women and shall reach 65 years in 2020. There is still a possibility of an early retirement if the person has 40 years of service (for the years of service for women there is still the transitional period by 2018 in force) at the age of 60 for men and women. However, the women will gradually reach this age in 2019. The Slovenian pension system still enables the lowering of the age threshold to acquire the right to an age pension due to child care and compulsory military service to two thirds of its actual duration. However, the new Act compared with the previous restricts the possibility to lower the age threshold, since the condition to enforce the right to lower the age threshold is that the beneficiary already reached 38 or 40 years of service without buying the years of service, while at the same time a relatively high age threshold for the lowering of years of service is set. Thus, Slovenia efficiently closed the options for an early retirement. It should be also added that the decrease of the number of disabled pensioners indicates a successful prevention of the early entering in the pension system through invalidity pensions.

4.1 Strategic documents

The field of pensions at the EU and Slovenia level are regulated by the documents below:
  – In the Europe 2020 strategy, the European Commission undertook to estimate the decency and sustainability of social and pension systems, while the Member States should completely use the systems of social security and pension system to provide decent income (European Commission, 2010).
  – The European Commission (2014b) stated in the Annual Growth Survey 2015 that the sustainability and decency of pension systems must be provided throughout the EU. Despite the reforms adopted by the Member States, additional measures to increase the efficiency and financial sustainability of pensions must be taken. At the same time the decency of the pension must be preserved that provides a decent level of the income after retirement. According to the trend of the extension of life expectancy, the Member States should introduce a dynamic way of determining the retirement age, e.g. by connecting the increasing of the retirement age with the increasing of life expectancy.
  – In 2013, Slovenia received from the European Commission the recommendations to the National Reform Programme 2013 and Stability Programme 2012-2016 (Council, 2013). It was pointed out that the reform adopted at the end of 2012 does not suffice in the long-term and that only its mid-term effect on public finance is expected (by 2020). The additional steps are required to improve the long-term sustainability of pension expenses. The legally determined retirement age should be adjusted according to the changes in life expectancy, an at the same time the pensions should remain decently high. The options of an early retirement must be decreased.
  – In its National Reform Programme 2014-2015 (2014), Slovenia also set the following objectives: 'The restriction of the increase of expenses due to the ageing of population by decreasing the growth of new pensioners upon providing decent pensions.' The

document includes the discussion on the pension system as a crucial task (point system, further progress of the second pillar of pension scheme).

– In 2014, the European Commission (2014a) in assessing the National reform Programme 2014 placed the long-term sustainability hindered by the expected costs of the ageing population among the main challenges for Slovenia. It is expected that the current pension system will be sustainable up to 2020. It was recognised that Slovenia made only a limited progress in providing the decency of pensions. The indexation preserved in 2014 and 2015 and extremely low number of beneficiaries of income support after the change of social legislation in 2012 affected the higher risk of poverty of pensioners.

– The importance of the pension system for the public financial sustainability is also mentioned in the reports of the European Commission (2013b, 2014c) on the macroeconomic imbalances.

4.2 Scenarios

To attain the objective set, the assessment of the activity rates of older generations, where the pension system will also be sustainable in the long term, first the state of the applicable pension system had to be assessed, and the selection of adequate measures established in the next step that should also provide the long-term sustainability at adequate pensions. In the preparation of the long-term projections of pension expenses and assessment of the deficit in the mandatory pension system we applied the applicable pension act and the latest EUROPOP2013 demographic projections and the projections of macroeconomic aggregates of the European Commission. Several scenarios were added to this base solutions that reflected the changed assumptions regarding the evolution of demographic projections, mandatory social contributions of employers and activity rates:

a) SCENARIO-BASE (SCbazni): considered conditions of the new Pension and Disability Insurance Act (ZPIZ-2) entered into force on 1 January 2013, medium variant of the EUROPOP2013 demographic projections and base values of macroeconomic aggregates of the European Commission. Up to 2013, we considered the actual values of the growth of labour productivity and intervention act in the field of pension indexations, while for the 2014-2018 period the projections of the labour productivity of the Office of the Government of the Republic of Slovenia for Macroeconomic Analysis and Development (Spring forecast, 2014) and the presumptions of the Ministry of Finance and the Pension and Disability Insurance Institute of the Republic of Slovenia (PDII) regarding the indexation of pensions considered in the preparation of the Convergence programme in 2014 were observed. The evolution of employment was particularly corrected in terms of the actual evolution of the employment during the crisis period and it was presumed that the employment in the next eleven years will gradually come close to the situation before the economic crisis. Considering all the above-stated presumptions, the model reproduces the amount of GDP in 2018, but at the same time assesses by 0.23 percentage point lower share of pensions in GDP according to the projection of the Ministry of Finance and PDII.

b) SCENARIO-SUSTAINABLE (SCvzdržni): We presumed that the share of pensions in GDP from 2010 is at the level that still provides the sustainability of the pension system. For this reason through adequate measures we tried to keep it at the same level during the whole observed period. Considering the observed presumptions of the base scenario (SCbazni), we thus presumed the increase of the retirement age, adequate measures in

the field of calculating the pension basis (increase of the current number of best years from 24 to 34 years) as well as the indexation of pensions (maintenance of the real level of pensions also in the years after retirement).

c) SCENARIO-BASE-DEMOGRAPHIC (SCbazni_dem): In the base scenario we replaced the medium variant of demographic projections determined by the European Commission with additional variants prepared by the European Commission as well (variants: with higher life expectancy, lower fertility rate, without migrations, with lower migration rate) and added our own variants with the objective to provide a possible range of evaluations (variants: with lower life expectancy, higher fertility rate, higher migration rate). In total, we drawn up seven addition variants of the base scenario that were based on the changed presumptions of demographic projections.

d) SCENARIO-SUSTAINABLE-DEMOGRAPHIC (SCvzdržni_dem): In the SCvzdržni scenario we replaced the medium variant of demographic projections determined by the European Commission with additional variants prepared by the European Commission as well and our own additional variants (see Point c). We tried to achieve the maintenance of the share of pensions at the level from 2010 in the whole observed period through adequate adjustment of the average retirement age.

In total, we thus drew up fourteen scenarios according to different assumption of the applicability of the Pensions Act applied, provision of its sustainability and evolution of demographic projections.

4.2.1 Results

The results of individual scenarios are presented in this chapter. The calculations were made for each individual year of the 2013-2060 period. Due to transparency needs, the report shows the results for the base year of 2013, for which we had the official data available, and then once every five years. The results are shown as the share in GDP (%), while the additional liability of the budget as per Article 162 of the Pension and Disability Insurance Act-2 is separately given in million EUR, calculated to GDP from 2013.

4.2.1.1 Scenario-base (SCbazni)

With this base scenario, which presumed that the currently applicable Pensions Act (Pension and Disability Insurance Act) will remain in force until the end of the observed period 2060, we want to establish its long-term sustainability. Regarding the assessed increase of expenditures for pensions, including the contribution for health insurance of pensioners, it is non-realistic to expect that such scenario will take place in practice. Nevertheless, it may serve us to indicate the seriousness of the question of the long-term sustainability of the existing pension system if the government fails to implement new pension reform. Timely tackling of future problems will provide adequate transitional periods for the necessary and harmonised changes of the existing pension system and thus reduce the urgency of too rapid decisions.

The results are shown in Table 4.1 and in Figure 4.1 depicting the initial state of the revenue and expenditure of the PDII in 2013 and the projection as the share in GDP. The evolution of the contribution is as expected to be relatively stable throughout the whole observed period – there

are only slight changes in the GDP share due to the changing of the structure of the employed through time. The means Slovenia is providing from the state budget to cover the liabilities of the mandatory insurance which arise due to the recognition or determination of rights as per the pension scheme and invalidity insurance under the special conditions or due to the non-payment of contributions (Article 161 of the Pension and Disability Insurance Act) are reduced in the initial period due to the assumed gradual decrease of the liabilities, and then increase again as the GDP share due to the evolution according to the growth of the pension bill.

Table 4.1: Revenue and expenditure of the Pension and Disability Insurance Institute of the Republic of Slovenia in the 2013-2060 period (as GPD%, SCbazni)

REVENUES	In 1000 EUR	2013	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Contributions – total	3,271	9.27	9.19	9.29	9.26	9.14	9.07	9.08	9.11	9.15	9.17	9.16
Transferred Revenues:	1,586	4.50	4.67	3.95	5.00	6.33	7.25	7.97	8.77	9.16	8.95	8.41
Received funds from national budget	330	0.94	0.74	0.72	0.75	0.82	0.87	0.91	0.96	0.99	0.98	0.95
Employer's contributions*	54	0.15	0.18	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
National budget liability	1,202	3.41	3.74	3.08	4.10	5.36	6.23	6.91	7.66	8.02	7.82	7.31
Pension Fund Management (KAD)	50	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other revenues in total	42	0.12	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Revenues without national budget liability in total	**3,747**	10.62	10.21	10.25	10.25	10.20	10.18	10.23	10.31	10.38	10.40	10.36
TOTAL	**4,949.00**	**14.03**	**13.96**	**13.33**	**14.35**	**15.57**	**16.41**	**17.15**	**17.98**	**18.41**	**18.22**	**17.66**

EXPENDITURE	In 1000 EUR	2013	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
Pensions - total	4,254	12.06	12.03	11.49	12.42	13.53	14.30	14.98	15.74	16.13	15.96	15.45
Transfers for social security	114	0.32	0.31	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Health insurance contributions for pensioners	378	1.07	1.08	1.09	1.18	1.28	1.36	1.42	1.49	1.53	1.51	1.46
Wage compensations	161	0.46	0.42	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Other expenditures – total	42	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
TOTAL	**4,949**	**14.03**	**13.96**	**13.33**	**14.35**	**15.57**	**16.41**	**17.15**	**17.98**	**18.41**	**18.22**	**17.66**

		2013	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060
NATIONAL BUDGET LIABILITY (as % GDP)		3.41	3.74	3.08	4.10	5.36	6.23	6.91	7.66	8.02	7.82	7.31
NATIONAL BUDGET LIABILITY (in million EUR , in regard to GDP in 2013)		1202	1320	1086	1446	1892	2198	2439	2703	2831	2758	2578

Source: Annual reports of the Pension and Disability Insurance Institute of the Republic of Slovenia (PDII), projections of the Ministry of Finance and PDII for the Stability Programme preparations, internal material, April 2014, own calculations from the microsimulation pension model.

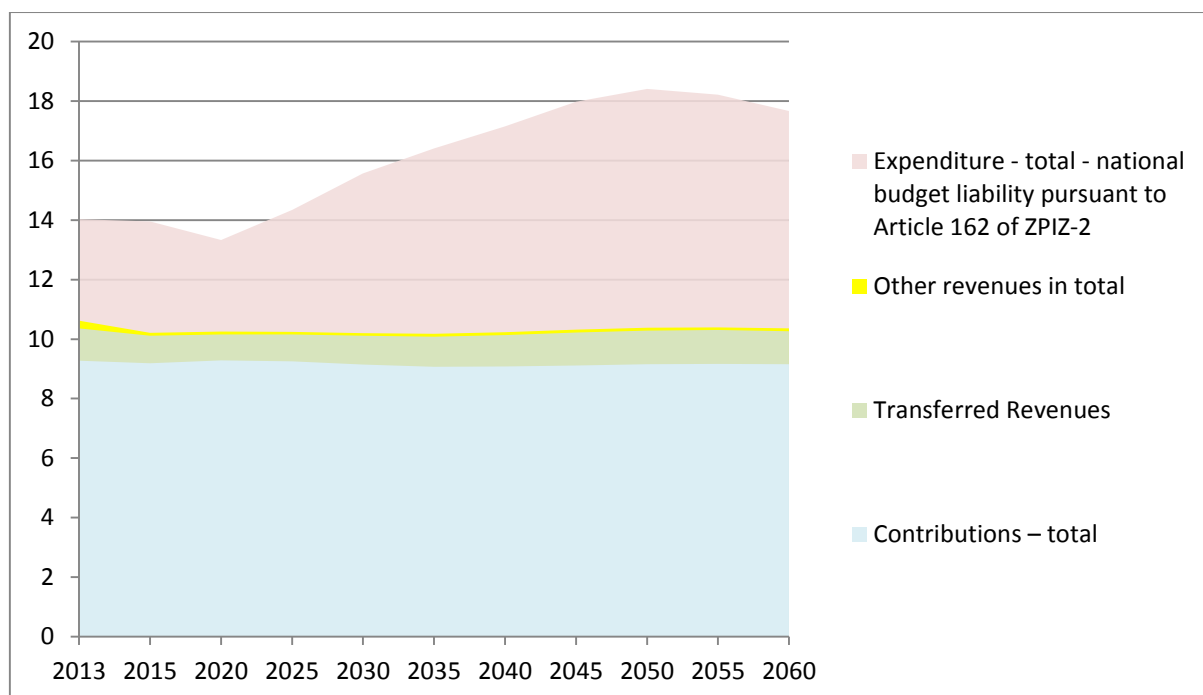Figure 4.1: Revenue and expenditure of the Pension and Disability Insurance Institute of the Republic of Slovenia (additional liability of the budget as per Article 162 of the Pension and Disability Insurance Act-2)

Source: Annual reports of the Pension and Disability Insurance Institute of the Republic of Slovenia (PDII), projections of the Ministry of Finance and PDII for the Stability Programme preparations, internal material, April 2014, own calculations from the microsimulation pension model.

The additional liability of the budget as per Article 162 of the Pension and Disability Insurance Act-2 provides the means to cover the difference between the PDII's revenue from the contributions and other resources and the PDII'sexpenditure. In 2013, this liability was 1,202 million EUR (or 3.4% of GDP). By recovering the economic growth after 2014, the liability is expected to gradually decrease, before increasing again after 2020 and will reach 7.3% as the GDP share by the end of the observed period. Calculated to GDP from 2013, the additional liability of the state budget, upon the assumption of the applicability of the Pension and Disability Insurance Act-2 throughout the observed period, is expected to increase from 1,202 million EUR to 2,578 million EUR.

The main culprits for such increase in the difference between the revenue and expenditure of the **PDII are the assessed growth of pension and growth of health insurance contributions of the pensioners.** In 2013, the high share of expenditures for pensions in GDP is the reflection of the reaction of individuals to the up-coming new pensions act, as well as the economic crisis and consequential decrease of the GDP, thus the long-term changes are indicated according to 2020 when it is presumed that there will be no more crisis.

The results indicate that the pensions are expected to increase by just under 4 percentage points. Another 0.4 percentage point must be added due to the increase of the health insurance contribution of pensioners. In practice, this kind of development of events cannot be afforded and we may expect that the new pension reform will be necessary and will eliminate or at least significantly mitigate the expected deterioration of the balance of the pension scheme.

As mentioned in the demographic section of the text above, with the application of new EUROPOP2013 demographic projection, the share of expenditures for pensions, expressed according to the gross domestic product (GDP), is significantly lower due to the changed demographic projections in 2060 – for about 1.5 percentage point. Nonetheless, the ageing of population in the future will continue to be significant and without further changes of the pension system the expenditures for pensions in GDP may increase strongly.

We can see that in the first decade the public financial expenditures for pensions according to GDP are relatively stable, although the population ageing rapidly increases. To a certain extent this is the result of the effects of the Pension and Disability Insurance Act (ZPIZ-2) that will somewhat increase the retirement age until 2020, but it is largely a consequence of the crisis measures. According to the foregoing presumptions, the GDP growth until 2018 is expected to be below 2.5%. If this was so, there would be no harmonisation of the growth of pensions with the growth of salaries until 2018. In this case, the pensions in the model adequately fall behind compared to the growth of salaries.

As shown, without any further changes of the pension legislation the share of public financial expenditures for pensions, expressed in the GDP % will start to rapidly increase, while the income of the pension scheme will remain approximately the same. The possible measures to limit the gap between the outcome and income are as follows:
- extension of the number of years in employment. This refers in particular to the increase of the retirement age, as well as longer employment (without intermittent unemployment, in particular between the employers and the employed agreed 'waiting' for the retirement with the Employment Service of Slovenia). At the same time, there is also a late entry in the labour market in Slovenia, mainly due to an apparent enrolment to study and delay of graduating with the purpose to acquire and maintain the student's status;
- increase in financial resources, in particular the contributions for pension scheme;
- reduction of the amount of pensions.

The combination of the foregoing measures is possible as well. Of all the foregoing possibilities, the increase of the number of years in employment is interesting, with the other two measures being less prominent. In general, the contribution burden or taxation of labour in Slovenia is one of the highest in the EU or in the world, while the further increase of tax burden will have a negative effect on the international competitiveness of Slovenia. The reduction of pensions would increase a drop of income with which the individuals are faced at the retirement and would in general reduce the living standard of the pensioners – unless the measure would be combined with the schemes of additional (e.g. investment) pension savings.

The comparison of the employment rates with other countries also indicates that the measure of extending the number of years in employment is the most applicable from the foregoing three measures. In Figure 4.2 we show employment rates for the selection of the developed European countries, to which Slovenia is frequently compared; the data for Iceland are added. We may therefore see that there is a late entry in the labour market and quick withdrawal from it in Slovenia. Particularly evident is the difference between Slovenia and Iceland where people enter the labour market early and remain employed to a significantly higher age than in other countries.

Figure 4.2: Comparison of the employment rates in Slovenia with the selected EU Member States and Iceland; 2013
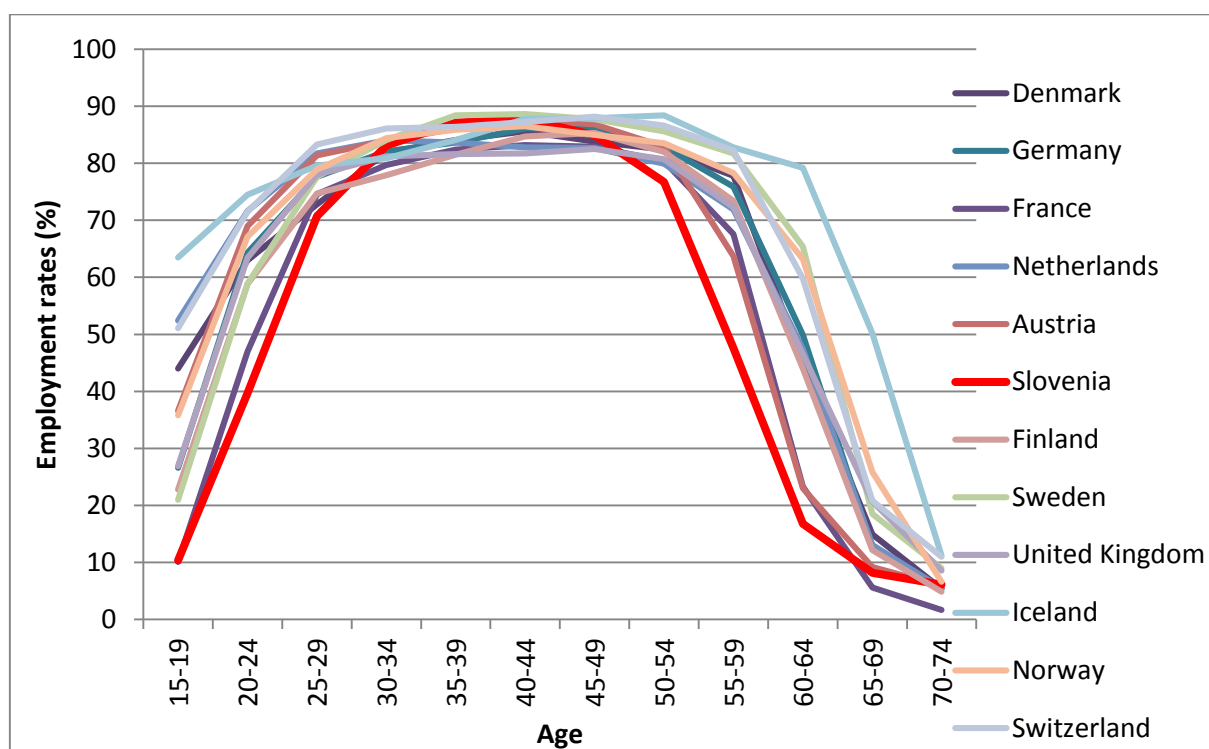
Source: Eurostat, 2014.

Figure 4.3: Comparison of the activity rates in Slovenia with the selected EU Member States and Iceland; 2013
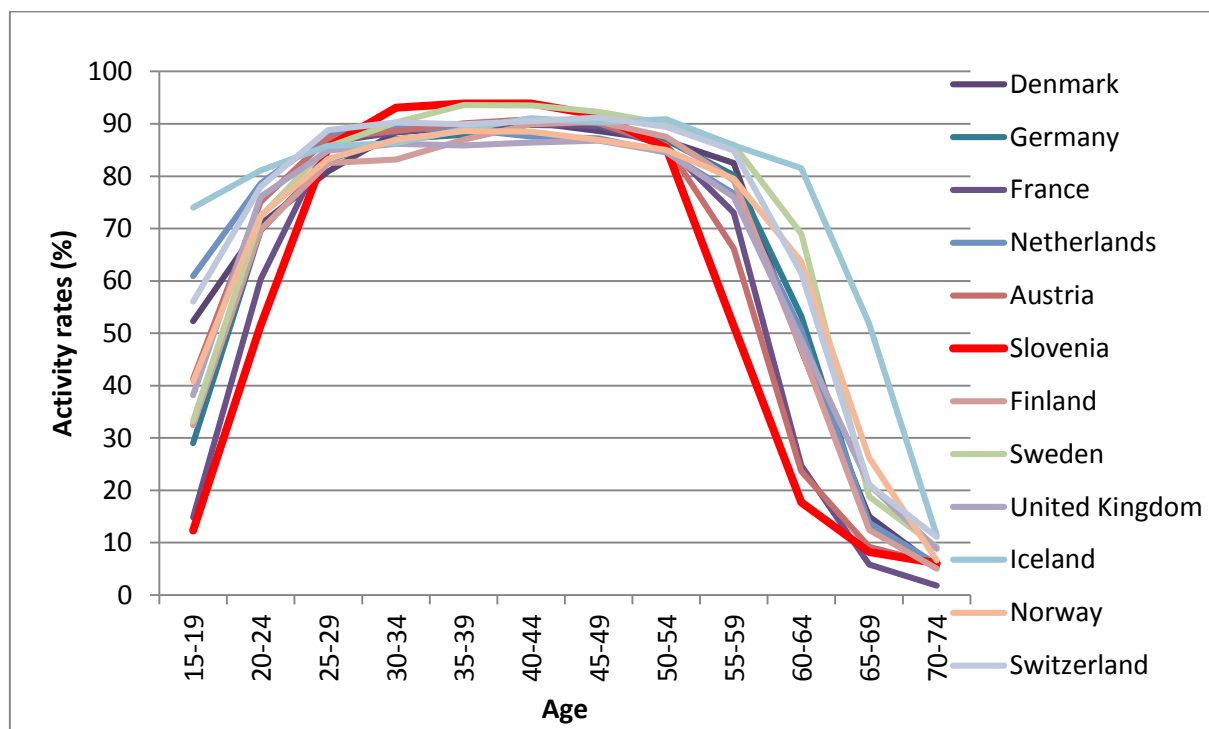
Source: Eurostat, 2014.

Since the low employment rate may also be a consequence of currently high unemployment rate due to crisis, which is different across the countries, Figure 4.3 shows also the activity rates. Activity rates include the employed and unemployed persons. However, we may establish that the activity rates also show similar figure as the employment rates. In the following text we will thus focus on the employment rates only.

4.2.1.2 Scenario-sustainable (SCvzdržni):

In the previous chapter it was established that the current pension system does not provide a long-term sustainability of the pension scheme. Consequently, the additional liabilities of the budget may adequately increase. The proper adjustment of the pension system will be required and thus also the adjustment of the employment rates of the employed in higher age groups. According to the workshops carried out with different stakeholders, the actual conditions and the recommendations of the European Commission, we tried to prepare a scenario that would include all necessary measures to provide a long-term sustainable pension system. As one of the important possible measures, the increase of retirement age in combination with changes in the field of pension calculations and indexations proved useful.

In this regard, it must be pointed out that the purpose of this project is not to prepare the final proposal of the future pension reform, which must be a final result of the consensus between the government and social partners, attained through a wide discussion on the basis of thoroughly prepared various possible scenarios and assessments of their consequences for the national budget and Slovenian society. In this chapter we tried to show the range of the necessary changes in the employment of the elderly and thus point out to the importance of knowing about the problem as well as timely preparation of adequate measures for the employees, employers and state that will in practice provide the implementation of the necessary reform.

In this scenario we thus presumed that the share of pensions in GDP from 2010 is such that it still provides the sustainability of the pension system. That is why, by applying the suitable measures, we tried to keep it at the same level during the whole period observed. Alongside the considered presumptions of the base scenario (SCbazni), we thus presumed the adequate increase of the retirement age with the simultaneous measures in the field of calculating the pension basis as well as the pension indexations:

- the number of the most favourable years for the calculation of the pension basis will increase to 34 years. With the Pensions Reform form 2012, entered into force on 1 January 2013, the number of years is gradually increased by one year per year, that is from 18 years in 2012, 19 years in 2013, etc. to 24 years in 2018. In calculations we therefore presume that the extension will continue by one year per every year and will reach 34 years in 2028. We would however like to presume the extension to all years of work, but the micro data available provides the simulations only to 34 years. Further extension of the number of years from 24 years presumed in the ZPIZ-2 to 34 years (and further only for all years) would further decrease the possibility of personal calculations or misuses. When a person reaches a favourable selection of 24 successive years, he may than look for ways for a form of employment where he pays minimum contributions since they usually provide him the same or similar pension (and the health care as well) as he would pay high contributions. Numerous other countries also consider all years of employment in calculating the pension or apply transitional periods to come close to this practice;

- after the retirement the pensions grow with the growth of the consumer prices, i.e. the inflation. In this way, the pensioners are still provided the same standard of living as they had at the retirement, however the pensions are not linked with the growth of salaries. As per the currently applicable legislation, the 60% indexations is foreseen, i.e. the real growth of the pensions is 60% of the real growth of salaries. Compared to other countries, this is generous. Under the pressures of the ageing of population, many EU countries have already started to use the system with the harmonisation with inflation, i.e. living costs, which will be, as already stated, presumed in our calculations;

- the longer employments (and related late retirement). We will presume that the extension of employment is being automatically adjusted – to prevent the increase of expenditures for pensions above the set level. The prolonged employment is also the measure that is mostly defended by the international institutions and experts and provides a sustainable pension system without posing a threat to 'suitable pensions' (i.e. adequate amount of pensions). At the same time, this measure is also the most direct response to a rapid extension of life expectancy and increase of healthy years of life we are witnessing.

The simulations results are shown at Figure 4.4 depicting the initial state of the PDII revenue and expenditure in 2013 and the projection as the share in GDP.

Figure 4.4: Revenue and expenditure of the Pension and Disability Insurance Institute of the Republic of Slovenia (additional liability of the budget as per Article 162 of the Pension and Disability Insurance Act-2)
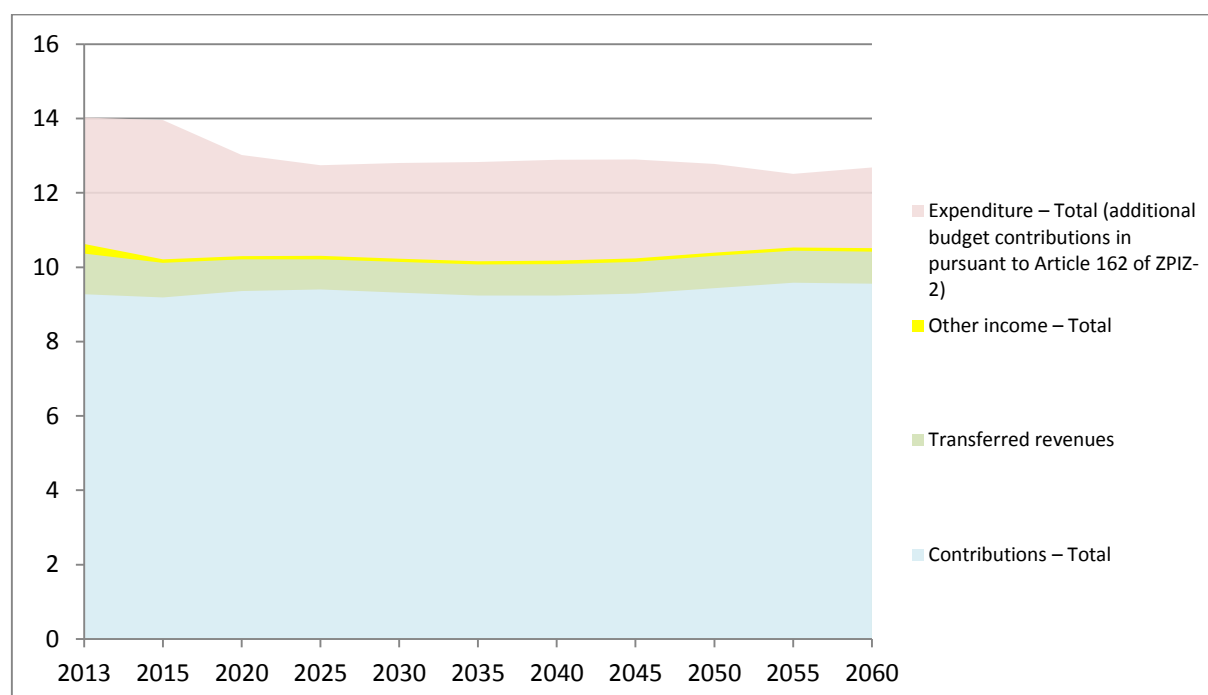
Source: Annual reports of the Pension and Disability Insurance Institute of the Republic of Slovenia (PDII), projections of the Ministry of Finance and PDII for the Stability Programme preparations, internal material, April 2014, own calculations from the microsimulation pension model.

The evolution of the contribution is as expected to be relatively stable throughout the whole observed period – there are only slight changes in the GDP share due to the changing of the structure of the employed through time. The means Slovenia is providing from the state budget to cover the

liabilities of the mandatory insurance which arise due to the recognition or determination of rights as per the pension scheme and invalidity insurance under the special conditions or due to the non-payment of contributions (Article 161 of the Pension and Disability Insurance Act), are reduced in the initial period due to the presumed gradually decrease of the liabilities, and then increase again as the GDP share due to the evolution according to the growth of the pension bill.

The additional liability of the budget as per Article 162 of the Pension and Disability Insurance Act-2 provides the means to cover the difference between the PDII revenue from the contributions and other resources and the expenditure of the institute. In 2013, this liability reached 1,202 million EUR (or 3.4% of GDP) and is expected to gradually decrease and reach 2.2% of GDP at the end of the observed period. Calculated to GDP from 2013, the additional liability of the state budget is expected to decrease from 1,202 million EUR to 766 million EUR.

Such evolution of the deficit would be possible by maintaining the share of pensions at the approximately same level as in 2010, which would also stabilise the contribution for the health insurance of pensioners. This may be achieved with a significant increase of the employment rates in the higher age classes through the adequate increase of the actual retirement age – in average for additional 5 years compared to the increase that will be realised due to full enforcement of the currently applicable Pensions Act (ZPIZ-2), increase of the number of best successive years for the calculation of the pension basis to 34 years and with the indexation of the pensions with the growth of consumer prices.

Below, we also tested the sensitivity of results to various variants of demographic projections – additional scenarios were tested on the base solutions upon the assumption of maintaining the currently applicable Pensions Act (ZPIZ-2) throughout the whole observed period, and on the sustainable scenario that is expected to maintain the share of pensions in the GDP at the approximate level from 2010.

4.2.1.3   *Scenario-base-demographic (SCbazni_dem)*

In the calculations we use the foregoing base scenario of calculations where we replace the medium variant of demographic projections with one of the variants presented in the chapter 2 where the demographic projections are shown.

The impact of individual demographic variants on the share of pensions in GDP and the deficit in the pension scheme is shown in Figure 4.5 and Figure 4.6. Also the results of base scenario were added for comparison.

The calculations of the share of pensions in GDP indicate that the fluctuation of the presumption on the fertility rate has the lowest impact (+- 0.4 percentage point), followed by migrations (+- 0.5 percentage point) and life expectancy (+- 0.8 percentage point). However, it must be pointed out that the major differences occur only towards the end of the observed period. By far the most negative impact is attributed to the presumption without migrations that is expected to cause the share of pensions in the GDP to grow by 3.2 percentage points (from 15.5% to 18.7% of GDP, Figure 4.6). According to the current evolution of net migrations, which is far from the already corrected Eurostat projections and even negative in the last quarter, it may be unrealistically to expect that the annual rates of net migrations are to evolve at the level of 4000 persons and even increase to 6000.

This means that the deficit of the pension scheme may be actually much higher and that even more severe measures should be taken to attain the sustainable pension system.

Figure 4.5: Evolution of the share of pensions in GDP in the 2013-2060 period (in %, various scenarios)
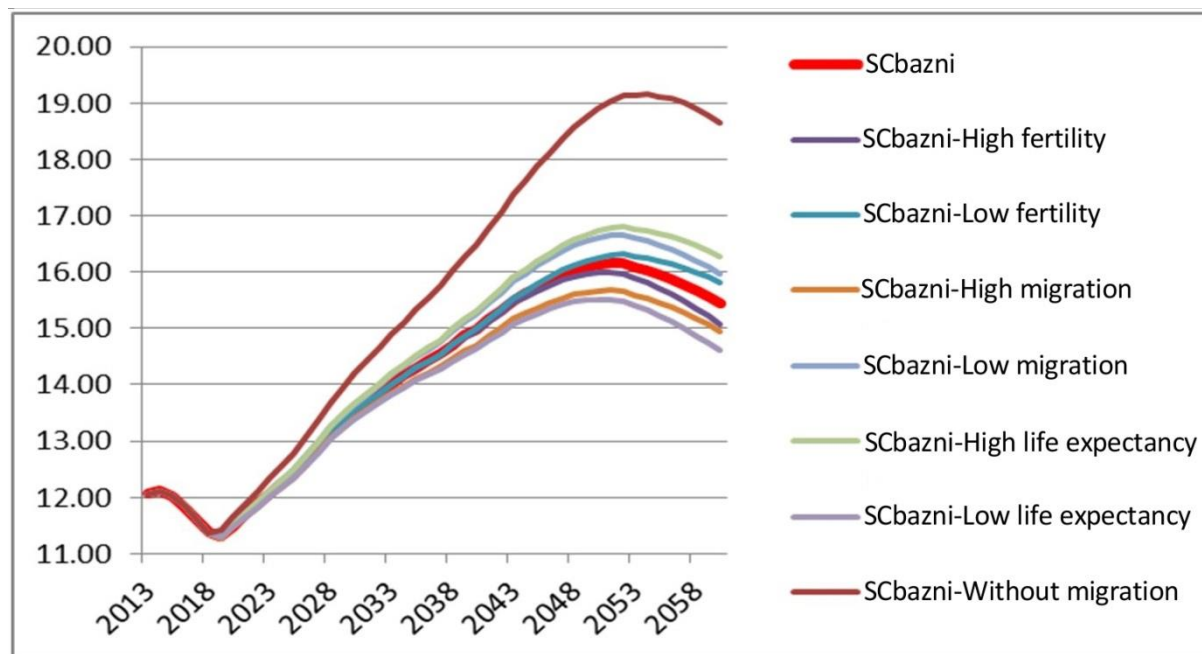
Source: EUROPOP2013 and our calculations.

Figure 4.6: Evolution of the share of deficit in the pension fund in GDP in the 2013-2060 period (in%, various scenarios)
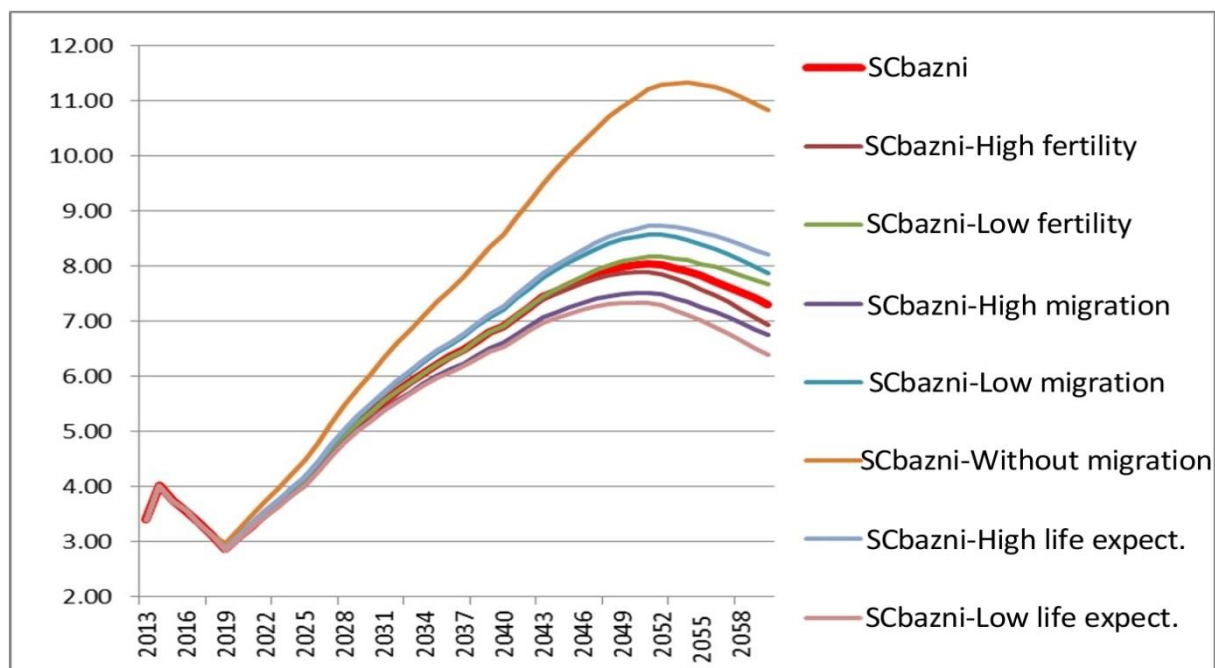
Source: EUROPOP2013 and our calculations.

4.2.1.4 Scenario-sustainable-dem (SCvzdržni_dem)

In the SCvzdržni scenario, similar to the previous chapter, the medium variant of demographic projections was replaced with additional variants of the demographic projections (with the exception of fertility rate which has no significant impact). In total, in this case we drew up additional five variants of the sustainable scenario based on the changed assumptions of demographic projections compared to the medium variant.

Figure 4.7: Evolution of the share of pensions in GDP in the 2013-2060 period (in %, various scenarios)
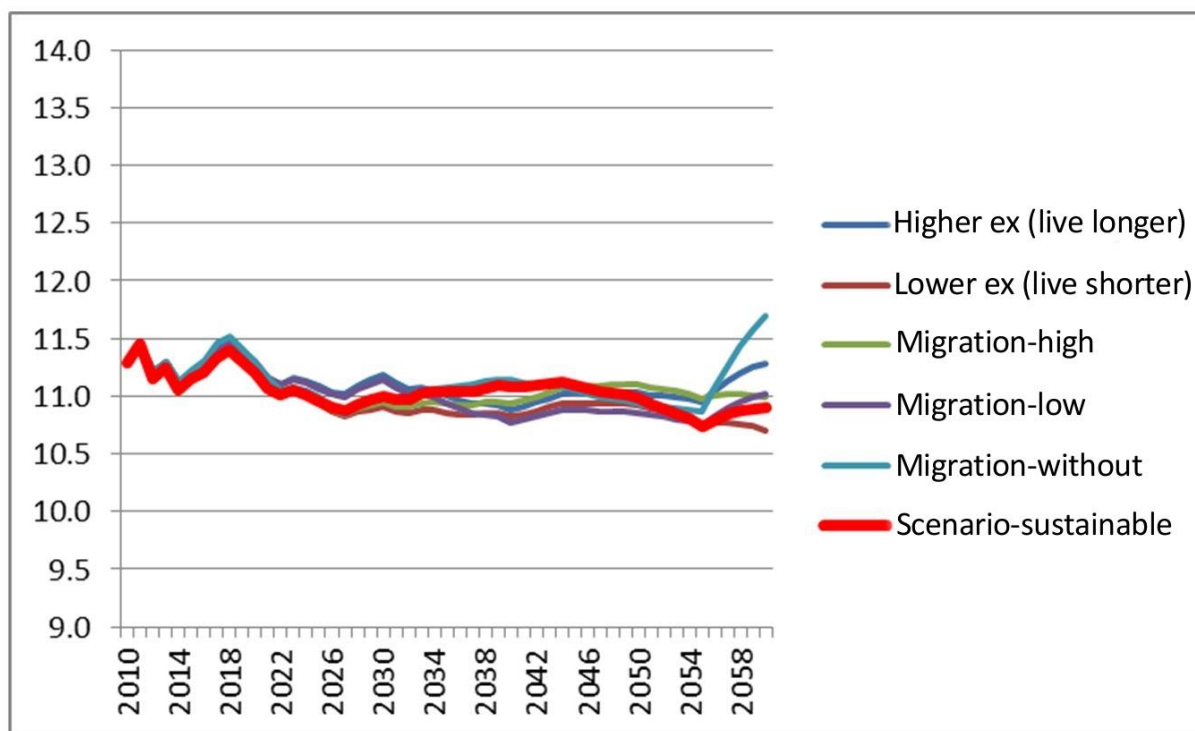
Source: Own calculations.

We tried to achieve the maintenance of the share of pensions at the level from 2010 in the whole observed period through adequate adjustment of the increase of the average retirement age. The variant without migrations again stands out that calls for an additional 10-year increase of the average actual age at the retirement. Due to the presumed objective of maintaining the share of pensions in GDP at the approximately same level as in 2010, these values also follow the objective in the observed period (Figure 4.7). The differences emerge due to the currently set mechanism of three possible transitional periods and only annual changes of the actual retirement age.

4.2.1.5 Employment rates

This chapter gives the consequences of providing the long-term sustainability of the pension system on the changes of rates and number of the employed according to the situation in the base year of 2013.

Figures 4.8 to Figure 4.10 show the actual employment rates from 2013. Until 2030, they are expected to increase, namely this is the increase assumed by the European Commission. As per the

assumptions of the European Commission, the employment rates should stabilise in 2030 and remain approximately the same for both genders until 2060.

Figure 4.8: The evolution of employment rates in Slovenia in the 2013-2030 period (assumption of the European Commission) and 2040-2060 period (further increase of the rates on the basis of own simulations with the criterion of restricting the increase of pension expenditures as the GDP %); MEN
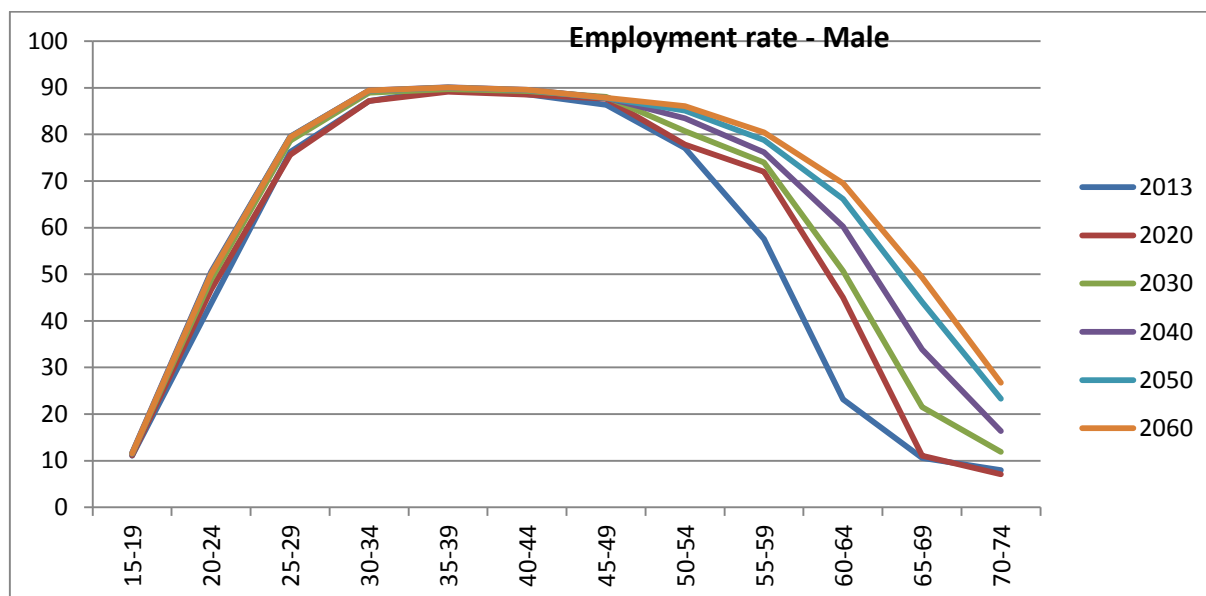
Source: European Commission, 2014; our simulations.

Figure 4.9: The evolution of employment rates in Slovenia in the 2013-2030 period (assumption of the European Commission) and 2040-2060 period (further increase of the rates on the basis of own simulations with the criterion of restricting the increase of pension expenditures as the GDP %); WOMEN
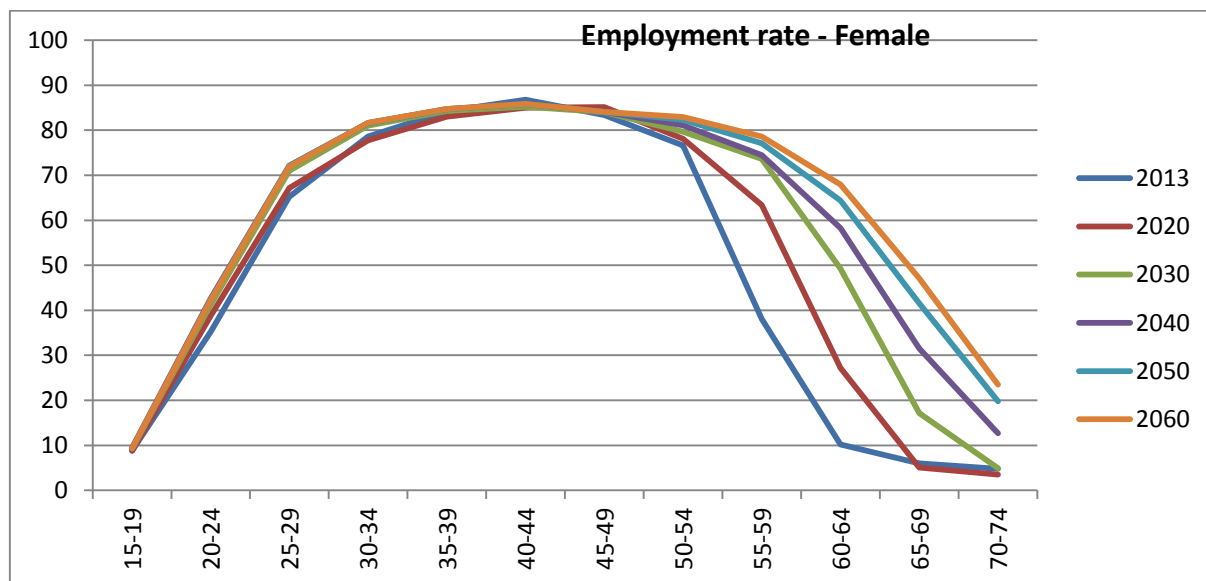
Source: European Commission, 2014; our simulations.

If the pictures were only equipped with the increase assumed by the European Commission, the curves from 2030 to 2060 would have the same shape. However, the employment rate in Figures from 4.8 to 4.10 continue to increase, since on the basis of our analysis we assume the further increase of the employment rates for 2 years in the 2031-2040 period and for further 3 years in the 2041-2055 period. The increase is one year per every 5 years or from 2 to 3 months per year. According to our calculations, one should remain employed for the respective period to stop the increase of public financial expenditures for pensions, expressed in GDP %.

Figure 4.10: The evolution of employment rates in Slovenia in the 2013-2030 period (assumption of the European Commission) and 2040-2060 period (further increase of the rates on the basis of own simulations with the criterion of restricting the increase of pension expenditures as the GDP %); BOTH GENDERS
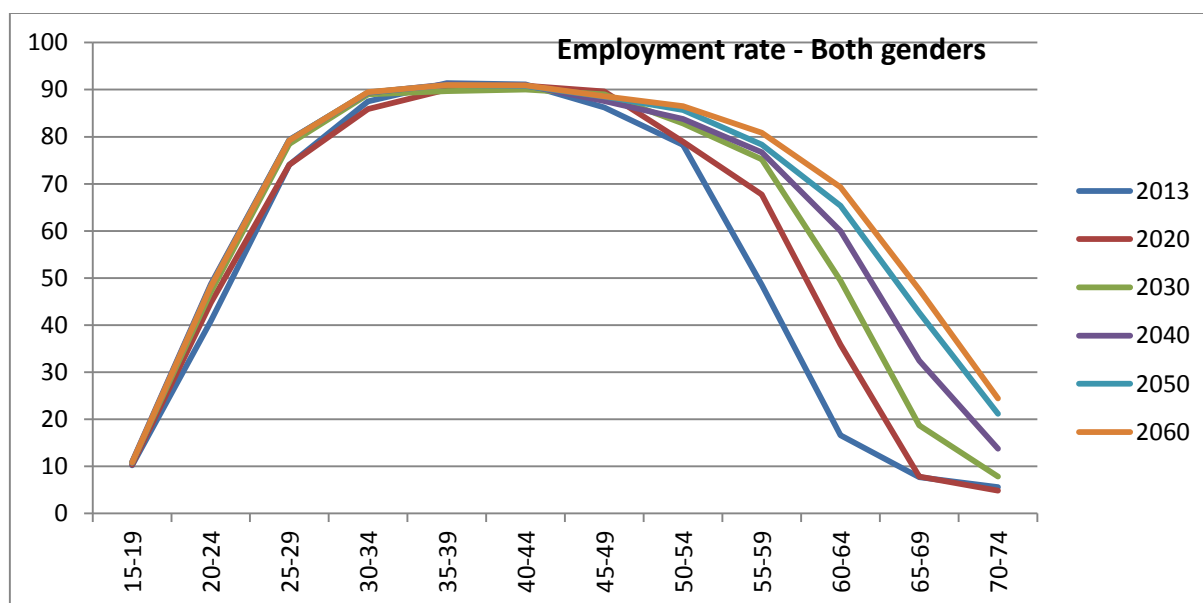
Source: European Commission, 2014; our simulations.

It can be seen that according to the assumptions of the European Commission the curve of the employment rates is moved to the higher age class for around 5 years. To limit the increasing expenditures for pensions, the curve on the basis of our own simulations is gradually moved in the 2031-2055 period for another 5 years.

In addition to the graphic representation in Figures 4.8 to 4.10 we represent the employment rates in the age classes from the age 50 upwards also in Table 4.3. At the same time with the shown changing of employment rates by individual age classes, also the number of population in these age classes will change. If we multiply the employment rates by the number of population, we get the evolution of the absolute number of employed, as indicated in Table 4.3.

Table 4.2: Evolution of the employment rates (in %) in higher age classes alongside the provision of the stable share of the expenditures for pensions as GDP %.

Male										
	2015	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
50-54	78.4	77.8	81.3	80.7	82.2	83.4	84.2	85.1	86.1	86.1
55-59	63.3	72.0	72.3	74.0	74.9	76.2	77.4	78.8	80.4	80.5
60-64	25.9	45.0	51.4	50.7	56.3	60.2	63.1	66.2	69.4	69.5
65-69	10.8	11.0	19.1	21.5	27.6	33.8	38.9	44.0	49.3	49.3
70-74	6.0	7.1	7.2	11.9	14.7	16.4	20.0	23.3	26.7	26.7
Women										
	2015	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
50-54	77.2	78.1	81.6	79.7	80.3	81.1	81.8	82.3	82.9	83.0
55-59	45.3	63.4	71.6	73.6	73.4	74.5	75.7	77.1	78.5	78.6
60-64	11.3	27.2	44.6	49.2	55.0	58.2	61.1	64.4	67.8	67.9
65-69	7.0	5.1	10.6	17.2	25.3	31.5	36.4	41.6	47.0	47.1
70-74	2.7	3.5	2.2	4.9	10.0	12.7	16.4	19.8	23.5	23.5

Source: European Commission, 2014; our calculations.

Table 4.3: Evolution of the number of employed in higher age classes in case of providing the stable share of expenses for pensions as % of GDP

Male										
	2015	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
50-54	61057	58665	60864	64102	61368	55976	48045	46462	46931	54252
55-59	47944	54004	52695	53732	57861	55458	50733	43989	42984	43035
60-64	18673	32300	36726	35349	39325	44873	44444	42084	37672	36225
65-69	5733	7390	12791	14456	18152	22429	27651	29690	30104	25787
70-74	2375	3348	4319	7254	9081	9950	12361	15521	16925	15428
TOTAL	**135783**	**155707**	**167395**	**174893**	**185786**	**188687**	**183234**	**177747**	**174617**	**174727**
Women										
	2015	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**	**2055**	**2060**
50-54	58672	57404	57804	59457	56940	52502	45550	42980	43238	49960
55-59	33564	47442	51969	51518	54146	52298	48592	42648	40711	40696
60-64	8139	19681	32701	35004	37837	42315	42284	40821	37076	34839
65-69	4032	3536	7434	12238	17547	21197	25906	28253	29310	25356
70-74	1303	1929	1448	3291	6833	8469	10678	13692	15506	14291
TOTAL	**105710**	**129992**	**151356**	**161508**	**173303**	**176781**	**173010**	**168395**	**165840**	**165142**

Source: European Commission, 2014; Eurostat, 2014; our calculations.

The evolution of the total number of employed in the age class of 50-74 years is shown also in Figure 4.11, namely in three variants. First we show an example if the employment rates by individual age classes are constantly at the level from 2013. In this case, the number of employed in the age class of 50-74 years would approximately stagnate at the medium level by 2035, i.e. with somewhat less than

140,000 men and somewhat more than 100,000 women, and then it will start to decrease due to the decrease of the number of population in these age classes.

The second variant in the same figure is the evolution of the number of the employed in the age class of 50-74 let, if we use all assumptions of the European Commission by 2060, meaning that the employment rates would increase by 2030 and then stagnate. In this case, the number of employed would rapidly increase by 2030 - to about 180,000 employed men and 160,000 employed women – than the number of the employed would start to drop as the consequence of the decrease of the number of population in these age classes.

In the third, 'sustainable variant', the evolution of employment rates by 2030 as in the variant of the European Commission, and then in the 2031-2055 period we extend the working activity by 5 years. Thus, the number of employed aged 50-74 by 2040 increases by around 190,000 men and somewhat less than 180,000 women. In the 2040-2060 period, there follows a slight drop, but compared to the previous variants (by the European Commission) the majority of this drop is nullified with the increasing employment rates.

Figure 4.11: Number of employed in the age class of 50-74 let at a) employment rates from 2013, b) assumptions of the European Commission and c) 'sustainable variant'
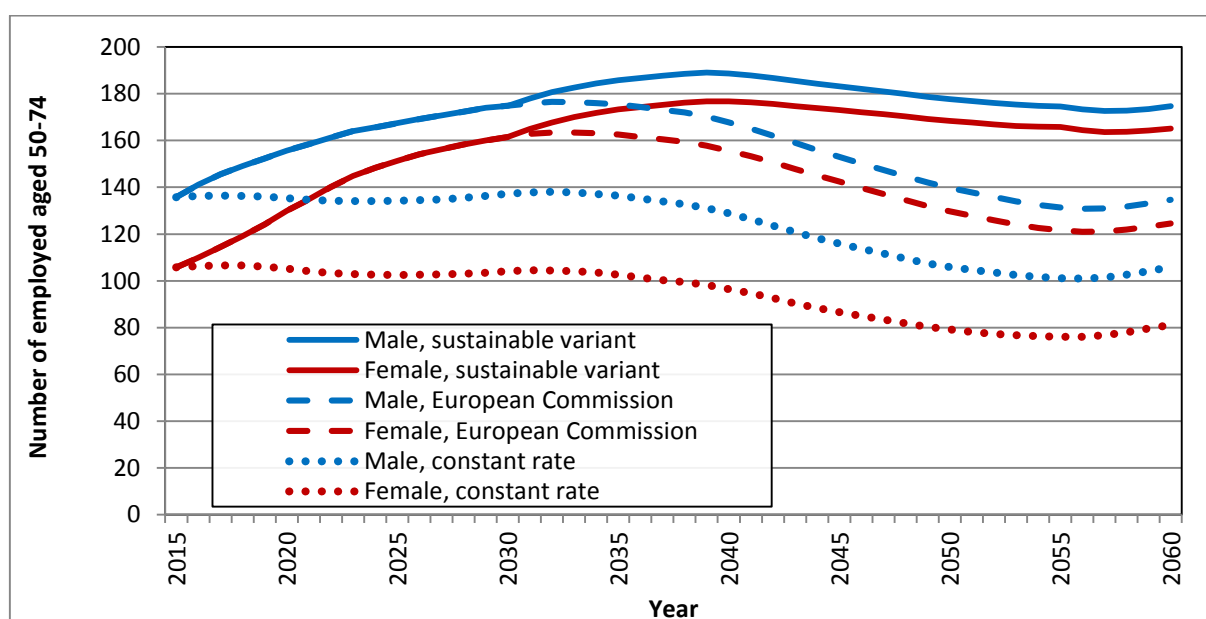
Source: European Commission, 2014; Eurostat, 2014; our calculations.

The results indicated the important necessary increase of employment rates in age classes of 55-74 years which is additionally more expressed for women. Clearly, this brings important challenges at the level of individual, companies, and the whole society in order to attain the set objectives of the prolonged employment and delayed retirement. Thus, individuals must understand that the provision of higher employability in the old age also calls for their inclusion in the process of the lifelong learning and healthy way of life. The employers in companies must be aware of the fact of ageing employees and the importance of introducing the so called 'age management' (collaboration of young and old employees, adjustment of working conditions, etc.). On the other hand the country must take care of adequate provision of information to individuals and companies so that they can make the right decisions (transparency of the pension system, consequences of the employment

extension), promote longer working lives, promote the employment of the elderly along with their inclusion in education and training programmes.

4.2.2   Final considerations

Within the scope of this chapter, we tried to assess what the expected increase of employment rates could be considering the introduction of the long-term sustainable pension fund. In this regard, it should be pointed out that the purpose of this project is not to prepare the final proposal of the future pension reform, which must be a final result of the consensus between the government and social partners, attained through a wide discussion on the basis of thoroughly prepared various possible scenarios and assessments of their consequences for the national budget and Slovenian society. In this chapter we tried to show the range of the necessary changes in the employment of the elderly and thus point out to the importance of knowing about the problem as well as timely preparation of adequate measures for the employees, employers and state that will in practice provide the implementation of the necessary reform.

The projections of the ZPIZ revenue and expenditure were prepared with adequately adapted variant of dynamic pension model in the forms of scenarios at various assumptions of demographic parameters, conditions of retirement and macro-economic variables that to the greatest possible extent are based on the recommendations of the European Commission. Results or projections comprise the period until 2060 and are expressed in the percentage of gross domestic product of individual year from this period.

The analysis of the obtained results showed that the existing pension system is not sustainable in a public-financial sense in the long term – a new pension reform is required. At the same time, we should understand the fact that the deficit of pension fund presents a problem already today and it will only continue to intensify without adequate necessary measures in the field of pensions system. The question arises, what is a sustainable pension system, how to provide it and at the same time attain the objective of adequate pensions.

The analysis of the sensitivity of results to various possible values of some demographic parameters indicated their great sensitivity to the scenario without migrations. According to the trend of net migration in the recent years, the significantly decreased Eurostat projections (compared to the previous projections from 2011) are also seen as unreal, which indicates the possibility that the deficit of the pension fund could be even higher or that the necessary measures to provide a sustainable pension fund may be even more severe.

5.   LABOUR MARKET

5.1   Introduction

The population of the whole European Union is ageing. Developed countries, including Slovenia, are faced with the challenges of ageing population which are also reflected in the decrease of the number of working age population since the unfavourable demographic trends (decrease of the number of births and longer life expectancy) increase the share of the elderly population.

The population who is today older than 64 years present more than a sixth of total population of Slovenia, while in the next five decades their share is to be increased to a third (Statistical Office of the Republic of Slovenia, 2013). This causes the decrease of the number of employed, in particular in the age between 55 and 64, and the pressures to the pension fund (ratio between the employed and pensioners was 1.38 : 1 in 2013). The employment rate of the population in the 55-64 age class was the lowest in Slovenia of all European Union Member States in 2013. In 2014, a lower ratio was recorded only by Greece.

Slovenians are not in favour of the prolonged employment, which was evident from the rejection of the referendum campaign on the pension reform in 2011, which, inter alia, also included the increase of the pension age. In this regard, the question of employment is not only related to the elderly, but the situation in the labour market with its characteristically low employment among the young and the increase of precarious forms of employment call for a comprehensive consideration. It is the consequence of the economic crisis, unsuitable study programme, non-stimulative working environment and also inadequate stimulation of the competitiveness of the companies and the country as a whole. Thus, the problems of the labour market interweaves with the issues of the pension system.

5.2 The analytical review of the situation in the labour market in the EU and Slovenia

5.2.1 Labour market in the EU

The employment rate in the EU-28 for persons aged 15 to 64 was 64.1% in 2013 according to the Labour Force Survey in the EU. The employment rate in the EU-28 was the highest in 2008 (65.8%) and fell in the next years to 64.0% in 2010 before it started to increase to 64.1% in 2013 and 64.9% in 2014. In the recent years, we are thus witnessing a slight positive trend in the labour market. Of the European Union Member States in 2014, the employment rate was the highest in Denmark, Germany, Netherlands and Sweden (from 72.8 to 74.9%), and the lowest in Croatia (54.6) and Greece (49.4%) as indicated in Table 5.1.

From the start of the financial and economic crises to 2014, the differences in the operation of labour markets were huge in individual European Union Member States. While the general employment rate in the EU-28 decreased by 0.8 percentage point compared to 2008, it increased in ten European Union Member States. The highest increase was recorded in Malta (6.8 percentage point), Hungary (5.1 percentage point) and Germany (3.7 percentage point), while Luxembourg, Czech Republic and Poland reported the increase by over 2 percentage points. Inversely, the employment rate in Greece decreased by over 12 percentage points in the 2008-2013 period (from 61.9% in 2008 to 49.4% in 2014). In the same period, also the employment rates in Spain, Cyprus, Portugal, Ireland and Denmark decreased significantly (for at least 5 percentage points).

The employment rates are in general lower for women and for the elderly workers. In 2014, the employment rate for men in the EU-28 reached 70.1% and 59.6% for women. The long-term comparison reveals that the employment rate for men in 2013 was lower than the rate from ten

years ago (70.3% in 2003), while the share of employed women increased significantly (by 4 percentage points compared to the 54.8% share in 2003), see Figure 5.2 and Table 5.2.

Table 5.1: Employment rates in the EU-28 states in the 2003-2014 period

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
EU-28	**62.5**	**62.9**	**63.4**	**64.3**	**65.3**	**65.7**	**64.5**	**64.0**	**64.2**	**64.1**	**64.1**	**64.9**
Belgium	59.6	60.3	61.1	61.0	62.0	62.4	61.6	62.0	61.9	61.8	61.8	61.9
Bulgaria	52.5	54.2	55.8	58.6	61.7	64.0	62.6	59.7	58.4	58.8	59.5	61.0
Czech Republic	64.7	64.2	64.8	65.3	66.1	66.6	65.4	65.0	65.7	66.5	67.7	69.0
Denmark	75.1	75.7	75.9	77.4	77.0	77.9	75.3	73.3	73.1	72.6	72.5	72.8
Germany	65.0	65.0	65.5	67.2	69.0	70.1	70.3	71.1	72.5	72.8	73.3	73.8
Estonia	63.0	63.1	64.8	68.4	69.8	70.1	63.8	61.2	65.3	67.1	68.5	69.6
Ireland	65.5	66.3	67.6	68.7	69.2	67.6	61.9	59.6	58.9	58.8	60.5	61.7
Greece	58.7	59.4	60.1	61.0	61.4	61.9	61.2	59.6	55.6	51.3	49.3	49.4
Spain	59.8	61.1	63.3	65.0	65.8	64.5	60.0	58.8	58.0	55.8	54.8	56.0
France	63.9	63.7	63.7	63.6	64.3	64.8	64.0	63.9	63.8	63.9	64.1	64.3
Croatia	53.4	54.7	55.0	55.6	57.1	57.8	56.6	54.0	52.4	50.7	49.2	54.6
Italy	56.1	57.6	57.6	58.4	58.7	58.7	57.5	56.9	56.9	56.8	55.6	55.7
Cyprus	69.2	68.9	68.5	69.6	71.0	70.9	69.0	68.9	67.6	64.6	61.7	62.1
Latvia	61.8	62.3	63.3	66.3	68.1	68.2	60.3	58.5	60.8	63.0	65.0	66.3
Lithuania	61.1	61.6	62.9	63.6	65.0	64.4	59.9	57.6	60.2	62.0	63.7	65.7
Luxembourg	62.2	62.5	63.6	63.6	64.2	63.4	65.2	65.2	64.6	65.8	65.7	66.6
Hungary	57.0	56.8	56.9	57.3	57.3	56.7	55.4	55.4	55.8	57.2	58.4	61.8
Malta	54.2	54.0	53.6	53.9	55.0	55.5	55.3	56.2	57.9	59.1	60.8	62.3
Netherlands	73.6	73.1	73.2	74.3	76.0	77.2	77.0	74.7	74.9	75.1	74.3	73.1
Austria	68.9	67.8	68.6	70.2	71.4	72.1	71.6	71.7	72.1	72.5	72.3	71.1
Poland	51.2	51.7	52.8	54.5	57.0	59.2	59.3	58.9	59.3	59.7	60.0	61.7
Portugal	68.1	67.8	67.5	67.9	67.8	68.2	66.3	65.6	64.2	61.8	61.1	62.6
Romania	57.6	57.7	57.6	58.8	58.8	59.0	58.6	58.8	58.5	59.5	59.7	61.0
Slovenia	62.6	65.3	66.0	66.6	67.8	68.6	67.5	66.2	64.4	64.1	63.3	63.9
Slovakia	57.7	57.0	57.7	59.4	60.7	62.3	60.2	58.8	59.3	59.7	59.9	61.0
Finland	67.7	67.6	68.4	69.3	70.3	71.1	68.7	68.1	69.0	69.4	68.9	68.7
Sweden	72.9	72.1	72.5	73.1	74.2	74.3	72.2	72.1	73.6	73.8	74.4	74.9
Great Britain	71.5	71.7	71.7	71.6	71.5	71.5	69.9	69.5	69.5	70.1	70.8	71.9
Japan	68.4	68.7	69.3	70.0	70.7	70.7	70.0	70.1	70.3	70.6	71.7	72.7
USA	71.2	71.2	71.5	72.0	71.8	70.9	67.6	66.7	66.6	67.1	67.4	68.1

Source: Eurostat.

Figure 5.1: Employment rates in the EU-28 in 2014
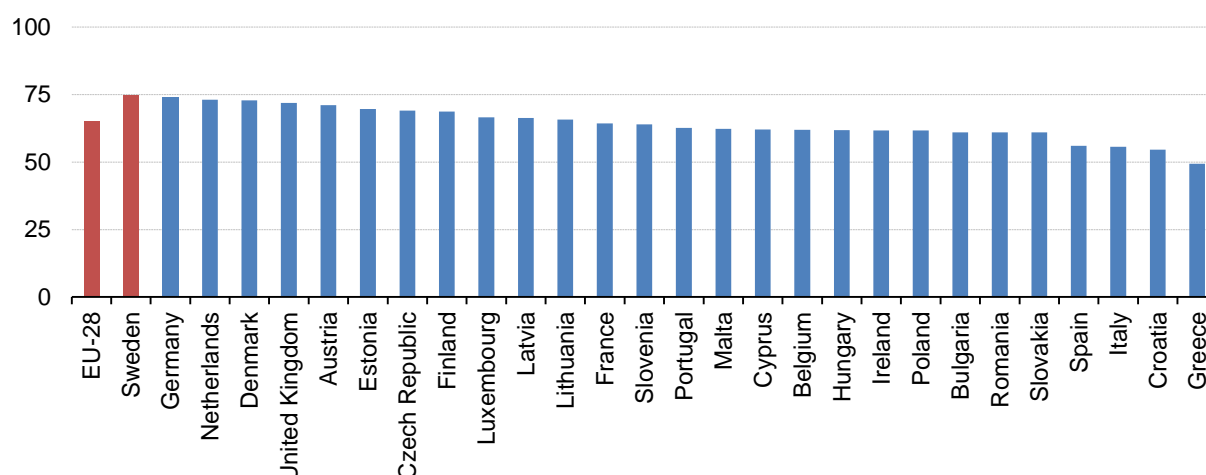
Source: Eurostat.

Figure 5.2: Employment rates in the EU-28 in 2014 by gender
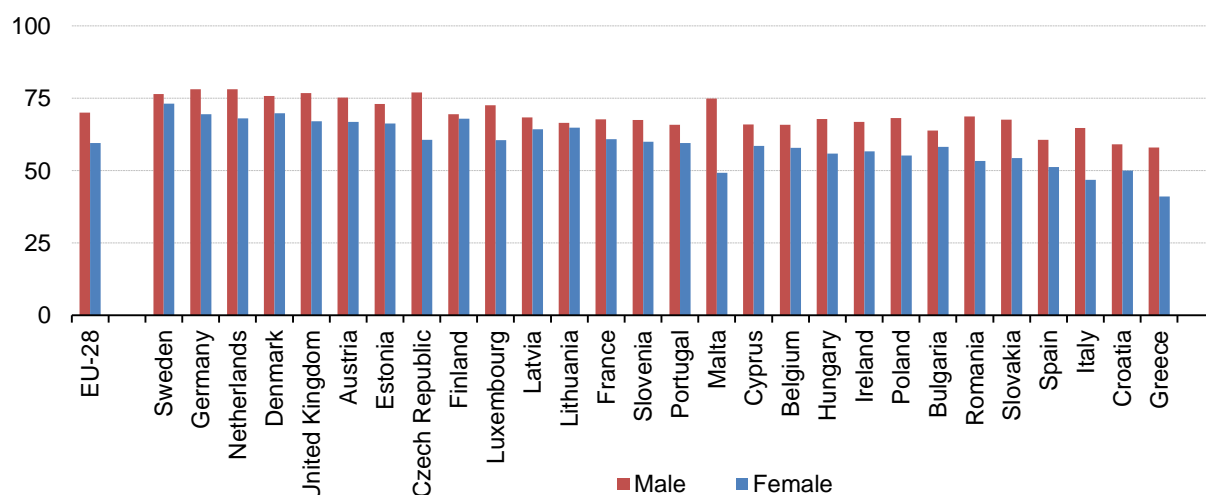
Source: Eurostat.

The differences in the employment rate of men and women are big between the Member States, with the highest gap recorded in Malta (25.6 percentage point), Greece, Italy and the Czech Republic (just under 20 percentage points). In 2014, the employment rate in women was the lowest in Greece (41.1%), with Italy and Malta also recording a share below 50%. The lowest difference in the employment rate of men and women was recorded in Finland (employment rate in women was by 1.5 percentage point lower than in men) and in Lithuania (1.6 percentage point) as shown in Table 5.2.

In the 2009-2014 period, the employment options in men decreased in particular, which is largely related to the reduction of the scope of activities that usually employ men with low education (e.g. construction works) (Kajzer, 2013, p. 5).

Table 5.2: Employment rates by the EU-28 states by gender and age groups in selected years.

	Men, age group 15-64			Women, age group 15-64			Older workers, age group 55-64		
	2004	2009	2014	2004	2009	2014	2004	2009	2014
EU-28	**70.3**	**70.6**	**70.1**	**55.5**	**58.3**	**59.6**	**40.6**	**45.9**	**51.8**
Belgium	67.9	67.2	65.8	52.6	56.0	57.9	30.0	35.3	42.7
Bulgaria	57.9	66.9	63.9	50.6	58.3	58.2	32.5	46.1	50.0
Czech Republic	72.3	73.8	77.0	56.0	56.7	60.7	42.7	46.8	54.0
Denmark	79.7	78.0	75.8	71.6	72.7	69.8	60.3	58.2	63.2
Germany	70.8	75.4	78.1	59.2	65.2	69.5	41.8	56.1	65.6
Estonia	65.7	64.3	73.0	60.7	63.2	66.3	53.0	60.3	64.0
Ireland	75.9	66.5	66.9	56.5	57.4	56.7	49.5	51.3	53.0
Greece	73.0	73.0	58.0	45.2	48.9	41.1	39.9	42.4	34.0
Spain	73.6	66.5	60.7	48.8	53.3	51.2	41.2	44.0	44.3
France	69.4	68.3	67.7	58.2	59.8	60.9	37.8	39.0	47.0
Croatia	61.8	65.2	59.1	47.8	53.7	50.0	30.1	39.4	36.2
Italy	70.2	68.5	64.7	45.5	46.4	46.8	30.5	35.6	46.2
Cyprus	79.8	76.3	66.0	58.7	62.3	58.6	49.9	55.7	46.9
Latvia	65.3	60.3	68.4	57.2	60.4	64.3	46.6	52.5	56.4
Lithuania	65.2	59.3	66.5	58.3	60.4	64.9	47.3	51.2	56.2
Luxembourg	72.8	73.2	72.6	51.9	57.0	60.5	30.4	38.2	42.5
Hungary	63.1	60.7	67.8	50.7	49.6	55.9	31.1	31.9	41.7
Malta	75.1	71.9	74.9	32.7	38.0	49.3	31.5	29.1	37.7
Netherlands	80.2	82.4	78.1	65.8	71.5	68.1	45.2	55.1	59.9
Austria	73.3	75.5	75.2	59.7	65.2	66.9	27.1	39.4	45.1
Poland	57.2	66.1	68.2	46.2	52.8	55.2	26.2	32.3	42.5
Portugal	74.0	70.8	65.8	61.5	61.5	59.6	50.2	49.7	47.8
Romania	63.4	65.2	68.7	52.1	52.0	53.3	36.9	42.6	43.1
Slovenia	70.0	71.0	67.5	60.5	63.8	60.0	29.0	35.6	35.4
Slovakia	63.2	67.6	67.6	50.9	52.8	54.3	26.8	39.5	44.8
Finland	69.7	69.5	69.5	65.6	67.9	68.0	50.9	55.5	59.1
Sweden	73.6	74.2	76.5	70.5	70.2	73.1	69.1	70.0	74.0
Great Britain	77.9	74.9	76.8	65.6	64.9	67.1	56.2	57.5	61.0

Source: Eurostat.

The employment rate in older workers (between 55 and 64 years) rapidly increased (similar to women) despite the financial and economic crisis. This rate in EU-28 reached 51.8% in 2014, whereby it increased every year from 2002 on (the start date of time series for EU-28). A more detailed analysis of employment rates by age groups is shown in Table 5.3 and Figure 5.4. The tables and figure show that the employment rate of older workers (55-64) is among the lowest in Slovenia of all European Union Member States which calls for a more detailed analysis that follows below.

Table 5.3: Employment rates in the EU-28 states in 2014 by age groups

	15-24 years	25-54 years	55-64 years	15-64 years
EU-28	**32.5**	**77.5**	**51.8**	**64.9**
Sweden	42.8	85.4	74.0	74.9
Germany	46.1	83.5	65.6	73.8
Netherlands	58.8	81.7	59.9	73.1
Denmark	53.7	82.0	63.2	72.8
Great Britain	48.1	82.1	61.0	71.9
Austria	52.1	83.4	45.1	71.1
Estonia	33.3	80.9	64.0	69.6
Czech Republic	27.1	83.8	54.0	69.0
Finland	41.4	80.5	59.1	68.7
Luxembourg	20.4	83.7	42.5	66.6
Latvia	32.5	78.2	56.4	66.3
Lithuania	27.6	80.8	56.2	65.7
France	28.4	80.4	47.0	64.3
Slovenia	26.8	81.9	35.4	63.9
Portugal	22.4	77.4	47.8	62.6
Malta	46.1	75.8	37.7	62.3
Cyprus	25.8	76.2	46.9	62.1
Belgium	23.2	79.1	42.7	61.9
Hungary	23.5	79.2	41.7	61.8
Ireland	28.4	72.6	53.0	61.7
Poland	25.8	78.4	42.5	61.7
Bulgaria	20.7	74.5	50.0	61.0
Romania	22.5	77.1	43.1	61.0
Slovakia	21.8	76.8	44.8	61.0
Spain	16.7	67.4	44.3	56.0
Italy	15.6	67.9	46.2	55.7
Croatia	18.3	71.2	36.2	54.6
Greece	13.3	62.4	34.0	49.4

Source: Eurostat.

Figure 5.3: Employment rates in the EU-28 states in 2014 by age groups
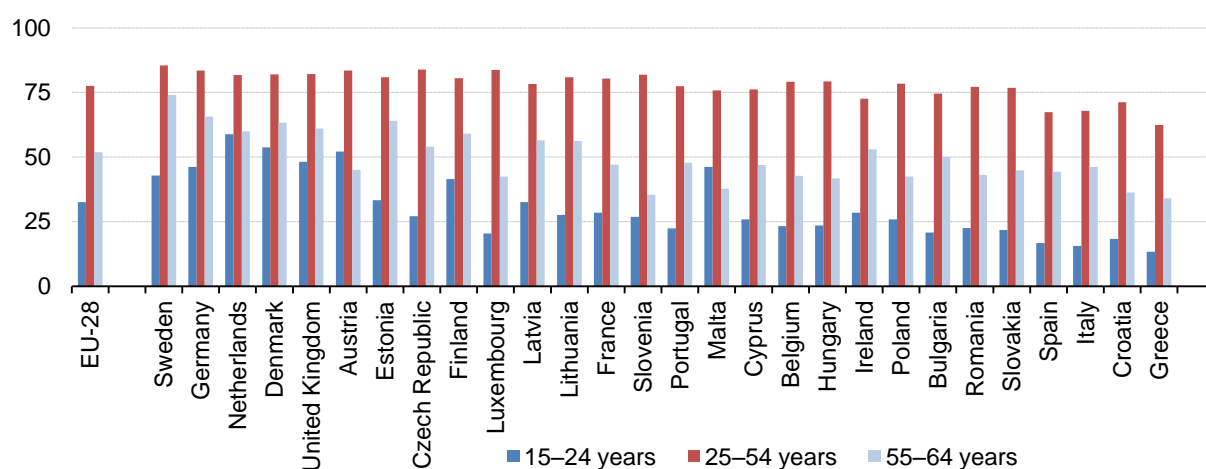
Source: Eurostat.

Employment rates are importantly different also in the field of achieved education. For this statistics, the employment rates are based on the age group from 25 to 64 years and not from 15 to 64 years. The employment rate of those who finished the tertiary education (short-cycle tertiary, undergraduate or equal education, acquired the Master's thesis or equal title or PhD or equal title) was in 2013 throughout the EU-28 83.7% (see Table 5.4), that is significantly higher than the rate of those with primary or low-secondary education (52.6%). The employment rate in persons with higher secondary or post-secondary pre-tertiary education was 73.4% in the EU-28. From the beginning of the financial and economic crisis (comparison between 2008 and 2014), the employment rate decreased the most in persons with the maximum of primary or lower secondary education and the least in persons with tertiary education.

Table 5.4: Employment rates in the EU-28 states in 2014 by the level of attained education

	Primary education (ISCED 0-2)	Secondary education (ISCED 3-4)	Tertiary education (ISCED 5-6)
EU-28	**52.6**	**73.4**	**83.7**
Belgium	47.5	72.8	84.7
Bulgaria	40.0	71.1	82.7
Czech Republic	43.0	77.6	84.5
Denmark	61.4	79.1	86.0
Germany	58.0	79.7	88.1
Estonia	60.9	74.3	83.9
Ireland	46.6	67.9	81.1
Greece	46.9	54.5	68.5
Spain	49.4	65.9	77.2
France	53.3	72.5	83.8
Croatia	38.8	62.6	80.5
Italy	49.6	69.8	77.8
Cyprus	54.5	69.6	79.7
Latvia	51.3	70.9	84.2
Lithuania	43.2	69.4	89.4
Luxembourg	60.9	72.1	84.6
Hungary	45.3	71.8	81.8
Malta	52.5	81.7	88.3
Netherlands	58.8	77.9	87.7
Austria	53.0	75.9	85.3
Poland	39.3	66.1	86.3
Portugal	63.0	77.6	82.7
Romania	55.5	70.4	86.0
Slovenia	48.5	69.5	83.2
Slovakia	32.7	71.0	80.0
Finland	53.5	73.2	83.5
Sweden	63.6	84.5	89.0
Great Britain	59.6	78.8	85.3

Source: Eurostat.

The crisis did not only have an impact on the employment rates, but also on the unemployment rates. The differences in the unemployment rates between the Member States increased significantly and reflect a different reaction of the labour market to the crisis and difference in the resistance of

the labour market to the decreased economic activities. The average number of executed working hours per week in the entire period in the majority of the EU Member States reduced (schemes to stimulate the reduction of working hours) which had an impact on the increase of the share of employments with short working hours (partial employments) (Kajzer, 2013, p. 4). The negative trend in the EU-28 continued also in 2013 (Table 5.5), while in 2014 the decrease of the unemployment rates, i.e. to 10.2%, occurred[4].

Table 5.5: Unemployment rates in the EU-28 states in the 2003-2013 period

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU-28	**9.1**	**9.3**	**9.0**	**8.2**	**7.2**	**7.0**	**9.0**	**9.6**	**9.6**	**10.4**	**10.8**
Belgium	8.2	8.4	8.5	8.3	7.5	7.0	7.9	8.3	7.2	7.6	8.4
Bulgaria	13.7	12.1	10.1	9.0	6.9	5.6	6.8	10.3	11.3	12.3	13.0
Czech Republic	7.8	8.3	7.9	7.1	5.3	4.4	6.7	7.3	6.7	7.0	7.0
Denmark	5.4	5.5	4.8	3.9	3.8	3.5	6.0	7.5	7.6	7.5	7.0
Germany	9.8	10.5	11.3	10.3	8.7	7.5	7.8	7.1	5.9	5.5	5.3
Estonia	10.3	10.1	8.0	5.9	4.6	5.5	13.5	16.7	12.3	10.0	8.6
Ireland	4.6	4.5	4.4	4.5	4.7	6.4	12.0	13.9	14.7	14.7	13.1
Greece	9.7	10.5	9.9	8.9	8.3	7.7	9.5	12.6	17.7	24.3	27.3
Spain	11.5	11.0	9.2	8.5	8.2	11.3	17.9	19.9	21.4	24.8	26.1
France	8.6	8.9	8.9	8.9	8.0	7.5	9.1	9.3	9.2	9.8	10.3
Croatia	14.1	13.8	12.8	11.4	9.6	8.4	9.1	11.8	13.5	15.9	17.2
Italy	8.4	8.0	7.7	6.8	6.1	6.7	7.8	8.4	8.4	10.7	12.2
Cyprus	4.1	4.6	5.3	4.6	3.9	3.7	5.4	6.3	7.9	11.9	15.9
Latvia	11.6	11.7	10.0	7.0	6.1	7.7	17.5	19.5	16.2	15.0	11.9
Lithuania	12.6	11.6	8.5	5.8	4.3	5.8	13.8	17.8	15.4	13.4	11.8
Luxembourg	3.8	5.0	4.6	4.6	4.2	4.9	5.1	4.6	4.8	5.1	5.8
Hungary	5.8	6.1	7.2	7.5	7.4	7.8	10.0	11.2	10.9	10.9	10.2
Malta	7.7	7.2	6.9	6.9	6.5	6.0	6.9	6.9	6.5	6.4	6.5
Netherlands	4.2	5.1	5.3	4.4	3.6	3.1	3.7	4.5	4.4	5.3	6.7
Austria	4.3	4.9	5.2	4.8	4.4	3.8	4.8	4.4	4.2	4.3	4.9
Poland	19.8	19.1	17.9	13.9	9.6	7.1	8.1	9.7	9.7	10.1	10.3
Portugal	7.1	7.5	8.6	8.6	8.9	8.5	10.6	12.0	12.9	15.9	16.5
Romania	6.8	8.0	7.2	7.3	6.4	5.8	6.9	7.3	7.4	7.0	7.3
Slovenia	6.7	6.3	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9	10.1
Slovakia	17.7	18.4	16.4	13.5	11.2	9.6	12.1	14.5	13.7	14.0	14.2
Finland	9.0	8.8	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.7	8.2
Sweden	6.6	7.4	7.7	7.1	6.1	6.2	8.3	8.6	7.8	8.0	8.0
Great Britain	5.0	4.7	4.8	5.4	5.3	5.6	7.6	7.8	8.0	7.9	7.5

Source: Eurostat.

Table 5.6 thus shows that the unemployment rates increased in men as well as in women. There are big differences between the countries. Thus, in 2013, the unemployment rate was the highest in Spain and Greece, and the lowest in Austria, Germany and Luxembourg. The situation is similar also with the unemployment rate in women. In Slovenia, the unemployment rate in men (9.5%) was under the EU-28 average (10,8%), in 2013, while the unemployment rate in women was at the EU-28 average (10.9%). The increase was in the 2008-2013 period in Slovenia above-average compared to

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[4] http://ec.europa.eu/eurostat/statistics-explained/index.php/Unemployment_statistics.

the EU-28 average which indicates a very negative impact of the crisis to the unemployment rate in Slovenia.

Table 5.6: Unemployment rates in the EU-28 states in 2013 by gender and age groups

	Male		Women		< 25 let	25-74 years
	2008	2013	2008	2013	2013	2013
EU-28	**6.6**	**10.8**	**7.5**	**10.9**	**23.4**	**9.5**
Belgium	6.5	8.7	7.6	8.2	23.7	7.1
Bulgaria	5.5	13.9	5.8	11.8	28.4	11.8
Czech Republic	3.5	5.9	5.6	8.3	18.9	6.1
Denmark	3.2	6.7	3.7	7.3	13.0	5.9
Germany	7.4	5.6	7.7	5.0	7.9	5.0
Estonia	5.8	9.1	5.1	8.2	18.7	7.6
Ireland	7.6	15.0	4.9	10.7	26.8	11.6
Greece	5.1	24.5	11.5	31.4	58.3	25.3
Spain	10.1	25.6	12.8	26.7	55.5	23.8
France	7.1	10.3	7.9	10.2	24.8	8.8
Croatia	7.0	17.7	10.1	16.8	49.7	14.1
Italy	5.5	11.5	8.5	13.1	40.0	10.3
Cyprus	3.2	16.6	4.3	15.2	38.9	13.6
Latvia	8.4	12.6	7.1	11.1	23.2	10.7
Lithuania	6.0	13.1	5.6	10.5	21.9	10.9
Luxembourg	4.1	5.6	5.9	6.3	17.4	5.0
Hungary	7.6	10.2	8.1	10.2	27.2	8.9
Malta	5.6	6.5	6.8	6.3	13.5	5.2
Netherlands	2.8	7.1	3.4	6.3	11.0	5.9
Austria	3.6	4.9	4.1	4.9	9.2	4.3
Poland	6.4	9.7	7.9	11.1	27.3	8.8
Portugal	*7.8*	16.3	*9.1*	16.6	37.7	14.8
Romania	6.7	7.9	4.7	6.6	23.6	5.9
Slovenia	4.0	9.5	4.8	10.9	21.6	9.2
Slovakia	8.4	14.0	11.0	14.5	33.7	12.5
Finland	6.1	8.8	6.7	7.5	19.9	6.5
Sweden	5.9	8.2	6.6	7.9	23.4	5.7
Great Britain	6.1	8.0	5.1	7.0	20.5	5.4

Source: Eurostat.

The attained level of education also affects the unemployment rate which is shown in Table 5.7. There are great differences between countries. However, the table shows that the highest unemployment rate is in the active population with the lowest attained level of education. During the crisis, the less educated people lost their jobs, and also the future for them is uncertain, since the robots are expected to take the jobs currently taken by the employees with primary or secondary education.

Table 5.7: Unemployment rates in the EU-28 states in 2013 by the level of attained education

	Primary education (ISCED 0-2)	Secondary education (ISCED 3-4)	Tertiary education (ISCED 5-6)
EU-28	**17.9**	**8.6**	**5.9**
Belgium	13.5	6.8	4.3
Bulgaria	28.5	11.2	6.1
Czech Republic	23.4	6.1	2.5
Denmark	9.2	5.6	4.6
Germany	12.5	5.1	2.4
Estonia	13.7	8.9	5.4
Ireland	20.3	14.0	6.7
Greece	28.6	28.0	19.3
Spain	32.9	23.5	15.1
France	14.0	8.5	5.3
Croatia	19.6	15.2	9.3
Italy	14.3	8.9	7.0
Cyprus	18.0	14.8	10.9
Latvia	22.6	12.5	5.5
Lithuania	32.9	13.9	4.4
Luxembourg	8.6	5.5	3.7
Hungary	21.8	8.7	3.6
Malta	8.2	3.4	1.9
Netherlands	8.6	6.4	3.7
Austria	8.7	3.9	3.1
Poland	19.3	9.7	5.0
Portugal	17.1	14.4	11.7
Romania	6.7	6.5	4.6
Slovenia	**17.8**	**9.8**	**5.8**
Slovakia	40.0	12.3	6.5
Finland	12.2	7.5	4.5
Sweden	13.4	5.2	4.0
Great Britain	10.7	5.8	3.2

Source: Eurostat.

To deterioration of conditions in the labour market, the countries responded by strengthening the active interventions in the labour market and reforms of labour market. In 2009, all countries increased the expenses for active interventions in the labour market, while in 2010 and 2011 some of them, despite further deterioration of conditions, already reduced them under the influence of fiscal consolidation. The majority of countries strengthened the education and training programmes during the crisis, while numerous countries increased the accessibility to the unemployment benefits in the beginning of the crisis. Since the ability for the labour market to adapt, with the great impact by the labour market institutions, became very important, numerous countries began to also introduce the reforms of the labour market. During the crisis, the most frequent reforms were active employment policies, and the number of reforms in the field of security of employment and unemployment insurance increased as well (Kajzer, 2013, p. 1).

All target groups are not in the same position. The employment rate in women, older people, the young and migrants will have to be increased in the future.

In the older people, the employment rate is in particular low in the age of 60-64, with the general employment rate in the EU-28 being less than 35% in 2013. The increase employment requires a public intervention in employers and employees, since it cannot be expected that the market will find a solution for the problem of low employment rate in older people. The factors affecting employment in this age period are very different and not only financial. The characteristics of individuals and their spouses, such as education, health, employment of the spouse, have a major impact as well as the characteristics of the pension system and system regulation of the work of pensioners (Directorate-General for Employment, Social Affairs and Inclusion, 2014, p. 39).

The unemployment rate of the young also increased significantly during the crisis, in particular in Greece and Spain, where the employment rate of the young is very low. The problem of employing the young is usually higher in less educated persons, but also the reduction of the employment rate in the young with at least secondary education indicates increasing problems in transition from the education period to the period of employment (Kajzer, 2013, p. 5).

5.2.2   Labour market in Slovenia

Crisis and problems of Slovenian economy are reflected in the deterioration of situation in the labour market in the recent years. The loss and lack of new jobs and thus decreasing of the employment caused a strong growth of unemployment. The share of unemployed young, those entering the job market for the first time and long-term unemployed increased. The older and less educated are less competitive in the labour market. The situation in the Slovenian labour market is briefly presented below, since there were some detailed studies conducted in the recent years, in particular Domadenik et al., 2013.

The table 5.8 shows that the number of employed[5] decreased in the recent years, while the contrary is true for the number of unemployed. While there were 996,000 persons employed in 2008, this number was only 906,00 in 2014 and 917,000 in 2014. The number of unemployed increased from 46,000 in 2008 to 99,000 in 2014. Table 5.8 shows that the situation in the labour market constantly deteriorated since the start of economic crisis in 2008, while a slight improvement of conditions was recorded in 2014. If we compare the genders, we see that the unemployment in men increased more than the unemployment in women, as shown in Figure 5.4.

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[5] Employed persons include employees, self-employed and unpaid family members working in the area of Slovenia.

Table 5.8: Labour force, employed, unemployed and inactive population in Slovenia, 2008-2014 in thousands, the data recapitulated from the analysis on the labour force

		2008	2009	2010	2011	2012	2013	2014
WORKING AGE POPULATION	TOTAL	1751	1753	1760	1760	1761	1760	1760
	Male	862	861	866	865	865	866	866
	Female	889	891	894	895	896	895	894
Employed	TOTAL	996	981	966	936	924	906	917
	Male	543	531	523	506	500	495	499
	Female	453	450	443	430	424	411	417
Employees - TOTAL	TOTAL	855	822	799	779	774	753	746
	Male	453	430	419	406	404	398	396
	Female	402	392	381	372	370	355	351
Self-employed	TOTAL	99	105	119	118	113	109	116
	Male	72	78	85	83	80	78	83
	Female	27	27	35	35	32	31	33
Unpaid family members	TOTAL	42	54	47	40	37	43	54
	Male	18	23	20	17	15	19	20
	Female	25	31	27	23	22	25	33
Unemployed - TOTAL	TOTAL	46	61	76	84	90	102	99
	Male	23	33	42	45	46	52	49
	Female	23	28	34	38	44	50	49
Inactive	TOTAL	709	711	718	740	747	752	744
	Male	296	297	301	314	320	319	317
	Female	413	413	418	426	428	433	427
PERSON LESS THAN 15 YEARS OLD	TOTAL	282	285	288	292	295	299	302
	Male	145	146	148	150	152	154	155
	Female	137	138	140	141	143	145	147

Source: Statistical Office of the Republic of Slovenia; our calculations.

Figure 5.4: Employed and total population in Slovenia, 2008-2014, 2008=100, the data recapitulated from the Labour Force Survey
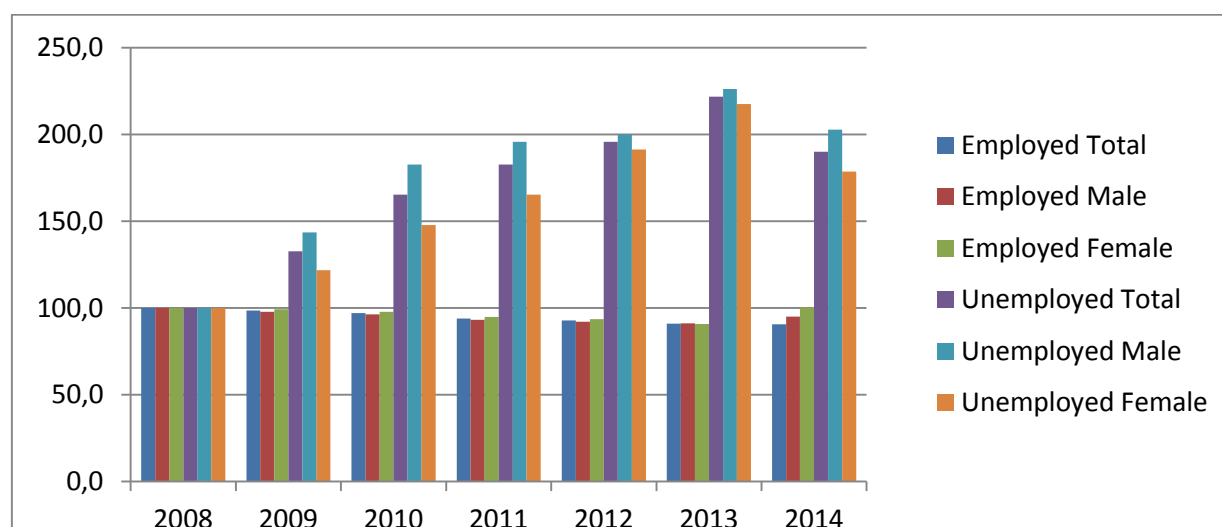
Source: Statistical Office of the Republic of Slovenia; our calculations.

Due to different methodology, the number of registered unemployed is higher than the number of unemployed[6] according to the Labour Force Survey (LFS). Thus, at the end of 2014, there were 119,458 unemployed people registered, while in the same period the number of unemployed according to the LFS was 97,000.

Table 5.9: The rate of registered unemployment in Slovenia in the 2005-2014 period

Year/period	Registered unemployment		Index per transitional period		Rate of registered unemployment, average (in %)
	End of the period	Average of the period	End of the period	Average of the period	
2005	92,575	91,889	102.0	99.0	10.2
2006	78,303	85,836	84.6	93.4	9.4
2007	68,411	71,336	87.4	83.1	7.7
2008	66,239	63,216	96.8	88.6	6.7
2009	96,672	86,354	145.9	136.6	9.1
2010	110,021	100,504	113.8	116.4	10.7
2011	112,754	110,692	102.5	110.1	11.8
2012	118,061	110,183	104.7	99.5	12.0
2013	124,015	119,827	105.0	108.8	13.1
2014	119,458	120,109	96.3	100.2	13.1

Source: Guidelines to implement the measures of active employment policy for the 2016-2020 period, the Ministry of Labour, Family and Social Affairs.

The conditions in the labour market are improving, but slower than the economic growth is increasing. The unemployment is decreasing, while the number of the registered unemployed at the monthly level started to decrease again in February 2015, while the unemployment at the annual level is lower than in June 2014. The number of employed is gradually growing. However the employers are still very careful in employment; in this year there are also less opportunities to include the unemployed in the programmes of subsidised employment, since the absorption of funds from the multiannual EU financial framework 2007-2013 ends in 2015, while the absorption of funds from the new EU multiannual financial framework has so far not yet started MDDSZ, 2015, p. 5).

The age structure of the unemployed is important. The table below shows that the share of older than 50 among all unemployed has been increasing throughout all years, except for 2013. In 2014, the trend continued. Thus, the average share of the unemployed of the 50+ age class was 31.1%.

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[6] The unemployment rate is measured in two ways; as the rate of registered unemployment and as the LFS unemployment rate. The registered unemployment measures the number of registered with the Employment Service of Slovenia; since the national legislation is the basis for the registration with the Employment Service of Slovenia this data is not internationally comparable. The unemployment according to the LFS is based on the definition of the International Labour Organisation; according to this definition the unemployed are all persons who did not work in the observed week, who are active jobseekers, and who are willing to start to work immediately.

Table 5.10: Share of the registered unemployed by individual age groups in Slovenia, 2005-2013 in %

Age class[7]	2005	2006	2007	2008	2009	2010	2011	2012	2013
Under 17 years	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
From 18 to 24 years	20.2	17.5	13.4	11.5	12.4	10.9	9.2	8.4	8.9
From 25 to 29 years	16.9	16.9	15.9	14.7	15.7	15.6	14.7	14.1	15.0
From 30 to 39 years	19.0	19.1	18.5	18.3	20.5	21.4	21.3	22.5	23.4
From 40 to 49 years	20.9	20.9	20.9	20.6	21.0	20.7	19.5	20.2	20.0
From 50 to 59 years	21.6	24.1	29.2	32.2	28.2	28.9	32.4	31.7	29.5
60 years or more	1.2	1.2	1.9	2.5	2.2	2.3	2.8	3.0	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
50 plus	22.7	25.4	31.1	34.7	30.3	31.2	35.2	34.7	32.5

Source: Employment Service of Slovenia.

While the share of the unemployed older than 55 years was 18% in 2014, it was already 19.4% in 2015 which indicates the increase of the share of all registered unemployed older than 55.

Table 5.11: Share of the registered unemployed by individual age groups in Slovenia, 2014-2015 in %

Age class	2014	2015
From 15 to 24 years	9.4	8.8
From 25 to 29 years	16.0	14.9
From 30 to 39 years	23.8	24.0
From 40 to 49 years	19.8	19.7
From 50 to 54 years	13.1	13.2
55 years or more	18.0	19.4
Total	100.0	100.0

Source: Employment Service of Slovenia.

The analysis shows that the duration of the unemployment is increasing by the age of the unemployed (Domadenik et al., 2013, p. 15) meaning that an adequate support to the older unemployed is necessary to keep their job.

Otherwise, the persons entering the labour market most frequently have problems. These are usually the young, entering the job market for the first time or the young who have found themselves in the 'vicious circle' of precarious employments. The older jobseekers who have problems finding a new job after losing their job are also faced with problems since their possibilities for a successful entering the labour market are limited by some other characteristics (health issues, low education, etc.) and the prejudices existing among the employers as well as in the society (the older have more difficulties to adapt, are not prepared to learn, etc.). (ESS, 2015, p. 26).

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[7] From 2014, the age classes are changed.

In addition to the low employment rates of the older, the rapidly increasing unemployment of the young must be pointed out. This is in Slovenia lower as the average of the European Union Member States, however the problem related to the precarious forms of employment is very critical. In general, it may be said that the young are that group of population that was the most affected during the recession in the labour market (in particular in the European Union). Relatively favourable unemployment rates of the young, which are lower than the average of the EU Member States despite the negative trend, are related with the increasing inclusion of generations in the tertiary education in Slovenia that is increasing practically from Slovenia's independence on and with it the number of graduates (Domadenik et al., 2013, p.1). During the crisis, the employment options of persons with tertiary education deteriorated mainly because the number of suitable jobs has been decreasing and the profile of the graduates frequently do not comply with the demand in the labour market. Thus, the graduates get no jobs which causes the increase of the number of unemployed, migrations abroad (in particular of the people with the highest qualifications) and intergenerational conflict.

The situation is different also from the point of view of regional distribution. The jobs are concentrated mainly in the Central Slovenian region where the jobs in the field of service activities prevail.

Table 5.12: Labour migration index

|	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
SLOVENIA	100	100	100	100	100	100
Pomurska	89.8	89.4	89.9	90.4	90.2	89.9
Podravska	97.3	98.1	97.1	96.4	96.1	96.3
Koroška	87.6	85.8	86.3	87.4	87.0	87.3
Savinjska	98.7	97.7	96.6	96.4	96.5	96.3
Zasavska	71.3	70.8	71.3	69.6	69.4	67.8
Spodnjeposavska	82.6	81.8	80.8	79.9	79.6	79.1
South-Eastern Slovenia	89.8	88.8	87.9	88.6	88.7	87.6
Central Slovenia	123.6	124.2	125.9	126.1	126.0	126.3
Gorenjska	84.7	84.9	84.2	83.6	83.9	83.9
Inner Carnolia-Karst	79.5	78.3	73.6	75.4	74.9	75.2
Goriška	97	96.6	96.7	96	96.3	96.2
Coastal-Karst	100.5	101.3	99.5	97.3	97.4	97.5

Source: Statistical Office of the Republic of Slovenia.

The evolution of the number of jobs by regions is not equally spread. The lack of jobs in individual regions causes a high daily migration rate and high level of regional unemployment. The highest lack of jobs regarding the active local population is in the Zasavje region causing more daily migrations of the employed, which is indicated also by the lowest index of labour migration (low index means less jobs for the local persons in employment). In 2013, the highest index of labour migration and thus the highest surplus of jobs over local living formally working population was recorded by the Central Slovenian region. The index for this region exceeded the Slovenian average by over 25 percentage points. The Coastal-Karst region was the closest to the weighted balance, followed by the Savinjska,

Podravska and Goriška region. The lowest index of labour migrations was recorded in the Zasavje region with over a quarter less jobs than it is the number of the local living working population. The table below also shows that the ratios between the regions are relatively stable.

According to the Statistical Office of the Republic of Slovenia data, over a half of persons in employment commute to work to other municipalities. The number of such persons was 392,000 in 2014, which is 50.9% of of all persons of employment, whereby the farmers were excluded. Compared to 2013, the number of inter-municipal labour migrants increased (by almost 8,700). Otherwise, the share of labour migrants slightly increases on the yearly basis.

Figure 5.5: Index of labour migrations, municipalities, Slovenia, 31 December 2014
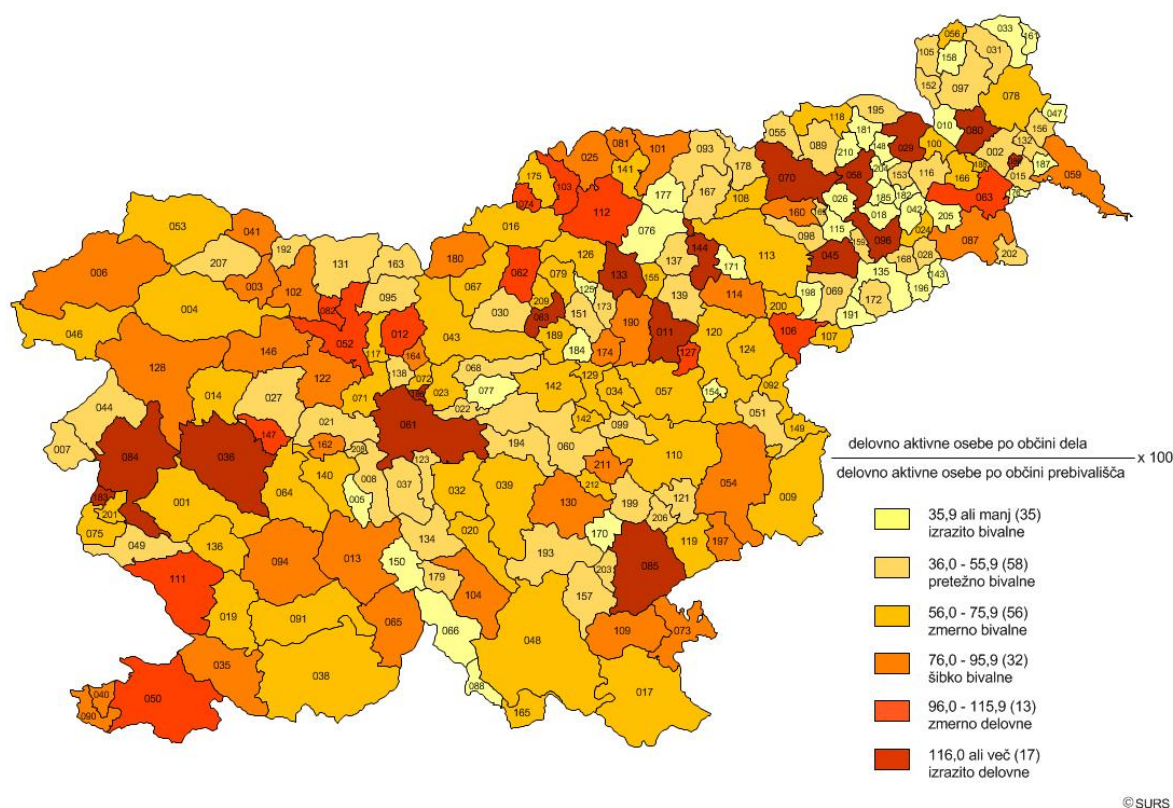
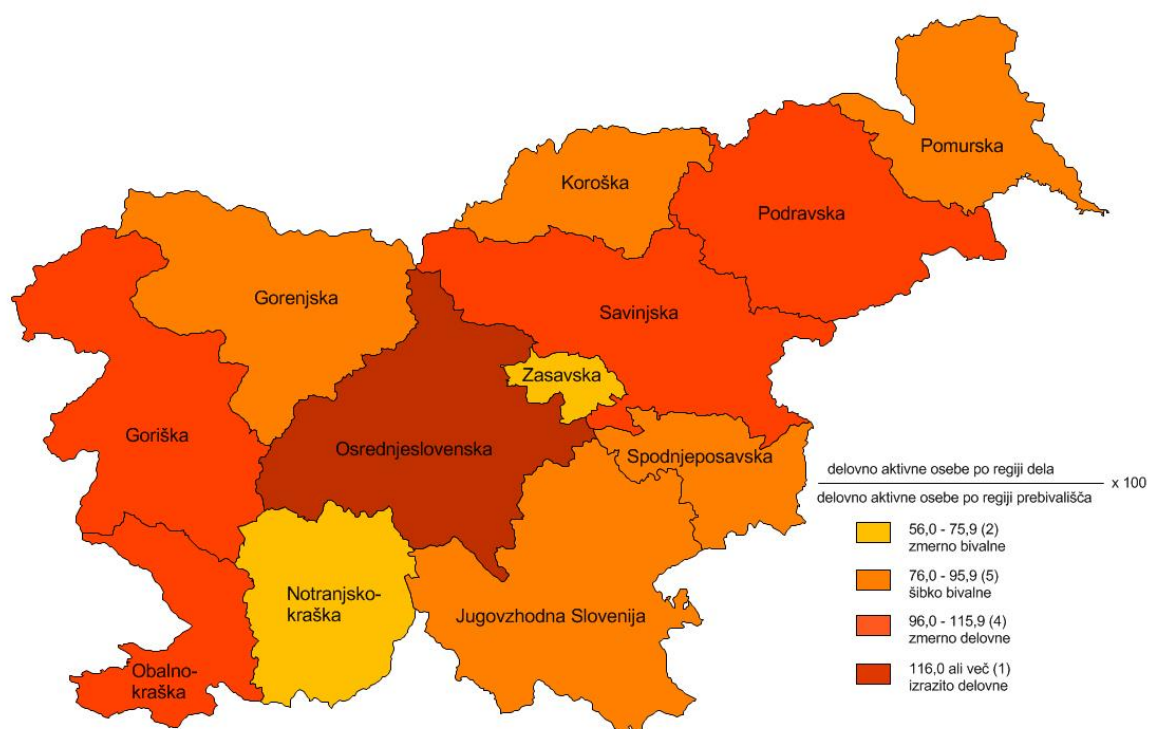Source: Statistical Office of the Republic of Slovenia.
Notes:
- Formula: persons in employment by municipality of workplace / persons in employment by municipality of residence x 100.
- Legend: from the bottom to the top: 116,0 or more (17) very labour-oriented, 96,0–115,9 (13) moderately labour-oriented, 76,0–95,9 (32) weakly residentially, 56,0–75,9 (56) moderately residential, 36,0–55,9 (58) mostly residential, 35,9 or less (35) very residential.

The transport infrastructure provides that the persons more frequently opt for a job that is somewhat distant from their place of residence. If an employer moves a part of the production to another location, they are even forced to do that if they do not find another job. The number of persons in employment whose workplace isin the municipality of their residence decreases from year to year. At the end of 2014, their number was almost 378,000 or 49.1% of all persons in employment.

Compared to 2013, this share decreased by 0.3 of a percentage point. At the end of 2014, a high 84% of Ljubljana citizens have their job in the municipality of their residence. This means that 84% (approx. 91,800) of the Ljubljana citizens also had their job in Ljubljana, while the other 16% (or almost 17,100) commuted to work to other municipalities. On the other hand, 112,000 persons travelled to work in Ljubljana from other municipalities. The smallest number, only 10.5% of persons in employment resided and worked in the Municipality of Sveti Tomaž, with almost 600 persons in employment who resided in this municipality commuted to work to other municipalities[8]. The extremely labour-oriented municipalities are those which have at least 16% higher number of jobs per the number of persons in employment who resided in this municipality. At the end of 2014, there were 17 such municipalities: Trzin, Šempeter – Vrtojba, Nazarje, Ljubljana, Murska Sobota, Kidričevo, Zreče, Gornja Radgona, Celje, Novo mesto, Maribor, Lenart, Ptuj, Velenje, Odranci, Nova Gorica in Idrija. Compared to the previous year, the extremely labour-oriented municipalities were joined only by the Municipality of Odranci. Labour migrations between individual statistical regions are not so frequent than at the municipal level, since the regions cover a larger territorial area (Figure 5.6).

Figure 5.7: Index of labour migrations, statistical regions, Slovenia, 31 December 2014

Source: Statistical Office of the Republic of Slovenia.
Notes:
- Formula: persons in employment by region of workplace / persons in employment by region of residence x 100.
- Legend: from the bottom to the top: 116,0 or more (1) very labour-oriented, 96,0–115,9 (4) moderately labour-oriented, 76,0–95,9 (5) weakly residential, 56,0–75,9 (2) moderately residential.

[8] http://www.stat.si/StatWeb/prikazi-novico?id=5160&idp=3&headerbar=2.

At the end of 2014, there were about 135,000 inter-regional labour migrants or 18.5% of all persons in employment. More than 82% of persons in employment found the jobs in the statistical region in which they have a residence.. In 2014, the Central Slovenian statistical region was the only one that had more jobs than the number of persons in employment, namely a good 26%. In Slovenia, the regional differences are also present in the field of unemployment, where the most affected regions in the past (high unemployment rate) are those that for some time now exceed the national average (Pomurska, Podravska, Koroška and Zasavje region) (Table 5.13).

Table 5.14: Rate of registered unemployment by regions

	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Slovenia	**11.8**	**10.2**	**9.4**	**7.7**	**6.7**	**9.1**	**10.7**	**11.8**	**12.0**	**13.1**	**13.1**
Western Slovenia	**8.6**	**7.4**	**6.9**	**9.5**	**4.8**	**6.9**	**8.3**	**9.6**	**9.9**	**11.2**	**11.2**
Coastal-Karst	8.8	7.5	7.2	6.3	5.2	6.9	7.9	9.6	10.2	11.7	12.1
Goriška	5.9	6.5	6.2	4.9	4.3	7.1	8.6	10.0	10.3	11.7	11.2
Gorenjska	9.7	7.3	6.4	4.9	4.4	6.9	8.1	8.8	8.9	9.8	9.5
Central Slovenia	8.8	7.6	7.2	5.9	5.0	6.8	8.5	9.9	10.1	11.5	11.7
Eastern Slovenia	**14.4**	**12.5**	**11.6**	**5.6**	**8.3**	**11.1**	**12.8**	**13.6**	**13.6**	**14.7**	**14.7**
Inner Carnolia-Karst	10.4	7.9	7.0	5.4	4.9	7.1	8.5	10.0	10.4	12.3	11.9
South-East Slovenia	10.4	8.8	8.6	7.0	6.3	8.9	10.0	11.6	12.8	14.1	13.9
Spodnjeposavska	13.4	11.5	10.5	8.9	7.7	10.2	12.2	13.4	13.9	14.8	14.7
Zasavska	14.9	13.8	12.0	9.7	8.2	11.0	11.9	13.3	14.7	16.6	17.7
Savinjska	13.1	12.7	11.6	9.4	8.0	10.3	11.8	12.7	12.7	13.9	13.9
Koroška	9.9	10.6	10.1	8.1	7.3	10.9	13.1	13.3	12.2	13.9	13.0
Podravska	18.1	13.5	12.7	10.4	9.1	11.9	13.5	14.5	14.1	14.7	14.4
Pomurska	16.7	17.1	15.7	13.4	12.2	15.9	19.0	18.0	17.3	17.8	18.1

Source: Development Report 2014; Employment Service of Slovenia.

Figure 5.8: Rate of registered unemployment by regions (2 classes)
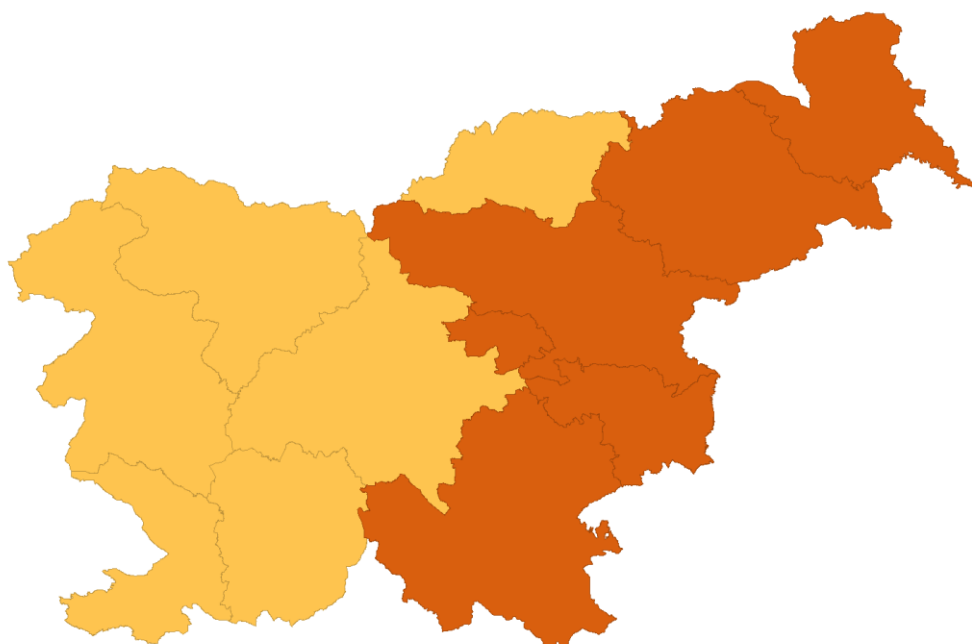
Source: Development Report 2014; Employment Service of Slovenia; our calculations.

The unemployment rate in individual region and consequently the index of daily migration is importantly affected also by the education and qualification structure of the working-age population in the region and in particular the structure of the economy in the region, especially in regions with a small number of major employers (Table 5.15). The Figure 5.9 shows that there is a very clear picture in regard to the registered unemployment rate between the eastern part of the country, where the rate of registered unemployment is high and the employment rate low, and the western part where the rate of registered unemployment is lower. This also indicates the lack of jobs in the eastern part of the country.

The age structure of persons in employment by statistical regions is also interesting. The table below shows the data for the 55+ age group (including the farmers). The table below indicates that the share of employed older than 55 years significantly increased in the recent years. As expected the share of this age group among the self-employed is higher than among the employed. The Coastal-Karst, Pomurska and Podravska region stand out. In the latter two regions the rate of the registered unemployment is above-average, and that is why the regional dimension, at least at the level of both cohesion regions, must be observed in the preparation of measures.

Table 5.16: Share of employed in the 55+ age group among all employed persons (including the farmers)
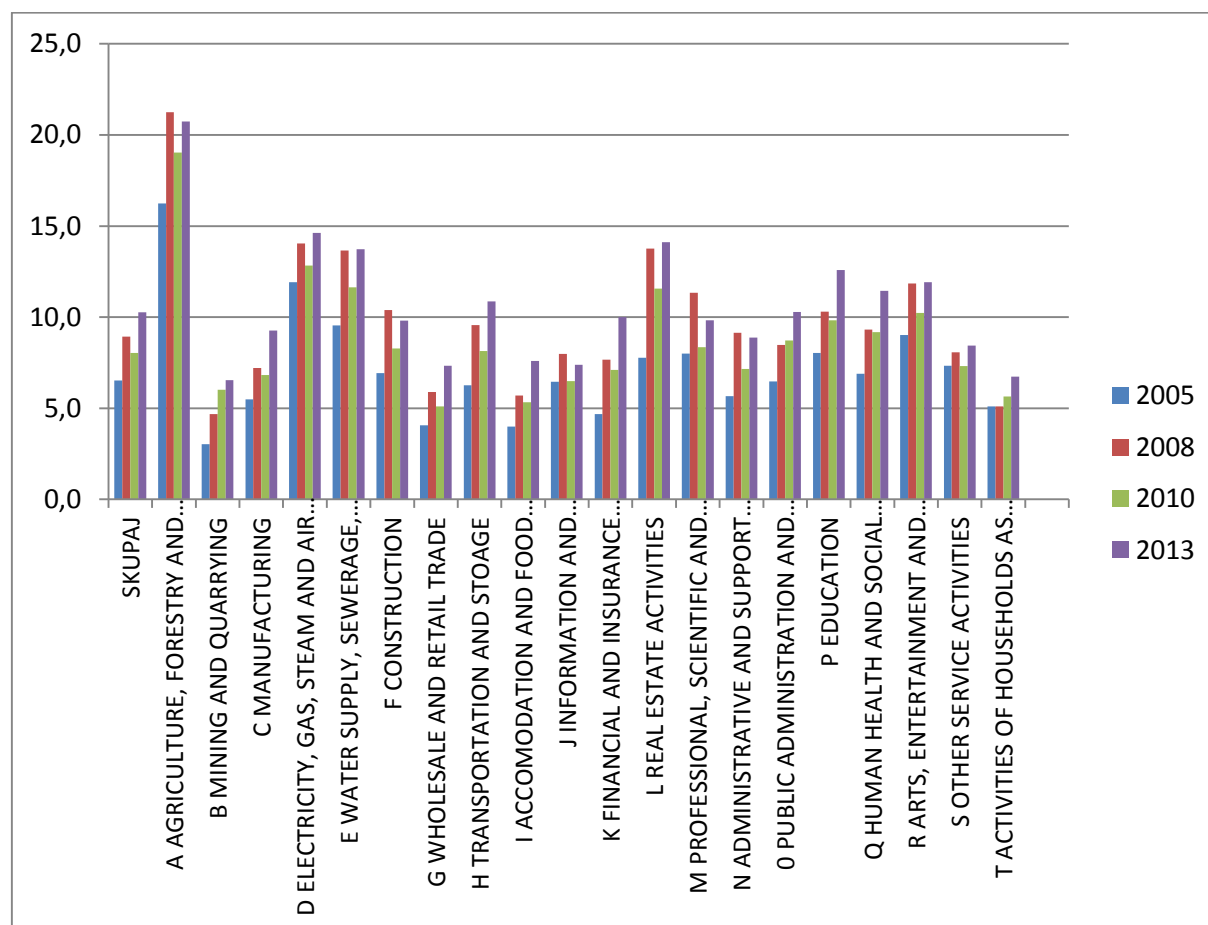
		2005	2008	2010	2013	2014
SLOVENIA	1 Employed - TOTAL	6.5	8.2	8.0	10.3	11.4
	11 Employees - TOTAL	5.8	7.4	7.3	9.5	10.6
	12 Self-employed persons - TOTAL	13.2	16.0	14.0	15.6	16.7
Pomurska	1 Employed - TOTAL	7.7	9.9	9.5	11.9	12.9
	11 Employees - TOTAL	5.3	6.9	6.8	9.6	10.6
	12 Self-employed persons - TOTAL	19.7	24.6	21.6	22.7	22.5
Podravska	1 Employed - TOTAL	7.0	8.9	8.7	11.3	12.5
	11 Employees - TOTAL	5.9	7.7	7.8	10.1	11.5
	12 Self-employed persons - TOTAL	15.0	18.0	15.6	18.4	19.6
Koroška	1 Employed - TOTAL	4.9	6.7	7.5	10.4	11.5
	11 Employees - TOTAL	4.2	5.9	6.7	9.5	10.5
	12 Self-employed persons - TOTAL	10.9	13.2	13.1	15.1	17.0
Savinjska	1 Employed - TOTAL	5.6	7.3	7.1	9.6	10.9
	11 Employees - TOTAL	4.8	6.1	6.1	8.7	10.0
	12 Self-employed persons - TOTAL	12.6	16.1	14.2	15.5	16.8
Zasavska	1 Employed - TOTAL	5.5	7.4	7.8	11.0	12.7
	11 Employees - TOTAL	5.2	6.8	7.2	10.6	12.4
	12 Self-employed persons - TOTAL	8.3	13.2	13.2	13.8	14.3
Spodnjeposavska	1 Employed - TOTAL	6.2	8.4	7.6	10.8	11.8
	11 Employees - TOTAL	4.7	6.3	5.9	9.1	10.1
	12 Self-employed persons - TOTAL	14.1	19.7	16.3	18.2	19.7
South-Eastern Slovenia	1 Employed - TOTAL	5.3	7.2	7.0	9.3	10.2
	11 Employees - TOTAL	4.4	6.0	6.0	8.1	9.2
	12 Self-employed persons - TOTAL	13.4	16.6	14.8	16.8	17.5
Central Slovenia	1 Employed - TOTAL	7.1	8.5	8.3	9.9	10.7

		2005	2008	2010	2013	2014
	11 Employees - TOTAL	6.7	8.1	8.0	9.5	10.4
	12 Self-employed persons - TOTAL	12.4	13.6	11.5	13.3	13.9
Gorenjska	1 Employed - TOTAL	5.8	7.5	6.8	9.3	10.4
	11 Employees - TOTAL	5.3	7.1	6.4	8.9	10.1
	12 Self-employed persons - TOTAL	10.6	11.3	10.0	11.6	12.7
Inner Carnolia-Karst	1 Employed - TOTAL	6.3	8.0	8.0	10.9	12.2
	11 Employees - TOTAL	5.8	7.1	7.1	9.7	10.7
	12 Self-employed persons - TOTAL	10.6	15.1	14.5	17.2	19.2
Goriška	1 Employed - TOTAL	6.2	8.3	8.1	10.6	12.1
	11 Employees - TOTAL	5.7	7.5	7.5	10.2	11.7
	12 Self-employed persons - TOTAL	10.2	14.1	12.5	12.7	14.6
Coastal-Karst	1 Employed - TOTAL	7.3	9.3	9.4	12.1	13.2
	11 Employees - TOTAL	6.7	8.7	8.8	11.4	12.3
	12 Self-employed persons - TOTAL	11.8	14.5	14.1	16.4	17.1

Source: Statistical Office of the Republic of Slovenia; our calculations.

The age structure of the employed by activities is also interesting (Standard Classification of Activities 2008). The figure below shows that the share of the older among all the employed increases in the individual sectors of manufacturing industry.
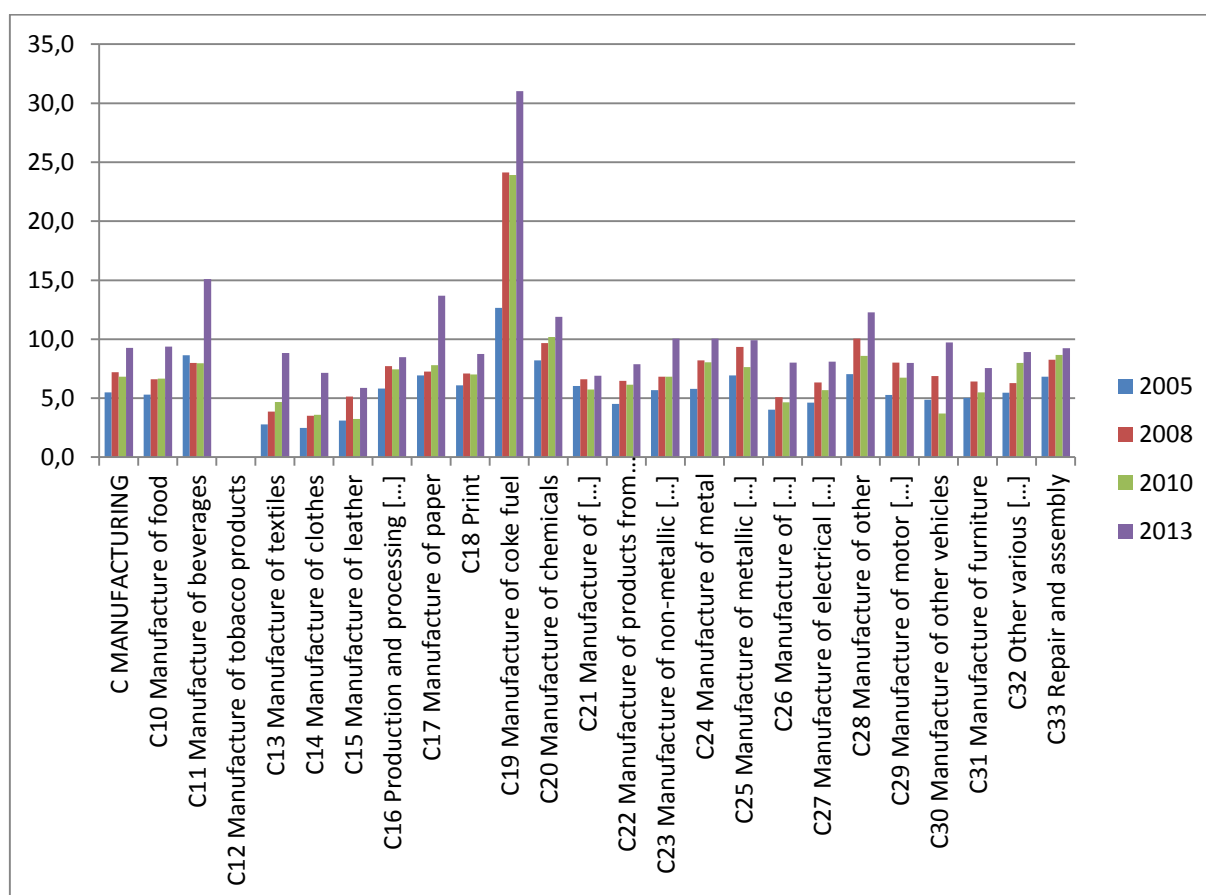
Figure 5.10: Share of the employed older than 55 by activities

If the share of employed older than 55 years is analysed, we see that there are large differences between the industries in terms of the share as well as the trend. Thus, the share is very high in the C11 subsector (manufacture of beverages) and also C17 (Paper production).

Figure 5.11: The share of employed older than 55 years in the manufacturing in the selected years

5.2.3   Final considerations

Slovenia falls under a group of countries that were the most affected by the economic and financial crisis in the 2008-2013 period. The employment rate in the EU-28 for persons aged 15 to 64 was 64.9 % in 2014 according to the Labour Force Survey in the EU. While it was still above the EU-28 average in Slovenia in 2011, it was 63.9% in 2014, i.e. one percentage point below the EU-28 average. In this period, the employment options in men in the EU-28 decreased in particular, which is largely related to the reduction of the scope of activities that usually employ men with low education (e.g. construction works). The similar trends are recorded also in Slovenia. Thus, the share of the unemployed men, unemployed young, persons entering the labour market for the first time and long-term unemployed increased since the duration of unemployment is extending with the age of the unemployed. The older and less educated are less competitive in the labour market. Compared

to other EU Member States, a very late entry in the labour market is a characteristic of Slovenia (long education, high share of the generation in the tertiary education, insufficient harmony of the education and economy sector, lack of jobs), and quick exit from the labour market (low average retirement age compared to other countries, average period of the receiving of pension is extending, the ratio between the insured persons and pensioners is extremely low and continues to decrease, the ratio between the age pension and salaries also drops).

The employment rate in older persons (between 55 and 64 years) rapidly increased (similar to women) despite the financial and economic crisis. This rate in EU-28 reached 51.8% in 2014, whereby it increased every year from 2002 on (the start date of time series for EU-28).

In 2014, the employment rate in the older people in the twelve EU Member States was higher than 50%, with the highest by far in Sweden (74.0%), while Slovenia recorded 35.4% which is the second lowest among all EU Member States[9] and calls for an adequate response.

The employment rate in the population of Slovenia aged between 55 and 64 years is different by:
- Sectors: high share of people aged 54+ in the activities 'Agriculture and hunting, forestry, fisheries', 'Power, gas and steam supply, water supply', 'Sewerage and waste management, remediation activities' and 'Real estate services'. Also, the share of older people in the manufacturing is also increasing, in particular in the C11 subsector (manufacture of beverages) and also C17 (Paper production).
- Forms of employment: higher share of the people older than 54 years among the self-employed than among employees.
- Regions: there are also vast differences between regions, where the Coastal-Karst , Pomurska and Podravska regions stand out with their high share of persons over 54 years among the employed.

The ageing of population while observing other social changes (e.g. climate change, disruptive technologies) calls for an increase of the employment rate in the older workers (aged between 55 and 64 years, or even in the 55-74 group) which demands the activities in the field of:
- extension of employment and
- delayed retirement.

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[9] In 2013, the level of labour force participation of the older was the lowest in Slovenia, while in 2014 it was lower only in Greece.

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LIST OF ABBREVIATIONS

SURS	Statistični urad Republike Slovenije	The *Statistical Office* of the Republic of *Slovenia (SORS)*
ZRSZ	6. Zavod RS za zaposlovanje	Employment Service of Slovenia (ESS)
MDDSZ	Ministrstvo za delo, družino socialne zadeve in enake možnosti	*The Ministry of Labour, the Family, Social Affairs and Equal Opportunities*
EUROPOP	Eurostatove projekcije prebivalstva	European Population Projections
UMAR	6.1.1 Urad RS za makroekonomske analize in razvoj	Institute of Macroeconomic Analysis and Development RS (IMAD)
SHARE	Raziskava o zdravju, procesu staranja in upokojevanju v Evropi	The Survey of Health, Ageing and Retirement in Europe