IMAD

economic issues 2019

Economic Issues 2019

Published by: IMAD, Ljubljana, Gregorčičeva 27
Responsible Person: Marijana Bednaš, MSc, Director
Editors-in-chief: Alenka Kajzer, PhD; Lejla Fajić

I. Dealing with labour shortages

Written by: Alenka Kajzer, PhD; Mitja Perko, MSc; Urška Sodja; Čelebič Tanja, MSc; Petra Petan, MSc; Andrej Kuštrin, MSc; Denis Rogan, MSc

II. Financing of social protection systems

Written by: Lejla Fajić; Barbara Bratuž Ferk, MSc; Eva Helena Zver, MSc; Petra Petan, MSc.; Lenart Milan Lah, MSc

III. Overview of developments in public finances

Written by: Lejla Fajić; Tanja Kosi Antolič, PhD; Andrej Kuštrin, MSc

Translated by: Sebastijan Razboršek Maček, Marija Kavčič
Language Editing: Amidas d. o. o.
Figures: Bibijana Cirman Naglič, Mojca Bizjak
DTP: Bibijana Cirman Naglič, Mojca, Bizjak, Ema Bertina Kopitar

Print: Eurograf d.o.o.
Circulation: 95 copies

ISSN 2536-359X (print)
ISSN 2464-0484 (pdf)

Ljubljana, July 2020

Since its first edition in 2007, Economic Issues has been dealing with topics that reflect IMAD's comprehensive approach to economic policy analysis or topics that require an economic policy response. This year's publication focuses on dealing with labour shortages, financing social protection systems and fiscal developments.

Contents

I. Dealing with labour shortages

Boxes

Figures

Tables

II. Financing of social protection systems

Boxes

Figures

Tables

III. Overview of developments in public finances

Boxes

Figures

Tables

I. Dealing with labour shortages

Summary

The problem of labour shortages, which is particularly pronounced in a period of rapid economic growth, is exacerbated by demographic change. Demographic change entailing a decline in the population of the most active age (20–64 years) reduces the potential labour supply and contributes to wage growth. More and more enterprises therefore have problems finding appropriately qualified workers, which can also become a factor limiting further economic growth. Ensuring a sufficient workforce is thus an ever-greater challenge for enterprises and economic policymakers.

The potential to increase the domestic labour supply exists but is not substantial given the decline in spare labour market capacity in recent years. The possibilities for expanding the labour supply in Slovenia lie in earlier entry into employment, later retirement, and the activation of unemployed and inactive people. Over the short term, labour shortages can be alleviated by activating the unemployed, but, with the unemployment rate below its natural rate, the possibilities are severely limited. Although the number of unemployed and in particular inactive persons, who represent domestic labour market slack, is still relatively high, the effective size of this potential additional labour force is in fact smaller because they are less strongly attached to the labour market. Owing to structural imbalances and differences in willingness to participate in the labour market, it cannot be expected that the economy could absorb all unemployed persons or that all inactive persons could be activated. The non-employment index, a broader measure of labour market slack, which takes into account not only the unemployed, but also inactive people and the differences in the likelihood of their transition into employment, shows somewhat more underutilised potential than the unemployment rate. However, its value has also fallen to historic lows and shows a relatively low potential workforce size. Unutilised potential exists particularly in the cohort of young people who will enter the labour market after finishing school and among people older than 55 years. As a result of relatively early retirement, Slovenia namely has a very low employment rate among older people, significantly lower than the EU as a whole.

Immigration can significantly contribute to the retention of a sufficient labour supply in the coming years. The shortage of workers can be alleviated by both increasing the inflows of foreign workers and encouraging the return of Slovenian citizens. Simulations of the impact of different net immigration levels on labour supply, however, indicate that very high immigration (over 10,000) would be required to fully offset the decline in the working-age population. The majority of foreigners come from former Yugoslav republics with relatively high unemployment rates, especially among people under 35 years of age, who more frequently decide to move abroad. Part of this inflow is also related to the economic cycle, according to our assessment. With regard to demographic trends, attracting foreign workers with appropriate skills will therefore be a major challenge for enterprises in the future, and will require a systemic approach through effective migration and integration policies.

To ensure better integration of immigrants into society, it is crucial to create the conditions necessary for them to enjoy a quality life. A precondition for integration is command of the language. However, the Slovenian language course for foreigners is relatively short, which is also reflected in immigrants' relatively poor knowledge of Slovenian. This affects their employability, income level, and access to health care and makes them more exposed to the risk of

poverty. With a very large share of immigrants living in overcrowded dwellings, one challenge is to adopt regulation facilitating their access to housing. Moreover, the employment rate of immigrant women is relatively low (amid the otherwise high employment rate of Slovenian women). They can also constitute a part of the labour force reserve that is worth activating, especially in light of the rising demand for social services.

In the short term, automation and robotisation can alleviate the problem of labour shortages, but in the long term, they may even increase it. The share of enterprises using robots in Slovenia is similar to the EU average, but Slovenia lags well behind the leading countries regarding this indicator. The OECD estimates that 14% of the existing jobs in OECD countries are at risk of automation due to technological progress, and a further 32% are likely to be significantly altered due to the introduction of new technologies. With 25% of all existing jobs threatened by automation, Slovenia ranks among the countries with a high risk of job automation. In the long term, however, automation and robotisation may increase workforce demand. Besides destroying jobs, each new technology changes the nature of existing jobs, making them more complex, and creates new ones. From the perspective of demographic change and the impact of automation and robotisation on jobs and society, ensuring that individuals can acquire appropriate knowledge and develop new skills throughout their working lives represents a particular challenge. This, however, requires a comprehensive approach to ensuring opportunities for lifelong learning.

Dealing with labour shortages poses many challenges. It is necessary to create conditions for earlier entry into and later exit from the labour market, which requires i) a better match between educational programmes and the economy, ii) the creation of a lifelong learning system that enhances employability and enables people to change careers throughout their working lives, and iii) the promotion of healthy lifestyles and investment in health and safety at work. In order to make more efficient use of the knowledge and skills of all workers, it is necessary to strengthen intergenerational cooperation within companies and to promote age management practices. The need for lifelong learning also arises from the introduction of automation and robotisation, which are changing the way we work and require new skills. It is also necessary to formulate effective migration and integration policies to ensure the conditions required for immigrants to enjoy a quality life and for Slovenian citizens to return from abroad, to promote knowledge sharing, and to attract foreigners with appropriate skills.

Introduction

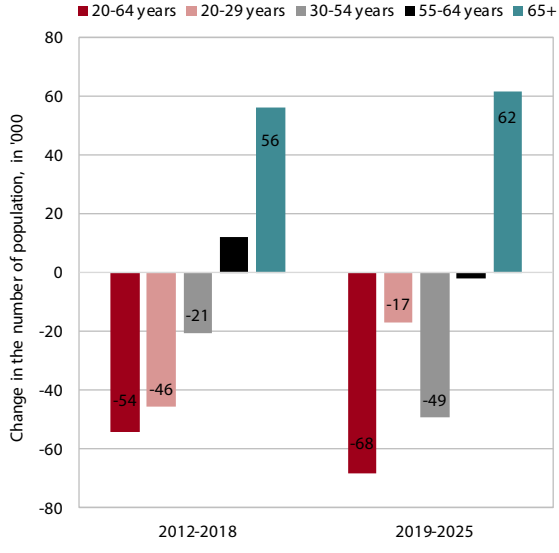
In a period of rising demand for labour, the problem of how to ensure sufficient labour supply in Slovenia is exacerbated by demographic change. Demographic change, reflected in a rapid shrinking of the most active part of the population (aged 20–64 years), is increasingly affecting the labour market. In 2012–2017, the number of people in this age group declined by around 10,000 per year, which is reflected in lower labour supply and increasing difficulties for firms in finding workers with appropriate skills. Labour shortages can be a limiting factor to business activities, which can in turn affect economic growth and a country's ability to secure and increase the well-being of the population. With these demographic trends expected to continue, labour shortages represent a growing challenge that needs to be addressed as soon as possible. This requires both activation of domestic spare capacity on the labour market and an active migration policy with appropriate measures for integrating immigrants into society. Over the short term, the lack of certain occupational profiles can be partly alleviated by automation and robotisation, but this in turn requires new skills.

This paper analyses different possibilities for dealing with labour shortages in Slovenia. The analysis provides an overview of available human potential in Slovenia and selected Balkan countries. The first chapter presents the impact of demographic trends on the labour market (the activity rate and wages) and assesses the decline in potential supply of labour, which can impair the country's ability to ensure the well-being of its population and requires activation of untapped domestic potential and appropriate migration policies. In the second chapter, we analyse spare capacities on the labour market and the size and characteristics of the inactive and unemployed population. We pay special attention to the low employment rate among older people, which is a consequence not only of retirement conditions, by also of the low general level of their skills. The latter is also partly related to their below-average participation in lifelong learning. In the third chapter, we assess the level of net immigration necessary to ensure sufficient additional supply of labour and present migration flows in Slovenia in terms of age and educational attainment of migrants over the 2008–2018 period. As the majority of foreigners working in Slovenia come from former Yugoslav republics and Albania, Romania and Bulgaria, and as these trends are expected to continue over the medium term, we also describe the demographic situation and labour market conditions in those countries. In this context, we also point to the importance of policies for integrating immigrants into society. The fourth chapter examines the impact of automation on jobs in Slovenia, as automation and robotisation could reduce growth in labour demand and alleviate certain skills shortages. The concluding remarks summarise the results and highlight the main challenges in these areas.

1 The impact of demographic trends on the labour market

Since 2012 Slovenia has been facing intense demographic change. While its population has been hovering around the two million for quite some time, an intense shift towards an older population structure has been observed since 2012. The number of people in the most active age group (20–64 years) is shrinking by around 10,000 per year, while the number of older people (over 65 years) is expanding at a similar rate.[1] The transition of so many people from younger age groups, which generally participate in the labour market, to older age groups, often inactive or retired, poses a major challenge to the economy. While before 2008, in times of strong economic growth, demographic trends still favourably affected employment by increasing the most active part of the population (including through immigration of foreign workers), it has become significantly more difficult to ensure sufficient labour supply in recent years. ESSPOP2015 projections[2] show that the ageing of the population is set to continue, meaning that the negative impact on various labour market aspects, such as employment, labour market participation and pressure on wages, are set to intensify.

Figure 1: Change in the size of population by age group, 2012–2018 and 2019–2025



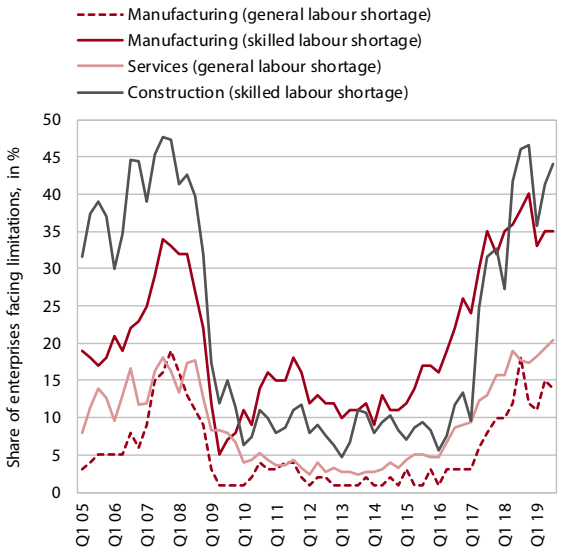
Source: SURS, from 2020 Eurostat ESSPOP2015; calculations by IMAD.

[1] Between 2012 and 2018, the number of people in the 20–64 age group declined by 54,000 while the number of those older than 65 years increased by 56,000.

[2] According to the baseline scenario of projections prepared by Eurostat in collaboration with national statistical offices.

The decline in the working age population has been reducing labour supply for the past few years, which is reflected in labour shortages. During the crisis, when demand was modest, this was not yet a limiting factor to employment growth, but in recent years increasing the number of employed persons has proven to be a serious challenge.[3] The share of enterprises reporting labour shortages has increased markedly, to around half, despite higher labour market participation and the influx of foreign workers. A large share of enterprises also report that labour shortages are limiting their activities (Figure 2). Enterprises affected by labour shortages are also faced with long procedures of searching for suitable candidates, unfilled job openings, the need to hire staff from abroad, an increased workload for existing employees and turning down orders (ESS, 2018). The moderation of economic activity may mitigate the problem in the short term, but over the long run a sufficient labour force can, besides by activating certain population groups, be ensured only through increased immigration.

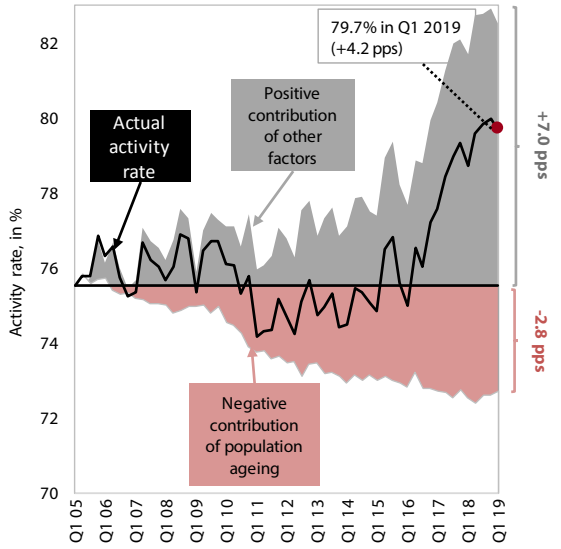
Figure 2: The share of enterprises reporting labour shortages



Source: SURS.

Demographic trends had a negative impact on labour market participation in the period under observation. Figure 3 shows a gradual increase in the share of persons in employment or actively seeking work (i.e. the activity rate – black curve) since 2015 (by 4.2 pps). The increase was positively affected by factors such as later retirement as a result of the latest pension reform, an improvement in educational structure[4] and a rising participation of women. The negative contribution came from population ageing, through changes in the age structure, i.e. a growth of the share of older people, who are typically less attached to the labour market and have a below-average activity rate, which thus reduces the overall activity rate. The estimates show that the overall activity rate would have increased significantly more from 2005 to the beginning of 2019 (by 2.8 pps) had it not been negatively affected by changes in the age structure.[5]

Figure 3: Estimate of the effect of changing age structure on the activity rate in the 20–64 age group



Source: Eurostat; calculations by IMAD.

Demographic change, in addition to other factors, has a significant impact on wage growth. The decomposition of real gross wage growth[6] into changes

[3] In 2017 the number of employed persons exceeded the pre-crisis level and in 2018 and 2019 it increased further.

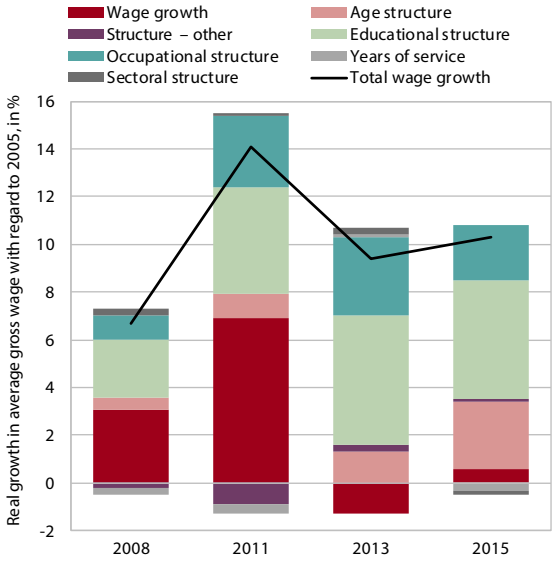
[4] The positive effect of the educational structure is confirmed by econometric assessments of a linear probability model carried out on microdata from the labour force survey (i.e. the survey of active and inactive population), where the binary dependent variable denotes whether an individual actively participated in the labour market in a given quarter while the explanatory (binary) variables are age, gender and quarter. The model shows that changes in the educational structure have to a great extent cancelled out the negative effect of ageing on the activity rate since 2005. For more information on the methodology, see Shimer (2014), https://sites.google.com/site/robertshimer/cbo-employment.pdf.

[5] In assessing how changes in the age structure affect the participation rate, we followed the approach of Abraham in Kearney (2018; *Explaining the Decline in the U.S. Employment-To-Population Ratio: A Review of the Evidence, NBER Working Paper Series 24333*). The change in the overall activity rate in a given period (in our case between Q1 2005 and Q1 2019) is decomposed into i) a contribution from changing within-age-group activity rates and ii) a contribution from changing within-age-group population shares. The latter is the contribution of population ageing. This has a negative effect on the overall activity rate if the population share increases for a group with a low activity rate (for example older people). The assessments of the contributions are otherwise dependent on the start and end of the time period over which the change is measured.

[6] The impact of structural changes is assessed using the Blinder–Oaxaca decomposition. The real growth of the average gross wage between

in the demographic and occupational structure of the working age population (Figure 4) shows that changes in the age structure made a positive contribution to overall wage growth between Q1 2005 and Q1 2019. This was a consequence of a significant increase in the share of older people in the total employed population (by 5.4 pps to 11.8% in the 55–64 age group[7]). Older workers tend to have higher wages than their younger counterparts (due, among other things, to seniority bonuses), which is increasing the pressure on the general wage level. The average wage was also significantly affected by changes in the educational structure (higher educational attainment of younger generations and retirement of older generations with generally lower qualifications), as the share of people with higher education increased by 11.3 pps to 32.5% over this period. Smaller, yet still significant, was the contribution from changes in the occupational structure. Indeed, the longer period is characterised by a gradual transition from labour-intensive industrial activities to service activities with more demanding and better paid jobs. Similar effects of the changing working-age population structure in Slovenia are also shown by the OECD analysis (2014).

Figure 4: Estimate of the effect of changes in the structure of employed people on total real growth in average gross wage relative to 2005



Source: IMAD estimate based on EU-SILC microdata.

two points in time is decomposed into an explained (a part that can be explained by a change in the characteristics of workers) and an unexplained part. The explained part reflects demographic and educational explanatory variables, while the unexplained part can be interpreted as wage growth. The decomposition was carried out on EU-SILC microdata. As explanatory variables we used dummy variables for age (five-year age intervals in the 15–64 year group), education (low ISCED 0–2, upper secondary ISCED 3, 4, higher ISCED 5–8), occupation (elementary, technicians, professionals), gender, type of employment (temporary, for an indefinite period of time), years of service (five-year intervals), and sector of employment.

[7] The share of young people in the 15–29 age group declined by the same extent in this period.

2 Domestic potential labour supply

Additional potential labour supply in Slovenia can arise from earlier entry into the labour market, later retirement, and activation of unemployed and inactive persons. Slovenia is characterised by relatively late entry into and early exit from the labour market. Istenič and Sambt (2016) find that the life period in which people on average produce more than they consume coincides with employment. In 2012 this period amounted to 32 years, a full seven years less than in 1983, although life expectancy was more than eight years longer. In 2012 young people entered the labour market significantly later in life than in 1983, while the age of people leaving it remained roughly the same. This is reflected in relatively low employment rates among young and older people, the population groups with the most untapped labour potential.

In the following sections we analyse labour market slack (i.e. the potential additional labour force) on the domestic market. The potential labour force that could be mobilised to alleviate labour shortages includes the unemployed and inactive population.[8]

2.1 Unemployed and inactive population

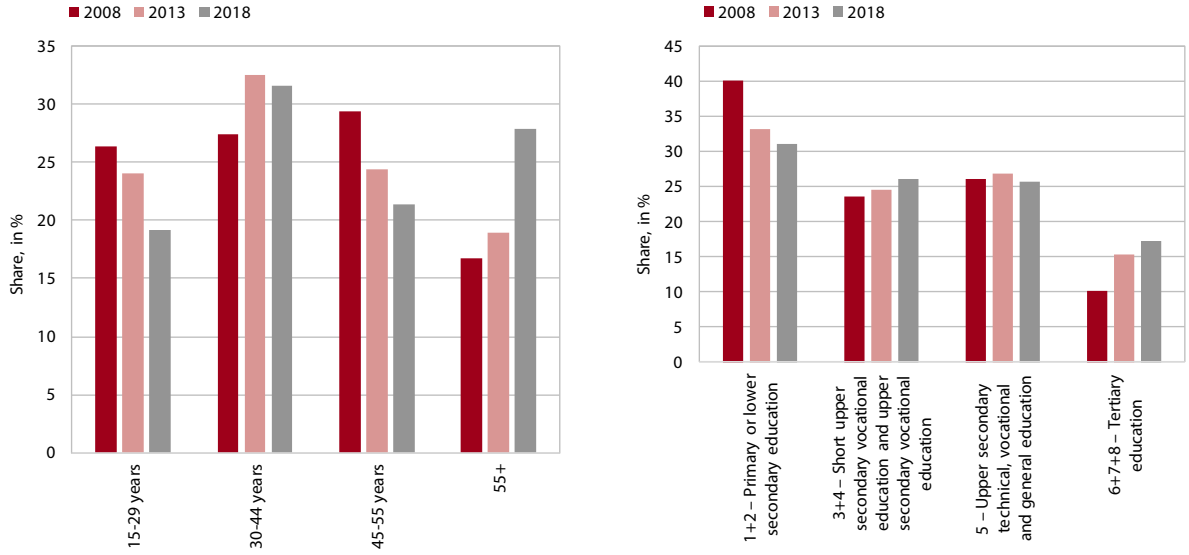
In the short term, the problem of labour shortages could be alleviated by activating the unemployed, although the possibilities are very limited. Against a background of favourable economic conditions, the number of people in employment has risen sharply in recent years, while the number of the unemployed has approached historical lows. The unemployment rate, the most commonly used measure of a country's labour market slack, is estimated to have fallen below the long-term level (i.e. below the natural unemployment rate), which is one of the signs of a limited supply of labour.[9] Despite the low unemployment level, almost half of those unemployed are still long-term unemployed, that is unemployed for more than one year.[10] Long-term unemployment reduces individuals' human capital and lowers their likelihood of finding a job, while increasing their risk of falling into inactivity. A faster activation of these population groups and their transition into

[8] According to employment status, a country's population is divided into employed, unemployed and economically inactive persons (ILO definition). The unemployed are those who are actively seeking work, while the inactive are those who are not seeking work. The latter group consists of persons who withdrew from the labour market for whatever reason, persons in education, retired persons, etc.

[9] The equilibrium (or structural) unemployment rate is usually referred to as the natural rate of unemployment (NAWRU). The widening of the gap between the actual unemployment rate and the NAWRU is usually associated with the cyclical phase of the economy when inflationary or wage pressures start rising owing to a high level of capacity utilisation on the labour market.

[10] Among the long-term unemployed, older and low-skilled persons make up the largest shares.

Figure 5: The structure of registered unemployed persons by age and level of education



Source: ESS.

employment could be boosted by a more comprehensive and effective active employment policy (AEP),[11] given that so far Slovenia has been allocating relatively low amounts of funding to active labour market policy measures (0.24% of GDP in 2016 compared with the OECD average of 0.52%). It also has low shares of long-term unemployed and older persons participating in AEP programmes.

The potential additional labour force could be obtained by activating those who currently do not participate in the labour market, most of them being young and older people. Slovenia has a relatively high activity rate[12] in the middle age group (30–54 years), indeed one of the highest in the EU, which indicates relatively low potential for increasing labour market participation in this age group. The activity rates among younger and older people are significantly lower than in the middle age group, which indicates that the shares of inactive persons in these age groups are higher, also in comparison with the EU average. The low activity rate among young people is mainly due to their high – significantly higher than elsewhere in the EU – participation in upper secondary and tertiary education. In addition to young people in school, who represent future workforce, young people neither in employment nor in education or training (NEETs) also constitute a potential source of additional labour according to our assessment. Another underutilised source is inactive older people (over 55 years), their participation and employment rates being among the lowest in the EU.

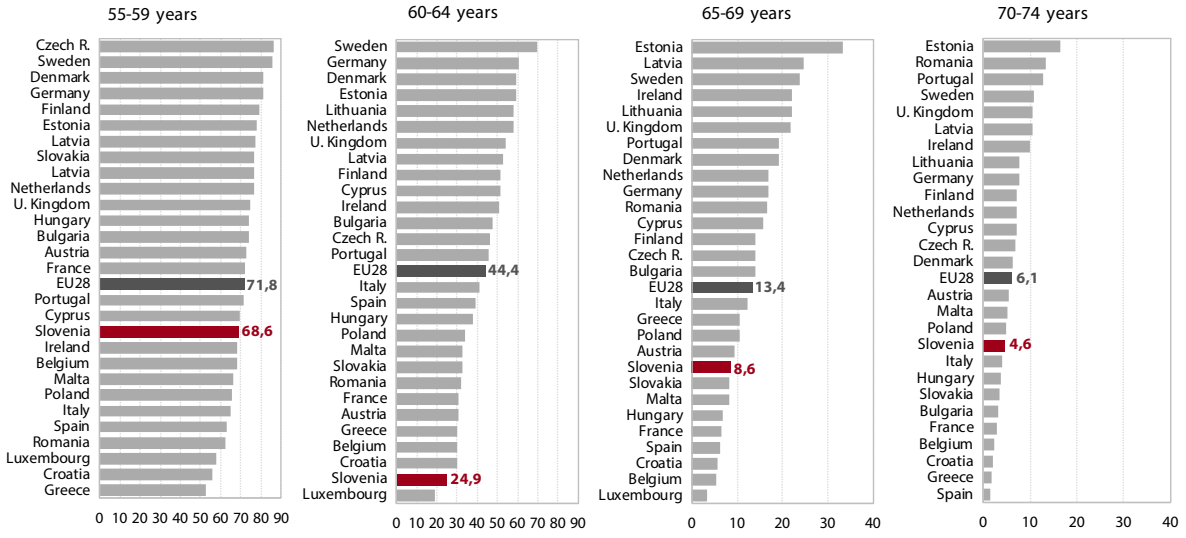
[11] Active employment policy could reduce structural unemployment, which predominated in the past, by activating the long-term unemployed.

[12] The activity rate is the number of active persons divided by the number of persons in a given age group.

A potential source of additional labour is young people neither in employment nor in education (NEETs). Over the past few years their share has dropped in Slovenia due to economic recovery and demographic change (smaller generations of young people and the shrinking of potential labour supply), but also as a result of government measures promoting youth employment. In 2018 the share of NEETs in the 25–34 age group (11.6%) nevertheless still exceeded that before the crisis (8.3% in 2008), which indicates that there is still some unexploited potential for increasing participation, particularly among women, who have more difficulties in transitioning from education into employment than men. This is related to higher demand for graduates from vocational upper secondary and higher education and those from science and technology fields, where the enrolment rate is significantly higher for men. Another source of underutilised potential is young people (25–34 years) with foreign citizenship, where the NEET rate is significantly higher than among their Slovenian peers.

Older people could contribute to greater labour supply by staying active longer or by re-entering the labour market. Although the employment rate in the 55–64 age group increased significantly after the implementation of the new Pension Act (ZPIZ-2) in 2013, it is still one of the lowest in the EU. The low employment rate can be attributed to early retirement in the past and the still relatively low actual retirement age. In women the average retirement age of newly retired old-age pensioners reached 60 only in 2015 (in men already in 2004). This is reflected in a lower employment rate for women than men in the 55–64 age group (although the gap with the EU average is smaller for women than for men). Given the relatively low actual retirement

Figure 6: The employment rate of older people in EU Member States, in %, 2018



Source: Eurostat.

age, Slovenia has, since 2013, been reducing its gap with the EU only in the 55–59 age group. In the 60–64 age group, the gap has been widening. In 2013–2018 the employment rate for people aged 60–64 rose from 16.8% to 24.9% in Slovenia (in the EU overall from 34.4% to 44.4%).

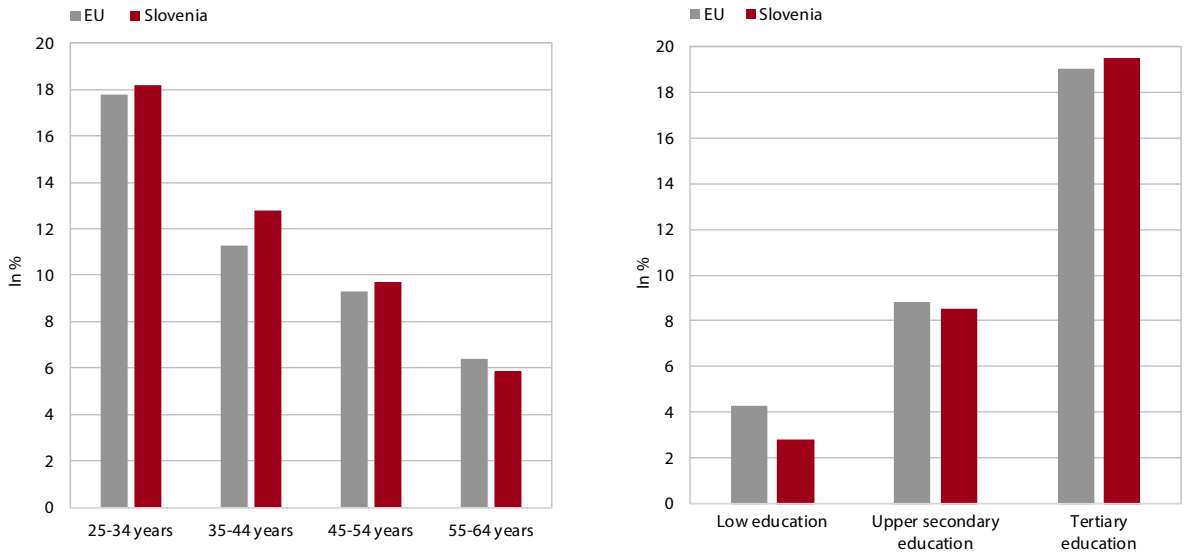
The employment of people over 65 years old, who could be another source of additional labour, is also low. The employment rate of this age group in 2018 was 8.6% (EU: 13.4%). Since 2007, when it exceeded the EU average and reached a ten-year high (12.7%), it has been falling in Slovenia while rising on average in the EU. The decline has been a consequence of demographic trends and a fall in the number of employed older people, particularly unpaid family workers in agriculture. It has also been due to the measures governing the retirement of public servants brought by the Public Finance Balance Act in the middle of 2012. The employment rate in the 70–74 age group totalled 4.6% in Slovenia in 2018 (EU average: 6.1%).

The low employment rate of older people is also related to a range of other factors that influence their decision to retire. The employment rate of older people is, in addition to retirement conditions, also affected by individuals' decision to prolong their working life after becoming eligible for an old-age pension. Kavaš et al. (2016) found that in Slovenia 70% of employed people retire immediately upon fulfilling the criteria for an old-age pension,[13] while almost 15% of them opt for the options of early retirement. They cite health-related reasons among the important for retirement (11.5%). People with tertiary education relatively less frequently leave work immediately upon meeting the criteria, although still more frequently than in other countries. Geppert et al. (2019) found that the increase in the activity rate in OECD countries between 2002 and 2017 was to a great extent attributable to rising life expectancy and educational attainment. Studies show that health status, measures for health and well-being at work, working conditions, and personal finances also play an important role in retirement decisions. With this in mind, it would be sensible to focus on measures promoting healthy lifestyles, preventing illness, and improving health and safety at work, which can contribute to longer activity (for more, see Chapter II).

The low employment rate of older people is also explained by the low level of their skills. Older people and people with low skills (whose share is largest precisely among older people) are less frequently included in lifelong learning programmes than other population groups, which is reflected in their low skill level and lower employability. According to the PIAAC survey, the Slovenian population has lower reading and mathematical skills than the OECD average. The low skills of older people are particularly problematic, as this reduces the possibilities for maintaining older people in employment or bringing them back to work. A large share of older people with the lowest level (Level 1) of problem-solving skills in technology-rich environments also stands out in times of rapid technological advancement (automation and robotisation) (Figure 8). Greater inclusion of adults (particularly older adults) in lifelong learning would enable greater labour market participation of this population group and ensure additional supply of labour.

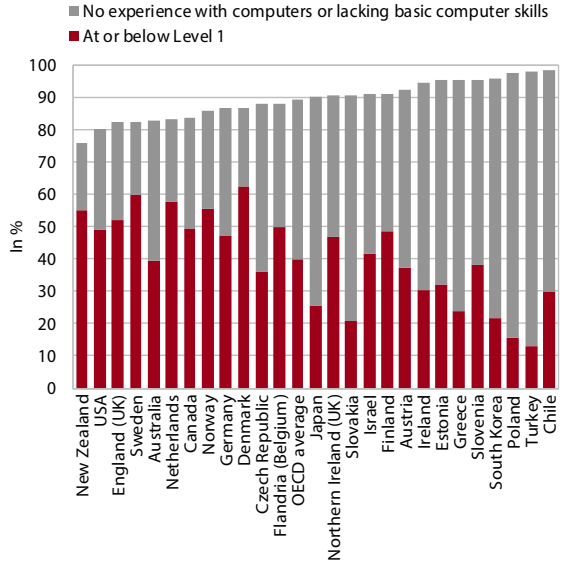
[13] Compared to only 38% in the Netherlands and 46% in Germany (Kavaš et al., 2016).

Figure 7: Participation in lifelong learning by age group (left) and education (right), 2018



Source: Eurostat.

Figure 8: The share of older adults (55–64 years) with proficiency at or below Level 1 in problem solving in technology-rich environments, in %



Source: OECD, PIAAC, 2012 and 2015.
Note: * Solving problems in technology-rich environments includes basic computer literacy skills (the ability to use computers and related applications) and problem solving skills (cognitive skills).

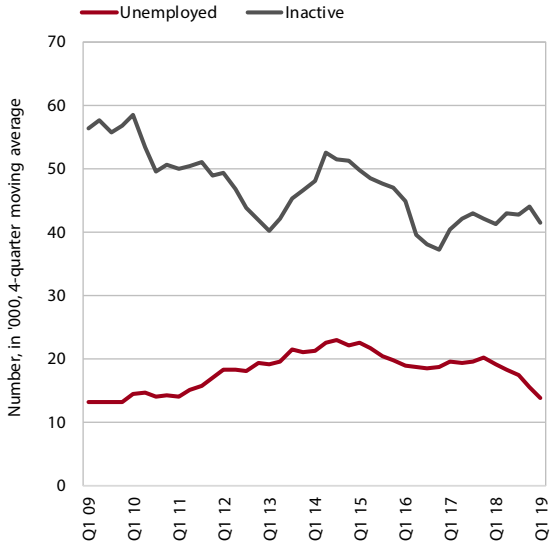
2.1.1 Assessing domestic labour market slack

Although the number of unemployed and, in particular, inactive persons, who represent domestic labour market slack, is relatively high, the effective extent of slack is significantly smaller. Owing to structural imbalances and different willingness of unemployed individuals to participate in the labour market, it is not expected that the economy could absorb all unemployment or that the entire inactive population could be activated. Measuring the extent of potential labour force that is actually employable in a given moment therefore remains a challenge. We tried to answer this question using an additional measure of labour slack, the non-employment index. The most common measure of labour slack, the unemployment rate, has several weaknesses because of its narrow definition: it fails to take into account (i) working-age people who are inactive but could be activated and (ii) significant differences in employment probabilities between different categories of people.[14] These deficiencies are corrected by a broader measure of labour market slack, the non-employment index.[15] Activation of some of the labour market slack indicated by the non-employment index could alleviate labour shortages in the short term.

[14] According to the definition of the International Labour Organisation (ILO), the unemployed comprise all persons who were without work during the week prior to the survey but were actively seeking work and were available for work within two weeks. Because of this narrow definition, the unemployment rate does not take into account all groups of working-age people and each group's probability of transitioning into employment. It also fails to take into account persons who are already employed but would like to work more or fewer hours.

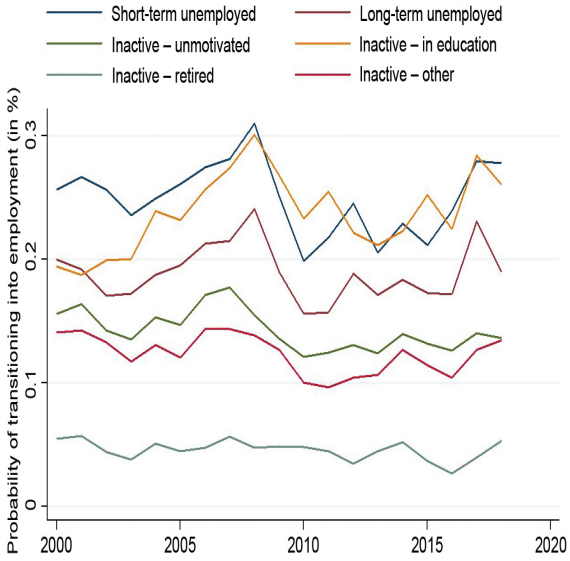
[15] See Hornstein et al., 2014.

Figure 9: The number of unemployed and inactive persons who transitioned to employment in a given quarter, in '000



Source: SURS.

Figure 10: Employment probability by individual groups of unemployed and inactive persons in 2000–2018, in %



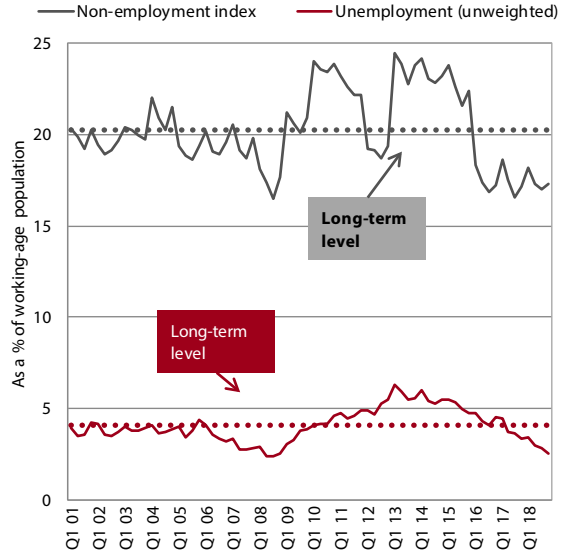
Source: SURS; calculations by IMAD.

There are significant differences in employability between groups of unemployed persons and inactive persons who do not actively participate in the labour market. The less willing they are to search for a job or the longer they are unemployed and out of touch with the labour market, the lower their probability of transitioning from unemployment or inactivity into employment. Although inactive persons are less likely to find a job then the unemployed, it is reasonable to regard them as a potential labour force, as inactive persons accounted for as much as two thirds of all transitions into employment in 2008–2018 (Figure 9). In assessing potential additional labour force, we took into account – in addition to the unemployed – the following groups of inactive persons: i) inactive persons available for work but not seeking it because they lost motivation, ii) persons in education who will enter the labour market in the near future, iii) retired persons, and iv) other inactive persons, i.e. those seeking work but not immediately available for various reasons (sick leave, care for family members, etc.), young people, NEETs, etc. Among the non-employed, those who have only recently become unemployed (the short-term unemployed) have the highest probability of transitioning to employment, while the long-term unemployed and, in particular, inactive (especially retired) people are less likely to find work (see Figure 10). The exception is persons in education, who are entering the labour market for the first time and therefore have a higher probability of employment than other population groups. The likelihood of finding a job also varies over time, but the relative distribution of groups by employment probability remains relatively unchanged.[16]

[16] During the crisis, all population groups had lower chances of finding a job than before or after the crisis.

The non-employment index indicates somewhat more underutilised potential than the unemployment rate, but it is also recording historical lows. In assessing labour slack, the non-employment index, in addition to the unemployed, also takes into account inactive people and their likelihood of transitioning into employment (see also Box 1). In calculating the non-employment index, groups with lower employment probabilities are assigned appropriately lower weights. The non-

Figure 11: The non-employment index and unemployment, as a % of the working-age population



Source: SURS; calculations by IMAD.

Box 1: Methodology for assessing the non-employment index

The non-employment index was developed as it was observed that the unemployment rate has provided an incomplete picture of the extent of labour market slack in recent years. This has been the case particularly given the absence of major wage pressures characteristic of the current period of declining labour supply (or low unemployment rate). In other words, the absence of wage pressures could be explained by a greater size of potential labour force than indicated by the unemployment rate.

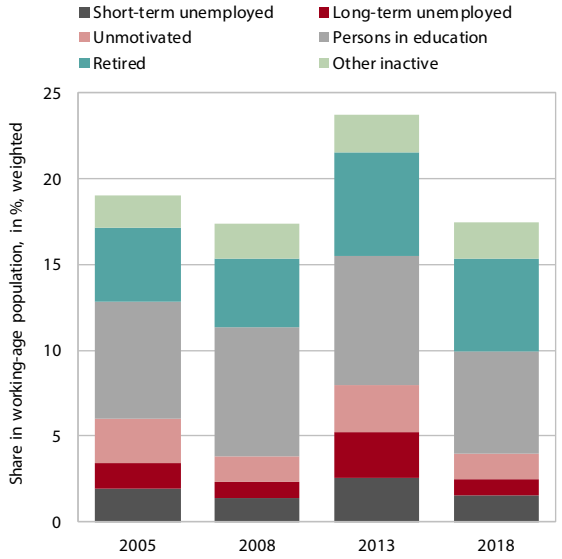
The non-employment index for a given quarter is calculated in the following way: $IN = \sum_{j=1}^{6} \theta_j \frac{Pop_j}{Pop}$

where the share of a given population group (j) in the total population is multiplied by its weight (θ). The weight for the population group (j) is its probability of transitioning into employment compared to the group with the greatest transition probability (the short-term unemployed). We took into account two groups of unemployed persons and four groups of persons who are not seeking work and belong to the inactive population: short-term unemployed, long-term unemployed (unemployed for more than 12 months), inactive persons who want to work and are available for work but are not seeking work (discouraged job-seekers), persons in education, retired persons and other inactive persons. The non-employment index is expressed as a percentage of the working-age population. The transition probability is assessed by a logistic regression model on the basis of microdata from the Survey on Active and Inactive Population (previously the Labour Force Survey) for the 2000–2018 period. As a dependent variable we used a binary variable denoting whether an individual moved from unemployment or inactivity to employment in a given quarter with regard to the previous quarter. Explanatory variables include, inter alia, dummy variables determining the group the unemployed or inactive person belonged to in the previous quarter (with the short-term unemployed as the reference) and the person's age and education. The sample includes persons in the 20–64 age group. The size of the sample for the whole period was 205,000 observations. For more on the methodology see Hornstein et al. (2014).

employment index indicates more spare capacity than the unemployment rate, but it is also decreasing rapidly. Its value has been historically low in recent years. If in 2018 the share of all non-employed persons in the total population amounted to 42%, after weighting this share drops to 17%.

Unutilised potential exists particularly in the cohort of young people in school and, despite the low weight, among older people. This is also suggested by the low activity rates for young and older people. Young people who are about to enter the labour force in the near future make up the largest share of spare capacity available for employment in the short term. Their transition into employment could be accelerated by measures for shortening the duration of study, linking enterprises with educational institutions and introducing apprenticeships. Demographic projections otherwise indicate that the number of young people will decline slightly in the coming years, while the number of older people will be rapidly rising. As life expectancy improves and the retirement age is raised only slowly, older people will represent an ever larger share of spare capacity in the future. It is therefore all the more important to strengthen policies for encouraging people to delay retirement or re-enter the labour market as set out in the Active Ageing Strategy.[17]

Figure 12: The groups of unemployed and inactive persons as a share of the working-age population, weighted



Source: SURS; calculations by IMAD.

[17] The Active Ageing Strategy was adopted by the government of the Republic of Slovenia in July 2017. It is available at http://www.umar.gov.si/fileadmin/user_upload/publikacije/kratke_analize/Strategija_dolgozive_druzbe/Strategija_dolgozive_druzbe.pdf.

3 Migration as a source of potential additional labour force

Labour shortages can be mitigated by a greater inflow of foreign workers. While it is important to work towards activating untapped domestic potential, a sufficient size of the working-age population could also be sustained by positive net migration, i.e. by encouraging Slovenian citizens to return from abroad and foreigners to move to Slovenia. In the following sections we present migration flows in Slovenia in the last ten-year period and simulations of the impact of different net immigration levels on labour supply. As most foreigners who have moved to Slovenia in recent years came from former Yugoslav republics, we also analyse demographic and labour market conditions in several Balkan states. Given their geographical proximity and historical ties with Slovenia, these countries also represent a source of potential workers for the Slovenian economy in the future. In this context, we also point to the importance of policies for integrating immigrants into society, which is vital for positive effects of migration.

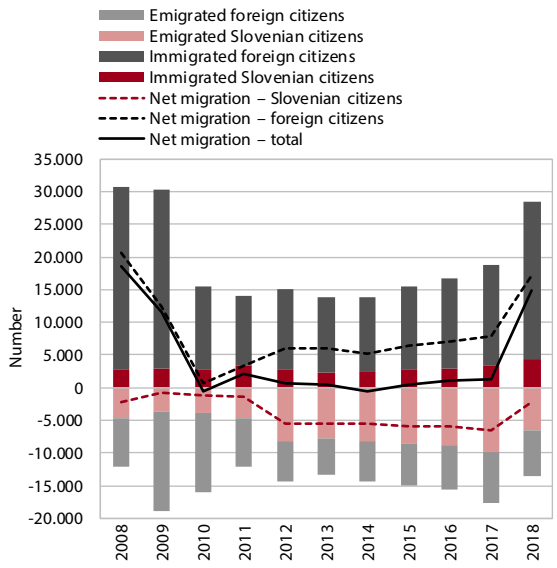
3.1 Migration trends in the 2008–2018 period

Total net immigration in Slovenia, which had been relatively low through 2010–2017, increased significantly in 2018. After high 2008 and 2009 levels, net immigration declined to 600 people per year on average in 2010–2017. The decline was, among other things, due to changes in the structure of economic growth and to the crisis, which reduced demand for labour and, with a time lag, more than halved immigration of foreign nationals. Since 2012 it has also been attributable to increased emigration of Slovenian citizens.[18] Net emigration of Slovenian citizens, seen since as early as 2000, has increased significantly since 2012, while net immigration of foreigners has remained roughly unchanged. In 2018 net emigration of Slovenians declined, while net immigration of foreigners increased strongly, total net migration being the highest since 2008 (14,928 persons).

In Slovenia, immigration of foreigners is strongly related to the economic cycle and the structure of economic growth. Since independence, the number of immigrants increased strongly for the first time in 2005–2008, when Slovenia recorded robust economic growth boosted by strong growth in construction. Immigration has also been rising rapidly since 2014, with Slovenia facing intense demographic change amid relatively high economic growth. The main reason for immigration is

[18] In the 2012–2017 period, 8,500 citizens per year left Slovenia, while around 2,800 per year returned.

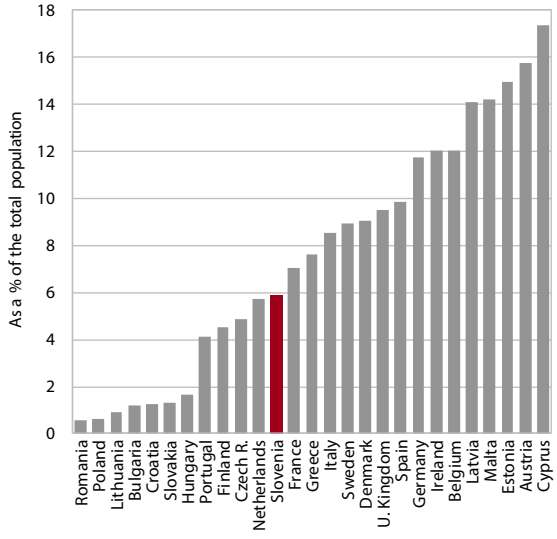
Figure 13: Net migration changes, 2008–2018



Source: SURS; calculations by IMAD.

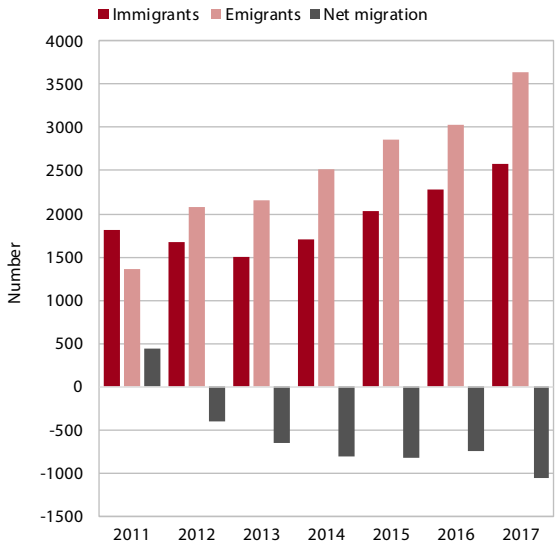
employment, though in 2011–2015 an almost equally important reason was family reunification, which can be attributed to there being fewer opportunities for new employment because of the crisis, while workers who stayed in Slovenia were gradually joined by their families. The share of foreigners moving to Slovenia for work started to rise again in 2016 and exceeds 50% of all immigrated foreigners. Despite the increase in the total number of foreigners, Slovenia does not deviate significantly from other EU countries as regards their

Figure 14: The share of foreign nationals in the total population, 2018



Source: Eurostat; calculations by IMAD.

Figure 15: The number of immigrants and emigrants with tertiary education



Source: SURS.

share in the total population (Figure 14).[19] Neither did it diverge significantly in terms of the share of emigrated citizens in the total population (at 0.5%) even in 2017, the year when their number was the largest on record. Similar also holds for the share of immigrated foreign citizens relative to the total population in 2017 (0.8%).

In recent years more educated people emigrated from Slovenia than immigrated to it. Among both immigrants and emigrants, the largest share had upper secondary education. Since 2014 the share of immigrants with upper secondary education has been rapidly rising. In 2017 it was 58.7%, the highest since 2011.[20] In recent years the share of immigrants with tertiary education also increased slightly, although the number of tertiary educated people leaving Slovenia still exceeds the number of those moving to it. We assess that this is related to the skill structure of labour demand in Slovenia and working conditions in comparison to other countries (wage level, career development opportunities, etc.). It is encouraging that from 2012 onwards the share of immigrated Slovenian citizens with tertiary education has been rising.

Young people aged 25–29 are the group most likely to move abroad. The majority of people who have moved to or emigrated from Slovenia since 2014 were 25–29 years old. In 2017 their share in all immigrants totalled 14.1% and in all emigrants 15.2%. The share of emigrants in this age group in the total number of emigrants increased in 2008–2017, while the share of immigrants in the same age group decreased. The average age of emigrated foreigners in 2017 was five months higher than in 2008,[21] while the average age of emigrated Slovenians was eight years lower,[22] which points to the need for appropriate measures and policies to create conditions for young people to work and stay in Slovenia.

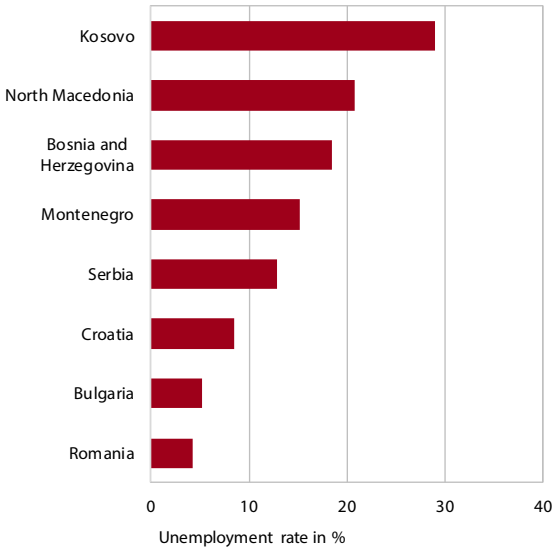
Among foreign nationals moving to Slovenia, the majority are from former Yugoslav republics. In 2014–2017 the most foreigners immigrated from Bosnia and Herzegovina (36%), followed by Serbia (12%), Kosovo (11%), North Macedonia (7.0%) and Croatia (7.2%). Immigration from Albania has been relatively modest in recent years, despite relatively high unemployment in that country and a large share of young people in the population. Given the geographical proximity of these countries and our shared history, these trends are expected to continue. In the following section we therefore present the demographic situation and labour market conditions in former Yugoslav republics and in other Balkan states as a potential additional source of workers for the Slovenian economy.

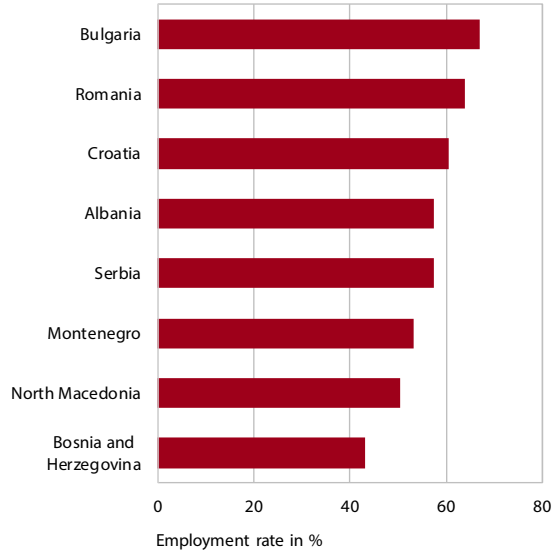
3.2 The demographic situation and labour market conditions in Balkan states

The existence of potential reserves of labour in the Balkan countries analysed is indicated by their relatively high unemployment and low employment rates. In these states[23] the unemployment rate has been falling in recent years, although it has remained fairly high in some. Though this could point to a certain potential for solving the problem of labour shortages in Slovenia, we have to be aware of the problem of high long-term unemployment in these countries.[24] A high share of long-term unemployed persons can mean lower potential supply of labour, as such persons are generally less willing to be activated than those with jobs or the short-term unemployed. The potential reserve of labour is also indicated by the employment rate, which was below 60% in 2017 in all the countries analysed except Romania and Bulgaria and much lower than in the EU on average and in Slovenia (63.1% and 69.3% respectively). However, with economic development, the employment rate in these countries is expected to increase, meaning that the number of potential migrants will decline.

[19] In 2018 the share of foreign citizens in the total population in Slovenia amounted to 5.9%.
[20] SURS has data on immigrated and emigrated population aged 15 or older from 2011 onwards.
[21] In 2008 the average age of emigrated foreigners was 36 years and four months.
[22] In 2008 the average age of emigrated Slovenians was 41 years and two months; in 2017 it was 33 years and one month.
[23] We analysed the labour market situation in the countries of former Yugoslavia (Croatia, Bosnia and Herzegovina, Serbia, Kosovo, and North Macedonia), Albania, Romania in Bulgaria.
[24] In Bosnia and Herzegovina the share of long-term unemployed totalled 82.1% in 2017, in North Macedonia 77.9% and in Montenegro 77.5%.

Figure 16: Unemployment rates in 2018 (left) and employment rates (15–64 years) in 2017

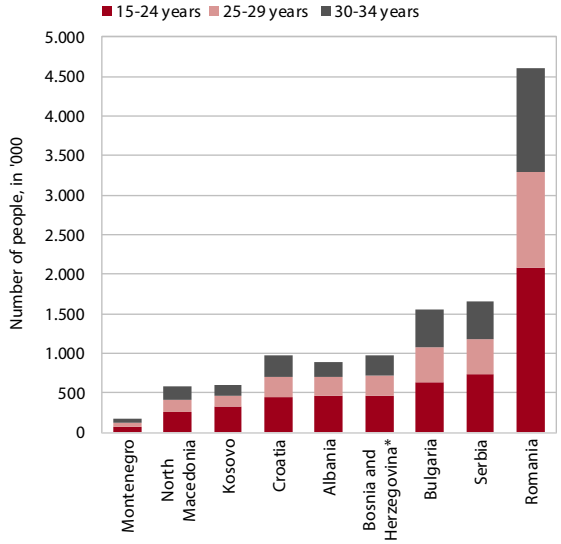




Source: Eurostat, WIIW

The potential supply of labour in the countries analysed is also indicated by high shares of people in age groups that are more inclined to move abroad. Although the population is also ageing in these countries, most of them have a lower share of people older than 65 years than Slovenia and the EU on average. At the same time, most of these countries have a higher share of young people (15–24 years) in the total population than Slovenia (9.4%) and the EU (10.8%). In Albania, North Macedonia, Bosnia and Herzegovina, and Montenegro, the share of young people exceeds 13%. The share of the population in the 15–34 age group is otherwise the highest in Albania and in Kosovo, at over 30%. The number of potential workforce, however, is largest in Romania, which is one of the countries with the highest shares of emigrants in the total population. Though the demographic picture and labour market conditions in these countries indicate potential reserves of labour, it should be borne in mind that with economic development demand for labour will increase there too and that labour shortages also represent a problem in other EU countries that may be more attractive for migrants.

Figure 17: Number of people in younger age groups, 2018



Source: Eurostat. Agency of Statistics of Bosnia and Herzegovina; calculations by IMAD. Note: * The data for Bosnia and Herzegovina are for 2013.

3.3 The impact of different levels of migration on labour supply

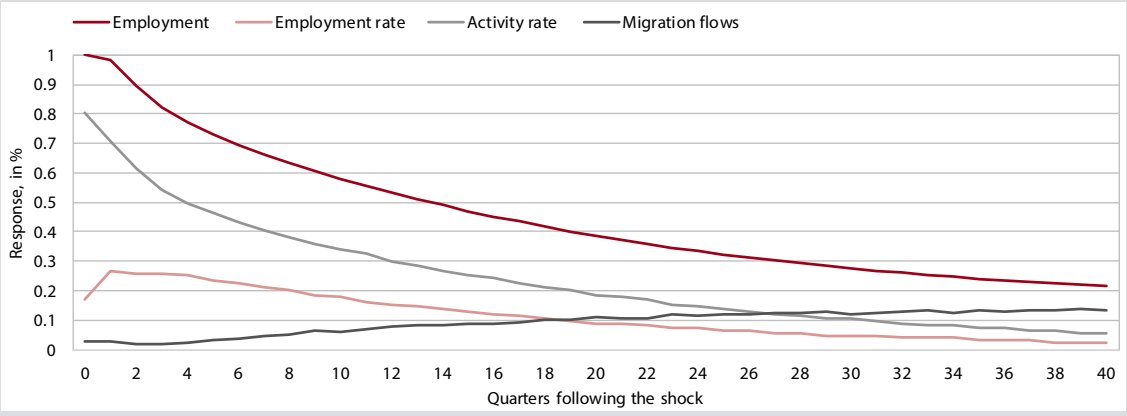
Demographic change is reducing the supply of labour. The shrinking of the population in the 20–64 age group has been reducing labour supply since 2012, but due to modest demand this was not yet a limiting factor to employment growth during the crisis period. Since 2014 the problem of labour shortages has been exacerbated by demographic trends. In the last two years the number of immigrants has increased strongly, contributing to high positive net migration, which is significantly affecting the size of potential labour supply in circumstances of intense demographic change. Besides by activating certain population groups, the problem of securing a sufficient workforce can be alleviated particularly by increasing the inflows of foreign workers and encouraging the return of Slovenian citizens from abroad (positive net migration).

Box 2: Response of the Slovenian labour market to a positive labour demand shock: A VAR approach

The correlation of labour market indicators and migration flows is analysed on the basis of the estimates of a vector autoregression (VAR) model, which is a standard tool in macroeconomic analyses. We used the approach introduced by Blanchard and Katz (1992).[1] We included three variables in the model: the first change in the logarithm of employment, the logarithm of the employment rate (defined as 1 minus the unemployment rate) and the logarithm of the activity rate. By means of the estimated model, we simulated the response of the Slovenian labour market to a positive labour demand shock,[2] identified with the Cholesky decomposition of the variance-covariance matrix of residuals.[3] The estimates of the model are based on data for 1999Q1–2018Q3. With quarterly data available, we assessed the model using four lags of variables.[4]

The estimates of impulse responses indicate that in the initial periods after a shock, the labour market responds mainly by adjustments of activity and employment rates, while over a longer term, migration plays a greater role. Figure 18 shows the impulse responses of variables[5] to a positive labour demand shock (1%). Immediately after the shock (*t=0*), the activity rate rises by 0.47 pps and the employment rate by 0.15 pps,[6] while the change in migration flows[7] is negligible. As evident from Figure 18, the estimate shows that the employment and activity rates return to a long-term equilibrium after the shock, while employment remains permanently higher (by around 0.2%).[8]

Figure 18: Impulse responses of the Slovenian labour market to a 1-percent positive labour demand shock



Source: estimates by IMAD.

Impulse responses can also be expressed in persons.[9] For easier interpretation of the above results, we present impulse responses in persons, with the initial shock (1%) normalised to 100 persons or 100 newly created jobs (Table 1). The estimates show that immediately after the shock, 85 of 100 of jobs created as a consequence of increased demand (shock) are filled by individuals who were previously not active in the labour market, 11 jobs are filled by unemployed people, while 5 jobs are filled by people moving into the region. Over the long term, when 22 new jobs are created, practically all jobs can be linked to migration.[10]

Table1: Impulse responses in persons

Response/Quarters following the shock	0	10	20	30	40
Working-age population (migration)	5	11	20	23	25
Employment rate	11	15	7	3	1
Activity rate	85	32	12	2	-4
Number of persons or newly created jobs	100*	58	39	28	22

Source: calculations by IMAD.
Note: *Because of rounding, the numbers in the column do not add up to the total.

[1] Blanchard, O. J., & Katz, L. (1992). Regional Evolutions. *Brookings Papers on Economic Activity, 23*(1), 1–75.

[2] Labour demand shock is defined as an unexpected change in employment. The reasonableness of this assumption is also corroborated by the negative correlation between the unemployment rate and employment growth. Specifically, in the Blanchard and Katz model, the correlation between unemployment rates and employment growth depends on the relative importance of growth factors. If growth derives from labour demand, unemployment should be negatively correlated with employment growth; if growth arises from labour supply (caused by migration), the correlation between these two categories should be positive.

[3] The variables are placed in the model in the following order: (1) employment growth, (2) employment rate and (3) activity rate, so that employment has a contemporaneous effect on the employment rate and activity rate (while the opposite is not the case).

[4] The information criteria otherwise suggest the use of one lag.

[5] All impulse responses are statistically significant at a 5% level. Confidence intervals, which, for greater transparency, are not presented in the graphs, are estimated from 1,000 bootstrap replications.

[6] The changes in the unemployment and activity rates in pps are calculated from the following relationships: $\Delta\left(\frac{U}{LF}\right) = \frac{E}{LF}\left(\Delta \ln\left(\frac{LF}{E}\right)\right)$ and $\Delta\left(\frac{LF}{POP}\right) = \frac{LF}{POP}\left(\Delta \ln\left(\frac{LF}{POP}\right)\right)$, where E denotes employment, LF the active population (the employed and unemployed together) and POP the working-age population (15 years and over). The average values in the sample are as follows: $\frac{E}{LF} = 0{,}929$ and $\frac{LF}{POP} = 0{,}582$.

[7] The change in migration flows is calculated as a residual category on the basis of the following relationship: $\Delta \ln(POP) = \Delta \ln(E) - \Delta \ln\left(\frac{E}{LF}\right) - \Delta \ln\left(\frac{LF}{POP}\right)$. As only a small proportion of changes in the working-age population is a consequence of demographics, $\Delta \ln(POP)$ can be used as an approximation of migration flows.

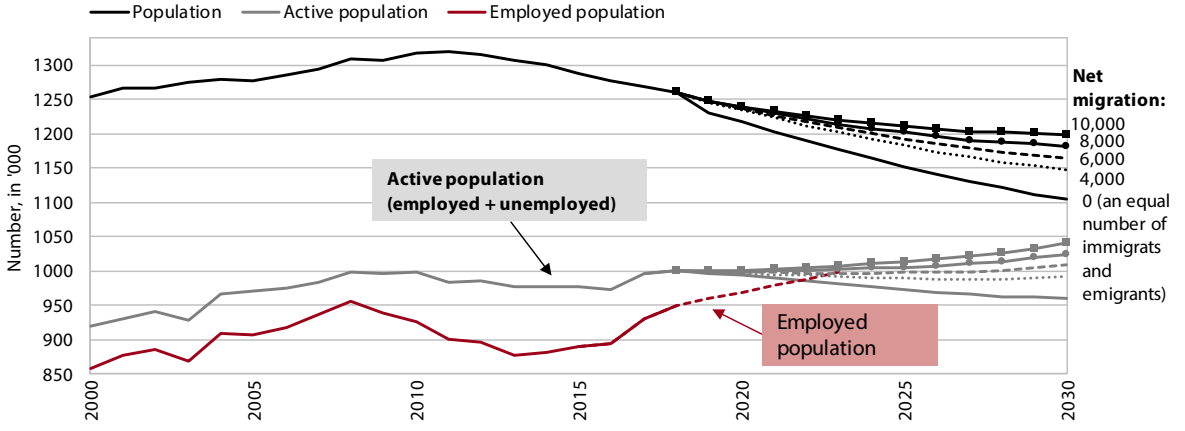
[8] This consequence arises from the way of modelling employment – in specifying the model, we took into account that employment is *I(1)*, which means that the effect of the shock on employment can be permanent.

[9] This approach was also applied by Blanchard & Katz (1992) – see p. 34.

[10] The results should be interpreted with some caution, since we do not really know who the migrating individuals are or if they are in fact the same individuals who directly lost/gained a job as a consequence of the shock. The impulse responses only show a net effect of the shock on employment (or any other variable).

Simulations of the impact of different net migration levels on labour supply, however, indicate that very high levels of net migration would be required to fully offset the decline in the working-age population. In the simulations we posited five net migration scenarios for the working-age population aged 20–64 years: balanced net migration and a gradual increase in net migration to four, six, eight and ten thousand persons per year by 2022. In addition to migration levels, the scenarios also assume a continuation of favourable activity trends for certain population groups. The assumed rise in activity rates is based on a further increase in the activity of young people (owing to a rising share of those with higher education), older people and women, whose activity rates have thus far been below the overall average. The simulations show that in the case of balanced net migration (the same number of immigrants and emigrants) and with expected demographic pressure, the moderate employment growth seen in the past (1% per year) comes to a standstill

Figure 19: Simulations of the impact of different net migration levels on the size of the total and active population



Source: SURS, calculations by IMAD.

Note: The simulation of activity on the labour market assumes the following scenarios of active population growth: i) further growth in the share of people with higher education; ii) equalisation of the (lower) activity rate of women with the (higher) activity rate of men by 2030; and iii) a 15 pps increase in the activity rate of older people by 2030. For a detailed description of the methodology, see Peschner and Fotakis (2013, 2015). The assumptions for fertility rates and life expectancy are in line with ESSPOP2015.

in a few years and then turns negative, as the economy absorbs all employable unemployed and all inactive persons that can be activated. Over the short term, the decline in the population in the 20–64 age group could be mitigated more effectively only by such an inflow of foreign workers as seen during a short period before the crisis (around 10,000 persons per year). Attracting this much foreign workforce requires an appropriate migration policy, however, i.e. a concerted approach to attracting foreign workers and encouraging emigrated Slovenians to return home. Simulations of the total and active population sizes at different net migration levels show that, assuming further growth in the number of employed people, the problem of labour shortages will intensify in the coming years.

Model estimates show a significant response of migration to increased labour demand particularly over the long term, after the activity rate has already adjusted to greater labour demand. Using an econometric model, we analysed how the activity rate, employment rate and migration respond to changes in labour demand (see Box 2). As the initial shock we assumed a 1% increase in labour demand and observed the response of other variables. The estimates show that in the first years after the initial shock, the economy responds particularly by an increase in activity and employment rates, while over a longer term, the response of migration also rises visibly. The estimates for Slovenia are in line with those for other countries. Although the estimates, which rely on historical data, show that migration flows are a less important adjustment mechanism in the initial periods after the shock, this may change in the future. Slovenia, like other EU countries, is experiencing population ageing and hence an ever greater shortage of appropriately skilled labour. Such changes in demographic conditions will, to sustain economic growth in the future, boost greater migration flows than seen in the 2010–2017 period.

3.4 Policies for integrating immigrants into society

Given the shortage of workers and the need for migrant labour, policies for attracting foreigners and their integration into society play an increasingly important role. As population ageing and labour shortages are experienced by most developed EU countries, it is essential for Slovenia to formulate measures for attracting foreigners and encouraging the return of Slovenian citizens. The OECD developed indicators to assess a country's attractiveness for foreign talent.[25] According to these indicators, Slovenia ranks in the upper third of countries in all three categories of migrants. It would therefore be sensible to consider the strengths and weaknesses identified by these indicators in formulating measures and informing foreigners about the advantages of working and living in Slovenia. Immigration, however, also requires measures for successful integration of immigrants into society, which can not only increase the probability of their longer participation in the labour market in Slovenia, but also enhance social cohesion.[26] In this context, however, it is also necessary to bear in mind the concept of integration as a dynamic, two-way process of mutual accommodation between migrants and their host societies. Integration into society is a comprehensive process that involves a number of areas, such as education, employment, access to housing and health services and other areas where foreign workers have to be ensured equality of treatment and opportunity for a decent life and integration into the society.[27]

Knowledge of the host country language is vital for foreigners to successfully integrate into the host society, but in Slovenia the language course for foreigners is relatively short. Being able to communicate in the host country language is the most important skill for immigrants who want to work and integrate into a society. It can increase their motivation to stay longer, which, over the long term, increases the supply of labour.[28] A successful integration of immigrants is dependent both on their knowledge of the host country's society and culture and the functioning of its institutions and on how informed they are about their rights and the services available to them. In Slovenia, non-EU nationals can participate in a free-of-charge Slovenian language learning programme,[29] where they also learn about Slovenian society. They are also entitled to a free-of-charge first Slovenian exam at the basic level, though to date performance in this exam[30] has been relatively poor. The share of immigrants (15–64 years) with advanced host language proficiency is also low by international comparison,[31] which might also be related to the short duration of the course compared with similar courses abroad. A renewal of language learning programmes and their adjustment to the needs of different target groups could be one way to improve immigrants' knowledge of Slovenian, where Slovenia could follow the example of other countries which offer foreigners more hours of language training and various other possibilities for learning (Box 3). Since 2018 information important for living and working in Slovenia can be obtained on a renewed website, but it is available in English and Slovenian only.

[25] The OECD Indicators of Talent Attractiveness, which assess a country's capacity to attract three specific categories of talented migrants: i) highly educated workers (those with master's and doctoral degrees), ii) foreign entrepreneurs, and iii) university students.

[26] OECD, "Settling in 2018. Indicators of Immigrant Integration", 2018.

[27] OECD, International Migration Outlook 2018, 2018.

[28] OECD, "Settling in 2018. Indicators of Immigrant Integration".

[29] The programme "Initial Integration of Immigrants" (ZIP) is implemented in the form of a 180-, 120- or 60-hour course.

[30] In 2018, 66.7% of participants passed the exam (Report on the Work of the Office for Migration for 2018, 2018).

[31] In 2014, Slovenia had one of the lowest shares of immigrants (15–64 years) with advanced proficiency in the host country language among the EU-25 and OECD-21 countries (OECD, "Settling in 2018, Indicators of Immigrant Integration", 2018).

Box 3: Examples of good practice for integrating migrants in selected EU countries

In Germany, immigrants can participate in programmes which include learning German and getting acquainted with German tradition, way of life, history, culture, etc. There is an elementary course of 400 to 600 hours of classes in order to reach the B1 level and an advanced course of 300 hours of lessons. Participants are grouped depending on their needs. In addition to the basic programme, special additional courses are available, including courses to improve literacy skills, integration courses for women, integration courses for younger adults, catch-up courses and intensive courses ("Integration courses: Learning German and much more").

In Sweden, an individual who has a residence permit and is registered in the population register has the right to attend the language course "Swedish for Immigrants". In addition, Sweden offers many activities for foreigners to start learning Swedish while waiting for a decision on a residence permit: in study courses, in voluntary organisations, on-line courses ("For asylum seekers who want to learn Swedish").

In Finland, there are individualised integration plans, which generally last two to three years and are prepared by local employment offices. The aim is to prepare training measures adapted to immigrants' knowledge, experience and needs. The integration programme is divided into several training modules combining vocationally-oriented content with integration training and other activities, including on-the-job-learning.

Box 4: Examples of pre-arrival programmes[1]

Austria, since 2013/2014, has had special integration representatives in its embassies in Belgrade and Ankara who hold specific orientation modules that inform prospective family migrants about the German language, rights and duties, the Austrian labour market, and the values of the Austrian society. Immigrants also receive contact details of service centres in Austria close to their future home.

The Netherlands provides prospective family migrants with a comprehensive on-line self-learning package to help them pass the mandatory basic civic integration examination. The package is available in 18 languages and includes the possibility for individual coaching.

France, until recently, required working-age family migrants without any knowledge of the French language and its civic values to attend a free language course of a maximum of two months (180 hours) and/or a half-day of civic orientation before moving to France. The courses were organised by local offices of the French Immigration and Integration Office and other bodies. Depending on the participants' results in the pre-departure training, they could be obliged to take an additional language course upon arriving in France.

[1] Summarised from OECD (2017) "Making Integration Work, Family Migrants".

A faster integration of immigrants into the society could also be achieved through pre-arrival programmes. OECD experts recommend the implementation of programmes for future family migrants in their home countries to make it easier for them to integrate into the society upon arrival in the host country.[32] These programmes include the provision of information about life in the new country, assistance in the development of language and job-search skills, the initial process of recognition of qualifications, and so forth (see Box 4). The implementation of such pre-integration programmes for prospective immigrants, especially in the countries where most immigrants to Slovenia come from, would facilitate their integration into Slovenian society.

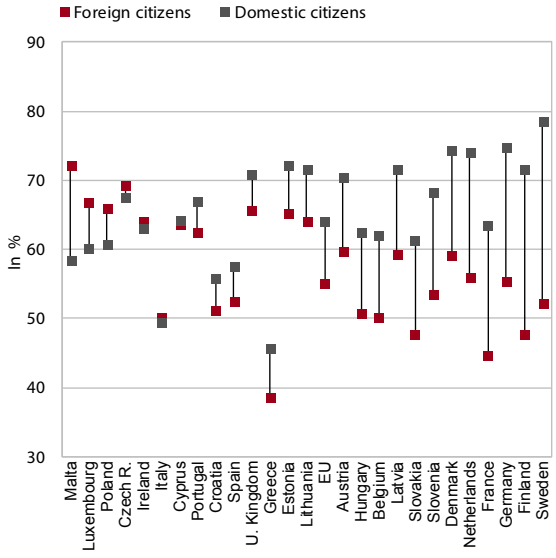
Given the relatively low employment rate of women with foreign citizenship in Slovenia, it would be sensible to formulate measures for their activation. The employment of foreign nationals could be increased through measures in the area of knowledge and skills that would contribute to their integration into the labour market, such as: i) improving the tools for the recognition of acquired qualifications, skills and work experience; ii) identifying the needs for skills; iii) strengthening active employment policies; and iv) increasing foreigners' participation in lifelong learning.[33] The most effective way to integrate immigrants into the host society tends to be employment, but in most EU countries labour market outcomes of foreign nationals are worse than for the domestic population.

[32] OECD (2017) "Making Integration Work, Family Migrants".

[33] In 2018, the participation rate in lifelong learning for Slovenian citizens and foreign nationals totalled 11.7% and 5.9% respectively.

The employment rate of foreign citizens in Slovenia is lower than for Slovenian citizens,[34] which is mainly due to the low employment rate of women with foreign citizenship. This is significantly lower than for Slovenian women, the gap between the two groups being among the widest in the EU. According to the OECD,[35] a special group of immigrants needing additional measures for integration into the labour market is that of women from countries where women with family traditionally do not work and who therefore need support services to help them enter the labour market. A large share of women who came to join a family member in Slovenia[36] points to the need for measures for encouraging their participation in the labour market, which is especially important in view of the rising demand for workforce in the area of social work.

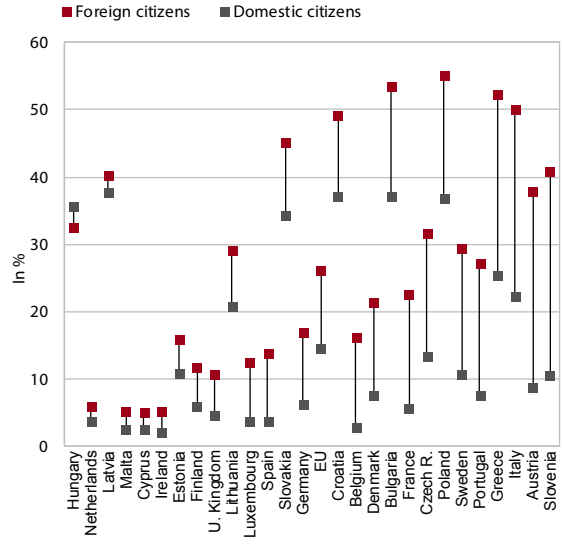
Figure 20: The employment rates of women (15–64 years) by citizenship, 2018



Source: Eurostat.

Access to better living conditions is another important factor in integrating immigrants into the society. Access to health services and housing, in addition to education and employment, is often highlighted among the objectives of measures for effectively integrating foreigners into society. The participation of foreign citizens in education is relatively high in Slovenia, but their educational outcomes are fairly modest and point to the need for reinforcing measures for easier inclusion of migrant children in education. The inclusion of migrant children in education has a significant impact on their learning achievement and future employment prospects ("Settling in 2018. Indicators of Immigrant Integration", 2018). An important factor of educational success is command of the host country language (Siarova and Essomba, 2014). For faster integration of migrant children, the latter have to be offered assistance in learning the language and other kinds of support. Access to health care for foreigners is regulated in the same way as for Slovenian citizens,[37] but they can have more problems accessing services as they are less informed about their rights or are afraid to be absent from work. Several studies of health problems among migrant workers indicate higher prevalence of mental health conditions, which may arise from discrimination, poor working conditions, or feelings of loneliness and isolation (Zečkanovič and Bilban, 2017). Foreign workers also more frequently suffer from work-related diseases and are at greater risk of occupational injuries and death at work compared to domestic workers.[38] Another factor

Figure 21: The share of the population living in overcrowded dwellings in EU Member States, by citizenship, 2018



Source: Eurostat.

[34] In 2018, the employment rate of foreigners aged 15–64 years was 68.8%. The employment rate of Slovenian citizens was 71.3%, which is lower than the EU average.

[35] Making Integration Work, Family Migrants", 2017.

[36] In 2015, the share of women who immigrated to join a family member was one of the highest among 19 EU Member States ("Making Integration Work, Family Migrants" (2017).

[37] Third-country nationals in Slovenia obtain compulsory insurance on the basis of a single residence permit for work and residence in Slovenia or the EU Blue Card. Their family members are compulsorily insured on the basis of the temporary residence permit issued on grounds of family reunification. Separately, they should apply for supplementary health insurance at one of the commercial insurance companies. Foreigners with a permanent residence permit and permanent residence in Slovenia who do not have sufficient means of subsistence and are recipients of financial social assistance are also entitled to the payment of supplementary health insurance.

[38] The differences in the incidence of injuries and death at work between foreign and Slovenian workers can be attributed to a number of barriers in ensuring occupational safety that are not encountered by native-born workers. According to Žečkanovič and Bilban (2017), foreign workers more frequently work in sectors where injuries are more common (for example construction). Another problem is the language barrier, because of which foreign workers are less informed about their rights and obligations regarding safety at work.

affecting the quality of life and, consequently, health is access to housing. Slovenia has a higher share of foreign citizens overburdened by housing costs and living in overcrowded dwellings than the EU on average. It thus has a significantly higher share of foreign citizens living in overcrowded dwellings than the EU average and – at the same time – the widest gap between the shares of foreign and domestic citizens living in overcrowded dwellings.

Stronger co-operation between different institutions and the adjustment of integration measures to the needs of different groups of migrants would facilitate their integration into society. For greater efficiency of measures, it is necessary to strengthen the cooperation between institutions at the local level (schools, employment services, health institutions, non-governmental organisations, etc.), which play an important role in integrating and empowering immigrants to become active members of society, as highlighted by the OECD in its publication "Working Together for Local integration of Migrants and Refugees" (2018). Reinforcing and adjusting integration measures to different migrant groups (economic migrants, family members, vulnerable groups, etc.) with different needs would also increase their possibilities for successful integration into society. .

4 The impact of automation and robotisation on the labour market

Slovenia is a country with a relatively high degree of automation and robotisation[39] in comparison to other Central and Eastern European countries.[40] The share of enterprises using robots[41] reaches 7% in Slovenia, which is equal to the EU average. Within that, 6% of robots are industrial and 1% service robots (5% and 2% respectively in the EU as a whole (Eurostat)). In 2018 Slovenia was ahead of other EU-CEE11 countries in the share of enterprises using robots in the food, textile, wood-processing, paper and chemical industries. Bulgaria ranked first in metals manufacturing, Slovakia in machinery production and Poland in construction (Reiter 2019). The gaps in robotisation levels between the EU-CEE11 and the EU15 are nevertheless still wide, at over 20 pps in some industries (food, textiles, wood, paper, chemicals and metals). In machinery the differences are narrower (11 pps), primarily owing to the closer integration of Eastern European countries with Western Europe in car production. Automation, however, is a broader notion than robotisation and therefore more difficult to measure.

Central and Eastern European countries, including Slovenia, have a low degree of automation compared to older EU Member States but are making very rapid progress in this area. The International Federation of Robots (IFR) estimates that the number of industrial robots in the Central and Eastern European countries will record 22% yearly growth in the next three years, compared to only 5% in Germany (IFR 2018). This is a consequence of several factors. Being "followers" of technological development trends, these countries have a lot of potential for automating simpler business and industrial processes. Despite rapid growth, their automation levels are still only at 17% of that in other EU countries (Reiter 2019). These countries also have significantly lower wages on average, although labour shortages, due to the favourable business cycle and strong demographic pressure, have increasingly affected

[39] Automation means using computer programs and other technology to carry out tasks that would otherwise be done by human workers. These tasks can be mechanical or virtual, from the very simple, routine and repetitive to the highly complex. Robotics, on the other hand, involves the use of robots, which consist of computer systems, sensors, motors and other components and are programmed to perform physical tasks (for example heavy lifting) autonomously. The two have a lot in common, but many types of automation have nothing to do with physical robots, while many types of robots have nothing to do with automation.

[40] i.e. the 11 countries that joined the EU after 2004.

[41] The share of enterprises using robots is Eurostat's indicator, which, together with robot density, is used to evaluate the degree of automation in a particular country or sector. In addition to industrial robots, which perform routine and clearly structured tasks, the indicator also covers service robots, which have a certain degree of autonomy and can perform intended tasks in interaction with people.

wage growth in recent years. Further automation is one of possible responses to these challenges and may be the best way to ensure long-term productivity and value added growth in the context of population ageing.

Automation and robotisation are increasingly changing the labour market and jobs. If 15 years ago robots were deemed capable only of performing repetitive, routine and non-cognitive tasks, the number of tasks they cannot yet do is persistently shrinking. The OECD estimates[42] that 14% of all jobs in OECD countries are at risk of automation due to technological progress and an additional 32% are likely to be significantly transformed due to the introduction of new technologies.[43] With 25% of all existing jobs threatened by automation, Slovenia ranks among the countries with high job automation risk.

Automation can mitigate labour shortages in the short term. This is especially important in view of ever stronger demographic effects and relatively rapid economic growth. In the context of labour shortages, ever faster wage growth and low interest rates, it is becoming more and more sensible for companies to automate production or part of the work process. This may lead to greater prevalence of robots in companies. Globally, three million industrial robots are expected to be in operation in 2020, double the figure in 2014.[44] The studies estimate that on average one robot can substitute for around six workers in production.[45] The speed at which new technologies will spread is difficult to assess, as it depends on several factors, but it is likely that part of the workforce will be replaced by robots in the short to medium term, particularly in activities that involve a lot of routine, not yet highly automated tasks. These include jobs in trade and manufacturing, i.e. sectors where Slovenia has the most job vacancies.

Over the long term, however, automation may in fact increase demand for labour, but the newly created jobs will require more skills and higher education. All technological changes in history displaced certain jobs in the short term but led to increased demand for labour at the aggregate level in the long term. Each new technology creates occupations that may not have existed before. At the same time, it changes old occupations and, thanks to new capabilities and adaptations, facilitates access to work for less represented groups, such as disabled and older people. Newly created jobs however require more cognitive skills and therefore more educated workforce, which necessitates reallocation of workforce between tasks, workplaces or even sectors. This in turn increases the needs for lifelong learning. At the same time, these jobs also generate higher value added and enable an economy to improve its productivity and move up the global value chain. Automation of physically demanding tasks with low value added can also allow a society to reallocate workforce to occupations that are more appreciated in that society, or necessary, such as occupations in health and social work (long-term care), which are in greater and greater demand because of population ageing.

In mitigating the negative social effects of automation, the preparedness of economies to change plays an important role. Reallocation of workers between jobs and sectors cannot happen immediately or without disrupting the labour market, as the automation risk is unevenly distributed among workers. Those with lower or upper secondary education and qualifications are at higher risk, which has tangible social consequences for more vulnerable members of the society. Digital transformation can be successful only if accompanied by effective systems of primary and lifelong learning, re-qualifications, flexicurity and social protection that can help workers find or hold the jobs in the rapidly changing world.

The extent of job destruction and technological unemployment that will be caused by automation and robotisation is very unclear. Due to technological advancements in robotics, robots are increasingly able to perform not only routine but also non-routine manual tasks, where humans still have a comparative advantage. The tasks that robots cannot do are persistently shrinking. Moreover, it is increasingly clear that, besides destroying jobs, automation is transforming the nature of existing jobs, requiring workforce to adjust. Assessments of how automation is likely to affect jobs differ significantly. Besides from the choice of data sources and methods used to categorise tasks, most differences between findings arise from the approach taken in the analysis, with some authors focusing on occupations (an occupation-based approach) and others on tasks (a task-based approach). Recently the task-based approach has become regarded as more credible in the literature, given that each occupation is comprised of a set of different tasks, of which some could be codified, while others could not.

With an ever greater prevalence of robots and other technologies in the work process, automation is going to change the demand for certain skills and jobs. Thus far all technological changes have increased workforce demand over the long term, even if in other, higher technology segments (ESDE 2018). The actual impact of automation on technological unemployment will thus depend not only on technological progress,

[42] Nedelkoska and Quintini (2018)

[43] The estimates of the automation risk are based on expert opinion on which types of tasks are already technologically substitutable. However, they do not take into account other factors that are equally important for the actual speed of automation, such a firms' decisions regarding investment in automation, which also depend on prices of robots versus labour, interest rates, the investment cycle and social preferences with regard to automation.

[44] International Federation of Robotics (2018), "Robots double worldwide by 2020".

[45] Acemoglu in Restrepo (2017).

Box 5: An overview of methodologies assessing the automation risk

Using the occupation-based approach, Frey and Osborne (2013), in one of the first studies of this kind, estimated the risk of automation for 702 jobs on the basis of expert opinions on technological capability. They assessed that 47% of all occupations in the US were at risk of automation.[1] Their model is based on the assumption that, besides all routine tasks, it is also possible to automate all non-routine tasks that are not identified as engineering bottlenecks, i.e. tasks that we are not yet able to codify. These are tasks related to perception and manipulation, particularly where they are performed in unstructured situations, tasks related to creative intelligence, such as coming up with original ideas, and tasks that necessitate social intelligence, such as understanding other people's reactions in social contexts and caring for others. Lordan (2018), using Autor and Dorn (2013) definitions of a "routine task intensity" for each occupation, similarly assess that 37% to 69% of current jobs are highly susceptible to automation.

Authors supporting the task-based approach caution that the occupation-based approach may overestimate the automation risks, given that even occupations with the highest probability of automation involve a number of tasks that resist automation. Applying the task-based approach, which results in much lower estimates of automation risk, Arntz, Gregory and Ziehran (2016), using PIAAC data from 2012, estimated the automatability of jobs for 21 OECD countries, breaking down jobs into different kinds of tasks. They classified them into routine versus non-routine tasks, manual versus abstract/cognitive contents, and more versus less interactive. Tasks that could be automated include repetitive routine tasks that involve physical labour and cognitive tasks that require the collection and processing of information. Considering the heterogeneity of tasks within occupations, the authors find than only a few jobs are in fact automatable, from 6% to 12% in different countries.

The most frequently cited newer OECD study (2018), using a similar methodology, finds that 14% of jobs in 32 OECD countries are at high risk of automation,[2] while another 32% could be radically transformed because of the automation of individual tasks. Using PIAAC data, the study builds on the Frey and Osborne (2013) definition of engineering bottlenecks, applying it to more narrowly defined occupational groups to get more accurate results.

These studies, however, assess the theoretical probability of automation only with regard to the technological potential and the nature of tasks. They do not assess the actual speed at which new technologies will be adopted or the likelihood of their implementation, which could be affected by several factors, from regulations on workers' dismissal, unit labour costs, the investment cycle and decisions of individual firms to social norms and preferences with regard to automation.[3] The estimates of automation risks should therefore be treated with caution. More reliable than assessments of automation risk for individual countries are relative comparisons between countries.

The assessments of automation risk for occupations differ significantly across countries. Cross-country differences reflect, among other things, differences in the sectoral composition of the economies. Sectors that are most likely to be automated are those that are still based on routine tasks, such as low-skilled jobs in manufacturing and certain craft and office-clerical jobs. According to the OECD (2018), the risk of automation is highest (33% of all jobs) in the Slovak Republic and lowest in Norway (6%). Jobs in Nordic and Anglo-Saxon countries and the Netherlands are less vulnerable to automation than those in Eastern and Southern European countries and Germany. Slovenia is among the countries with higher automation risks[4] according to this analysis (25%).

An important finding of these studies is that more and more jobs require competences that cannot be automated. The tasks that are difficult to automate (the so-called bottlenecks to automation) and are increasingly sought after require analytical and social skills, especially a combination of both.[5] On the other hand, workers in fully automatable jobs are more likely to become unemployed, work fewer hours and have lower hourly wages than those in jobs with lower risk (Nedelkoska & Quintini, 2018). Outcomes of these studies indicate that automation already has a strong impact on the labour market.

---

[1] Their study contributed to the debate on technological unemployment due to persistently high unemployment rates in advanced economies, which some analysts attributed to the increasing prevalence of computer-controlled equipment.
[2] A high risk of automation means at least 70% probability of automation.
[3] For example, even though, technically speaking, robots could replace carers in nursing homes, it is still more desirable for social care to be delivered by people. This is one of the reasons why – although individual tasks are performed with relative ease – the social care sector is not under pressure of automation and is increasingly hiring people to meet the rising demand.
[4] A high risk of automation means that more than 50% of a worker's tasks are likely to be displaced by machines.
[5] Jobs that require a combination of skills that are not usually associated with the same job (referred to as "hybrid jobs" in the media) have become increasingly common in recent years. (https://www.weforum.org/agenda/2019/03/are-you-ready-for-the-rise-of-hybrid-jobs/).

but also on the readiness of educational systems and industries to address changing skill needs by appropriate education and lifelong learning systems and on-the-job training (OECD 2019). To deal with the challenges of automation and alleviate labour shortage problems by encouraging people to stay active longer, it will thus be necessary to increase individuals' opportunities for lifelong learning.

5 Concluding remarks

Demographic change is exacerbating the problem of labour shortages, which is a challenge for both companies and economic policymakers. The shrinking of the population in the 20–64 age group in circumstances of strong demand for labour is increasingly reflected in labour shortages. The problem of labour shortages can be addressed by activating certain population groups and through immigration. The analysis of unused domestic potential shows that it has declined significantly in recent years but still exists, particularly among older people, where the employment rate is low, and among pupils/students, who will enter the labour market after finishing school. Simulations of various net immigration scenarios indicate that to fully alleviate labour shortages, very high levels of immigration would be required. Automation can mitigate labour shortages over the short term but may increase the need for workforce over the long term and requires higher education and new skills.

Dealing with labour shortages involves many challenges. It is necessary to establish conditions for early entry into and late exit from the labour market, which requires a better match between education and the economy, set up a lifelong learning system that will enhance employability and enable people to change careers throughout their working lives, and promote healthy lifestyles and investment in health and safety at work**.** For greater efficiency of human capital use, it is necessary to strengthen intergenerational cooperation in companies and promote age management practices. The need for lifelong learning also arises from the introduction of automation and robotisation, which are changing the way we work and require new skills. It is also vital to formulate effective migration and integration policies to ensure the conditions required for immigrants to enjoy a quality life and for Slovenian citizens to return from abroad, to promote brain circulation, and to attract foreigners with appropriate skills.

Bibliography and sources

Abraham in Kearney (2018; Explaining the Decline in the U.S. Employment-To-Population Ratio: A Review of the Evidence, NBER Working Paper Series 24333.

Acemoglu, D. & P. Restrepo (2019). Robots and Jobs: Evidence from US Labor Markets. Journal of Political Economy.

Agencija za statistiku Bosne i Hercegovine. (2016). Popis stanovništva, domaćinstava i stanova u Bosni i Hercegovini, 2013. Sarajevo: Agency for Statistics of Bosnia and Herzegovina.

Autor, D. H. & D. Dorn (2013). The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market. American Economic Review, št. 103(5): 1553-97.

Blanchard, O. J. in Katz, L. (1992). Regional Evolutions. Brookings Papers on Economic Activity, 23(1), 1–75.

Employment Forecast 2018/II. (2018). Ljubljana: Employment Service of Slovenia. Obtained on 5 November 2019 at https://www.ess.gov.si/_files/11785/Porocilo_napovednik_zaposlovanja_2018_II.pdf

European Commission (2019). Employment and Social Developments in Europe 2019. Publications Office of the European Union, Luxembourg.

Eurostat Data. Database – Cross Cutting Topics – Indicators on Migrants and Migrant Integration. Obtained at: https://ec.europa.eu/eurostat/data/database

Eurostat Portal Page – Population and social condition – Education and training. (2019). Luxembourg: Eurostat. Obtained at: http://epp.eurostat.ec.europa.eu

Eurostat Portal Page – Population and social condition – Income, social inclusion and living conditions. (2019). Luxembourg: Eurostat. Obtained at: http://epp.eurostat.ec.europa.eu

Eurostat Portal Page – Population and social condition – Labour market. (2019). Luxembourg: Eurostat. Obtained at: http://epp.eurostat.ec.europa.eu

Eurostat Portal Page – Population and social conditions – Population. (2019). Luxembourg: Eurostat. Obtained at: http://epp.eurostat.ec.europa.eu

Fotakis, C. and Peschner, J. (2015). Demographic change, human resources constraints and economic growth: the EU Challenge Compared to Other Global Players. European Commission Working Paper 1/2013.

Frey, C. B. & M. A. Osborne (2013). The Future of Employment: How Susceptible are Jobs to Computerisation?

Geppert, C., et al. (2019), "Labour supply of older people in advanced economies: the impact of changes to statutory retirement ages", OECD Economics Department Working Papers, No. 1554, OECD Publishing, Paris, https://doi.org/10.1787/b9f8d292-en

Government of the Republic of Slovenia. IMAD (2017). Active Ageing Strategy. Obtained at: http://www.umar.gov.si/fileadmin/user_upload/publikacije/kratke_analize/Strategija_dolgozive_druzbe/Strategija_dolgozive_druzbe.pdf

Hornstein, A., Kudlyak, M., Lange, F. (2014). Measuring Resource Utilization in the Labor Market, Federal Reserve Bank of Richmond Economic Quarterly – Volume 100, Number 1. Obtained on 5 November 2019 at https://www.richmondfed.org/media/richmondfedorg/publications/research/economic_quarterly/2014/q1/pdf/hornstein.pdf

International Federation of Robotics (2018). "Robots double worldwide by 2020".

Kavaš, D., Koman, K., Kump, N., Majcen, B. (avtor, urednik), Sambt, J., Stropnik, N. (2016). Active and healthy ageing for active and healthy old age: analysis of existing situation, projections and measures to promote seniors' employability and postponed retirement decisions. Ljubljana: Institute for Economic Research.

Making Integration Work. Family Migrants. (2017). Paris: OECD.

Nedelkoska, L. & G. Quintini (2018). Automation, skills use and training. OECD Social, Employment and Migration Working Papers, št. 202. OECD Publishing, Paris.

OECD Employment Outlook 2014. (2014). Paris: Organisation for Economic Co-operation and Development

Peschner, J. in Fotakis, C. (2013). Growth potential of EU human resources and policy implication for future economic growth. Luxembourg: Publications Office of the European Union.

Reiter, O. (2019). Robot adoption in the EU-CEE and the rest of the EU. Wiiw Monthly Report 2019/05.

Robert Shimer. (13.6.2014). Historical and Future Employment in the United States. Obtained on 5 November 2019 at https://sites.google.com/site/robertshimer/cbo-employment.pdf

Settling in 2018. Indicators of Immigrant Integration. (2018). Paris: OECD.

Siarova, H.; Essomba, M. A. (2014). Language support for youth with migrant background. Sirius. Sirius network policy bref series, št. 4. Obtained at: http://www.sirius-migrationeducation.org/wp-content/uploads/2018/10/Polciy-Brief-4_Language-Support.pdf

Skills Matter: Further Results from the Survey of Adult Skills. (2016). Paris: OECD.

Talent Attractiveness. (2019). Paris: OECD. Obtained at: https://www.oecd.org/migration/talent-attractiveness/

Uredba o načinih in obsegu zagotavljanja programov pomoči pri vključevanju tujcev, ki niso državljani Evropske unije (Decree on ways and scope of providing programs of support for integration of third country nationals). Official Gazette of the Republic of Slovenia, No. 70/2012.

WIIW. (2019). Moving into the Slow Lane, WIIW Forecast Report, spring 2019. Vienna: WIIW.

Working Together for Local Integration of Migrants and Refugees. (2018). Paris: OECD.

Zečkanović, A. in Bilban, M. (2017). Zdravstvene težave migrantskih delavcev (Health issues of migrant workers). Obtained at http://www.zvd.si/media/medialibrary/2018/05/Zavod_za_varstvo_pri_delu_RDV_1_2017_Zdravstvene_tezave_migrantskih_delavcev.pdf

II. Financing of social protection systems

Summary

Social protection systems have various goals, which can be complementary or mutually exclusive. Such a variety of goals is typically a major challenge for policymakers, which becomes apparent especially when major changes are being introduced. Pension systems must provide financial security and adequate income in old age, but they must also be financially sustainable so as not to disrupt other economic and social balances. By redistributing income across generations, they also pursue social policy goals, such as alleviating poverty in old age. Achieving long-term financial sustainability in health policy is not an end in itself, but means above all taking into account the constraints on public funding. What is important is how financial sustainability is achieved in the context of the main health system goals, i.e. ensuring equality in access to the system and improving the health of the population. Long-term care is recognised as a new branch of social security. It is associated with the risk of dependence on assistance of another person in performing everyday activities, which may last for an extended period of time. The cost of long-term care can therefore be very high for individuals and jeopardise their social security.

Given the population ageing, the needs and expenditure for social protection services, i.e. pensions and health and long-term care, are expected to rise in the future. The rising of age-related expenditure as indicated by various projections is related to demographic change and the assumption of no policy change. By appropriate adjustments of current policies, it will be possible to mitigate expenditure growth in the future, at least partially. Population ageing is also reflected in rising demand for health and long-term care services. With a greater share of older people, expenditure growth is also driven by rising expenditure on older people, particularly after the age of 60. With rising GDP per capita, people have greater expectations regarding health care and access to new health technologies that expand treatment possibilities and improve the quality of services. The needs for long-term care are growing even faster than health needs, but, given the inadequate long-term care system, they are already remaining to a great extent unmet. A significant increase in these unmet needs can be expected particularly after 2025, when the largest generations start crossing the 80-year threshold. The key factor behind this expenditure growth is an increasingly large proportion of older people in need of assistance in basic everyday activities. Because of greater labour market participation of older people, there is also a rising demand for formal care. The share of expenditure allocated to cover the growing needs for health and long-term care services is therefore expected to grow in the future, notwithstanding the ongoing measures to improve the efficiency of the system.

In Slovenia, the main source for funding social protection expenditure is the social contributions of the employed population, but these are no longer sufficient to cover all expenditure. This is most evident in pension expenditure, where the difference between revenues from social contributions and expenditure on pensions and other expenditures of the Pension and Disability Insurance Institute (ZPIZ) is covered by a transfer from the state budget. In 2018 expenditure on pensions alone exceeded the collected contributions by one tenth, so that almost a quarter of pension expenditure was paid from the state budget. More specifically, the contributions and the transfer do not cover only expenditure on pensions, but also other ZPIZ expenditures, such as health insurance contributions for pensioners and some social security transfers (annual allowance for pensioners, disability insurance benefits, and assistance and attendance allowance). During the period of a cyclical decline in social contributions, funding from other public sources also increased in the health

system, again through a transfer from the state budget. According to legal regulation, this transfer finances medical and specialist training. In 2017 it also covered the accumulated hospital losses. Social contributions also represent the largest share of public sources for financing long-term care, which is not yet integrated into a single system in Slovenia. Funding from private sources is also increasing, in health care especially from complementary health insurance, in long-term care from household out-of-pocket expenditure.

To reduce the gap between expenditure and the main source of funding for social protections systems – social contributions – other sources will also be required in the future. Owing to demographic and technological changes (robotisation, automation), which are affecting the labour market, the problem of financing social protection expenditure is expected to deepen in the future. Social protection systems will also be under additional pressure from non-standard forms of employment, which are characterised by more flexible and less predictable contractual relationships, often with lower payments into social insurance systems. Some of these forms of work (platform work for example) are not yet widespread in Slovenia, but are expected to become part of our future employment structure given the spread of new technologies, ever-greater global integration and the openness of our economy. To be able to ensure services meeting the rising needs, it will therefore be necessary to adopt measures for reducing the gap that will slow social protection expenditure growth, as well as measures that will offset the loss of revenue from social contributions.

Approaches to achieving the goals of social protection systems and reducing the gap between sources of funding and expenditure on social protection vary from country to country and provide an insight into the different options available for introducing changes in Slovenia. A transfer of certain solutions that work in one country may not be acceptable or possible in another, since systems are different and depend on the social contract and their development through the history of each country. Nevertheless, an overview of measures to adapt to the above-mentioned long-term challenges introduced in other countries points to various options that could also be applied in Slovenia.

The pension system in Slovenia, with the dominant first tier, successfully distributes risk across generations, but becomes financially unsustainable as the population that pays the contributions shrinks. Longer lifespans and smaller generations entering the labour market are undermining the fiscal sustainability of pay-as-you-go systems with defined benefits such as Slovenia's. The key approach to dealing with this challenge is prolonging working life. In half of OECD countries the retirement age will increase in the future as a result of the already adopted legislative changes. As this will not suffice, some countries have also introduced automatic mechanisms linking pension system parameters to demographic change (for example increases in life expectancy) to reduce the revenue–expenditure gap. Reforms for improving financial sustainability, however, are also associated with a risk of compromising the material situation of pensioners. To alleviate the pressure on public finances and sustain the adequacy of pensions, countries are therefore introducing supplementary pension insurance schemes, which have the nature of investment funds with defined contributions and are managed by private pension funds. A combination of systems where the publicly financed first tier, which has become unsustainable due to demographic change, is supplemented with a stronger second tier covers more risks and increases pensioners' income. Slovenia is one of only five EU Member States where, according to the current pension system conditions, the

retirement age in 2070 is projected to be the same as in 2016. At the same time, it is not among the 16 EU Member States that have introduced a sustainability factor or some other automatic mechanism among pension parameters (such as linking the retirement age to increases in life expectancy), which could help curb pension expenditure growth. For Slovenia it will be essential to encourage supplementary insurance in the future, as it has the lowest participation rate in individual supplementary pension insurance schemes in the EU.

In bridging the gap between health revenue and expenditure, countries have taken more varied approaches than in adjusting the pension system. As measures do not belong strictly in the area of health, they require formulation of inter-sectoral policies. Analyses and experience in other countries show that the revenue–expenditure gap can be reduced by measures aimed at improving the health status of the population or promoting active and healthy ageing, increasing the efficiency of the systems on both the supply and demand side, and changes in the sources of health system financing.

A common feature of changes in health care financing across countries is expansion to sources that are not dependent on the income of the active population and sources less dependent on cyclical fluctuations. The most widely used measures include a) broadening the contribution bases (to the inactive population, capital gains), b) increasing tax sources by direct financing of certain services (for example sickness benefits) or, indirectly, by increasing transfers into social security funds, c) improving the effectiveness of contribution collection and simplifying the systems, and d) including private sources (co-payments, participation, change in the basket of health services). In recent years, Slovenia has adopted several permanent measures to increase public sources of health financing, mainly by an increased transfer to the Health Insurance Institute of Slovenia (HIIS) for financing certain expenditures and, partly, by broadening the contribution bases (although only to the employed population). The additional public funds were mainly used to offset the cyclical shortfall in social contributions during the crisis, so that in 2018 public health expenditure as a share of GDP stayed at the level reached ten years before. It will, however, be necessary to think about sources of financing that will also alleviate the shortfall in social contributions in times of demographic change. Decisions on reforming health care funding will also have to address the ratio of public to private expenditure and the content of the future public benefit basket. These decisions are closely linked to complementary health insurance, which is the main private source for health care financing in Slovenia.

In some advanced countries, long-term care has long been recognised as a new branch of social security. In establishing and modernising the system, countries are encountering problems in financing and organising long-term care related to the overlap between services and benefits and between long-term care and health care services. Analyses show that in the case of unregulated and insufficient possibilities for ensuring long-term care, the costs of long-term care services are transferred to medical institutions and increase the costs of health services. Slovenia lags behind other countries not only in public expenditure on long-term care, but also in the share of long-term care services at home, which is the dominant type of care in the most developed countries. EU countries have approached the systemic regulation in this area in different ways, depending on the level of development of their long-term care systems, economic development and the traditional role of the family. Some of them have universal LTC coverage and budgetary financing (most Nordic countries), some compulsory social

insurance for long-term care (Germany, Belgium, Luxembourg and Japan), while others are also resorting to less established financing solutions, such as the abolition of public holidays or the introduction of dedicated sources of funding.

Efforts to integrate long-term care into a unified system have been underway in Slovenia for over 15 years. The lack of success in this regard is mainly a consequence of the complexity of the system, which requires the overlapping of activities within the purview of several ministries, and a lack of agreement regarding the financing of the new system, i.e. the necessary additional sources. Under the draft act on long-term care from 2017, the aim of establishing a single system of financing is to pool the existing public resources to a new social insurance for long-term care and secure additional public financing. This is an issue that should be addressed together with the financing of the health benefit basket, as both activities are closely interlinked not only in terms of content but also financially. Although the latest draft act on long-term care from 2017 represents a new step in the creation of a unified long-term care system, analyses point to certain key parts of the proposed act that remain open as regards funding. These will therefore require further consideration. They pertain particularly to the actual scope of additional sources, consideration of demographic change and the ratio of public to private sources for long-term care financing.

Introduction

Projections of age-related expenditure show that in the coming decades, assuming policies do not change, we may expect increasing expenditure on social protection (pensions, health and long-term care) and a mismatch between expenditure and sources of financing. This is particularly true of countries, Slovenia included, where financing is based on contributions by the active working population, which is shrinking due to demographic change.

To ensure social protection systems remain viable and sustainable in the future, numerous public policies, on both the revenue and the expenditure side, will have to adjust and address these issues, which is the focus of this analysis. The first chapter describes the challenges that demographic change will create for the sources of financing social protection systems. Additionally, financing sources will be affected by changes in the labour market resulting from automation, robotisation and the expansion of non-standard forms of labour. In the subsequent chapters we first separately present the principal features of the current pension, health and long-term care systems in Slovenia. We also list examples of adjustment measures taken by other countries to reduce the gap between sources of financing and revenue for the respective systems. Drawing on a review of existing measures and ongoing activities, along with the experience of other countries, we then lay out the possible adaptations in the respective systems in Slovenia required to meet the growing needs associated with population ageing and the preservation of the sustainability of these systems.

The analysis is an attempt to launch a debate on the financing of social protection systems in the coming period, when the effects of demographic change will become even more pronounced.

1 Social protection financing systems – challenges brought by demographic trends and technological change

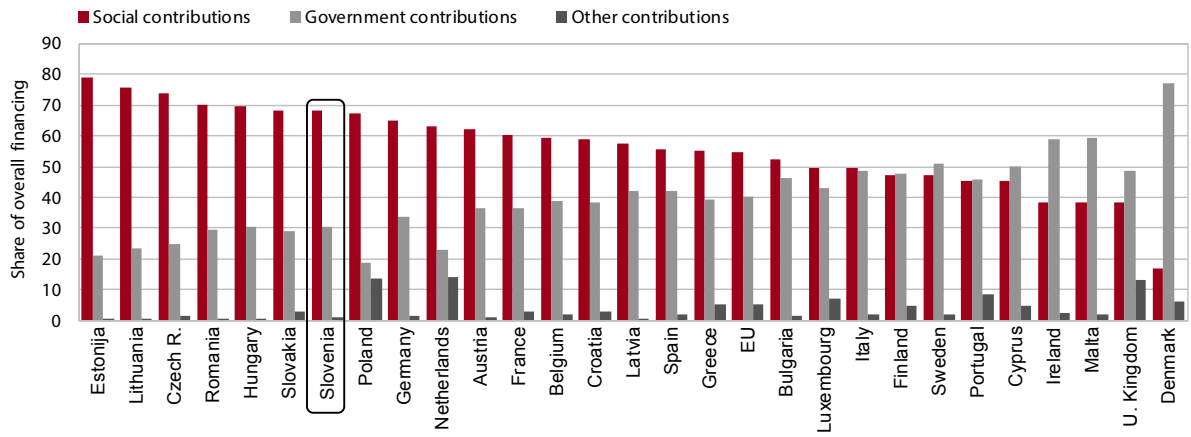
Despite differences in the financing of social protection system, EU countries broadly fit into two fundamental models – the Bismarck and the Beveridge systems of social protection. In a Bismarck system, financing is based on paid contributions by the active working population and the contributions are levied on their income from labour. The system is based on the principle of reciprocity, which means that an individual's benefits depend on their paid contributions. The financial foundation in a Beveridge system, on the other hand, originates in general taxes or state transfers. The overarching principle of this system is universality, which means it covers the entire population and everyone is entitled to the same basic benefits afforded by the social protection system. Beveridge systems have a bigger redistributive role than Bismarck systems.

In EU countries social contributions account for the bulk of the financing of social protection systems, but there are significant differences between individual countries. In 2016, in the EU-28 on average social protection[1] was predominantly funded from social contributions (54.5%), followed by tax-based state contributions (40.4%) and other sources (5.1%).[2] However, there are significant differences between the countries. In some, in particular in northern and Anglo-Saxon countries, taxes are the principal source of financing. In Continental European countries, on the other hand, social protection systems are financed chiefly from social contributions. Slovenia has such a system, and the share of social contributions in overall financing is among the highest in the EU.

The changing structure of the population, including the contracting share of the working age population, is a limiting factor for growth of sources of financing based on the social contributions of the active working population. In Slovenia and many other EU countries, a transition is under way towards a society with a growing share of older population and declining share (and number) of the working age population (15–64), a trend that will accelerate in the coming decades. This follows from scenarios of demographic projections (ESSPOP 2015), which consider various combinations of key assumptions such as numbers of births and deaths and net immigration. With shrinking cohorts entering working age, large cohorts of older people and life

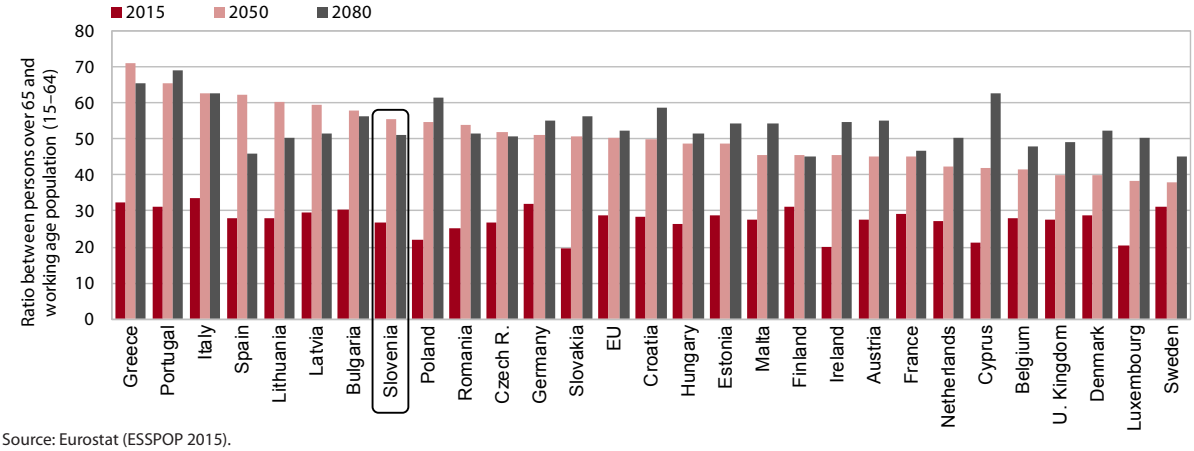
[1] Section 2.2. uses the concept of social protection system as defined by the ESSPROS framework.
[2] Other sources include interest and dividends.

Figure 1: Differences in sources of financing of social protection systems in EU countries, 2016



Source: Eurostat.
Note: Social protection systems according to the ESSPROS (European system of integrated social protection statistics) definition.

Figure 2: Age dependency ratio, 2015 and projections for 2050 and 2080



Source: Eurostat (ESSPOP 2015).

expectancy increasing, the age dependency ratio[3] in Slovenia is projected to increase from 26.6% in 2015 to 55.7% in 2050 (EU: from 28.8% to 50.3%; see Figure 2). To preserve the long-term sustainability of financing, it will be essential to provide a large enough supply of labour and secure a high level of employment in groups with below-average employment rates (youths, older population, etc.).[4] But given the current labour market trends (changing labour relationships, automation and robotisation), increased employment alone will not be sufficient to ensure sustainability of the financing of social protection systems.

Another challenge is the changes brought about by automation and robotisation, which likewise affect the availability of sources of financing social protection systems. There are no precise estimates as to the long-term effects of automation and robotisation on the labour market, but these processes are already disrupting labour market conventions. Analyses show that technological change has so far increased demand for labour in the long run, albeit in other, more technologically advanced segments. But due to the growing number of jobs that robots are able to perform, and the increasing take-up of technology in the work process, routine non-cognitive jobs with low value added are now at risk (see Chapter I). This may cushion the demand for low-skilled labour, but it may also have a negative impact on contributions, which represent the principal source of financing for health, long-term care and pensions.

[3] The age-dependency ratio is the ratio between the number of those over 65 and the population in the 15–64 age group.
[4] Labour shortage is not just a consequence of the contraction of the working age population, but also reflects a mismatch between available skills and employer demands.

Non-standard forms of employment, which are more flexible and less predictable than contractual labour relationships, exert additional pressure on social protection systems. There is no single definition of non-standard forms of employment, which differ from country to country, but what they have in common is limited duration or discontinuity, part-time nature, and indirect relationship between employer and employee.[5] Some have existed for a long time (part-time work, fixed-term employment, self-employment), but many are more recent (work via online platforms, work on call, etc.).[6] Even though the share of the latter forms of work remains low in the majority of EU countries, it is rising persistently and has caught the attention of public-policymakers. Part-time work has increased both in Slovenia and in the EU as a whole over a longer time horizon, as has the share of fixed-term contracts, which is above average in Slovenia due to the high volume of student work.[7] Aside from typically providing poorer social security, non-standard forms of employment are problematic in that one reason employers and employees resort to them is to reduce labour costs and hence social contributions. New non-standard forms of employment whose tax treatment has not yet been fully resolved may exacerbate this trend in the future. This includes working through platforms and many other forms of work (employee sharing, job sharing, casual work, ICT-based mobile work, etc.), which are often described as the "uberisation" of labour since workers work on call, frequently without pre-determined working hours or payment. Aside from the problem of insuring workers against various life risks, this raises concerns about the sustainability of social protection systems in that such workers typically pay less into social insurance than they would if they worked full-time.[8]

[5] Overview of new forms of employment – 2018 update, 2018.

[6] Eurofound has identified nine new forms of employment in labour markets in Europe, classified them by their effect on the labour market and working conditions, and evaluated the impacts on the social protection of employees ("New forms of employment", 2015).

[7] In the EU-28 the share of part-time jobs increased from 14.9% in 2002 to 18.7% in 2017. In Slovenia it rose from a much lower starting point in this period, from 5.2% to 9.6%. In the EU the share of fixed-term jobs rose from 11.2% in 2002 to 13.4% in 2017; in Slovenia it increased from 13.9% in 2002 to 16.8% in 2017. In the same period the share of workers with contracts of indefinite duration contracted slightly in the EU-28.

[8] The Future of Social Protection: What Works for Non-standard Workers?, 2018.

2 The pension system

2.1 The pension insurance financing system

Pension insurance in Slovenia has three tiers, which were introduced with the 2000 pension reform. The first tier includes compulsory pension and disability insurance, which is the public and strongly dominant source of pension financing, while the second tier is supplementary insurance, which comprises mandatory supplementary insurance (occupational insurance) and voluntary supplementary insurance (individual and collective). All other forms of saving for old age (annuity and life insurance, savings in mutual funds, stocks) constitute the third tier.

The first tier in Slovenia – compulsory pension insurance – has the characteristics of a pay-as-you-go system and is financed from public funds. In a pay-as-you-go system, the pensions of current pensioners are financed with the contributions of current workers, the difference between expenditure and contributions being covered by transfers from the state budget. The Pension and Disability Insurance Act (ZPIZ-2) stipulates that compulsory pension and disability insurance is based on intergenerational solidarity and comprises compulsory and voluntary enrolment in compulsory insurance and the benefits and obligations stemming from compulsory insurance for old age, disability and death that are determined based on work, contributions and under the principle of mutuality and solidarity. Compulsory insurance is based on the responsibility of the Republic of Slovenia and employers and the personal responsibility of insured persons for the implementation of the insurance. It is financed by contributors, employers and the Republic of Slovenia. It may also be financed from a demographic reserve fund, though this is yet to happen,[9] and other sources determined by law.

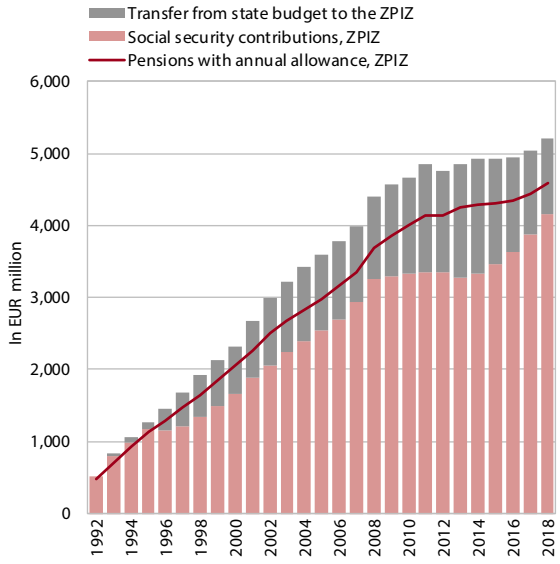
With the exception of the initial years, contribution revenue has fallen short of ZPIZ pension expenditure. The gap widened at the fastest pace when unemployment rose during the crisis, coinciding with increased retirement following the adoption of a new pension act in 2012. In 2013 and 2014 the difference between contributions and pensions widened to almost a billion euros. In that period pension expenditure exceeded contributions by 30%, with the budget transfer reaching 37% of pension expenditure (in 2018, 10% and 23% respectively).[10] In subsequent years,

[9] A demographic reserve fund act has not yet been adopted.

[10] Contributions and the budget transfer cover not only pensions disbursed by the ZPIZ, but also cover other types of ZPIZ expenditure (contribution for the health insurance of pensioners; social protection transfers – annual allowance, assistance and attendance allowance, disability benefits for physical impairment; wage compensation; current spending).

increased employment and wage growth, driven by the economic recovery and slower growth in the number of pensioners, narrowed the gap.

Figure 3: Expenditure on pensions, social security contributions and budget transfer to the ZPIZ



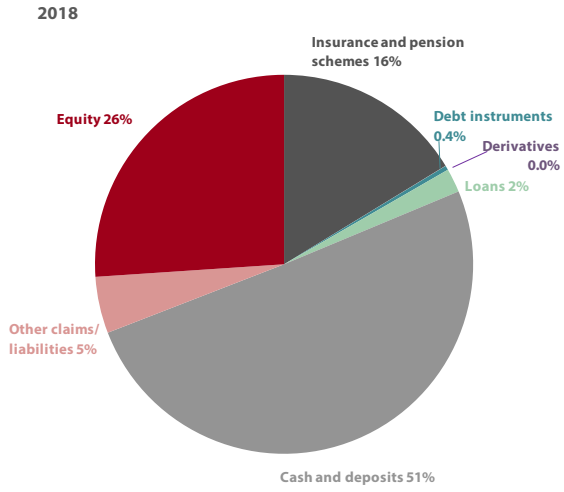
Source: Ministry of Finance.
Note: Pension expenditure includes expenditure on old-age, disability, survivors', farmers', military, widow and other pensions. The sum of contributions and the budget transfer is higher than total pensions since ZPIZ revenue covers other types of expenditure as well (see footnote 10).

The second tier comprises occupational insurance, which is financed by employers, and supplementary insurance, which is financed by employees and employers. Occupational insurance is intended for insured persons performing particularly physically demanding work and work potentially harmful to health or work that cannot be successfully performed beyond a certain age. Enrolment is mandatory and employer contributions are collected on personal accounts which entitle contributors to an occupational pension and other benefits as provided by law. Supplementary insurance comprises insurance-based investment plans that largely follow the defined contribution model.[11] This involves the accrual of funds on personal accounts entitling contributors to a supplementary pension or other benefits. Such supplementary pension insurance may be collective or individual and the government promotes it with tax benefits. At the end of 2018, 548,189 persons were enrolled in supplementary pension insurance, representing 57.8% of all contributors. Only 3.7% of insurance policies were for individual pension insurance,[12] the lowest share among all EU countries (see also Figure 7).

[11] White paper on pensions, 2016, p. 183.
[12] Supplementary pension insurance, Ministry of Labour, the Family, Social Relations and Equal opportunities.

Saving in the third tier depends solely on individual choice and is independent of employment status. It includes investments in securities, life insurance, annuities and similar savings. There are no tax incentives for the third tier and it requires individuals to take a long-term view in order to generate additional income in retirement. International comparisons show that financial assets account for a below-average share of assets in Slovenia; we estimate that real estate plays a bigger role. In 2017 financial assets represented 100.8% of GDP in Slovenia (financial liabilities, mostly loans, stood at 31.0% of GDP), whereas in the EU-28 they were at 224.6% of GDP (financial liabilities: 66.0% of GDP). Cash and deposits account for the bulk of financial assets in Slovenia (50.4%), compared to the EU average of around 30%.

Figure 4: Financial assets of households in Slovenia, 2018



Source: Bank of Slovenia.

2.2 Impact of demographic change on mismatch between revenue and expenditure

Projections of demographic trends show that under a no-change scenario, the ratio between contributors and pensioners will deteriorate; consequently, contributions which finance pensions would be insufficient. Under the projections (ESSPOP 2015), large cohorts will retire until about 2050 and, given longer life expectancy, they will spend more time in retirement (assuming retirement conditions remain unchanged). At the same time, cohorts entering the labour market will be smaller, which will severely affect the ratio between contributors and pensioners.

Given that Slovenia's pension system is based on intergenerational solidarity, contributions, which represent the bulk of pension financing, will lag behind expenditure. According to the demographic

Figure 5: Ratio between contributions and pension revenue, contributor-to-pensioner ratio

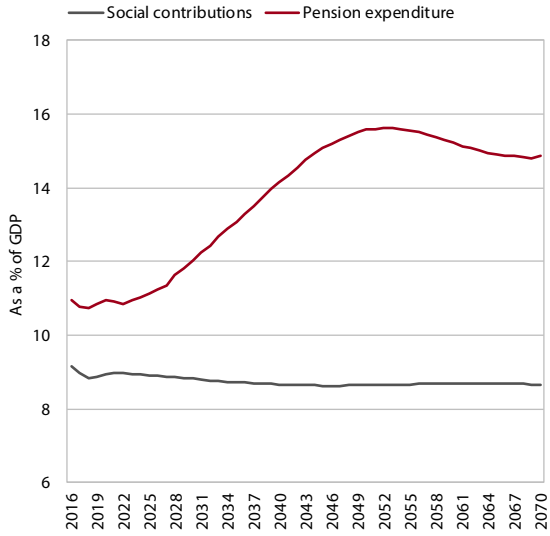
Source: The 2018 Ageing Report, IER calculations using Ageing Report assumptions.

projections which the European Commission uses for projections of age-related expenditure,[13] the contributor-to-pensioner ratio will drop to the extent that in just slightly over 20 years the number of contributors and pensioners will be equal and after 2040 the collected contributions will cover just slightly over half of pension expenditure, which is projected to increase by 4.3 pps of GDP by 2060. These projections assume a no-policy-change scenario. Due to an exceptionally low activity rate of older persons (55–64), Slovenia has one of the lowest average effective ages of exit from the labour force (60.5 years in 2016; only Luxembourg's is lower). The effects of the pension reform, which entered into force in January 2013, on increased activity of older persons ease off after a certain phasing-in period, meaning that after the end of this period, the assumed activity rates remain largely unchanged in the model.[14] The adoption of appropriate measures paves the way for increasing the activity rate. The increase in pension expenditure also reflects indexation and retirement conditions, which remain unchanged for Slovenia throughout the projection period, in contrast to many other countries, which already have stricter retirement conditions from the aspect of retirement age.

[13] Projections of age-related expenditure are created by the Ageing Working Group (AWG) at the European Commission's Economic Policy Committee. Member States have representatives on the AWG. For more on methodology of projections, see also IMAD, 2019, "Long-term projections of pension expenditure – Methodology used by the Ageing Working Group (AWG)".

[14] The currently agreed projection methodology does not assume any other upward convergence in activity rates.

Figure 6: Long-term projections of pension expenditure and social contribution revenue, 2016–2070, as a % of GDP



Source: The 2018 Ageing Report, IER calculations using Ageing Report assumptions.
Note: Contributions as a share of GDP remain relatively stable over time, as GDP growth depends on productivity growth and employment trends, while the amount of social security contributions paid depends on the growth of wages (which are assumed to increase in line with productivity growth) and employment trends (Majcen B., Sambt J., 2018).

2.3 Bridging the gap between revenue and expenditure – examples of other countries

Pension systems pursue multiple objectives, some complementary, other exclusionary.[15] The general features of pension systems across many countries indicate that pension systems must provide financial security and adequate income for older people, but they must also be financially sustainable lest other economic and social balances are disrupted. They have to both secure future spending for pensioners and withstand potential demographic and economic pressures. Intergenerational redistribution of income also contributes towards social policy goals such as alleviating poverty among older persons. Pension systems must protect against risk during the active period and in old age. Such a variety of objectives typically represents a major challenge for policymakers. The transfer of certain solutions from one country to another might not be acceptable or possible, since pension systems differ and depend on the social contract and the historical development of each country's system.

Countries have to identify a combination of pension system elements that provides maximum coverage of risks. Pension systems are multi-tiered, combining elements that define both contributions

[15] OECD Pensions Outlook 2018, 2018, p. 22.

Table 1: Four elements of pension systems and their main features

Pay-as-you-go system	Defined benefit system
- Spreads risks across generations	- Provides workers with a reliable perspective on their retirement income
- May become unsustainable if the working age population shrinks	- May become unsustainable if balance between contributors and pensioners changes
- Exposed to demographic, productivity and political risks	

Funded system	Defined contribution system
- Every generation responsible for its own ratio between contributions and pensions	- Automatically reacts to demographic change
- Requires a long period of capital accumulation	- Exposes workers to demographic, productivity and capital market risks depending on underlying pay-as-you-go or funding principles
- Exposed to capital market risks over the long term	

Source: European Parliament. (2010). "Social impact of the crisis - Demographic challenges and the pension system", p. 8.

and benefits: pay-as-you-go or funded systems, defined contribution systems, or defined benefit systems (see Table 1).[16] In Slovenia the first tier is a pay-as-you-go system with defined benefits. Pay-as-you-go systems disperse risks intergenerationally, but they become financially unviable as the contributing population shrinks. This is also a feature of defined benefit systems. Longer life expectancy and smaller cohorts entering the labour market reduce the financial sustainability of defined benefit systems. Reforms to improve financial sustainability, however, create the risk of worsening pensioners' financial position. In order to alleviate pressures on public finances and preserve an adequate level of pensions, countries therefore introduce supplementary insurance pensions, which are investment products with defined contributions managed by private pension funds. A combination of systems where the shortcomings of unsustainable financing of the first tier due to demographic change are supplemented with a stronger second tier covers more risks and increases pensioner incomes.[17]

In order to improve their financial sustainability, pay-as-you-go pension systems are undergoing changes towards establishing a stronger correlation between contributions and benefits (i.e. amount of pensions), bearing in mind the economic and demographic conditions. One key measure that countries are undertaking to address the challenges of an ageing society is raising the retirement age. In half of OECD countries the retirement age will rise in the future under legislative changes already in place, and some countries are linking retirement age to life expectancy, which will result in an approximately 1.5-year average increase in retirement age in OECD countries over the next few decades. But since this is not sufficient, some countries have introduced automatic links between pension parameters and demographic change to reduce the gap between financing sources and expenditure (see Table 2).[18] As early as the 1990s, several countries reformed their pension systems by either tying their pay-as-you go system to a points system (e.g. the point value is determined as contributions from average wage, whereby an individual's contribution is translated into points) or introducing notional/non-financial defined contribution accounts, where an individual's contributions are notionally recorded on the contributor's individual account.[19] One of the more important elements of pension reforms has been the introduction of mechanisms that automatically adjust key pension parameters (retirement age, amount of pension, sources of financing) to demographic change, i.e. higher life expectancy, higher old-age dependency ratio, etc. Since the mid-1990s over half of EU Member States have introduced i) automatic balancing mechanisms, which ensure sustainability of the pension system by adjusting pensions or contributions, ii) sustainability factors, which adjust pensions to projected demographic changes such as life expectancy at retirement, or iii) automatic links between retirement age and life expectancy.[20] These mechanisms may be introduced in pay-as-you-go systems as well.

Many countries have also introduced supplementary pension insurance, whose main aim is to reduce individual and collective risk of lower income in old age. With supplementary insurance, individuals are supposed to reduce the gap between employment and pension income. Supplementary pensions are funded, defined contribution systems managed by private institutions and pension funds.[21] It is up to each country to decide which risks the supplementary insurance will mitigate (e.g. longer life expectancy, unsustainable increase in public expenditure or provision of adequate pensions) and what its role should be. Promotion of supplementary insurance is also essential for Slovenia, which has the lowest rate of participation in individual supplementary insurance (see Figure 7); in occupational pensions, the situation is better.

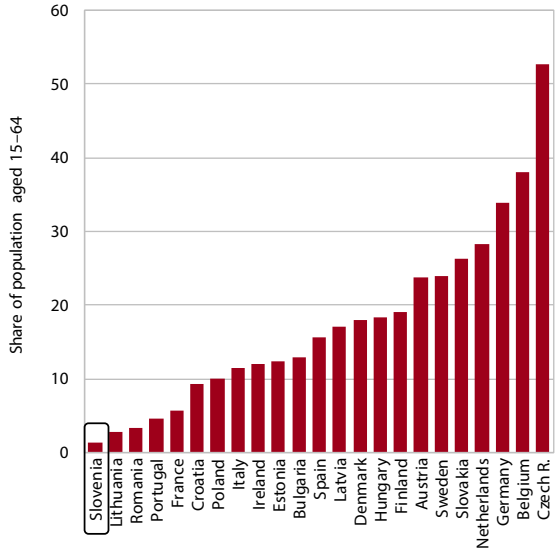
[16] Social impact of the Crisis…, 2010, p. 8.
[17] OECD Pensions Outlook 2018, 2018, p. 18.
[18] "Pensions at a Glance", 2017, pp. 28–29.
[19] Boulhol, 2019.
[20] "Pension reforms in the EU since the early 2000s", 2016.
[21] OECD Pensions Outlook 2018, p. 18.

Table 2: Countries with automatic balancing mechanisms, sustainability factors, or links between retirement and life expectancy

Country	Automatic balancing mechanism	Sustainability factor	Link between retirement age and life expectancy
Italy		x	x
Latvia		x	
Poland		x	
Sweden	x	x	
France		x	
Germany	x		
Finland		x	x
Portugal		x	x
Greece			x
Denmark			x
Netherlands			x
Cyprus			x
Slovakia			x
Spain	x	x	
Lithuania	x		
Malta			x

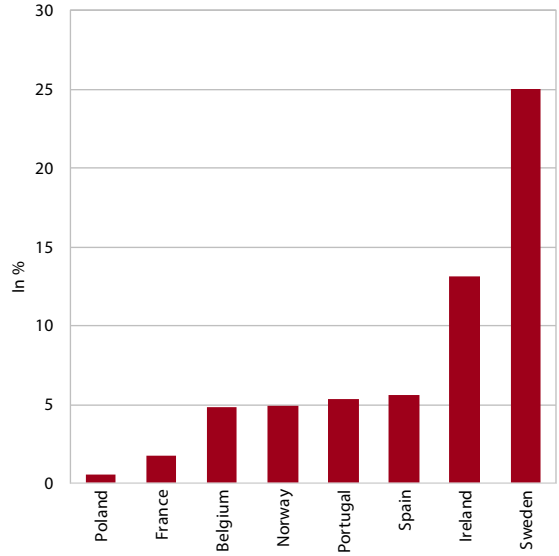
Source: "The 2018 Ageing Report: Underlying Assumptions and Projection Methodologies", 2017, Table II A2.3.
Notes: See source for more notes on individual countries.

Figure 7: Individual supplementary pension insurance policies in selected EU countries – share of participating population aged 15–64



Source: Pension Adequacy Report 2018.

Figure 8: Funds managed by public pension reserve funds in selected countries at the end of 2009, in % of GDP



Source: OECD Statistics, Eurostat.

To co-finance pension expenditure, some countries have set up public pension reserve funds. The role of these is to pre-fund social security benefits with funds that will be integrated into the pay-as-you-go system when pension expenditure exceeds revenue.[22] Their purpose is thus to provide a reasonably stable source of revenue for public pensions – these are funds used solely for the financing of social insurance – and to increase public savings and hence the national savings rate. The principal characteristic of these funds is that beneficiaries do not own the fund: it is owned by a managing institution or directly by the state, unlike funding from private pension schemes, where contributors have direct ownership of the funds and the schemes are regulated

[22] Rangus, 2012, p. 174.

by law and through supervision.[23] A by-country overview shows there is no single mechanism under which public pension reserve funds are financed (contributions, state budget, state property), nor is there a single rule determining when the first transfers will be made into the pay-as-you-go system after the accumulation of funds;[24] available data show that the amount of funds under management differs significantly (see Figure 8).

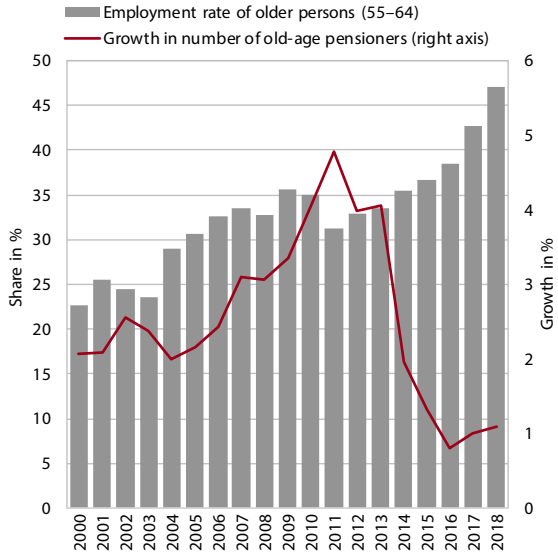
2.4 Existing measures in Slovenia and further possibilities to improve the sustainability of the pension system and provide adequate pensions

Most of the measures taken so far have failed to address long-term challenges. Over the last several years Slovenia has taken measures that have slowed the growth of pension expenditure in the medium term relative to GDP and increased the employment rate of older persons. Some measures were structural, but during the crisis pensions were also affected by austerity measures. Most of the measures listed below were for the short or medium term, whereas the long-term challenges associated with an ageing population and non-standard forms of employment have not been adequately addressed in terms of the sustainability of sources of financing and adequacy of pensions. Experiences in other countries indicate that changes will be required both in compulsory pension insurance and in the promotion of individual supplementary pension insurance. These warnings have been highlighted before, in the white paper on reform of the pension system and other analyses.[25]

A new pension law was adopted in 2012, but its positive impact on the slowing of expenditure growth will wear off in the coming years. Chief among the changes introduced by the ZPIZ-2 are equalisation of retirement conditions for men and women, extension of the period for the calculation of pensionable earnings, and changes to valorisation and indexation of pensions. According to estimates made when the act was passed, the reform was not designed for the long term, since the changes were expected to slow expenditure growth only until 2023, when pension expenditure relative to GDP was projected to start increasing again.[26] The data shows the legislation has slowed the increase in the number of old age pensioners and raised the employment rate of older person, which is nevertheless still among the lowest in the EU (2018: 47%; EU-28: 58.7%).

The 2012 legislative amendments also tackled pension adequacy. Adequacy of pensions refers to the extent to which the pension system shields individuals from poverty in old age and provides a stable income for the entire time spent in retirement.[27] In Slovenia the at-risk-of-poverty rate in over-65-year-olds is higher than in the working age population, with single women particularly vulnerable.[28] The challenges regarding pension adequacy affect mostly persons with shorter length of service and career breaks and the self-employed.[29] It is encouraging that new pensioners, in particular women who retire older and with more years of service, have higher pensions since the currently retiring generations spent more time on the labour market that previous cohorts due to changes in retirement conditions after the adoption of the pension reform (higher minimum retirement age, longer years of service).

Figure 9: Employment rate of older persons (55–64) and increase in number of old-age pensioners, Slovenia, 2000–2018



Source: Eurostat, ZPIZ.

[23] Yermo, 2008, pp. 134–136.
[24] Rangus, 2012, p. 177; White paper on pensions, 2016, pp. 143–144.
[25] White paper on pensions, 2016, "Economic Issues 2016", 2016.
[26] Supplementary pension insurance was also reformed with the introduction of life-cycle pension funds and restrictions on the withdrawal of funds paid by employers.
[27] There is no generally accepted definition of an adequate pension. The OECD, for example, estimates that adequate income in old age is roughly 70% of income before retirement (more for those with lower incomes); if compulsory insurance pensions do not achieve this replacement rate between last pay and first pension, the difference can be covered with supplementary pension savings. To ensure an adequate pension, an individual should save between 5% and 15% of their wages every year for retirement, depending of the target replacement rate, 25% or 70%, respectively). (Antolin, 2009, p. 3).
[28] For more, see development reports, e.g. Development Report 2019, Section 3.1. The at-risk-of-poverty threshold for a single-person household was EUR 662 per month in 2008; the average old-age pension including a portion of survivor pension and excluding recipients of partial pensions was EUR 727, disability pension was EUR 550, and survivor pension was EUR 401.
[29] The 2018 Pension Adequacy Report, 2018, p. 228.

Public employees have been enrolled in supplementary collective insurance since 2003. Collective supplementary pension insurance for public employees was introduced as a result of a 2003 agreement between public sector trade unions and the Government of the Republic of Slovenia stipulating that a wage increase be permanently translated into a supplementary insurance premium.[30] It is regulated by a separate act and a collective agreement on the pension plan for public employees. Participation is compulsory for all public employees and the insurance is managed under a mutual Pension Fund for Public Employees.[31] At the end of 2018 the fund had 228,741 members, of which 181,038 were active.[32] Aside from premiums paid by employers, public employees may make additional individual payments to increase their supplementary pensions. The entirety of the individual premium (payable from net wage) is tax deductible.[33] A total of 9,290 employees thus have individual funds on their personal pension accounts. At the end of 2018 savings by public employees totalled EUR 783 million, of which EUR 740 million in collective premiums and EUR 43 million in individual premiums (both including accrued returns generated by the fund). In 2018 the average monthly collective premium was EUR 32 and the average individual premium EUR 50.

The Act Amending the Pension and Disability Insurance Act introduced the guaranteed pension in October 2017. Workers who retire with 40 years of service or an appropriately shorter service without the purchase of additional years of service (those already in retirement were also eligible) are entitled to a guaranteed pension of EUR 500[34] even if their pension were lower under the general rules. Certain recipients of disability pensions were also eligible.[35] ZPIZ data shows that in the first month there were 52,622 beneficiaries of guaranteed pension.

[30] During the crisis the payments were reduced; since 2018 they have been paid in full again.

[31] It is managed by Morda zavarovalnica d.d. As of 1 January 2017 it was transformed into a guaranteed-return sub-fund of the Pension Fund for Public Employees. The Pension Fund for Public Employees conducts a life-cycle investment policy with three sub-funds that differ by risk profile.

[32] Members for whom premiums were paid. The majority of the others are members on hold who no longer have public employee status and whose funds are on hold until they claim supplementary pension benefits, early supplementary pension or transfer of funds to another provider of a collective pension plan; a minority are members on hold due to suspension of employment contract under the act governing labour relationships.

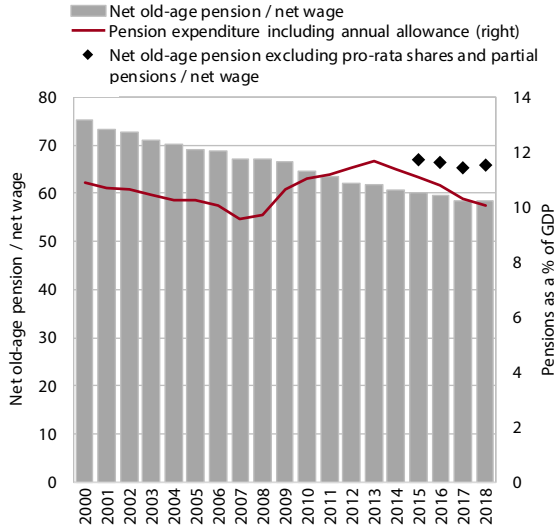
[33] It amounts to 24% of compulsory contributions for pension and disability insurance or 5.844% of gross wage, but no more than EUR 2,819.09 annually.

[34] The amount is subject to periodic indexation (in February it stood at EUR 530.57).

[35] In persons disabled due to occupational injury or occupational disease whose pension along with the disability allowance was set at 85% of pensionable earnings under regulations applicable until the end of 1999.

Pension expenditure as a share of GDP was the same in 2018 as in 2008, but the ratio between average pension and average wage declined in this period. In both years pension expenditure amounted to 9.7% of GDP, having increased strongly in the initial years of this period due to a sharp deceleration in economic activity and uptick in retirement in the run-up to the adoption of a new pension reform. By the end of the period it contracted again due to the economic upturn, the preservation of certain austerity measures and slower growth in retirement following the adoption of the pension reform. On the other hand, net old-age pensions declined relative to net wages, a result of a restrictive indexation policy during the crisis and, according to our assessment, an increase in early retirement prior to the 2012 changes to the pension act, which resulted in slightly lower pensions. Nevertheless, the data shows that the ratio between net old-age pension and net wage excluding partial and pro-rata pensions is higher (see Figure 10).

Figure 10: Pension expenditure as a % of GDP and ratio of average pension to average wage



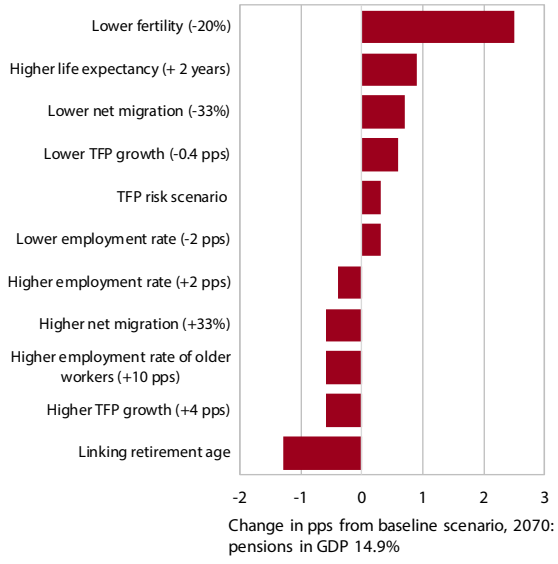
Source: SURS, Ministry of Finance, ZPIZ.
Note: Partial pension refers to phased retirement and pro-rata pension refers to the portion of pension a pensioner receives from the ZPIZ (the remainder of the pension being received from abroad).

On the pension expenditure side, the most efficient measures contributing towards the long-term sustainability of the system would be to link retirement age to life expectancy and change the indexation of pensions. This is evident from sensitivity tests that varied certain underlying assumptions, which were conducted in the framework of long-term EC projections (see Figure 11). Among the selected sensitivity tests, linking retirement age to growing life expectancy would contribute the most to lowering pension expenditure. Certain other simulations show[36]

[36] White paper on pensions, 2016; Economic Issues 2016; "Assessing the

that changing the indexation of pensions by increasing indexation to inflation and reducing indexation to wages would have a similar or even bigger impact.[37] Due to the need to provide adequate pensions, such a transition should be phased in so that future generations can offset the income shortfall due to change of indexation by increasing savings in the second tier or with other measures, for example raising the basic pension. On the other hand, the tests show that pressure on long-term expenditure may increase, in particular if birth rate and net immigration are lower and life expectancy is higher than in the baseline projections scenario; higher migrations, increased employment rate of older persons and similar would have the opposite effect. This underlines the importance of action in areas outside the core pension system, for example in labour market policy, migration and natality policy, that affect pension expenditure.

Figure 11: Sensitivity tests of baseline scenario of pension expenditure projections for Slovenia



Source: The 2018 Ageing Report.

Expenditure-side measures should be coupled with the promotion of additional sources of financing. One possible solution to supplement key sources of financing of the current pay-as-you-go system (social contributions) would be the introduction of compulsory insurance for everyone, where the contributor and the employer would co-finance complementary pension insurance under an opt-out system for contributors, which is one of the proposals in the White Paper.[38] The White Paper furthermore provides several proposals for the promotion and reform of complementary insurance, for example co-financing of premiums for low-income individuals or young contributors with non-permanent jobs. Encouraging youths to enter the labour market sooner would increase revenue as well, but the effects would probably be more pronounced for individuals, who would thus secure higher income in old age, than at aggregate level. For the pay-as-you-go system in the first tier, the White Paper suggests the option of introducing a points system. Points systems typically measure individual incomes relative to average income, whereby the ratio is used to determine the number of points for each period of paid contributions. This is a simpler, and clearer, way of improving the link between paid contributions and pensions, but it would necessitate introducing a transitional period for a gradual transition to the changed mechanism of determining benefits.[39] It would probably improve interest in and knowledge of future pensions among the working-age population and motivate individuals for additional savings.

At the beginning of October 2019 the Government confirmed a new proposal of changes to the pension system.[40] Due to take effect in 2020, the proposal focuses on increasing pensions as the accrual rate for 40 years of service will be the same for both sexes (63.5%; for men it will increase over six years, while for women it will no longer decline and will remain at the level it was in 2019). This will improve the incomes of new pensioners. The percentage of pension received by those who remain in the workforce after meeting the retirement conditions will increase as well (from 20% to 40% in the first three years), which is how the proposal addresses the low employment rate of older persons and labour shortages. However, the proposal does not introduce sustainability parameters, further amplifying the challenge of long-term expenditure growth and long-term sustainability of the system.

One additional source of financing the shortfall in pension expenditure in the future will be a public pension reserve fund. Kapitalska družba should have been transformed into a public pension reserve fund by the end of 2015 according to law, but a public pension reserve fund act has not yet been adopted. Under a draft bill that was submitted for public consultation in 2017,[41] the accumulation period should be 20 years, whereupon the fund would transfer 90% of income from the management of own assets to the ZPIZ every year. Assuming returns that were simulated at 3%, 5% and 8%, and taking into account Kapitalska družba assets in 2015, which stood at EUR 931 million, the pension reserve fund's assets would be around EUR 3.7 billion,

effects of some structural measures in Slovenia", 2016.

[37] This measure has a high impact because the effects of lower expenditure due to change of indexation accrue; it is also a measure that affects the entire population of pensioners.

[38] White Paper on pensions, 2016, p. 206.

[39] White Paper on pensions, 2016, pp. 120–121, 266.

[40] The 46th regular session of the Government of the Republic of Slovenia, 2019.

[41] Proposal for an act on a pension reserve fund in public consultation, 2017.

EUR 5.4 billion and EUR 9.9 billion respectively in 2040 and average transfers to the ZPIZ would be around EUR 115 million, EUR 272 million and EUR 760 million respectively from 2040 to 2060. At the highest simulated rate of return, this would represent roughly two-thirds of the current budget transfer to the ZPIZ.

3 Health care

3.1 System of health financing in Slovenia

The current health financing model in Slovenia has hardly changed since 1992. Compulsory health insurance based on the Bismarck model was introduced in 1992 with the adoption of the Health Care and Health Insurance Act. This replaced an earlier socialist model of health care in which contributions from wages and other income were likewise the basic source of financing, although differences in management are more significant.[42] Due to difficult economic conditions following independence, contributions did not suffice to cover the needs. While high user charges were introduced for the majority of health services and medicines, the Health Care and Health Insurance Act put in place voluntary complementary health insurance to cover these user charges, partially modelled on that of France. To a lesser extent health financing also included the state budget and local budgets, in particular to cover prevention and public health, and households as the direct payers of certain services and medicines that are not critical to health. This system has survived to this day.

The system of compulsory and voluntary complementary health insurance in Slovenia provides coverage of a very broad benefit package by international standards. Compulsory health insurance provides insurance against disease or injury not related to work and insurance for work-related injuries and occupational diseases. The benefit package set down in the Health Care and Health Insurance Act and the Rules on Compulsory Health Insurance Benefits is defined as a share of the total cost of service or medicine.[43] Insured persons must cover the remainder of the cost, but they may sign up for complementary health insurance with one of three insurance companies. Over 95% of the population liable for user charges are covered by complementary health insurance.[44] Enrolment in other private health insurance is modest, but it has been increasing in recent years due to longer waiting times.[45]

Health expenditure by type of financing varies significantly by country, but Slovenia stands out

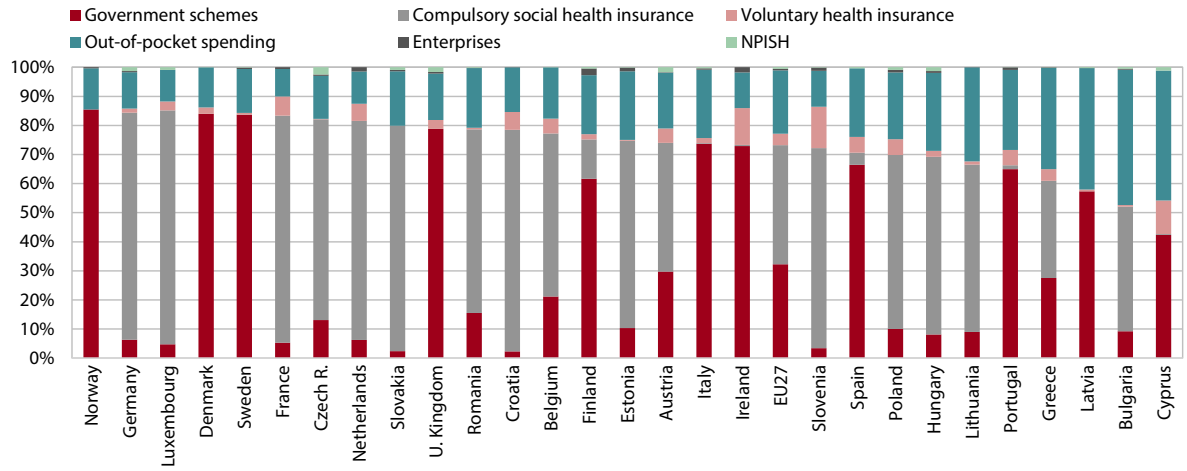
[42] Toth, 2003.

[43] The benefit package and share of price covered by compulsory health insurance is determined in Article 23 of the ZZVZZ.

[44] Children up to age 15 and those in education until 26 are exempt; the user charges of recipients of social benefits, the war-disabled, war veterans and prisoners have been covered since 2009 by the state (between 2009 and 2011 on request and since 2012 automatically based on status).

[45] In 2017 roughly 3.2% of the population were covered by such complementary health insurance. Other types of voluntary insurance accounted for only 1.6% of total complementary insurance premiums in 2013, rising to 2.6% in 2015 (EUR 12.2 million) and 3.6% in 2017 (EUR 17.7 million) (Slovenian Insurance Association, 2018).

Figure 12: Health expenditure by financing scheme, international comparison for OECD countries, 2017



Source: Eurostat Database.
Note: Countries are ranked by share of public expenditure in total current expenditure. EU27 is simple average, without Malta.

in international comparisons by its low share of government schemes (excluding transfers) and high share of voluntary health insurance. The share of direct expenditure from government schemes (the state and municipal budgets; excluding transfers) was the second lowest in the EU in 2017 (see Figure 12). Preliminary estimates for 2018 show public expenditure accounted for 72.2% of total current health expenditure, of which the majority is covered by compulsory health insurance (66.4%); pension fund (mostly for long-term health care -2.4%), and general and local budgets funds for health care, which are largely spent on administration of the system, prevention, public health and long-term health care, represent the remainder of public funds (3.4%).[46] Aside from these health expenditure by direct government schemes, the majority of countries also provide government financing indirectly via transfers to compulsory social health insurance (see Figure 13). In countries with a Bismarck system of social health insurance (Austria, Belgium, Czech Republic, France, Luxembourg, Netherlands, Germany and Slovakia), indirect government transfers accounted for an average of about 11.8% of all sources of funding health system in 2017. Another distinct feature of the Slovenian health expenditure structure is the high share of voluntary insurance (14.3%), which is associated with the complementary health insurance system for user charges (only France and Croatia have similar arrangements). In the EU, the share of voluntary health insurance averages only 4%.[47] But the broad basic benefit package covered with a combination of public sources and complementary insurance also results in a relatively low share of out-of-pocket expenditure (12.3%)[48] and good affordability of health care in Slovenia.[49]

The level of Slovenia's public expenditure on health is closely connected with HIIS revenues, i.e. contributions by insured persons. In 2018, 69% of all public health expenditure was covered by the system of compulsory social insurance, with the majority from the HIIS fund and EUR 83 million coming from the pension fund. In the structure of the revenues for compulsory health insurance (HIIS), 78% came from contributions of insured persons, 13.5% from contributions for pensioners (transfer from pension fund) and only 3.2% from the government transfer (see Figure 13). Due to the high share of revenue from labour, HIIS expenditure is strongly exposed to cyclical swings; moreover, the HIIS must run a balanced budget at the annual level and cannot borrow or adjust its revenue by rising contributions.[50] In the period of financial crisis in 2009–2013, multiple measures were therefore adopted to contain expenditure (see Section 3.4.2). After 2013 faster employment and wage growth increased HIIS revenue, facilitating faster expenditure growth. But even in the medium term the performance of the HIIS will be increasingly under pressure as a result of the contraction of the working-age population.

Formally employed persons contribute a significantly higher share of their income than pensioners and all other insured persons for the same package of compulsory health insurance benefits. The rate of

[46] Allowance for home care and assistance under the Act on Social Care of Persons with Mental and Physical Impairments and assistance and attendance allowance under the Social Care Act, War-Disabled Act and War Veterans Act are funded from the state budget (see Nagode et al., 2014).

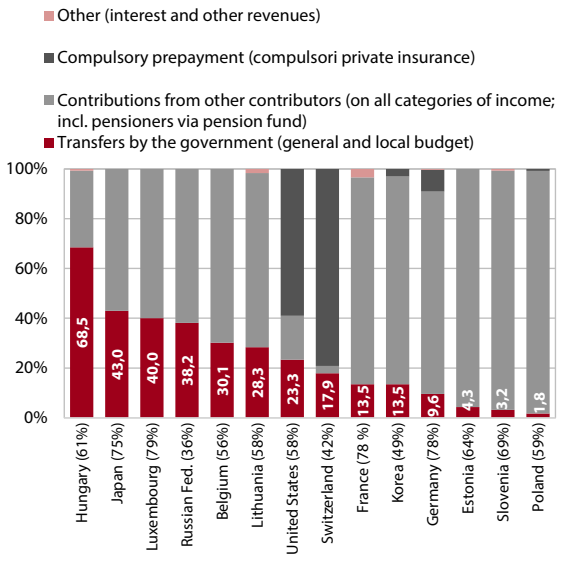
[47] Voluntary health insurance premiums typically reflect age and risk profile and are hence affordable only to the wealthier population.

[48] Out-of-pocket expenditure does not include complementary health insurance premiums, since they are not directly payable to health service providers but are collected in an insurance scheme run by a private health insurance company (see SHA 2011, 2017).

[49] The majority of unmet needs for health care is not due to financial reasons, but is associated with long waiting times (Zver, E., 2019).

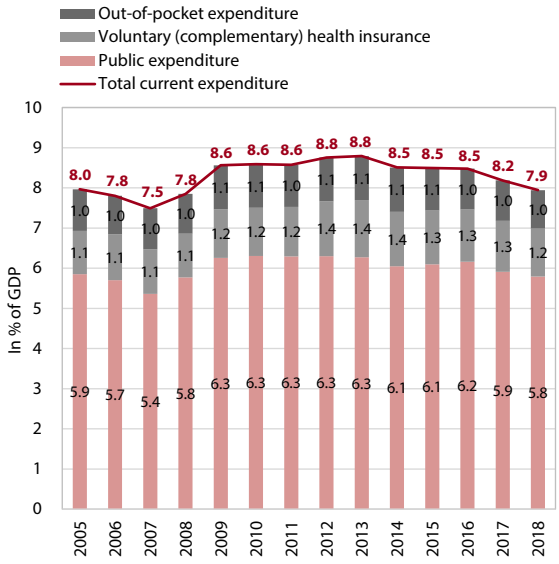
[50] Since the adoption of the Fiscal Rule Act in 2015, the HIIS expenditure ceiling has been determined in the Ordinance on the Framework for the Preparation of the General Government Budget.

Figure 13: Compulsory health insurance by sources of revenue, Slovenia and OECD countries, 2017



Source: Health at a Glance, 2019, for France OECD Fiscal Sustainability of Health Systems…, 2015.
Note: Countries for which data are available; for France year 2013.
The brackets show the shares of compulsory health insurance in total health expenditure. According to the international methodology, the sources for compulsory health insurance also include assistance and attendance allowance, which in Slovenia is paid by the ZPIZ

Figure 14: Health expenditure as a share of GDP by financing scheme, Slovenia, 2005–2018



Source: SURS, "Health expenditure and sources of financing", 2019; IMAD calculations.
Note: Health expenditure according to the System of Health Accounts methodology (SHA 2011, 2017) also includes the health part of long-term care (category HC.3), which represents the bulk of public expenditure on long-term care.

compulsory health insurance contribution depends on the status of the insured person (employee, self-employed, tradesman, pensioner, farmer, unemployed person, etc.). The differences in the contribution rates of individual categories of insured persons (see Table 3), which stem from status rather than income, therefore do not always reflect the principle of solidarity. They might also be problematic for the long-term sustainability of public sources of heath financing. Changes in the number of insured persons by individual category in the period 2007–2018 indicate there is already a transition under way from insurance categories with higher contributions (formally employed) to categories with lower contributions (pensioners) and an increase in the number of the self-employed, although the latter category contracted slightly in the last three years due to changes in the labour market.

Public health expenditure amounted to 5.8% of GDP in 2018. Public health expenditure trends for the last decade reflect swings associated with the adoption of particular measures and the economic cycle, but throughout this period it remained at around 6% of GDP (see Figure 14). The same applies to total current health expenditure, which stood at 7.9% of GDP in 2018, below the EU average. Existing measures have successfully maintained the level of expenditure, but problems appeared in the financial performance of public health institutions and waiting times became longer, reducing the accessibility of health services.

Measured by total per capita health expenditure, the gap to the EU average increased in the last few years. In 2013 Slovenia was at 85% of the EU average, while in 2017 it achieved only 81% of the EU average. On the other hand, measured by per capita GDP, the gap narrowed, as Slovenia went from 82% to 85% of the EU average.

Complementary health insurance represents an additional health financing source as a large proportion of the population is enrolled; the downside is that it is regressive. Around 95% of persons liable for user charges have complementary health insurance. Under the Health Care and Health Insurance Act (Article 23), most health services are subject to high user charges for the majority of the population. Only certain conditions and diseases (as well as children and youths under 26 enrolled in school) are entirely covered by compulsory social health insurance, which means that the risk of user charges is very high. Since the introduction of complementary health insurance in 1992, the share of user charges has gradually risen due to a lack of public funding, in particular during the last crisis. The single premium regardless of income represents the main weakness of the complementary health insurance scheme; this means that the system is regressive, though it should be underpinned by income solidarity given the high risk of user charges.[51] The regressive nature

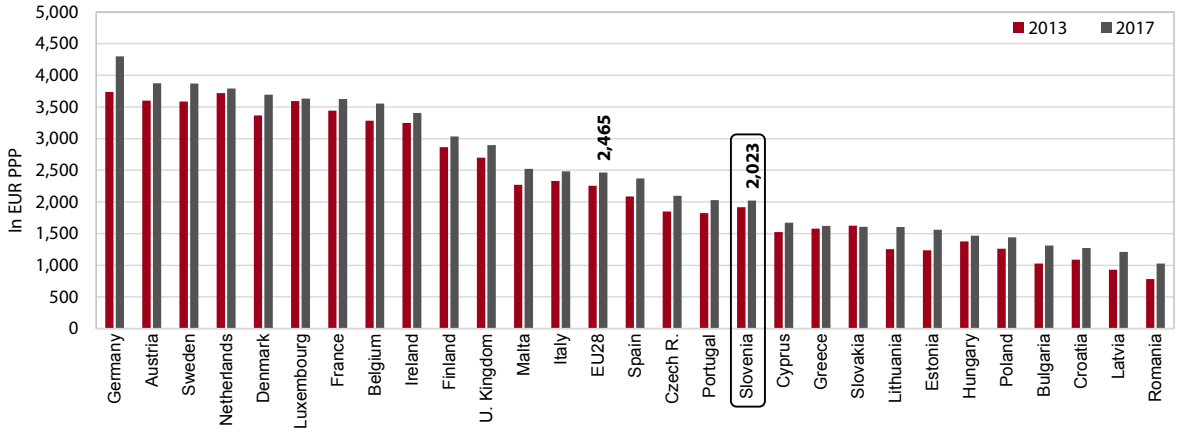
[51] In 2016 the annual premium corresponded to 62% of monthly net minimum wage, 33% of average net wage and 57% of average net

Table 3: Compulsory health insurance contributions by basic category of insured person, Slovenia, 2018

Category of insured person	Number of insured persons	Contribution rate in %	Monthly contributions per insured person in EUR	Paid contributions in EUR 1,000
Formally employed[1]	813,743	13.45	219	2,141,532
- employers	813,743	7.09	114	1,115,746
- employees	813,743	6.36	105	1,025,786
Self-employed	75,241	13.45	146	131,993
Farmers	11,579	18.78 or 6.36	50	6,915
Pension fund for pensioners	545,257	5.96	60	392,652
Unemployed[2]	16,069	11.92	92	17,813
Persons paying contributions individually (under Article 20 of the Health Care and Health Insurance Act)	44,929	5.96	24	12,908
Persons without income (under Article 21 of the Health Care and Health Insurance Act)	44,885	2.00	33	17,690
Other insured persons[3]	44,585	Various	74	39,752
Total	1,596,288			2,761,255

Source: Business Report for 2018, 2019, HIIS.
Notes: [1] The figure includes revenue from sickness benefits and parental benefits. [2] The figure refers only to unemployed persons enrolled in insurance by the Employment Service as recipients of unemployment allowance funded by the insurance against unemployment. [3] Includes contributions for prisoners, default interest, subsequently paid cancelled contributions paid by the Republic of Slovenia, contributions for insured persons under Articles 17 and 18 of the Health Care and Health Insurance Act, contributions from allowances funded by disability insurance, and unclassified contributions.

Figure 15:Health expenditure per capita, in EUR PPP, 2013 and 2017



Source: Eurostat, 2019.
Note: The figure for the EU-28 is the unweighted average. OECD Health at a glance: Europe 2018 uses the weighted average for the EU-28 (EUR PPP 2,773), which reflects to a greater extent the data from large EU countries (Germany, France, United Kingdom) that have relatively high per capita expenditure.

of this source was significantly reduced in 2012, when new social legislation introduced automatic coverage of user charges from the state budget for recipients of social assistance (see Figure 16).[52] The share of income households spend on complementary health insurance premiums rose from 2.8% to 3.3% in 2005–2015, but in 2012 it dropped sharply for the first income quintile, which includes recipients of social assistance. At the other end, the share increased the most for households in the top quintile as higher complementary insurance premiums combined with declining consumption in the crisis period.[53] A study by the WHO[54] shows that this source is less regressive than in France but more than in Croatia, the only two other countries with a similar system of complementary health insurance.

Households' out-of-pocket payments are low in Slovenia. The high coverage of the population with

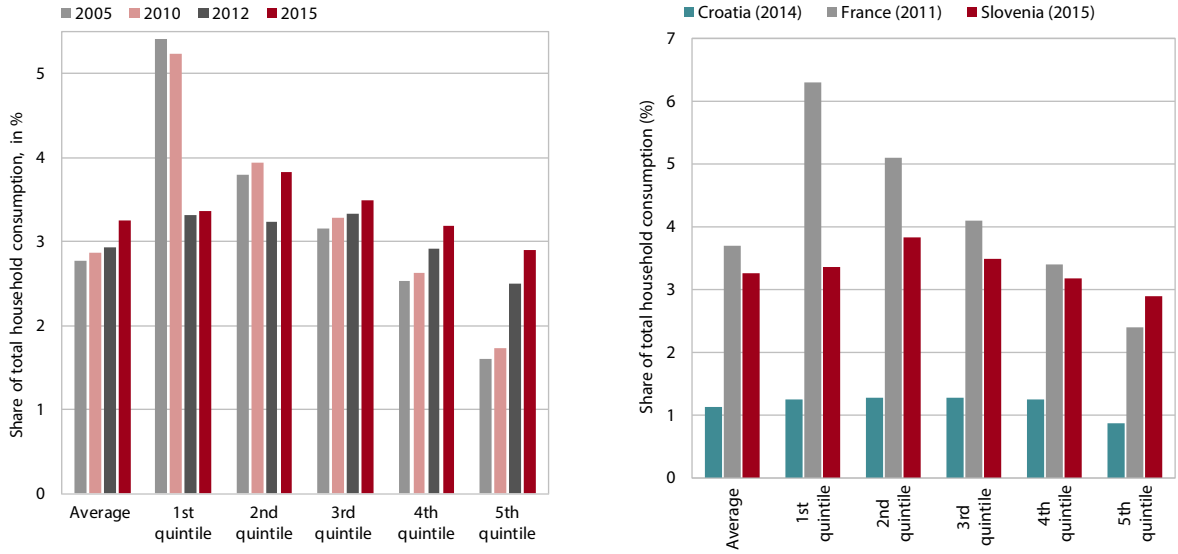
pension (Klemenčič, 2018).

[52] This benefit had already been introduced in 2009, but until 2012 it was not automatically conditional on eligibility for social assistance.

[53] Zver et al., 2019.

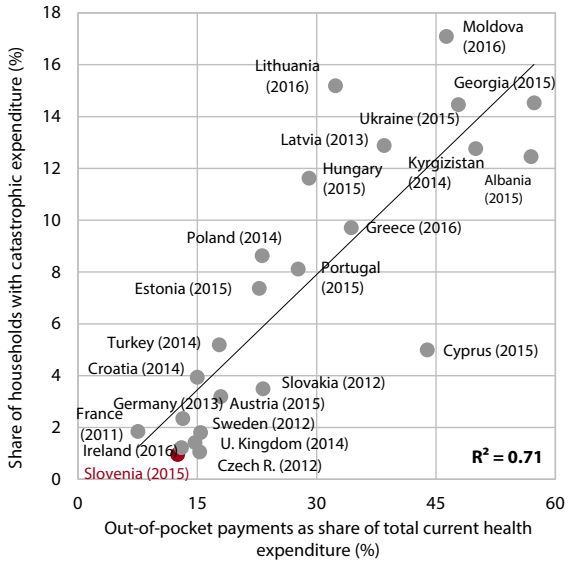
[54] Thomson, S., et al., 2019.

Figure 16: Voluntary health insurance expenditure as share of total household consumption by income quintile, Slovenia (left) and comparison with France and Croatia (right)



Source: SURS, Household budget survey; SURS calculations; published in Zver, E., Jošar, D., and Srakar, A. (preprint).
Note: The analysis shows the category private insurance connected with health (COICOP 12532), excluding accident insurance. It includes all private health insurance premiums (complementary health insurance accounts for 97% of the total). Since 2013 the share of other private insurance (i.e. supplementary, parallel) has been rising rapidly: from 1.3% in 2013 to 2.6% in 2016 and 3.6% in 2017 (Slovenian Insurance Association, 2018).

Figure 17: Share of households with catastrophic health expenditure and share of out-of-pocket health expenditure in EU countries, latest available year



Source: Thomson, S., et al, 2019, WHO Barcelona Office for Health Systems Strengthening.
Note: Out-of-pocket expenditure is deemed catastrophic for a household if it exceeds 40% of their capacity to pay, i.e. income over the minimum cost of living, which includes food and essential consumer goods plus housing costs.

complementary health insurance contributes to mutuality between the healthy and the sick population (and young and old) in the collection of complementary health insurance funds. For the majority of the population, the cost of the bulk of health services and medicines is fully covered, partially with compulsory social health insurance and partially with private complementary health insurance. Households' out-of-pocket payments, which are a strongly regressive source of heath financing[55] and are the most problematic type of health expenditure for individuals, are therefore relatively small in the current system, whereas affordability of health services is high. The private voluntary complementary health insurance system thus contributes to individuals' social security, in particular in the older population, the biggest users of health services.[56]

[55] Due to inequalities in health, those with the lowest incomes and older persons are in greatest need of health services (Inequalities in Health, 2018).

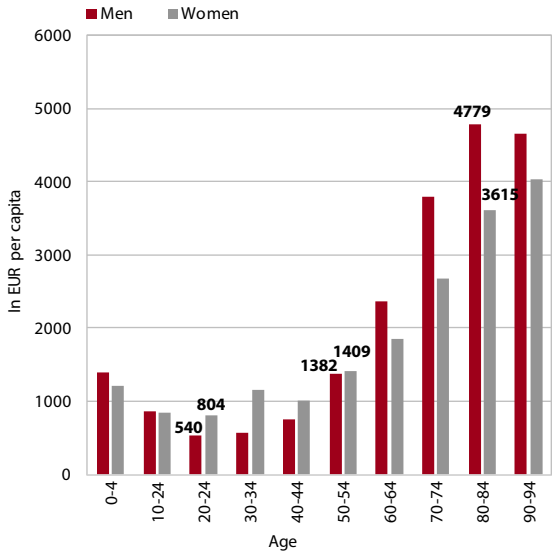
[56] In conventional private health insurance, premiums depend on individual health risks and are significantly higher for older and less healthy persons.

3.2 Impact of demographic and non-demographic factors on the gap between health revenue and health expenditure

In the past, economic growth and technological progress were the leading factors behind fast growing health expenditure; in future the pressure of demographic factors will increase as well. Aside from increasing per capita GDP, which affects expectations about health care, the main non-demographic factors are new health technologies,[57] which expand treatment options, improve the quality of service and increase the Baumol effect on price growth.[58] Health expenditure per capita grows quickly as people age, in particular after the age of 60, which will increase the demographic pressure on expenditure growth as the share of the older population rapidly increases in the future (see Figure 18).

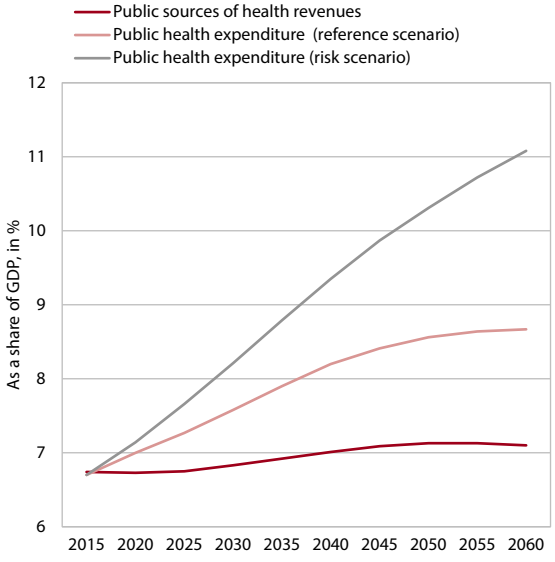
Long-term projections show an increase in health expenditure as a share of GDP, whereby the share of public funds, which are contribution-based, will not be able to keep up with the pace. The Institute for Economic Research (IER) projections,[59] which present all public sources of health revenues and all public health expenditure (including sickness benefits but excluding investment), show that the gap between health revenue and health expenditure in Slovenia would amount to 0.8% of GDP in 2030 under the reference scenario, widening to 1.6% of GDP by 2060. The projection for sources of health financing assumes that revenues will grow in lockstep with GDP growth (additional model estimates are used for pensioner contributions). The expenditure projection uses the latest EC estimates.[60] The reference scenario reflects in particular the effects of demographic factors; non-demographic factors are considered only to a lesser extent.[61] The projections already include the assumption that the health of the population will improve and that certain other measures

Figure18: Public health expenditure by age and sex in Slovenia, 2016



Source: HIIS, internal data used for long-term projections of the European Commission – The Ageing Report 2018.
Note: Per capita public health expenditure is adjusted to the aggregate level of public health expenditure used for AWG projections (public expenditure under SHA methodology excluding long-term health care (HC.3) plus public expenditure on investment in health providers according to COFOG methodology).

Figure 19: Long-term projection of public health expenditure, 2015–2060, as % of GDP



Source: Calculations by Majcen, B., and Sambt, J., 2018, based on the assumptions of The 2018 Ageing Report, HIIS.
Note: Sources of revenues as a share of GDP remain relatively stable over time, as GDP growth depends on productivity growth and employment trends, while the amount of social security contributions paid depends on the growth of wages (which are assumed to increase in line with productivity growth) and employment trends. For pensioners' contributions to the HIIS, which represent only 15% of revenues for compulsory health insurance, IER model projections are used. These projections show that the total expenditure on pensions would increase strongly by 2060 under the current pension system (and thus also the contributions for pensioners (from 0.98% to 1.33% of GDP by 2060). (Majcen B., Sambt J., 2018).

[57] The latest studies show that new technologies had already contributed some 25–50% to health expenditure growth in the past, but a portion thereof is already accounted for in the contribution of GDP growth, longer life expectancy and price growth, which is why the contribution of new technologies itself is added as the remaining growth. Demographic factors contributed around 25% (Marino, A., and Lorenzoni, L., 2019).

[58] According to Baumol (1996), faster growth of health prices is the consequence of relatively low productivity of the health care sector compared to other activities. Health care is a labour-intensive industry in which the deployment of new technologies does not reduce the demand for labour (indeed it often increases it), which is why prices tend to grow faster than in other industries.

[59] Majcen, B., and Sambt, J. (2018).

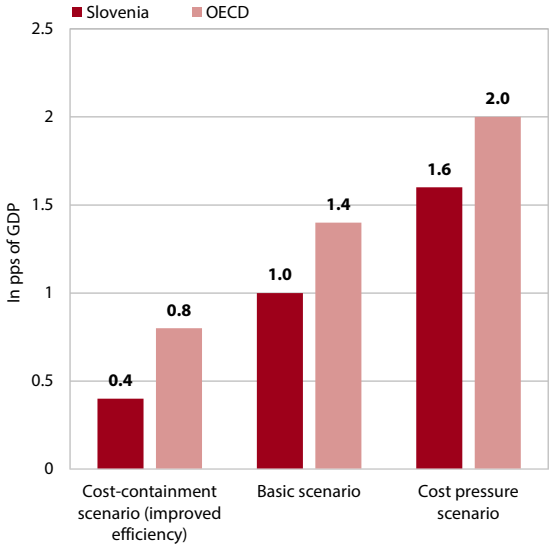
[60] The 2018 Ageing Report, 2018.

[61] The reference scenario assumes that half the additional years of life will be healthy and that income elasticity, combined with non-demographic factors, will be 1.1. The risk scenario assumes elasticity of 1.4.

will be taken to restrain expenditure growth, so that the efficiency of the system will improve. Assuming a greater impact of non-demographic factors, which is calculated in the risk scenario, the gap between public sources of financing and expenditure may widen to as much as 4.0% of GDP by 2060.

The introduction of measures to improve the health status of the population and efficiency of the health system has the potential to significantly slow the growth of health expenditure. The authors of OECD projections point out[62] (see Figure 20) that the purpose of long-term scenarios which show that health expenditure can be restrained if the efficiency of the system improves is i) to highlight that health policy has the power to restrain expenditure growth and ii) to show that pressure on health expenditure growth will increase to the extent that countries will have to achieve a consensus on raising health expenditure if they are to preserve the current level of accessibility and quality. Under the scenario that assumes the maximum possible effect of such measures, total health expenditure in Slovenia would still increase by 0.4 pps of GDP by 2030.

Figure 20: Projection of increase in total health expenditure in Slovenia and OECD countries, 2015–2030



Source: Lorenzoni et al. (2019).
Note: The OECD projections (Lorenzoni et al., 2019) include total health expenditure (public and private), including the health portion of long-term care.

[62] Lorenzoni et al., 2019.

3.3 The challenge of bridging the revenue–expenditure gap: examples of other countries

The adoption of measures that would reduce the gap between revenue and expenditure in health systems requires balancing the goals of financial sustainability and the accessibility and quality of care. Many measures do not strictly fall under health care, which requires adequate intersectoral policies aimed at increasing the positive and mitigating the negative effects of ageing. Finding a balance between financial sustainability and quality of care is also a question of social values and political priorities, which in many countries involves raising public expenditure on health as one of the principal factors of economic development. Analyses and experiences of other countries show that the gap between revenue and expenditure in health care can be reduced by acting towards:

(i) Improving the health status of the population and promoting healthy and active ageing,
(ii) Making changes to sources of health financing, and
(iii) Improving the efficiency of the system on both the supply and demand sides.

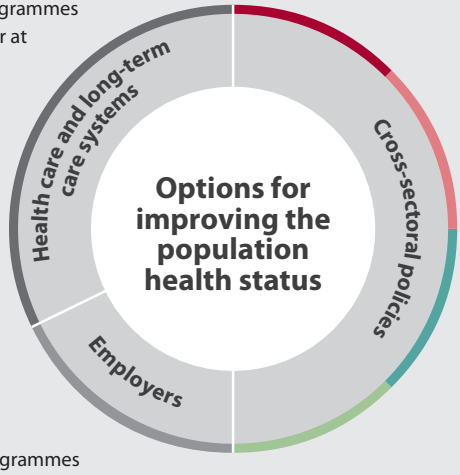
Below are presentations of diverse possible measures in each of these areas that other countries have deployed to reduce the gap.

3.3.1 Improving the population health

Improving the health status of the population may help significantly increase revenue and mitigate health expenditure growth. A healthier and more active population can participate in the labour market to a greater extent, contributing to higher revenue and, due to lower rates of illness, to reducing the gap between revenue and expenditure for social protection systems. Increasing healthy life years directly reduces the share of the population depending on caring assistance and lower expenditure for medical treatment, while indirectly increasing the participation of older persons in formal and informal work. It is thus essential that as people live longer, they are also healthier and active longer. Studies[63] show that to increase the number of healthy life years, it is important that measures be taken at the level of the health care and long-term care systems, that employers invest in health, and that a variety of cross-sectoral policies be deployed (see Figure 21). Due to significant inequalities in health due to income and education, it is urgent to dedicate special attention to older and poorer persons.[64]

[63] "The Heavy Burden of Obesity…", 2019; Rehm et al., 2012; Merkur et al., 2013; Sassi et al., 2013; Cecchini et al., 2015.
[64] "Inequalities in Health", 2018; Krejstad et al., 2016.

Figure 21: Options for improving the health status of the population



Health care and long-term care systems
- Strengthen public health policies
- Strengthen prevention at primary level
- Strengthen community nursing
- Strengthen mental health policies
- Introduce cancer screening programmes
- Early detection of risk behaviour at primary level
- Home visits to older chronic patients to maintain ability for independent living
- Early rehabilitation programmes
- Strengthen secondary and tertiary prevention

Impact on individual choice
- Education system
- Media advertising
- Packaging labelling
- Mobile applications

Expansion of individual choice
- Organic food subsidies
- Bicycle lanes
- Green and recreational areas
- Public transportation
- Programmes to strengthen physical and cognitive abilities of older persons

Price and tax policy
- Taxation of sugary drinks and salty/fatty food
- Higher excise duties on alcohol and tobacco
- Subsidies for healthy food
- Incentives for employers to invest in workers' health
- Subsidies for sports and recreational activities

Employers
- Safety at work improvements
- Introduction of recreational programmes for employees
- Care for employees' mental health
- Adaptation of jobs to older persons
- Investment in preventive examinations of employees
- Telecommuting and flexible forms of labour
- Measures to reduce absenteeism

Bans and restrictions
- Advertising of unhealthy food, tobacco and alcohol
- Smoking indoors
- Driving under the influence of alcohol
- Alcohol sales
- Sales of tobacco products
- Sales of unhealthy foods

Source: IMAD, based on an overview of analyses Rehm et al. (2012); Merkur et al. (2013); Sassi et al. (2013); Cecchini et al. (2015).
Note: [1] The measures must focus on improving the accountability of employers for health and safety at work, regulations on temporary absence from work and sick pay, assessment of inability to work, reduction of hospital waiting times, and priority treatment of cases of long-term sick leave.

3.3.2 Changing the sources of health financing

When changing sources of health financing, it is necessary to bear in mind the fundamental goals of the health system and the existing systems of social protection. Achieving long-term fiscal sustainability is not a health policy objective per se, but is foremost a consideration of the limitations of public financing. What is important is how fiscal sustainability will be achieved within the framework of the fundamental objectives of the health system – ensuring equal access to the system and improving the health of the population.[65] Different countries have different approaches to that, and in proposing changes to health financing it is also necessary to consider other systems of social protection, including social transfers to the older population. Changes in health financing are also directly linked to changes in the financing of long-term care system, which necessitates solutions that provide stable and sustainable financing of both systems at the same time.

The range of measures employed by countries to reduce the reliance of public sources of health financing on payroll contributions is very wide. The common feature of these measures is expansion to sources that are not dependent solely on the incomes of the active population and sources less dependent on the economic cycle. Table 4 lists some of the most frequent measures mentioned in international analyses.[66]

France, Hungary and Belgium are examples of mixed Bismarck–Beveridge models of health financing. In restructuring the social insurance fund revenues, Hungary in 2008–2017 strongly reduced payroll contributions and replaced them with transfers from the state budget and general taxes. In Belgium, the shortfall of revenues from payroll contributions in the crisis period was offset with increased transfers from the state budget; the higher level of transfer was also kept after the crisis. Meanwhile France has undertaken the most far-reaching diversification of health financing.

[65] OECD, "Fiscal Sustainability of Health Systems…", 2015.

[66] "Joint report on Health Care...", 2016; "Joint report on Health Care...", 2019; Cylus et al., 2018; Cylus et al., 2019.

Table 4: Possible measures reducing reliance of public health financing on payroll contributions – examples from selected countries

Toolbox of measures		Examples of some countries
Broadening of contribution bases	Broadening of contribution bases to capital gains, rents, dividends	Slovakia
	Increased taxation of inactive persons (pensioners, family members, the unemployed)	France, Croatia, Germany
Increase of taxes	Changes of health system financing from Bismarck model of social insurance to Beveridge model of direct budget financing (partially or fully)	Spain, Iceland: fully in 1980
	Increased transfers from government schemes to social insurance funds	France: gradually increasing tax sources since 1990; Hungary: from 2009; partially in Germany, Denmark, Austria
	Introduction of sin taxes on sugary drinks and/or unhealthy food[1]	Belgium, Netherlands, Hungary, Finland, France, Mexico, Norway
	Higher sin taxes on tobacco and alcohol	France, Ireland, Finland, Norway, Sweden, UK
	Introduction of excise duties on luxury goods	France: luxury cars, precious metals; Greece: leather products, jewellery, precious stones and metals, aircraft for personal use
	Introduction of additional earmarked taxes in certain sectors[2]	As many as 38 countries earmark a portion of excise duties for health or prevention programmes. France has the most earmarked taxes: taxes on revenue of pharmaceutical companies (1%), tax on advertising and sale of medicines 0.03%, revenue tax on companies with more than USD 760,000 in revenue, portion of environmental taxes.
Improved efficiency of collection and allocation of funds	Greater centralisation of financing	France
	Simplification of existing systems	Finland, Sweden
	Decentralisation of systems[3]	Denmark, Finland, Italy, Sweden, Austria, Spain, Canada, Norway, Netherlands
Increase of private funds	Reduction of benefit package financed from public sources (and complementary insurance) or placement of certain services on a negative list	France: since 2008 all newly introduced user charges for prescription medicines and certain less urgent services are no longer covered by complementary insurance. UK, Germany: services are placed on a regularly updated negative list based on health technology assessment (HTA).
	Introduction of the explicit list of services in the publicly funded benefit package	Poland, Italy, France, Spain, Netherlands
	Increased user charges, co-payments or deductibles	France: numerous user charges were raised in 2008 and co-payment of 50 cents introduced for each prescription, capped at EUR 50 per year. Switzerland and Netherlands: the first EUR 350 for services or medicines each year comes out of pocket (the socially disadvantaged are exempt); Denmark: patients must pay full price of medicines up to a certain amount.
	Changes in coverage by social insurance	Germany: in 2009 compulsory private insurance was introduced for people on high incomes and already covers around 11% of the population. Employees making over EUR 5,000 per month, the self-employed and students may exit public social insurance but must then enrol in private health insurance. Netherlands: in 2005 compulsory private insurance was introduced for the entire population, with special protection in place for the socially disadvantaged.
	Tax incentives to increase enrolment in voluntary health insurance[4]	Ireland, Portugal, Spain, Australia, UK, US

Source: IMAD based on review of: Joint Report on Health Care..., 2016; Joint report on Health Care..., 2019; OECD, "Fiscal Sustainability of Health Systems…", 2015; Cylus et al., 2018; Cylus et al., 2019; Pisu, 2014; Sassi et al., 2013; Belloni, 2013; Schrezogg et al., 2005.
Notes: [1] The purpose of raising sin taxes is not primarily to increase revenues, but to reduce the consumption of unhealthy food, tobacco and alcohol. [2] In general the EC does not recommend earmarked taxes, which often reduce other health funds due to political interests; earmarked taxes are not suitable for all tax systems either. [3] Local governments are supposed to be more responsive to the needs of the population, but studies show that decentralisation is cost-efficient only if local government spending is subject to very strict budgetary limitations. [4] The purpose of tax benefits for private health insurance investment is to achieve savings in public funds, but some studies show that savings are lower than investments and, moreover, tax benefits for this purpose are highly regressive.

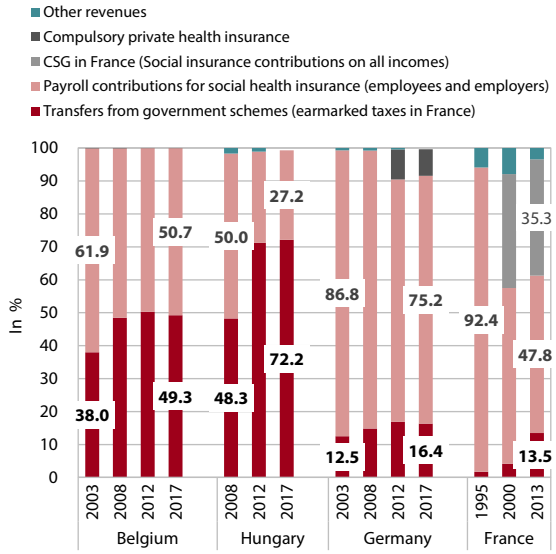
The process began in 1997 and by 2013 the share of contributions from wages had contracted to about two thirds of all health revenue (employer contributions were at 47.8% in 2013 and employee contributions around 17% in the framework of the "general social contribution on all incomes (CSG)"[67] – see Figure 22). Moreover, after 2000 France gradually introduced more and more earmarked taxes to finance the health care system. There were over 20 by 2013: various taxes on

[67] CSG – Contribution Sociale Generalisee, 2019. Roughly 70% of CSG contributions are earmarked for health (the rest for pensions, family allowances, allowances for persons with limitations). Contributions to this fund are levied at different rates on wages and other income from labour, unemployment benefits, pensions, social benefits, disability allowances and income from gaming. They increased gradually from 1997 and in 2013 amounted to around 35% of all public health financing.

pharmaceutical companies, a tax on company vehicles, a portion of VAT, tax on profits of large corporations, a portion of excise duties. This source of health financing rose from 4% in 2000 to 13.5% in 2013.[68]

Germany and the Netherlands are special examples of mixed public–private models of health financing. In 2009 Germany introduced the option of compulsory private insurance for high-income individuals and in 2012 it also increased the transfer from government schemes (budgets) to public social health insurance. The Netherlands introduced three tiers of compulsory health insurance in 2005. The first tier is compulsory social insurance for long-term care, which is financed from employer contributions and partially from the budget. The second and third tiers collect funds for compulsory contractual health insurance by private insurance companies. In the second tier, which accounts for roughly a third of overall funds, contributions of employees, the self-employed and pensioners are collected, while the third tier collects funds with premiums that are flat for all, whereby poorer people are compensated for a portion of their premium with a tax relief.

Figure 22: Structure of the revenues of social health insurance funds in Belgium, France, Germany and Hungary, different years



Source: OECD Stat. 2019.

In many EU and OECD countries user charges for certain services, medicines, dental care and medical devices are an important source of heath financing. Partial financing of the basic benefit package [69] with user charges could be set up as:

- Percentage share of price that an individual user must pay or insure against (user charge);
- Co-payment. This is typically a low amount for which people cannot take any insurance (e.g. co-payment of EUR 2 for prescription medicines or EUR 5–10 for first medical examination);[70]
- Excluded services, which are provided within a public health service network but are fully payable by the user;
- Deductible, the amount an individual must pay for health expenses in a certain period before insurance covers the costs.

The system of user charges may improve the efficiency of the health care system, if the user charges are determined selectively and based on the estimates of the cost-efficiency of individual services. The literature warns that user charges for a broad scope of services and medicines do not reduce the demand for health services or improve the cost-efficiency. In most countries user charges are predominantly covered by out-of-pocket payments (and not by private insurance, as is the case with the complementary health insurance in Slovenia), which results in equal reduction of necessary and unnecessary services, deters the sick people from urgent and cost-efficient services (even if co-payments are very low), negatively affects the health of low-income people, and may even increase expenditure.[71] On the other hand, experts have found that user charges may improve the efficiency of public financing when the user charges are selective, determined on the basis of cost-efficiency estimates (value-based user charges).[72] Such an approach is said to be most effective in systems where user charges are already present, but even there it is necessary to protect certain groups (children, students, the socially disadvantaged, chronic patients) and set a user charge ceiling proportional to the individual's income. There are institutions for health technologies assessment in most of the EU[73] countries working on deciding which services, treatments, medicines and medical devices should be included in the basic benefit package or what the share of user charges should be.

[68] OECD, "Fiscal Sustainability of Health Systems…", 2015.

[69] In 11 OECD countries there are no user charges for hospital and outpatient services; in all others user charges for outpatient services are between 25–49%. All countries have user charges for medicines and medical devices (Joumard et al., 2010; Pisu, M., 2014).

[70] Majcen, B., and Čok, M., (2014) have calculated that a EUR 1 co-payment per prescription would generate EUR 11.8 million and an EUR 10 co-payment for first visit to the doctor EUR 46.8 million in revenue. An annual deductible of EUR 100 would bring EUR 99.1 million. The calculations are made under the assumption that the recipients of social assistance and those for whom the complementary health insurance contributions are covered by the state are exempt from co-payments and deductibles. Out-of-pocket payments would thus potentially bring EUR 157.7 million into the health system (calculated for 2012). However, the introduction of co-payments and deductibles would hurt the older population hardest. Among pensioners, payments would average EUR 150 per year, but the amount would grow with age, from just over EUR 150 at age 70 to almost EUR 230 in the oldest age bracket. There are also costs of deployment and operation associated with co-payments and deductibles.

[71] Lorenzoni et al., 2018.

[72] Thomson et al., 2015; Pisu, M., 2014.

[73] Health Technology Assessment – assessment in particular of new services, medicines, etc. with a calculation of the clinical parameters, economic and organisational aspects, impacts on individual, etc.; Paris et al., 2016.

Some countries have been setting up reserve funds to mitigate the sensitivity of public health financing to the economic cycle. A health reserve fund may help maintain an adequate level of accessibility of health system when sources of health financing cyclically decline. For example, prior to the crisis, in 2008, Estonia had amassed reserves of 35% of annual revenue in the health insurance fund, which allowed it to maintain accessibility during the crisis.[74]

3.3.3 Increasing the efficiency of the health system

Increased efficiency of the health system may significantly contribute to its long-term sustainability. The experiences of other countries show that efficiency measures may be divided into supply of and demand for health services and medicines and the management of the system at the macro level[75] (see Table 5).

Table 5: Possible measures to improve the efficiency of health systems

Macro level	
	• Budgetary constraints at macro level or at level of health activity • Limitation of benefit package and introduction of standards • Expansion of benefit package at primary level (more prevention, rehabilitation, physical therapy, community nursing) • Financial protection of the socially disadvantaged to prevent more expensive future treatment • Health Technology Assessment • Stronger oversight of treatment procedures and use of medicines • Adequate supply of staff • Control of wage growth • Centralisation of public contracting • Medicine price controls • Introduction of care models for the chronically ill (practising ambulances, transmission of tasks to nurses) • Integration of health and long-term care
Supply side:	
Services	• Reform of providers payment models • Reform of procurement of health services and management of the process • Introduction of regulated competition between providers • Increased independence of hospital management • Incentives for employees (bonuses for preventive services, patient satisfaction, quality and efficiency) • E-health and deployment of ICT in home care • Introduction of integrated health care • Introduction of model of "comprehensive planning of hospital discharges with individualised monitoring" • Introduction of clinical pathways (guidelines for treatment diseases) • Introduction of guidelines for treatment of multimorbid patients[1]
Medicines	• Price controls • Classification of medicines on lists • Prescription controls
Demand side:	
Services	• User charges for services and medicines (co-payment, user-charges, deductibles but with adequate protection of low-income groups) • Stronger role of gatekeepers at primary level • Educating chronic patients to use ICT in home care • Higher sin taxes on alcohol, tobacco and unhealthy food, regulation of advertising • Policies promoting active and healthy ageing and management of risk behaviour
Medicines	• Replacement of original medicines with generics; lists of preferred medicines (lower co-payment) • Educating multimorbid patients about taking medicines

Source: IMAD, based on Stadhouders et al., 2016; Journard et al., 2010; Cylus et al., 2018; Stadhouders et al., 2016; Lorenzoni et al., 2018.
Note: [1] Excessive treatment is often associated with misguided financial incentives for providers or inadequate organisation of treatment and care of multimorbid patients (patients with multiple health conditions).

[74] The reserve fund in the framework of the Estonia Heath Insurance Fund (EHIF) has three components: (1) At least 6% of annual revenue is collected in a macro reserve fund for the coverage of cyclical fluctuations and may only be used in special circumstances with government approval; (2) 2% of annual revenue is collected in a risk fund and is set aside for coverage of future needs. The EHIF supervisory authority decides on the spending of these reserves; (3) surplus of revenue over expenditure is collected in a cash reserve fund in the event revenue is higher due to more favourable macroeconomic trends than forecast. These reserves may be managed by the EHIF (Pisu, M., 2014).

[75] Stadhouders et al., 2016; Journard et al., 2010; Cylus et al., 2018; Stadhouders et al., 2016; Lorenzoni et al., 2018.

3.4 Existing measures in Slovenia and possibilities for closing the gap between health revenues and health expenditure

In Slovenia prevention is the segment of the health system that adjusted most successfully in the past. One positive consequence of the economic and financial crisis was that it accelerated measures improving the cost effectiveness of the health system. A number of measures have been adopted to mitigate expenditure growth, but systemic changes has been lacking. The present system of health financing no longer corresponds to changes in the labour market, demographics and the needs of the population. Problems with lack of financing sources and an inappropriate system of payment for services has undermined the performance of public health institutions and resulted in longer waiting times. These problems will be exacerbated by demographic change and technological development if social contributions remain the dominant source of health financing. Below are some of the measures that have already been adopted and possibilities to address these challenges more permanently.

3.4.1 Improving the health status of the population and promoting active and healthy ageing

Investments in prevention and public health, including with increased public funds, represent some of the key measures that Slovenia has adopted in recent years to improve the health status of the population and extend healthy life years. Aside from increased public sources of financing, some of the major measures at the national level were:[76]

- Strengthening the public health role of community health centres.
- Activities associated with the promotion of health and prevention of disease (e.g. the National Programme on Food and Physical Activity for Health, the National Cancer Management Programme, the Strategy for Management of Diabetes, the Strategy for Prevention of HIV/AIDS Infections, national programmes on illicit drugs, alcohol and tobacco policies, and programmes for strengthening mental health).
- Measures to reduce risk behaviour (educational programmes for a responsible attitude to alcohol, entry into force of the Act on Use of Tobacco and Related Products, which restricts the use of tobacco and related products and sets emission, labelling and packaging restrictions).

Some of the key measures that may be adopted in the future to promote active and healthy ageing include further strengthening prevention and public health policies and programmes and reducing inequalities in health. Within the framework of various strategic documents,[77] some measures have already been introduced or are foreseen based on policies that are also being implemented in other countries (see Figure 21). However, all areas of action in the health system, in the long-term care system, in companies and in the introduction of cross-sectoral policies should be strengthened in the future.[78]

3.4.2 Adjustments in health financing sources and measures to contain health expenditure growth

During the economic crisis measures were adopted to reduce compulsory social health insurance expenditure and increase financing from complementary health insurance. In 2009–2013 the public health system in Slovenia faced a decline in revenues from compulsory health insurance contributions, which weighed down on the performance of the HIIS, whose revenue and expenditure are required to be balanced. To maintain the balance, HIIS reserve funds were spent in the first years of the crisis and several other measures were adopted:

- Employment restrictions as part of general measures in the public sector, reduction of expenditure on tertiary health services,[79] reduction of the percentage of sickness allowances, lower standards for medical devices and other short-term measures. In what was a permanent measure to reduce expenditure, sickness allowances for the unemployed covered by compulsory social health insurance was abolished in 2012, while funeral payment and bereavement payment were transferred to the state budget in 2014.[80]
- Lowering of prices of health services covered bythe HIIS. The calculation of health service price includes wage costs, material costs, medicines, depreciation of building and equipment, and other costs.[81] However,

[76] Numerous measures carried out under various programmes and strategic documents (for more detail, see "Information on the situation and activities of the health system", 2017).

[77] Resolution on the National Health Care Plan until 2025, Active Ageing Strategy, Resolution on the National Mental Health Programme 2018–2028, Resolution on the National Programme of Health and Safety at Work 2018–2027.

[78] "Inequalities in health", 2018; Active Ageing Strategy, 2017.

[79] Tertiary services are services provided by clinics, clinical institutes or clinical departments, which include scientific, research and educational work at the medical faculty and other higher education institutions, and the most complex ambulatory and hospital health services, whose professional, staff, technological and organisational complexity renders it impractical to perform them at lower levels.

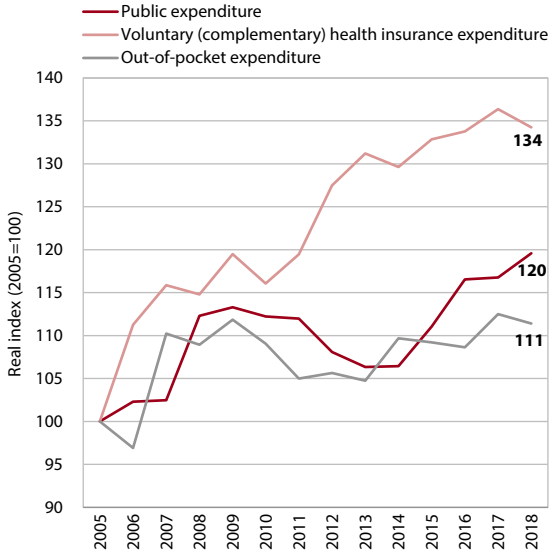
[80] Under the Act Amending the Social Assistance Benefits Act. Instead, assistance in the area of social protection benefits is provided in the form of means-tested funeral payment and bereavement payment to the immediate family of the deceased. This reduced HIIS expenditure by approximately EUR 9.6 million per year.

[81] The majority of hospital services are invoiced under the diagnosis-related groups system. These are groups of acute hospital treatments that are classified in the same diagnosis-related group and have an

the price reduction was steeper than cost cuts, which required hospitals to streamline operations. As a result, in most hospitals losses started to mount and waiting times increased.

- Increased premiums and the share of user-charges covered by complementary health insurance. During the crisis, this resulted in a significant shift of public financing to private, but due to the extensive complementary health insurance coverage of the population, universal financial affordability of health services and medicines was preserved. Out-of-pocket health expenditure did not increase significantly.

Figure 23: The real growth of heath expenditure by financing schemes



Source: OECD Stat (October 2019).
Note: In accordance with the system of health accounts (SHA), an international methodology, public expenditure includes expenditure of state and municipal budgets, the ZZZS, and ZPIZ expenditure on assistance and attendance allowance; the figure for 2018 is a preliminary estimate.

Except for lower sickness allowance, the majority of these expenditure-side measures were gradually abolished in 2014–2018; statutory caps on share of user-charges covered from complementary health insurance were preserved. The raising of prices of health services in the post-crisis period was followed by the gradual abolition of austerity measures, but a portion of the wage increases in the public sector implemented in recent years has not been offset by higher prices of health services.[82] Therefore, hospital deficits started increasing at an even faster rate in 2016, as did waiting times. In 2017 a law[83] was therefore adopted to financially restructure hospitals, first with a one-time transfer to hospitals amounting to 80% of accumulated losses and write-off of outstanding depreciation claims. Additionally, turnaround management teams were appointed to provide guidance on measures to restructure the remaining losses.

Several permanent measures have been adopted in recent years to increase public financing of health:

- Higher contributions on contracts for copyrighted work and higher contributions for the self-employed (2013).[84]
- Changes in compulsory social security contributions on temporary and occasional work performed by students (2015).[85]
- For individual contributors (the self-employed, partners and farmers), a cap on the contributions base equalling 3.5-times average annual pay was introduced (in 2015).[86]
- Transmission of the financing of medical practitioners and traineeship to the state budget. The transmission is gradual: EUR 20 million each year in 2017–2020; EUR 80 million by 2020.

Major adjustments in health financing sources that would cover the introduction of new technologies and medicines, the growing needs of an ageing population, and securing the long-term sustainability of the public system remain the biggest challenge. Based on the experiences of other countries that have undertaken adjustment in health financing sources, and solutions put forward in international recommendations and in the Analysis of the health care system in Slovenia,[87] we highlight below a set of measures that could be adopted as the financing of health is reformed:

- **Expansion of contribution bases and equalisation of contribution rates** for different categories of insured, which would reduce reliance of HIIS revenues on payroll contributions, improve solidarity in contributions, and strengthen the stability of financing in the event of crisis and the long-term sustainability of public sources of health financing.
- **Introduction of compulsory health insurance contributions on passive incomes (dividends, rent).** However, policymakers should bear in mind that in the majority of countries with social insurance models, income solidarity is restricted with contribution caps, which is not the case in Slovenia.
- **Increase in tax sources with the transmission of the financing of certain health benefits to the state budget (directly or indirectly in the form of a transfer to the HIIS).** Increased tax financing is

assigned weight in the system based on which they are invoiced to the HIIS. The relations between diagnosis-related groups and the weights were determined in 2004 using the Australian model and have not changed since.

82 Notes to the HIIS financial plan for 2016, 2017, 2018 and 2019.

83 Act Determining Intervention Measures to Ensure the Financial Stability of Public Healthcare Institutions Established by the Republic of Slovenia (Official Gazette RS, No. 54/17).

84 This is estimated as having increased HIIS revenue by EUR 35.8 million annually.

85 HIIS data show that changes in compulsory social security contributions on temporary and occasional work performed by students under amendments to the ZUJF-C in 2015 brought in an additional EUR 14.7 million (HIIS, "Business report for 2015", 2016).

86 ZPIZ-2, Article 145.

87 Analysis of the health care system for Slovenia, 2015.

one of the main ways in which countries replace or complement health financing (see Table 4). According to the principles of the Bismarck system, the state is supposed to create social insurance (pension, health) to address "risk", however, "special needs" should be financed from the budget. Examples of such a special need rather than risk include long-term care and the primary level of health care. Many countries also finance sickness allowance from the budget.

- **Introduction of earmarked sin taxes (or portions thereof) on alcohol and tobacco to finance prevention and public-health programmes; sin taxes on sugary drinks.** New or increased sin taxes on certain products that have a harmful impact on health play an important role in reducing the consumption of such products. However, earmarkedd taxes are not in compliance with the underlying integral-budget principles in Slovenia.
- **Compilation of a list of services and standards in the health benefit package that are financed from public sources.** One feature of insurance systems is that all services are precisely defined, which should apply to compulsory social insurance as well. Creation of a specific list of services by type and scope of service is also important for the long-term sustainability of the system. Expansion of benefits would be controlled and as a rule conducted only on the basis of Health Technology Assessment (HTA) procedures. However, there is also a risk in the introduction of precise lists and standards, as when public sources would be limited, the benefits would be reduced, which would exacerbate inequalities in health status since only the wealthiest would be able to afford more expansive methods and materials.

Whatever the decisions about the reform of the health financing system in Slovenia would be, they will also have to address the ratio between public and private financing and the content and scope of future benefit packages. These decisions are inextricably linked with complementary health insurance, which is currently the predominant private source of health financing. The main reasons typically invoked in favour of abolishing high user charges and at the same time also complementary health insurance include their regressive nature and the high administrative costs of private insurance companies,[88] but in deciding how to reform the health financing system, several other factors and options will have to be considered as well:

- **High user charges in the current system represent a risk for individuals that is unacceptably high and may jeopardise their social security if they are not voluntarily insured.** Due to limited public sources of financing, user charges and complementary health insurance premiums are expected to grow in the future. This heightens the probability of socially disadvantaged and younger contributors exiting complementary health insurance,[89] which would further accelerate premium growth and increase the share of uninsured individuals. Consequently, out-of-pocket expenditure would quickly rise, with financial protection and affordability of health care deteriorating.
- **The experiences of other countries show that it makes sense to gradually transition towards a greater share of public financing.** The Analysis of the health care system for Slovenia[90] has found that experiences of countries which have decided to reduce user charges and increase public financing (Asian countries in particular in the last ten years – South Korea, China) indicate it makes sense to conduct a gradual transition. This creates more room for adjusting the tax system and general government expenditure to changes in sources of health financing. The authors find that in Slovenia a phased transition, with a gradual reduction of user charges, would also allow the complementary health insurance market to adjust.
- **If user charges and complementary health insurance are abolished, the system will need to be transformed making sure that the long-term sustainability of public finances and accessibility of the health system are not compromised.** The majority of proposals for reform of user charges in Slovenia are in favour of a system in which all services in the basic benefit package would be 100% covered from public sources, which constitutes the complete elimination of user charges. This means that Slovenia would have one of the broadest benefit packages in the EU, fully funded from public sources.[91] These proposals should account for the fact that growth of public sources is limited in the long term.[92] This

[88] The administrative costs of managing complementary health insurance are EUR 50–60 million per year, representing a portion of funds that does not go towards the payment of health services. However, the positive impact of the abolition of complementary health insurance would be lower, since a portion of management costs are already transferred from insurance companies to health service providers (hardware and software costs) or payable to the ZZZS (licence and maintenance fees for the health insurance card system) (Gracar, 2014). Moreover, the cost of insurance management includes discounts granted to contributors (EUR 15–20 million).

[89] Around 5% of persons that are liable for user charges are currently uninsured. According to Household Budget Survey data for 2015, 11% of Slovenian households did not spend on complementary health insurance, which means they either did not pay premiums or were exempted from user charges. In 2015 the share was very high in the first quintile (25%), but as this quintile also includes recipients of social assistance whose charges are covered by the state, it is difficult to determine how many people are actually uninsured. It is possible that lack of insurance is in fact a bigger problem in the second income quintile, where 12% of households did not spend on complementary health insurance. Analysis of Household Budget Survey data also shows that during the crisis lack of coverage sharply increased in other income quintiles as well, but that improved in 2015 (Zver et al., preprint).

[90] Analysis of the Health System for Slovenia, 2015.

[91] The share of public health financing (around 85%) would be among the highest in the EU, which entails the risk of a deterioration of indicators measuring the efficiency of the health system (health outcomes would remain the same, but the share of public financing would increase) and long-term sustainability (increased share of age-related public expenditure relative to GDP) that international institutions use to assess health systems.

[92] Due to the limitations of public financing, some economists (e.g.

involves the attendant risk that shortage of public funds would lead to a narrowing of the benefit package. Narrowing of the benefit package would in turn lead to increased out-of-pocket expenditure and worsen the affordability of the health care system. For any new private insurance for benefits outside the basic package, private insurers would consider individual health risks. For all services exempted from the basic package, such system would therefore no longer have the degree of solidarity (mutuality) it has now.

- **The introduction of cost-effective user charges could improve the efficiency of the health system.** In the event of a complete abolition of user charges and complementary health insurance, there is a chance new charges may be introduced based on cost-effectiveness criteria and with appropriate safeguards for low-income groups and pensioners (e.g. a cap on annual user charges). On aggregate, this would provide additional private sources for health financing, while a portion of the public sources could be redirected towards broadening the benefit package for the long-term care system. In the event of the abolition of current user charges, another reason why new user charges would make sense is to preserve the high coverage of the population by private insurance, which will be an increasingly important source of financing in the future due to the long-term increase in health service needs; the same as applies to pension insurance.[93]
- **Preserving user charges, at least to a certain extent, would facilitate a more flexible adjustment of the ratio between public and private financing during the course of the economic cycle.** The fact is that public sources are limited. During the last economic crisis, the share of user charges and premiums increased. This resulted in a transfer of public financing to private complementary health insurance sources, which are collected mutually, rather than out-of-pocket payments, the most regressive type of user charge. If the share of public financing would be higher in the case of the abolished user-charges, this flexibility of adjustment would be weaker.
- **Improved regulation of the complementary health insurance system and introduction of additional mechanisms to protect the population in the first and second quintiles.** Assuming the current user charges are not abolished, the weaknesses and anomalies of the current system require improving regulation by additionally cutting administration costs of private insurers, improving the risk equalisation schemes, and reducing user charges and hence premiums.[94] One possible adjustment of the current system that would reduce its regressive nature would be additional safeguards for the population in the first and second income quintiles (e.g. recipients of the minimum pension support; consideration should be given to a partial refund of paid premiums for minimum wage recipients and households in the second quintile).

3.4.3 Measures increasing the efficiency of the health system

Various analyses rank Slovenia among countries with moderately efficient health systems.[95] Some of the measures other countries are introducing to improve the efficiency of their health systems (see Section 3.3.3, Table 5) have already been fully or partially implemented (see Table 6). These include measures highlighted in the Analysis of the health care system for Slovenia.[96] Several other solutions and legislative changes have also contributed to improved efficiency.[97]

Tajnikar et al., 2016) propose the formation of two packages of health benefits. The proposal by health organisations (Zdravniška zbornica et al., 2016) was to some extent similar.

[93] However, in the event of lower charges and hence lower risk of charges, it would be difficult to preserve the current high coverage and relatively low premiums.

[94] Thomas et al., 2015.

[95] Medeiros and Schwierz, 2015; Behr and Theune, 2017; MACELI report, 2015.

[96] Analyis of the Health System for Slovenia, 2015.

[97] Pharmacy Services Act, Act Amending the Medical Practitioners Act, Act Amending the Patients' Rights Act, Health Services Act.

Table 6: Overview of measures improving the efficiency of the health system and additional options

		Main areas of action so far	Additional options
Macro level		Budgetary restrictions at macro level or at level of health activity Financial protection of the socially disadvantaged[1] Centralisation of public contracting Stronger oversight of treatment procedures and use of medicines Introduction of care models for the chronically ill (reference practitioners' ambulance, transmission of tasks to nurses)	List of benefits package and introduction of standards for certain services Expansion of benefit package at primary level (more prevention, rehabilitation, physical therapy, community nursing)[2] Health Technology Assessment Ensuring sufficient staff Integration of health and long-term care
Supply side	**Services**	Web application with common price database (intravizor) Register of expensive medical equipment Financial restructuring of hospitals Clinical pathways E-health Introduction of guidelines for treatment of multimorbid patients[3]	Reform of provider payment models Reform of purchasing of health services and management of the process Introduction of regulated competition between providers Incentives for employees (bonuses for preventive services, patient satisfaction, quality and efficiency) Introduction of integrated care Introduction of model of "comprehensive planning of hospital discharges with individualised monitoring" Introduction of clinical pathways Deployment of ICT in home care
	Medicines	Price controls Classification of medicines on lists Prescription controls	
Demand side	**Services**	Stronger role of gatekeepers at primary level Educating multimorbid patients about taking medicines Higher excise duties on alcohol and tobacco Regulation of advertising Management of risk behaviour Policies promoting active and healthy ageing	User charges (co-payments, deductibles) for services and medicines combined with cost-effectiveness assessment and appropriate protection of the socially disadvantaged Educating chronic patients to use ICT in home care Establishment of an efficient system of long-term care Introduction of sin taxes on unhealthy food
	Medicines	Replacement with generic medicines System of highest acceptable cost value for therapeutic class of medicines	

Source: IMAD, summarised from the following analyses: Analysis of the Health System for Slovenia, 2015; "Information on the state and activities of the health system", 2017; Joint Report on Health Care…, 2019 (Country Documents – 2019 Update).
Notes: [1] Better financial protection ensures timely care of the socially disadvantaged, preventing more expensive future treatment (Lorenconi et al., 2018). [2] Lorenzoni et al., 2018. [3] Excessive treatment is often associated with misguided financial incentives for providers or inappropriate organisation of treatment and care of multimorbid patients (patients with multiple conditions).

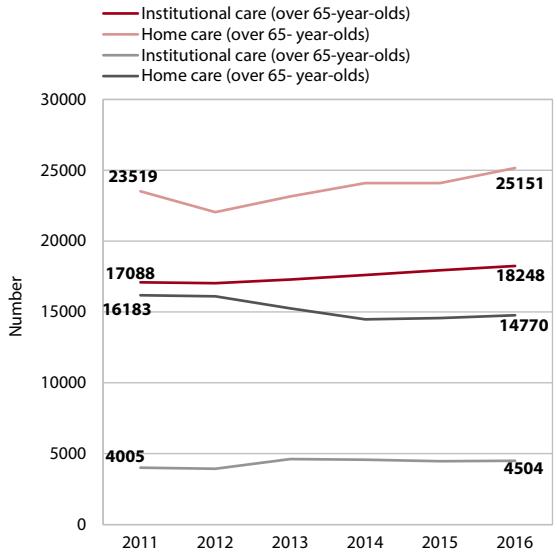
4 Long-term care

4.1 System of long-term care in Slovenia

Formally organised long-term care in Slovenia started developing in its contemporary form after 1970, but until independence it was mostly confined to institutional care. Modern homes for elderly did not start opening until the late 1970s, providing comprehensive care for older persons who were unable or unwilling to live alone.[98] Institutional care has been developing rapidly and successfully since and remains important to this day. It was not until after Slovenia became independent that contemporary forms of home-based elderly care started to be introduced as well. Organised social home help circumscribed by law was introduced in 1991, first through community work placement and a year later under the provisions of the Social Care Act.[99] Assistance and aid allowance for severely disabled as a cash benefits for long-term care (hereinafter: LTC) had been introduced as early as 1959 in the framework of pension and disability insurance.

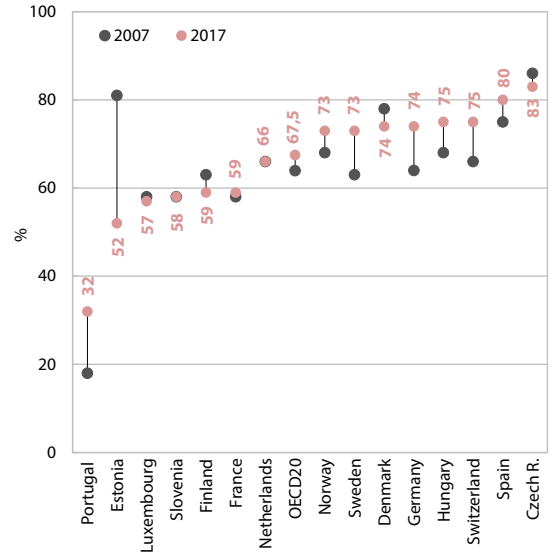
Long-term care[100] is yet to be brought under a single system; fragmentation in financing is reflected in intransparent and inefficient use of resources. LTC services and benefits were developed under a variety of laws. LTC is therefore financed and provided from separate social protection systems (pension and disability insurance, health insurance, parental care benefits, social benefits and social assistance services, war veteran care, and social protection for the mentally and physically disabled).[101] Eligibility for services and cash receipts for persons dependent on help with activities of daily living is defined in a piecemeal way, without unified eligibility criteria. In some benefits there is overlap between services and cash receipts; in others many needs remain unmet.[102]

Figure 24: Recipients of long-term care in Slovenia, 2011–2016



Source: OECD Stat 2019.

Figure 25: Long-term care recipients aged 65 and over receiving care at home, 2007 and 2017 (or latest available year

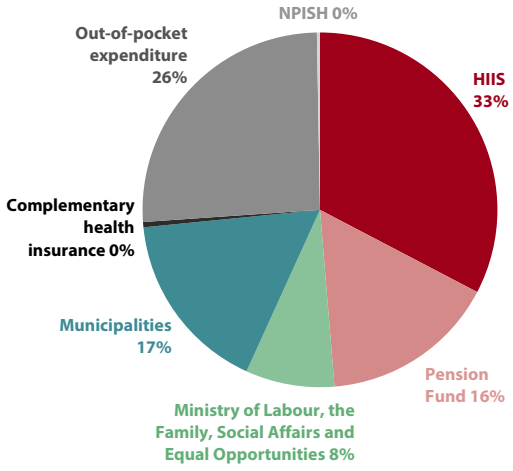


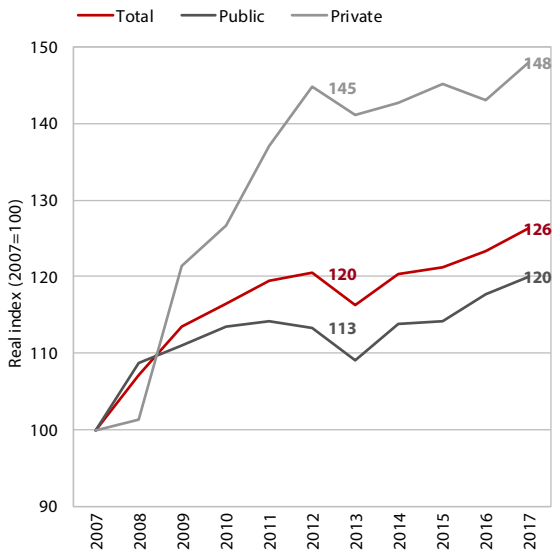
Source: OECD Health at a glance 2019.
Note: Data for Slovenia are for 2011 and 2017.

The number of recipients of long-term care is increasing. In 2016 there were 62,700 recipients of LTC in Slovenia, of whom 43,400 were older than 65. Just over a third received institutional care (22,800) and the rest received home care, either in the form of services (22,100) or as cash benefits (17,300).[103] The share of

[98] More in Dominkuš, 2015.
[99] Social Care Act, 1992; more in Nagode, 2014.
[100] International organisations (OECD, Eurostat, WHO) define long-term care as a set of services required by people with limited functional capacity (physical or cognitive) who are consequently dependent for an extended period of time on help with basic and/or instrumental activities of daily living. Basic activities of daily living (ADL) include bathing, dressing, feeding, going to bed and getting out of bed, moving and using the toilet. Long-term care services are often provided in combination with basic health services such as health care, preventive services, rehabilitation and palliative care. Instrumental activities of daily living (IADL) are associated with household help, in particular cooking, laundry, transportation and cleaning. (System of Health Accounts, 2011; Colombo et al., 2011; more in Nagode, 2014).
[101] These services are regulated by the Pension and Disability Insurance Act, the Health Care and Health Insurance Act, the Parental Protection and Family Benefits Act, the Social Assistance Act, the Social Assistance Benefits Act, the Exercise of Rights from Public Funds Act, the War Veterans Act, the War Disability Act, and the Act on Social Care of Persons with Mental and Physical Impairments.
[102] Dominkus et al., 2014.
[103] SORS, 2018. The actual number of recipients of cash benefits is significantly higher (just over 42,300), but in the sum of all recipients (62,700) each person is counted only once, even if they receive

Figure 26: Expenditure on long-term care in Slovenia by financing source, 2017 (left) and real growth of expenditure on long-term care in 2007–2017 (right)





Source: SURS, 2019 (left figure); OECD Stat, 2019 (right figure); IMAD calculations.
Note: Figures were translated to constant prices using the implicit GDP deflator.

persons over 65 who receive institutional or home care was at 11.4% in 2016, compared to the OECD average of 13.0%. Among European countries, Switzerland, the Netherlands, Sweden and Norway have the highest share of persons over 65 receiving long-term care, at 16–20%. Aside from the difference in the share of over-65-year-olds receiving LTC, Slovenia also lags behind in terms of the development of home-based LTC for those over 65, with the number of recipients decreasing in recent years (see Figure 24). Inadequate care of elderly persons increases the burden on families and the use of health services.

Approximately three-quarters of LTC expenditure is covered from public sources, but private expenditure in this area has been rising rapidly in the last decade. Total LTC expenditure stood at EUR 520 million in 2017, of which public expenditure EUR 382 million and private EUR 138 million. From 2007 to 2017 private expenditure on long-term care rose at a much faster pace than public expenditure (see Figure 26), rising from 23% to 27% of total LTC expenditure over this period. Private expenditure is used mainly for long-term social care services and consists largely of household out-of-pocket spending on home care services and user charges for accommodation and food in the homes for the elderly and other forms of institutional care.[104]

Two thirds of public expenditure on LTC is financed from health care and pension insurance contributions. In 2017 the HIIS spent EUR 170.1 million on LTC services, or 45% of total public expenditure on long-term care (32.7% of total public and private expenditure; see Figure 26). HIIS funds are used for long-term care services in homes for the elderly and special social protection institutions[105], nursing care and palliative care in hospitals, and community nursing. The Pension Fund contributes almost a quarter of public expenditure on LTC (EUR 83.4 million), which it spends on assistance and aid allowance for severely disabled. Allowances are also partly financed by the Ministry of Labour, the Family, Social Affairs and Equal Opportunities (EUR 42.2 million). The ZZZS, the ZPIZ and the Ministry (almost 77% of total public expenditure) finance the health portion of long-term care. The remaining 23% of public expenditure is spent on social protection services, which are financed from municipal budgets.

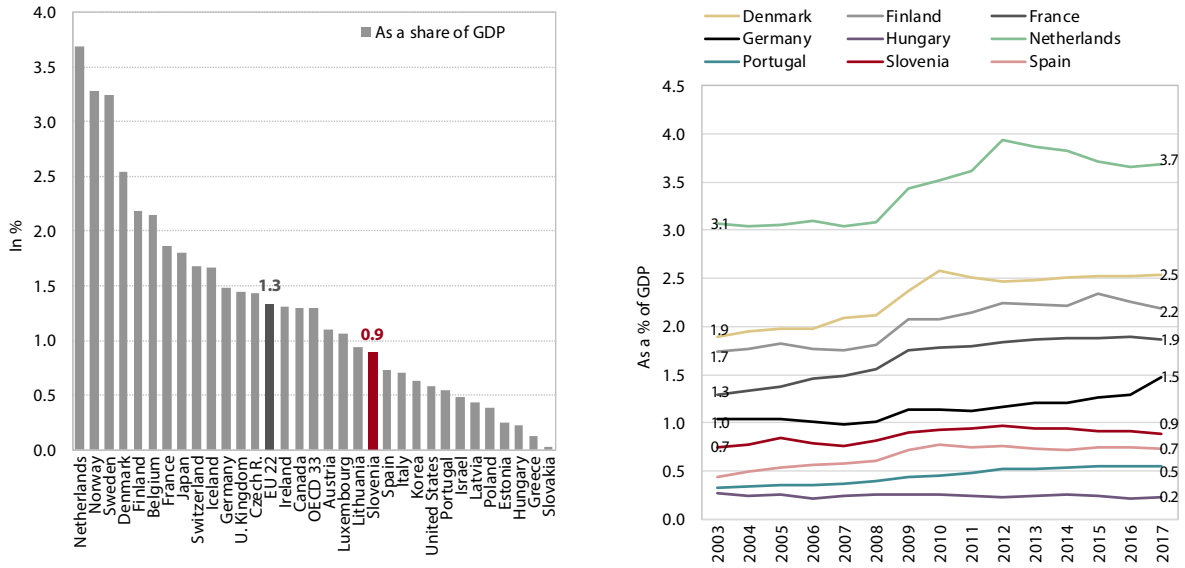
Broken down by mode of service provision, as much as 77% of expenditure was spent on institutionalised LTC in 2017. Of that, more than half of the funds were channelled into homes for the elderly and 15% to social care institutions such as centres for training, work and care, centres for protection and training and in special social welfare institutions. Only 4% of the funds was spent on hospitals, which provide long-term health care, palliative care, and care of persons with physical and cognitive limitations. Expenditure on home care accounts for 23% of total LTC spending; this includes expenditure on family assistants, providers of home care, community health centres that provide community nursing services, and cash benefits for recipients not included in formal care.

services as well as cash benefits.

[104] SURS, 2019; more in Development Report 2019, 2019.

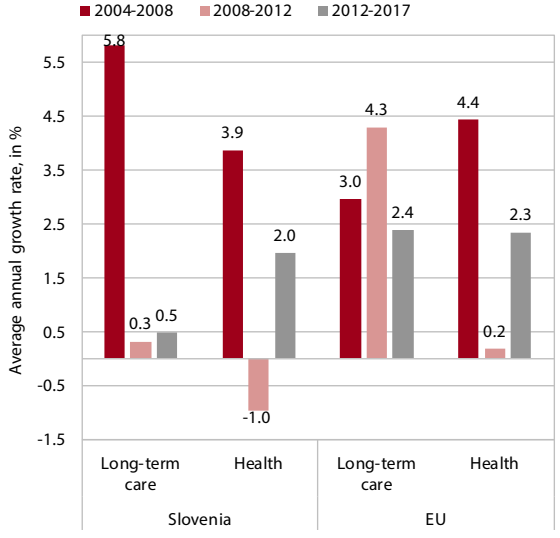
[105] Centres/institutions for training, work and care, Centres for protection and training and in special social welfare institutions.

Figure 27: Public expenditure on long-term care as a share of GDP in 2017 (left) and change through 2003–2017 (right)



Source: OECD Stat, 2019.

Figure 28: Comparison of real growth rate of long-term care expenditure (health part) and health expenditure, Slovenia and EU, 2004–2017



Source: OECD, "Health at a glance: Europe 2018"; OECD Stat 2019; IMAD calculation.
Note: EU data for 23 countries for which data is available. The comparison shows only the health part of LTC (HC.3), which accounts for two-thirds of total LTC expenditure in Slovenia. For many countries, data for the social part of LTC is not available.

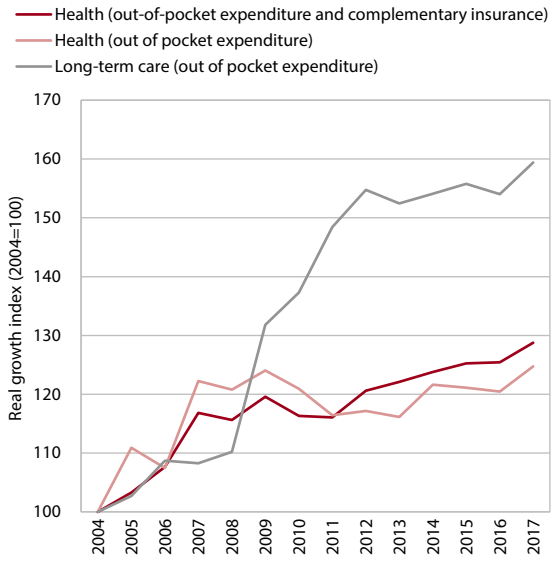
Long-term care expenditure as a share of GDP in Slovenia is increasingly lagging behind the EU average. Expenditure on LTC in Slovenia totalled 1.2% of GDP in 2017, of which public expenditure 0.8% of GDP and private expenditure 0.3% of GDP. From 2007 to 2017, expenditure on LTC as a share of GDP increased at a far slower pace than in other EU and OECD countries for which comparable data are available (see Figure 27).

There are significant differences between countries in terms of public spending on long-term care as a share of GDP. Scandinavian countries, the Netherlands, and Belgium stand out, their public expenditure on LTC being at 2%–4% of GDP. These large differences are not just the consequence of different levels of economic development, but also reflect differences in long-term care systems, the impact of demographic factors and differences in traditional forms of life, in particular the role of family and informal care.

Demand for long-term care is growing faster than for health care and a significant share of the needs already remains unmet. Public expenditure on LTC grew rapidly only in the period before the financial crisis, when in Slovenia significant capacity was added to the homes for the elderly. During the crisis the growth was modest, although still stronger than in health, but from 2012 to 2017 it slowed significantly, lagging behind both average growth in EU countries and health expenditure growth. Expenditure on health services at homes for the elderly and other social care institutions and for community nursing grew at a particularly sluggish pace. LTC services have therefore been deteriorating in recent years, whereas private, out-of-pocket expenditure on LTC has been rising very rapidly. This, the most problematic type of expenditure in terms of affordability has been growing substantially faster than private health expenditure(see Figure 29). The need for LTC can strongly affect the disposable incomes of individuals and their families; over a longer time period it may also become a huge burden on informal caregivers in the family,[106]

[106] Informal caregivers are usually partners, especially women, or other family members or friends who help in particular with instrumental

Figure 29: Comparison between growth in private expenditure on health and long-term care, 2004–2017



Source: SORS, 2019; IMAD calculations.
Note: For health, the figure separately shows growth in out-of-pocket and total private expenditure, with complementary insurance accounting for 51% of expenditure, out-of-pocket payments 44%, companies (mostly for occupational medicine) 4% and non-profit institutions 0.4%. In LTC almost all private expenditure is out-of-pocket, since the share of private insurance is almost negligible (2%).

reduce their productivity and availability on the labour market, lead to early retirement and overuse of more accessible health services, and exacerbate poverty.[107]

Quality long-term care may help reduce acute health care and slow the growth of health expenditure. There is a growing number of patients with chronic diseases and other conditions that increase their dependence on help for a prolonged period of time. Chronic diseases increasingly demand broader, long-term and integrated health and social care, which may significantly affect health expenditure. Various social LTC services (help with instrumental activities of daily living, social rehabilitation, other activities for older persons, etc.), which are typically cheaper than health services, may help keep older people healthier and reduce their dependence.[108]

4.2 Impact of demographic and technological change on growth in long-term care expenditure

Long-term care is a field that will continue developing in the future for a variety of reasons. Colombo et al.[109] list at least four drivers: (i) demographic change and rapid increase in the number of persons over 80; (ii) change of family structures and increased participation of women in the labour market (in some countries) leading to a lack of informal caregivers and greater demand for formal care; (iii) economic development driving demand for quality, responsive and user-focused long-term care; and (iv) technological solutions which improve the prospects of providing a significant portion of long-term care at home, requiring a reorganisation of care. Aside from the growth in out-of-pocket expenditure on LTC, growing demand for services also entails increasing opportunity costs of informal care provided by family members and friends who spend their free time on care, which may have a negative impact on their health and ability to work.

Demand for long-term care will start to accelerate at an even faster pace after 2025, when the largest cohorts start to turn 80. The key driver of growth in LTC expenditure is the increasing share of the older population who need assistance with basic or instrumental activities of daily living, which tends to increase with age, in particular after age 80. The bulk of expenditure on LTC is dedicated to persons with limitations in basic activities of daily living (ADL; severely limited), whose share in Slovenia is above the EU average across all age categories (see Figure 30). One key assumption in projections of expenditure on LTC is whether the share of persons with severe limitations in a given age category will increase or decline in the future; empirical studies do not provide a clear answer here.[110] The reference scenario of projections prepared by the EC,[111] for example, assumes that in the future older persons will be healthier and the share of the population with severe limitations (dependent population) lower. This means that the share of the population dependent on assistance from others at a certain age will gradually decline. Despite this assumption, however, demand for LTC and hence expenditure will grow quickly due to the pronounced increase in the share of the older population. In Slovenia public expenditure on LTC would

activities of daily living. European Commission estimates indicate that there are almost twice as many informal as formal caregivers. The SHARE study shows that in 2013 approximately 48,000 persons over 50 in Slovenia provided personal care or practical assistance outside their own household and approximately 37,000 provided regular help with personal care in their own household (Nagode and Srakar, 2015). Ramovš et al. (2013) put the figures even higher, estimating that 55,000 persons over 50 care for their parents and over 50,000 care for their partners.

[107] Normand, 2015; Dominkuš et al., 2014.

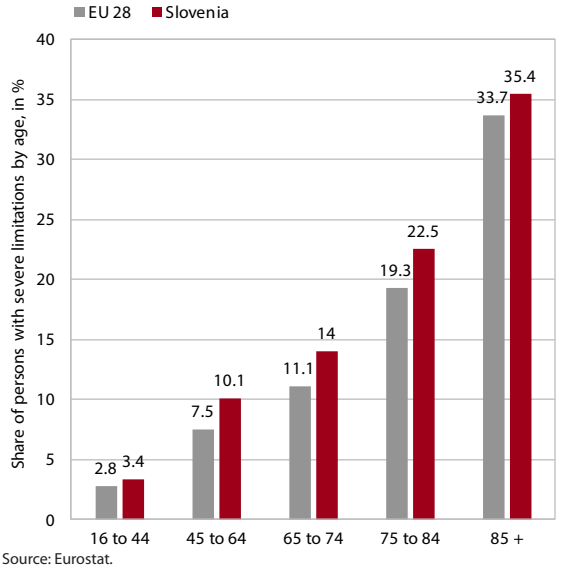
[108] Muir, 2017.

[109] Colombo et al., 2011.

[110] Empirical studies are not in agreement as to whether the share of the population with limitations will increase or decrease in the future. Some studies show that dependence on help is increasing in certain age groups for various reasons, with the increase in dementia a particular problem ("Addressing Dementia…", 2015); other studies show that as life expectancy rises, the incidence of certain types of limitations will be deferred to older age, which would decrease the share of the population with limitations in certain cohorts (The 2018 Ageing Report: "Underlying assumptions…", 2017; Wren et al., 2012).

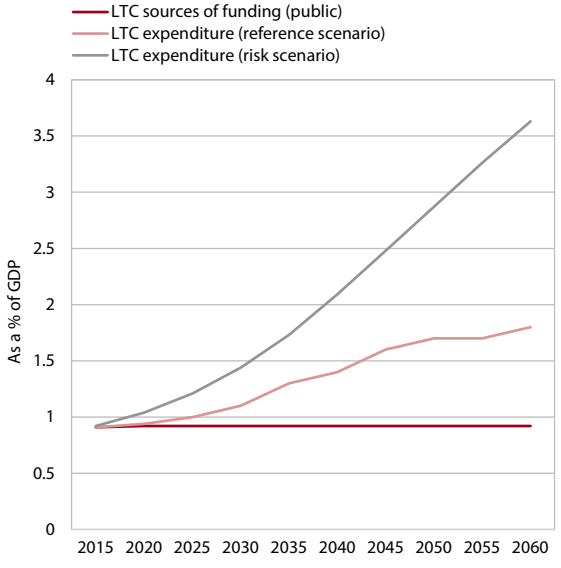
[111] The 2018 Ageing Report, 2018.

Figure 30: Share of persons with "severe limitations" in basic activities of daily living by age group, Slovenia and EU-28, 2017



Source: Eurostat.
Note: Data from the EU SILC survey question "Are you limited because of health problem in activities people usually do? Would you say you are severely limited, limited but not severely, not limited at all?

Figure 31: Long-term projections of public expenditure on LTC and sources of funding LTC, 2015–2060



Source: Majcen and Sambt, 2018, based on data from SORS, the ZZZS and the 2018 Ageing Report (AWG 2018).
Note: Shows public sources of financing LTC and public expenditure on LTC, including the health and social components thereof (HC.3 + HC.R.1). Expenditure growth rates are taken from reference and risk scenarios of AWG 2018. The projections of public sources of financing assume social security contributions and budgetary sources will grow in lockstep with GDP (under AWG 2018 assumptions). Total social security contributions depend on wage growth (wages are assumed to grow in line with productivity gains) and employment trends (under AWG 2018 assumptions).

thus double by 2060 under the reference scenario (from 0.9 to 1.8% of GDP). The mismatch between public sources of funding LTC and public expenditure on LTC will be 0.2 pps of GDP in 2030 and 0.9 pps of GDP in 2060, according to IER calculations[112] (see Figure 31).

Aside from demographic trends, growth in long-term care expenditure may be affected by other factors, such as increased coverage by formal care and growing cost of long-term care services. Projections under the risk scenario of LTC expenditure account for both demographic and non-demographic factors, including expected growth in service costs driven by a shortage of available staff in this sector, which is already severe in certain more developed European countries with a higher share of formal care. Considering the estimated size of the population with severe limitations, coverage by formal LTC is currently below the EU average.[113] The transition from informal to formal care is therefore expected to accelerate in the future. Under this scenario, public expenditure on LTC could grow almost four-fold in Slovenia by 2060 (from 0.9% of GDP in 2016 to 3.6% of GDP in 2060). The mismatch between public sources of financing LTC and public expenditure on LTC would be 0.5 pps of GDP in 2030 and 2.7 pps of GDP in 2060 (see Figure 31).

4.3 Creating a single system of long-term care financing and reducing the mismatch between financing sources and needs – Examples of other countries

4.3.1 Financing of long-term care systems

In some developed countries long-term care has already for a long time been recognised as a "new" branch of social security systems. Individual needs for long-term care are unpredictable and associated with the risk of dependence on others with daily activities of living, which may last an extended period of time. The cost of care may therefore be very high for individuals and jeopardise their social security.[114] Studies show that approximately a quarter of the population presently aged 65 will never need LTC services, but for around 10%

[112] Majcen and Sambt, 2018.
[113] Coverage: home-based LTC: SI 16%, EU 21%; institutional care: SI 16%, EU 14%; cash benefits: SI 19%, EU 29% (The 2018 Ageing Report 2018).
[114] An OECD study has shown that in the event of severe needs (dependence on help with basic activities of daily living) the cost of home-based care or institutional care may equal or even exceed average disposable income of those over 65. LTC costs differ significantly across countries. For example, relative to GDP the cost of care in Sweden is twice as high as in France or the UK. This has to do with higher demands regarding caregivers' qualifications and higher wages, which is often associated with higher quality of care. Differences may also stem from higher costs of transportation for care recipients in rural areas (Muir, 2017).

Table 7: Typology of systems of long-term care in EU-28 countries

Nature of LTC system	Countries	Characteristics
• Formal care-oriented provision • Generous • Accessible and affordable	Denmark, Netherlands, Sweden	• Public provision of LTC and budget financing predominant, often from local budgets • High share of public financing, low user charges • Little informal care; high informal care support • Modest cash benefits
• Medium accessibility of formal care • Some informal care orientation in provision	Belgium, Czech Republic, Germany, Slovakia, Luxembourg	• Compulsory social insurance against LTC risk is funded from contributions • Medium public and low private formal care expenditure • High informal care use and high informal care support • Modest cash benefits
• Medium to low accessibility of formal care • Medium informal care orientation	Austria, the UK, Finland, France, **Slovenia**, Spain, Ireland	• Medium public coverage against LTC risk with financing from contributions or taxes (mixed systems) • Medium public and private formal care expenditure • High informal care and high informal care support • High cash benefits
• Low formal care accessibility • Strong informal care orientation	Hungary, Italy, Greece, Poland, Portugal	• Modest social insurance for LTC • Low scope of public sources of financing; high private financing • A lot of informal care; low informal care support • Low cash benefits
• Rather low formal care accessibility • Almost exclusively informal care orientation	Bulgaria, Cyprus, Estonia, Lithuania, Latvia, Malta, Romania, Croatia	• Little social insurance against LTC risks • Very low public spending on formal care • Very high informal care use, little to no informal care support; • Modest/low cash-benefits

Source: The Joint Report on Health Care Systems…, 2016.

the cost of LTC will be very high,[115] and they will exceed average disposable income.

In designing a comprehensive system of long-term care, it is necessary to bear in mind the interdependence of all social protection systems. There are different ways in which European countries have systemically tackled this issue. The majority of North European countries and some in Western Europe have been actively developing their LTC systems for 30 years, and even there coming up with appropriate solutions to make the system comprehensive lasted years (e.g. in Germany 20 years passed from the first proposals to the deployment of a social insurance for long-term care), and they are constantly being tweaked and adapted even now.[116] Most Central and South European countries, on the other hand, have only piecemeal solutions in place, governed by multiple laws, as is the case in Slovenia. In either creating or upgrading their systems, all countries must tackle financing and organisation of LTC, in particular overlap between services and benefits, opacity of the system, overlap of LTC services with health services, and management costs. To ensure efficiency of social protection systems, it is therefore important to align publicly funded LTC benefits with solutions in the health and pension system.[117]

In all countries transforming the financing of long-term care is a lengthy process associated with the identification of new public sources of funding. The differences in how individual countries have approached changing their existing LTC systems are largely the result of differences in the organisation and development of LTC systems, systems of social protection in general, economic development, and the traditional role of the family. Existing LTC systems organisationally fall into five groups (see Table 7), with some financing differences between them. The majority of Nordic countries have a system with universal coverage and budget financing. Some countries which have an underlying Bismarck model of social security have introduced universal compulsory social insurance for LTC (Germany, Belgium, Luxembourg, Japan, South Korea, some provinces in China), but due to the contraction of the working-age population, these countries will have to expand sources to new taxes to finance LTC.[118] For example, Japan, Netherlands, Belgium and Luxembourg are already complementing payroll contributions with various alternative sources of revenue. In Japan and Germany, LTC contributions are higher for pensioners. France opted

[115] According to the Dilnot Commission (2011) study, the costs of one in ten recipients of LTC exceeded EUR 110,000. Similarly, in the US (Kemper et al., 2005) it has been assessed that 42% of those over 65 will not need LTC, but for 16% the cost will exceed $100,000.

[116] More in Toth et al., 2004.

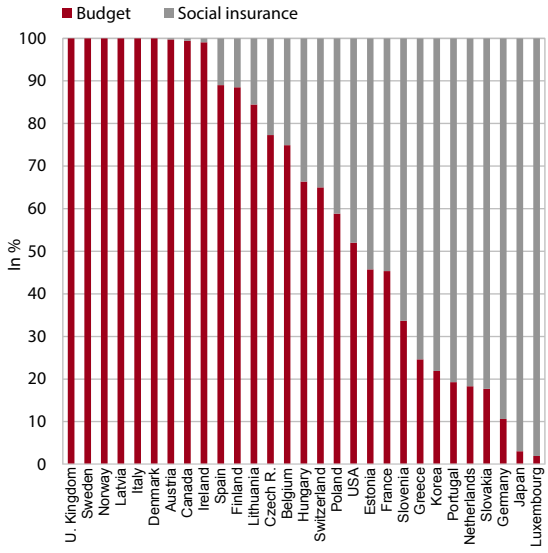
[117] "Fiscal Challenges and Inclusive Growth…", 2019.

[118] "Adequate social protection…",2014; Spasova et al., 2018; Cylus et al., 2018.

as early as 1997 for budget financing of LTC, as have Austria and the Czech Republic, which are essentially countries with a Bismarck model of social insurance. The experiences of several other countries are interesting due to the variety of approaches to transformation and identification of additional public sources:

- Germany introduced new contribution rates for LTC when the Long-Term Care Act was adopted in 1994. To win the support of employers, one work-free day was abolished. Pensions are subject to contributions for the LTC fund.[119] Germany is one of the few countries which transfer a portion of LTC insurance contributions to a special reserve fund, which will start paying for benefits in 2035, when a sharp increase in the share of the population needing LTC is expected. LTC services (institutional care and home care) are mostly provided by the private sector.[120]
- In Belgium, the Flemish regional government introduced compulsory social insurance for LTC which is financed from social contributions, with contribution rates higher for pensioners than for employed persons. However, the amount of collected funds and payments under this insurance scheme are low and do not suffice to cover the needs.
- In Luxembourg taxes on electricity were raised along with the introduction of the new compulsory social insurance for LTC, the funds being set aside for LTC programmes.
- France did not opt for a new social insurance, instead it introduced, in 1997, a new form of cash benefit for persons with disabilities and persons dependent on assistance, which is financed from regional budgets. Regarding the introduction of a new social insurance, there was political consensus that higher contributions from wages would undermine the competitiveness of the economy and would not provide a sustainable source of financing in the long term considering the growing needs of the older population.[121] In 2003 this cash receipt was renamed the "allowance for autonomy" and eligibility was significantly expanded. In 2004 a "solidarity contribution for autonomy"[122] was introduced as an additional source of financing of this benefit via the abolition of one work-free day, which was named the "day of solidarity".[123] On this day employees do not receive pay; instead employers pay 0.3% of average annual gross wage for each employee into a dedicated "national solidarity fund for autonomy".[124] In 2015 a "solidarity contribution for autonomy of the elderly" was introduced, a 0.3% charge levied on pensioners whose annual income exceeds EUR 13,956 (EUR 21,408 for a couple).
- In Austria, cash benefits for LTC have been provided from the budget since 1993 in accordance with the Long-Term Care Allowance Act. Allowances for LTC are approved following an assessment of individual needs and are means-tested. In 2013 a Long-Term Care Funds Act was adopted providing fiscal equalisation to federal states and municipalities in the financing of LTC services. Even though Austria is at its core a country with a Bismarck model of social insurance, LTC is entirely financed from taxes.[125]
- The Czech Republic introduced, in 2007, a universal allowance for LTC akin to Austria's that is tax financed.
- In the UK the share of public sources of financing of LTC was increased in 2016 with the help of local taxes and the introduction of an additional property tax at the local level, the aim being to reduce the pressure on social assistance covered by local budgets.[126]

Figure 32: Structure of public expenditure on LTC by financing source, OECD countries, 2017



Source: OECD Stat, 2019
Note: International databases do not provide more fine-grained break-downs by sources of financing.

Most countries finance long-term care services at least partially from private sources, much like they finance health. There are large differences between countries in terms of co-payments and out-of-pocket spending on LTC services. Individual payments depend on 1) threshold to enter the LTC system, 2) scope of services or amount of cash benefits covered by public funds, and 3) in most countries, partially or entirely, on the recipient's income and property. Most countries use a specific scale to assess a person's limitations and hence eligibility for LTC services or cash benefits. In some

[119] Morel, 2006.
[120] Draft Long-Term Care and Insurance for Long-Term Care Act, 2017.
[121] Additionally, "dependence on other person's help" was designated as a special need of older persons, not as a life risk. Under Bismarck principles, the state must create social insurance (pension, health) due to "risk"; any special "needs" of the population should be financed from the budget (Morel, 2006).
[122] *Contribution solidarite autonomie* (CSA, 2019).
[123] *Journee de solidarite,* 2019.
[124] Caisse Nationale de Solidarite pour l'Autonomie (CNSA, 2019).
[125] Draft Long-Term Care and Insurance for Long-Term Care Act, 2017.
[126] The problem with this source is that it is expected to further widen the differences between local communities in the provision of adequate social protection of the older population (Cylus et al., 2018).

countries the threshold is very high, which means that persons with moderate needs (moderate limitations) cover all costs themselves. As for the scope of service, the majority of countries set a weekly quota of hours of home-based LTC an individual is entitled to depending on their needs (in Slovenia, 20 hours of social home care per week maximum). Likewise, in institutional care a certain scope of service is determined individually based on assessed needs. In this area there are significant differences between countries as well. As regards means-testing, the majority of European countries also provide at least partially universal LTC – a certain level of care notwithstanding individual wealth or income. User charges for institutional care vary significantly country by country and in some countries they are means-tested.[127] The majority of European countries provide institutional care without user charges for the socially disadvantaged. In Slovenia and France relatives must contribute towards the cost of care on a means-tested basis. In some countries (Czech Republic, Slovenia, Canada, Belgium) eligibility for community nursing, which is provided in the framework of the health system, is not means-tested. In Italy, Austria, Germany, Slovenia and Scandinavian countries services are means-tested but cash benefits are universal.[128]

In most countries persons with severe limitations cannot afford home care, with institutions playing the role of safety net. The OECD study estimates for individual countries the financial risk of the recipients of LTC not being able to cover basic necessities of life due to co-payments for LTC. In the event of such, either the cost is transferred to relatives or the recipient accepts less care than they actually need, poorer quality of care and thus reduced quality of life. The study has shown that Slovenia ranks among countries in which the co-payments are very high even for persons with moderate limitations and on average exceed individual financial capacity. For persons with severe limitations, co-payments are even higher, which is why such persons typically resort to institutional care. Institutions act as safety nets in other countries as well, providing care for everyone, regardless of income. In some countries, persons with moderate limitations or older persons without limitations do not qualify for institutional care or have to pay more for care than those with severe limitations.

In the last decade private insurance for long-term care has been developing and this could alleviate some of the pressure on public finances by allowing individuals to avoid the risk of high out-of-pocket spending. However, in the majority of countries the market for LTC insurance is small and only the wealthier can afford the insurance since premiums depend on risk profile. Germany has private insurance for LTC as an independent tier of compulsory insurance for LTC. France has relatively well developed group insurance for LTC at company level, which has the advantage of being open to younger persons, which keeps premiums lower.[129] There are also private insurances for LTC on the market as segments of life insurance policies (much like accident insurance) and reverse mortgages. All of these options are welcome since they reduce the pressure on public finances at least to a certain extent (at least for care for the wealthier) and reduce the risk of out-of-pocket spending. However, the promotion of private insurance for LTC with tax benefits widens differences in equality and solidarity.[130]

4.3.2 Improving the efficiency of long-term care

Experiences of other countries show that even if a long-term care system has been in place for some time, ongoing efforts are required to improve its efficiency and reduce the gap between sources of financing and expenditure. Activities are focused on appropriate budgeting for LTC at the national level and governance improvements. In many countries budgetary planning of LTC involves multiple government departments, which requires a clear segregation of duties of individual ministries and improvements in the transfer of information. Governance of LTC systems is complex and often inefficient. Most countries have faced problems with regard to coordination between health and social systems and overlapping services. Countries are also looking for solutions to use acute health services less often in cases when such services can be provided by the LTC system.

[127] The OECD study (Muir, T., 2017) features 14 countries, Slovenia included. Individual wealth is a factor in the rate of user charges for institutional care in eight countries and five countries means-test home care eligibility as well (Belgium, Croatia, England, Netherlands and the US). But in the majority of these countries (except for England and the US) means-testing is not very restrictive and does not cause large differences in user charges.

[128] Rodrigues, 2014.

[129] Potočnik, 2013.

[130] "Joint Report on Health Care…", 2016; "Fiscal Challenges and Inclusive Growth…", 2019.

Table 8: Options for improving the efficiency of long-term care systems

Macro level	• Budgetary restrictions or budgetary objectives • Restrictions of scope of benefits and introduction of standards • Financial protection of the socially disadvantaged • Introduction of regulated competition between providers on price and quality • Improving the supply of nursing staff on the labour market (appropriate education and training programmes for formal and informal caregivers; securing staff with the support of migration policy) • Control of wage growth • Changes to staff responsibilities • Organisation of volunteering with older persons at municipal level, in particular with activation of younger pensioners
Supply side	• Promotion of home care and community care • Development of adequate institutional care capacity1 • Introduction of ITC in home care, which can reduce the demand for staff2 • Reform of provider payment models • Introduction of clinical pathways (care guidelines) • Employment of care coordinators • Incentives for employees (salary supplements for preventive services, for satisfaction of care recipients, for quality and efficiency) • Integration of social and health care at home and in institutions • Support for informal caregivers (training, facilitating a balancing of informal care at home with formal work obligations)
Demand side	• Introduction of a single entry point • Introduction of single eligibility assessment for entering LTC system • User charges for expenditure on LTC services (co-payments, deductibles) • Means-testing of benefits financed from public sources • Behaviour risk-factors managing programmes • Disability prevention programmes • Fall-prevention programmes • Development of early rehabilitation • Prevention of decline in cognitive capacity • Introduction of ICT solutions for independent home living and training of care recipients • Elimination of physical obstacles to independent life at home and in the community (e.g. elevators) • Incentives for investment in housing tailored to older persons • Interdepartmental policies promoting active and healthy ageing

Source: IMAD, drawn from: "Analysis of the health system in Slovenia", 2015; "Joint Report on Health Care...", 2016; MOPACT, 2016; AHA.SI, 2016; "Fiscal Challenges and Inclusive Growth…", 2019; SAPEA, 2019.
Notes: [1] For persons with severe limitations, home care is more expensive than institutional care; coupled with a lack of skilled staff, it is therefore important cost-wise to provide adequate capacity in institutional care. 2 Use of new technologies may increase labour productivity in LTC services. E-care (use of sensors to support older persons living independently in the home environment) has been shown to reduce the number of emergency visits by doctors. It may also significantly alleviate the burden on family and informal caregivers. However, there are few studies on the effects of ICT on the cost of care. Source: SAPEA, 2019.

4.4 Slovenia's measures addressing long-term care and possibilities for future development

4.4.1 Creating a single system of long-term care financing

Efforts to transform long-term care into a unified system have been under way for over 15 years. While the need to create a new single LTC system has been widely accepted, an Act on LTC is yet to be adopted. The inability to do so is a consequence of the complexity of this field, which demands overlapping activities under the purview of multiple ministries, and of inefficient planning of the new system and lack of agreement on the type of financing sources of the new system and the volume of additional sources of financing.[131] Driven by the need to put in place a new LTC system and systematically monitor its state and development by international standards, records on expenditure and recipients of LTC were set up between 2005 and 2015,[132] and five draft acts on LTC and insurance for LTC were drawn up from 2006 to 2017.[133] Each of these contributed

[131] The Court of Audit (Audit Report, 2019) has found that the Government, the Ministry of Labour, the Family and Social Affairs, and the Ministry of Health had not made adequate plans for a new system of LTC between 1 January 2007 and 30 June 2018. The Government failed to precisely determine and delineate the tasks that either of the ministries ought to be in charge of. In preparations leading to the draft act on LTC, the weaknesses of the existing social care system were not adequately identified, the requisite funding was not precisely calculated, and sources of financing were not determined with due consideration of population ageing trends.

[132] See Nagode et al., 2014.

[133] Draft Act on Long-Term Care and Insurance for Long-Term Care (Ministry of Labour, the Family, Social Affairs and Equal Opportunities, 2006, 2010; Union of Pensioners' Associations of Slovenia, 2011;

towards the next draft and improved solutions, but none involved adequate calculations of the scope of funding to provide LTC in the new system.[134]

In recent years activities to create a single system of long-term care financing have picked up again. With growing awareness about and indeed the impact of demographic change, several strategic documents have been completed.[135] In 2017 all tasks associated with the preparation of new LTC legislation were transferred from the Ministry of Labour, the Family, Social Affairs and Equal Opportunities to the Ministry of Health with the aim of developing an integrated network of LTC providers and determine the financing of LTC, which is closely connected with the financing of the health system.[136] From 2017 a public consultation has been ongoing about the latest draft Act on Long-Term Care and Insurance for Long-Term Care; several solutions from this draft act are being tested in practice via pilot projects (see Box 1).

Even though the latest draft act on long-term care represents a new step in the creation of a unified system of long-term care, some analyses have highlighted certain key aspects of the proposal that remain open with regard to funding. These areas therefore require additional consideration and appropriate amendments to the financing provisions of the legislation:

- **Actual scope of additional sources of financing LTC.** Analysis by the Court of Audit shows[137] that the scope of additional funds has not yet been determined, since some major assumptions were not appropriately included in the calculations. Given that the new system of LTC will presumably change eligibility criteria and financing, it will also increase coverage and affect the types of care provided. Likewise, the study by Majcen and Sambt (2018)[138] notes that the creation of an entirely new LTC system must be underpinned by an expert analysis of the needs of existing recipients of care, and an estimate must be made of the number of the recipients of informal care that would enter the new LTC system under different eligibility criteria. This was not accounted for in the new draft act. It has been estimated on the basis of the SHARE survey for 2013 that there are an additional 53,000 persons in Slovenia older than 50 who have at least one limitation in basic activities of daily living but receive either no care at all or just informal care. They could potentially enter the new LTC system, which would require additional funding.
- **Adequate, socially acceptable ratio between public and private financing of LTC.** The share of co-payment for LTC services varies significantly across European countries and depends on the LTC model (see Table 5). The latest draft act in Slovenia copied the German and Austrian models, where the share of co-payments for formal LTC services is relatively high. Under the latest proposal, LTC recipients would contribute 30% towards the cost of the approved benefits out-of-pocket, plus food and other costs of living at home or in an institution. This portion of the proposal is not means-tested and most pensioners could not afford to cover these co-payments.[139]
- **Projections of LTC expenditure.** Projections of financial sources and expenditure on LTC by Majcen and Sambt (2018) use assumptions and calculations presented in the last draft act on LTC (2017).[140] The projections show that, assuming LTC remains unchanged, the gap between financing sources and expenditure would widen quickly and the compulsory levy for LTC (as a new public source), which is supposed to cover this shortfall, would increase by over 60% by 2030 and more than triple by 2060. Under the risk scenario, the increase would be even higher.
- **Possibility of implementation of a system in which benefits would be partially means-tested.** In such a system, persons with high income would cover, for example, all costs of instrumental activities of daily living (IADL), housing modifications and several other services. But the law could also determine different benefit thresholds, whereby the wealthier would have fewer benefits covered and the socially disadvantaged more. This could also apply to cash benefits for LTC assuming such an option is provided for in the legislation (it was not in the 2017 draft act).[141]
- **Consideration of other public sources.** Higher payroll contributions additionally raise the taxation of labour and, due to demographic change, this source is not sustainable, which is why it makes sense to consider additional public sources, for example taxes. Due to long-term demographic trends, even most countries with a Bismarck model of social insurance

Slovenian Community of Social Institutions, 2010; Ministry of Health, 2017).

[134] Audit Report, 2019.

[135] Elderly Care Strategy until 2010 – Solidarity, Coexistence and Quality Ageing, 2016; Resolution on the National Social Assistance Programme 2006–2010, 2006; Resolution on the National Social Assistance Programme 2013–2020, 2013; Resolution on the National Health Care Plan 2016–2025 – Together for a Healthy Society, 2017; Active Ageing Strategy, 2017.

[136] The Court of Audit holds that the Ministry of Health is better suited for the implementation of the transferred tasks, but the problem is that the powers of the two ministries have not been adequately delimited: the Ministry of Health is responsible for the development of the integrated network of providers of LTC, but the existing network is under the purview of the Ministry of Labour, the Family, Social Affairs and Equal Opportunities (Audit Report, 2019).

[137] The Audit Report (2019) has found that the two ministries are yet to carry out an analysis of how many persons are eligible for category II, III and IV care or how many will be eligible in the future considering the population ageing trends. This information is essential for an adequate calculation of actual LTC financing sources under the new system.

[138] Majcen and Sambt, 2018.

[139] The Court of Audit has estimated that, based on the average old-age pension in 2016, potential recipients of LTC could only afford category I of the institutional care in a public facility, i.e. not categories II, III or IV. In private institutions with concessions, where prices are higher, they would not even be able to afford category I care. Recipients could also pay for only 2.4 hours of care at home per day, assuming that they spent their entire pension on home care (Audit Report, 2019).

[140] Draft Long-Term Care and Insurance for Long-Term Care Act, 2017.

[141] AHA.SI, 2017.

Box 1:
Features of the latest proposal on long-term care and compulsory insurance for long-term care (2017)

The aim of the planned single system of LTC financing is to pool existing public resources into a new social insurance for LTC and secure additional public financing. Under the latest draft Act on Long-Term Care and Insurance for Long-Term Care, existing public sources, funded from contributions to the HIIS, Pension Fund and Ministry of Labour, the Family, Social Affairs and Equal Opportunities would be folded into a new insurance for LTC managed by the HIIS. It is estimated that an additional EUR 160 million in public funds would be needed when the new LTC system is put in place. The draft therefore proposes the introduction of a new public levy, an LTC contribution payable by all contributors to compulsory health insurance, who would thus become insured for LTC. Contributors would fall into one of several income brackets based on their gross income, with the contribution levied on net income.[1] Under the latest draft, recipients of LTC would be liable for the compulsory contribution plus 30% of the cost of assigned benefits out of pocket. Additionally, they would cover the cost of food and accommodation in an institution or at home.

Another aim the new system pursues is to improve the efficiency of the financing and provision of long-term care. The key elements Slovenia is considering in planning a new LTC system (Ministry of Health, 2019) are as follows:

- Clearly define the scope of LTC services
- Create a single entry point to centralise as much as possible the information on health, social protection and LTC and simplify procedures for recipients
- Introduce a single eligibility assessment
- Introduce care coordinators to maximise the efficiency of access to benefits and prevent overlap of benefits
- Make it possible for recipients to remain at home as long as possible with appropriate care if they wish so
- Introduce new care services to provide equal quality of service for recipients of home care and institutional care
- Provide services strengthening and maintaining independence and e-care services
- Create effective oversight of service quality and safety
- Provide support to providers of informal care at home and family caregivers
- Improve planning and governance and assure quality, safety and efficiency in the provision of LTC services
- Ensure efficient, economical, safe and financially acceptable use of human resources
- Create effective public oversight of provision of LTC services

The pilot projects testing the solutions proposed by the draft act will be completed in 2020. The goal of these projects is to test the key tools, methods, procedures and services of integrated LTC in three environments (urban, suburban and rural) and evaluate their benefits and shortcomings in practice, perform an analysis of unmet needs, test e-care services, and test coordination mechanisms involving multiple care providers and mechanisms supporting the providers of informal care. Several other projects designed to support the transition to the new system of LTC are ongoing.[2]

[1] The contribution is supposed to be levied in net income so that pensioners are liable for contributions as well (due to the system of net pensions).
[2] The Ministry of Health coordinates the projects Substantive and Information Support for pilot project Long-Term Care and the project on reforming existing networks and facilitating the entry of new providers of community services and programmes for the adult and elderly population, and the project Long-Term Care Model in Community (2019). Five other projects are handled by the Ministry of Labour, Family, Social Affairs and Equal Opportunities (2019): i) Development of pilot ICT projects, (ii) Development of community programmes and services, (iii) Analysis of community services, programmes and needs, (iv) Modernisation of network of existing emergency services for the provision of community services, and (v) Construction of a network of residential units for deinstitutionalisation of persons with physical and mental disabilities.

have refrained from raising employee contributions (with the exception of a few, see Section 4.3.1); instead they have opted for higher budgetary financing of LTC.

- **Possibility of a special budgetary fund for financing investments in active ageing society.** In accordance with Active Ageing Strategy guidelines, increasing the activity of older persons will require adjustments of living conditions (e.g. elevators) and transportation, introduction of ICT solutions for older persons, investments in smart homes and remote access, and similar. The state could create a new budgetary fund for this purpose (modelled on the climate fund). Alternative financing could be considered, modelled on solutions introduced by certain other countries (see Section 4.3.1).
- **Systemic measures and adequate incentives will be required to maximise the involvement of volunteers in the provision of LTC.** One such possible incentive is to publicly finance the health and pension contributions of a family member who would leave his

work to take care for a relative;[142] another option is for example the introduction of a system in which service recipients would pay part of the monthly costs on a means-tested basis.

Along with securing additional public sources of financing for long-term care, it is necessary to address the health benefit package, since the two activities are closely interlinked, not just substantively but also financially. Expenditure on LTC accounted for 13% of public expenditure on health in 2017; in some countries it already exceeds 20%. Moreover, almost 90% of all public expenditure on LTC is for LTC health services. Additional sources of LTC financing will largely be spent on LTC health services as well, which means they will also form an additional public source of health financing. One possible additional public source of LTC financing is therefore a reallocation of health benefits in favour of a higher share of LTC health services (additional palliative, community nursing and early rehabilitation programmes). In Slovenia this possibility would be appropriate in the event complementary health insurance would be abolished. In such a case, it would also be necessary to consider changing the benefit package to provide additional private sources along with additional public sources (due to the replacement of complementary health insurance with public sources of funding). These additional public sources of health financing would create more options for reallocation of benefits towards a greater share of LTC health services (e.g. community nursing, geriatrics and palliative care).

4.4.2 Preventing disability

Promotion of a healthy way of life and programmes for the prevention of frailty and disability have been recognised as crucial in improving the long-term sustainability of social protection systems. The main guidelines in Slovenia for the prevention of disability (Active Ageing Strategy, 2017) are as follows: (i) create programmes for the prevention of falls, physical exercise programmes, the development of early rehabilitation and long-term home-based care; (ii) address the most common age-related diseases (dementia, incontinence, diabetes, chronic wounds, oral health), including by creating welcoming communities and services which will improve the quality of life of patients and their relatives; (iii) early diagnosing of neurodegenerative diseases; (iv) development and use of cutting-edge technologies to monitor older people and assist in their holistic and long-term home care; and (v) create measures and programmes to nurture the independence of older people and older disabled persons and allow them to fully participate in all areas of life.

In recent years several programmes have been implemented at the national level to prevent the disability of older people, and even more are under way at the local level: [143]

- The programme Living Healthy – Promotion of Health in Rural Local Communities has been successfully implemented for over a decade. Its goal is to improve health and prevent or defer the occurrence of risk factors and chronic diseases (coronary and heart disease, cancer, diabetes, obesity, locomotory conditions, etc.) by promoting healthy lifestyles with an emphasis on involving people in improving their own health.
- The Dementia Management Strategy until 2020 was adopted in May 2016 (Ministry of Health).
- The project Active and Healthy Ageing in Slovenia (AHA.SI) concluded in 2018. Multiple guidelines and recommendations were also adopted for the prevention of falls and support for independent living at home.
- The project of Joint action to prevent frailty (JA-ADVANTAGE) is dedicated to a holistic approach to the promotion of healthy and independent living in advanced age of the EU population. This is the first joint action project that addresses the prevention of frailty. It has been under way since 2017 and will last three years; it is co-financed by the EU and brings together 22 EU Member States and over 40 organisations. The NIJZ participates in all work packages and is leader of a segment on the management of individual frailty.
- The project Demenca aCROsSLO is dedicated to improving the quality of living of persons with dementia and is under way in Slovenia and Croatia.
- JA CHRODIS-PLUS is a project supporting the implementation of innovative policies and practices reducing chronic disease and multimorbidity, with an emphasis on intersectoral activities.

[142] AHA.SI, 2017.

[143] Living healthy (NIJZ); AHA.SI, 2017; JA-ADVANTAGE, 2017; Demenca aCROsSLO, 2019; JA CHRODIS-PLUS, 2019.

Bibliography and sources

AHA.SI – Aktivno in zdravo staranje v Sloveniji (Active and Healthy Ageing in Slovenia). (2015). (2014): Podpora samostojnemu bivanju v domačem okolju in dolgotrajne oskrbe (Support for independent living in the home environment and long-term care). Final document with proposed measures. Edited by: Drole, J. and Lebar, L. NIJZ, Ministry of Health, Ministry of Labour, Social Affairs and Equal Opportunities. Obtained at: http://www.staranje.si/sites/www.staranje.si/files/upload/images/m20_aha_si_dolgotrajna_oskrba_koncna.pdf

AHA.SI – Aktivno in zdravo staranje v Sloveniji (Active and Healthy Ageing in Slovenia). (2017). Obtained at: http://www.staranje.si/aha-si/izdelki-projekta-project-outputs

Active Ageing Strategy. (2017). Ljubljana: Government of the RS, MDDSZ, IMAD. Obtained at: http://www.umar.gov.si/fileadmin/user_upload/publikacije/kratke_analize/Strategija_dolgozive_druzbe/UMAR_SDD.pdf

Addressing Dementia. The OECD Response. (2015). OECD Health Policy Studies. Obtained at: https://www.oecd.org/health/addressing-dementia-9789264231726-en.htm

Adequate social protection for long-term care needs in an ageing society. (2014). Brussels: Social Protection Committee and European Commission Services. Obtained at: http://ec.europa.eu/health//sites/health/files/ageing/docs/ev_20140618_co04_en.pdf

Albreht, T., Pribaković, R., Brinovec, R., Josar, D., Poldrugovac, M., Kostnapfel, T., Zaletel, M., Panteli, D., Maresso, A. (2016). Slovenia: Health system review. Health Systems in Transition. Vol. 18, No. 3 (3). Copenhagen: European Observatory of Health Systems and Policies, Republic of Slovenia, Ministry of Health. Obtained at: http://www.euro.who.int/__data/assets/pdf_file/0018/312147/HiT-Slovenia_rev3.pdf?ua=1

Analiza zdravstvenega sistema v Sloveniji (Analysis of the health system in Slovenia). (2015). Ljubljana: Ministry of Health, European Observatory on Health Systems and Policies and WHO. Obtained at: https://www.gov.si/gone?url=http://mz.arhivspletisc.gov.si/si/pogoste_vsebine_za_javnost/analiza_zdravstvenega_sistema/

Annual report 2018. (2019). Ljubljana: Pension and Disability Insurance Institute of Slovenia. Obtained at: https://www.zpiz.si/content2019/2letna-poroila019

Antolin, P. (2009). Private Pensions and the Financial Crisis: How to Ensure Adequate Retirement Income from DC Pension Plans. In OECD Financial Market Trends, No. 97, Volume 2009/2. Obtained at https://www.oecd.org/daf/fin/44628862.pdf

Audit report: (2019). Skrb za tiste, ki zaradi starosti, duševne ali telesne prizadetosti potrebujejo pomoč drugih (Care for those who need assistance due to old age or mental or physical disabilities). Ljubljana: Court of Audit of the Republic of Slovenia. Obtained at: http://www.rs-rs.si/fileadmin/user_upload/Datoteke/Revizije/2019/KAM/KAM 2_RSP_RevizijskoP.pdf

Bank of Slovenia – Statistics – Financial accounts. Obtained in October 2019 at: https://www.bsi.si/statistika/podatkovne-serije/podatkovne-serije.

Behr, A. and Theune, K. (2017). Health System Efficiency: A Fragmented Picture Based on OECD Data. PharmacoEconomics – Open 2017 Sep; 1(3): 203 (-221).

Bela knjiga o pokojninah (White Paper on Pensions). (2016). Ljubljana: Ministry of Labour, Family, Social Affairs and Equal Opportunities. Obtained at: http://www.mddsz.gov.si/fileadmin/mddsz.gov.si/pageuploads/dokumenti__pdf/dpd/2Bela_knjiga_o_pokojninah.pdf

Boulhol, H. (2019). Objectives and challenges in the implementation of a universal pension system in France. Paris: OECD. Economics department working papers no. 1553

Business Report for 2016. (2017). Ljubljana: Health Insurance Institute of Slovenia. Obtained at: http://imss.dz-rs.si/imis/9fe47d749ce2f854f663.pdf

Business Report for 2017. (2018). Ljubljana: Health Insurance Institute of Slovenia. Obtained at: http://imss.dz-rs.si/imis/fc1729f6ed0c66eb49d3.pdf

Business Report for 2018. (2019). Ljubljana: Health Insurance Institute of Slovenia. Obtained at: http://www.zzzs.si/zzzs/internet/zzzs.nsf/o/2ADB33085127846AC1256E86003EDAA9

Cecchini, M., Devaux, M. and Sassi, F. (2015). Assessing the impacts of alcohol policies: A microsimulation approach. OECD Health Working Papers, No. 80, Paris: OECD. Obtained at http://dx.doi.org/10.1787/5js1qwkvx36d-en

Comparative efficiency of health systems, corrected for selected lifestyle factors. Final Report. (2015). Brussels: European Commission. Obtained at: https://ec.europa.eu/health//sites/health/files/systems_performance_assessment/docs/2015_maceli_report_en.pdf

Colombo, F., Llena-Nozal, A., Mercier, J., Tjadens, F. (2011). Help Wanted? Providing and Paying for Long – Term Care. OECD Health Policy Studies, OECD Publishing

CNSA – Caisse nationale de solidarite pour l'autonomie. (2019). Obtained at: https://www.cnsa.fr/

CSA – Contribution Solidarite Autonomie. (2019). Obtained at: https://www.service-public.fr/professionnels-entreprises/vosdroits/F32872

CSG – Contribution Sociale Generalisee (2019). Obtained at: https://www.vie-publique.fr/fiches/21973-contribution-sociale-generalisee-csg-taux

Cylus, J., Normand, C., Figueras, J. (2018). Will population ageing spell the end of the welfare state? A review of evidence and policy options. The European Observatory for Health Care Systems and Policies. Copenhagen: WHO Regional Office for Europe.

Cylus, J., Roubal, T., Ong, P., Barber, S. (2019). Sustainable Health Financing with an Ageing Population. Implications of different revenue raising mechanisms and policy options. The economics of healthy and active ageing series. WHO Centre for Health Development and European Observatory on Health Systems and Policies. Copenhagen: WHO Regional Office for Europe. Obtained at: https://extranet.who.int/kobe_centre/en/project-details/Sustainable_financing

Demenca a CROsSLO. (2019). Naslov projekta: Izboljšanje kakovosti življenja oseb z demenco na čezmejnem območju (Project – Life quality improvement of people with dementia in the cross-border area). Obtained at: https://www.nijz.si/sl/demenca-acrosslo

Development Report 2018. (2018). Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.si/fileadmin/user_upload/razvoj_slovenije/2018/POR_2018.pdf

Development Report 2019. (2019). Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.si/fileadmin/user_upload/razvoj_slovenije/2019/slovenski/POR2019_splet1.pdf

Dodatno pokojninsko zavarovanje (Supplementary pension insurance). Ministry of Labour, Family, Social Affairs and Equal Opportunities. Obtained at: http://www.mddsz.gov.si/si/delovna_podrocja/delovna_razmerja_in_pravice_iz_dela/pokojninsko_in_invalidsko_zavarovanje/dodatno_pokojninsko_zavarovanje/

Dogovor o plačah in drugih stroških dela v javnem sektorju (Agreement on Salaries and Other Payments of Labour Costs in the Public Sector). Official Gazette of the RS, No. 80/2018. Obtained at: https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2018-01-3862?sop=2018-01-3862

Dominkus, D., Zver, E., Trbanc, M., Nagode, M. (2014). Long-term care – the problem of sustainable financing. Host country paper. Peer Review on financing of long-term care, Slovenia 2014. European Commission. Obtained at: file:///C:/Users/ezver/Downloads/Host%20country%20paper_SI_2014%20(1).pdf

Dominkuš, D. (2007). Prijetno in prijazno bivanje na jesen življenja. Prispevek v zborniku Dom upokojencev Ptuj: 80 let delovanja Doma upokojencev Ptuj. Editor: Dokl, Kristina. COBISS.SI-ID 59372033.

Dilnot Commission. (2011). Report on Fairer Funding for All – The Commission's Recommendations to Government. https://webarchive.nationalarchives.gov.uk/20130221121534/http://www.dilnotcommission.dh.gov.uk/our-report/

Economic Issues 2016. (2016). Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.gov.si/fileadmin/user_upload/publikacije/izzivi/2016/EkonomskiIzzivi2016.pdf

Employment and social conditions in Europe 2017. (2017). Brussels: European Commission. Obtained at: https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8030&furtherPubs=yes

Eurostat Database (2019). Population and Social Conditions – Health – Health Care – Health Care Expenditure (SHA 2011). Obtained in October 2019 at: https://ec.europa.eu/eurostat/data/database

Eurostat Database (2019). Population and Social Conditions – Health – Health Status – Functional and activity limitations. (EU SILC).

Eurostat Database. Economy and Finance – National Accounts – Annual National Accounts – Main GDP Aggregates. Obtained in October 2019 at: https://ec.europa.eu/eurostat/data/database

Eurostat Database. Economy and Finance – Population and Social Conditions – Labour market – Employment and Unemployment. Employment and Activity. Obtained in June 2019 at: https://ec.europa.eu/eurostat/data/database

Fiscal Challenges and Inclusive Growth in Ageing Societies. (2019). OECD Economic Policy Paper. September 2019 No. 27. Obtained at: https://www.mof.go.jp/english/international_policy/convention/g20/annex3_2.pdf

Fiscal Sustainability of Health Systems: Bringing Health and Finance Perspectives. (2015). Paris: OECD. Obtained at: http://www.oecd.org/publications/fiscal-sustainability-of-health-systems-9789264233386-en.htm

Government of the Republic of Slovenia. (3. 10. 2019). 46th regular session of the Government of the Republic of Slovenia. Obtained at: https://www.gov.si/novice/2019-10-03-46-redna-seja-vlade-republike-slovenije/

Gracar, I. (2014). Velik kompromis o dopolnilnem zdravstvenem zavarovanju (A major compromise on supplementary health insurance). Delo, Sobotna priloga, 19.7.2014.

Health at a glance: Europe 2018. (2018). State of Health in the EU Cycle. Paris: OECD Publishing. Obtained at: https://ec.europa.eu/health/sites/health/files/state/docs/2018_healthatglance_rep_en.pdf

Health at a glance 2019. OECD Indicators. (2019). Paris: OECD Publishing. Obtained at: https://www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm

Informacija o stanju in aktivnostih zdravstvenega sistema (Information on the state and activities of the health system). (2017). Ministry of Health. Material for the Economic and Social Council, 22 September 2017.

JA-ADVANTAGE. (2017). Naziv projekta: Projekt skupnega ukrepanja o preprečevanju krhkosti JA-ADVANTAGE (Project: Joint Action for Frailty Prevention JA-ADVANTAGE). Obtained at: https://www.nijz.si/sl/advantage

JA CHRODIS-PLUS. (2019). Project: JA CHRODIS-PLUS. Implementing good practices for chronic diseases. Obtained at: https://www.nijz.si/sl/ja-chrodis-plus.

James, C, Devaux, M., Sassi, F. (2017). Inclusive Growth and Health. OECD Health Working Paper No. 103. Paris: OECD. Obtained at: http://www.oecd.org/els/health-systems/health-working-papers.htm

Joint report on Health Care and Long Term Care Systems and Fiscal Sustainability. Volume 1. (October 2016). European Economy. Occasional Paper 37. Brussels: European Commission and Economic Policy Committee. Obtained at: https://ec.europa.eu/info/publications/economy-finance/joint-report-health-care-and-long-term-care-systems-fiscal-sustainability-0_en

Joint report on Health Care and Long Term Care Systems and Fiscal Sustainability. Volume 2. Country Documents 2019 Update. (June 2019). European Economy. Occasional Paper 104. Brussels: European Commission and Economic Policy Committee. Obtained at: https://ec.europa.eu/info/publications/economy-finance/joint-report-health-care-and-long-term-care-systems-fiscal-sustainability-0_en

Joumard, I., André, C. and Nicq, C. (2010). Health care systems: efficiency and policy settings. Paris: OECD. Obtained at: http://www.oecd.org/eco/healthcaresystemsefficiencyandpolicysettings.htm

Journee de solidarite: comment s'applique-t-elle dans les entreprises?. (2019). Obtained at: https://www.service-public.fr/professionnels-entreprises/actualites/A13357

Kemper, P, Komisar, H. Alecxih, L. (2005). Long-term Care Over an Uncertain Future: What Can Current Retirees Expect? Obtained at: https://www.researchgate.net/publication/7210258_Long-Term_Care_Over_an_Uncertain_Future_What_Can_Current_Retirees_Expect

Klemenčič, Š. (2018). Financiranje sistema zdravstvenega varstva na temelju solidarnosti in socialne pravičnosti (Funding of the health care system based on solidarity and social justice). Master's thesis. Kranj: University of Maribor, Faculty of Organisational Sciences. Obtained at: https://dk.um.si/IzpisGradiva.php?id=72501&lang=eng

Letno poročilo Krovnega pokojninskega sklada za javne uslužbence za leto 2017 (Annual report of the Umbrella pension fund for public servants for 2017). 2018) Ljubljana. Modra zavarovalnica. Obtained at: https://www.modra-zavarovalnica.si/fileadmin/letna_porocila/revidirano_LP_KPSJU_2017.pdf

Lorenzoni, L., Murtin, F., Springare, L.S., Auraaen, A., Daniel, F. (2018). Which policies increase value for money in health care? OECD Health Working Paper No. 104. Paris: OECD. Obtained at http://www.oecd.org/els/health-systems/health-working-papers.htm

Lorenconi, L., Marino, A., Morgan, D., James, C. (2019). Health Spending Projections to 2030: New results based on a revised OECD methodology. OECD Health Working Papers No. 110. Paris: OECD. Obtained at: http://www.oecd.org/els/health-systems/health-working-papers.htm

Majcen B. and Čok M. (2014). Ocena dolgoročne javnofinančne vzdržnosti zdravstvenega sistema in možnih virov financiranja (The estimation of long-term financial sustainability of the health care system and possible sources of financing). Ljubljana: Institute for Economic Research. Obtained at: http://www.zav-zdruzenje.si/wp-content/uploads/2014/04/Studija.pdf

Majcen, B. (2015). Ocena dolgoročnih projekcij izdatkov in prejemkov zdravstva in dolgotrajne oskrbe (Long-term projections of revenues and expenditure for health and LTC). Ljubljana: Institute for Economic Research. Posvet o financiranju in optimizaciji plačilnih modelov v zdravstvu (Debate on financing and optimising the models of payment in health care). Obtained at: http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/Analiza/ppt/_Majcen_slo_Projekcije-zdravstvo-DO.021115__Zdruzljivostni_nacin__.pdf

Majcen, B. and Sambt, J. (2018). Projekcije srednjeročnih in dolgoročnih izdatkov za dolgotrajno oskrbo in zdravstvo (Projections of medium- and long-term expenses for long-term care and health care). Final report. Projekt Ministrstva za zdravje po pogodbi št. C2711-18-951303 (Project of the Ministry of Health according to Contract No. C2711-18-951303). Ljubljana: Institute for Economic Research.

Maresso, A. et al. (2015). Economic Crisis, Health Systems and Health in Europe. Impact and implications for policy. Copenhagen: European Observatory for Health Systems and Policies. Obtained at: http://www.euro.who.int/__data/assets/pdf_file/0008/289610/Economic-Crisis-Health-Systems-Health-Europe-Impact-implications-policy.pdf?ua=1

Marino, A., Lorenconi, L. (2019). The impact of technological advancements on health spending – A literature review. OECD Working Paper. Obtained at: http://www.oecd.org/els/health-systems/health-working-papers.htm

MDDSZ – Ministry of Labour, Family, Social Affairs and Equal Opportunities. (2019). Website – Archive.

Medeiros, J. and Schwierz, C. (2015). Efficiency estimates of health care systems. European Economy. Economic Paper 549. Brussels: European Commission. Obtained at: https://ec.europa.eu/economy_finance/publications/economic_paper/2015/pdf/ecp549_en.pdf

Medical Chamber of Slovenia, Slovenian Medical Association, Fides, Professional Association of Slovenian Private Doctors and Dentists. (2014). Strateške usmeritve slovenskega zdravstva za izhod iz krize (Strategic orientations of the Slovenian health care for exiting from the crisis). Ljubljana. Obtained at: https://www.zdravniskazbornica.si/docs/default-source/zbornicni-akti/strat-usmer-za-zdravstvo-kzo---ver-14-02-2014.pdf?sfvrsn=4

Merkur, S., Sassi, F., McDaid, D. (2013). Promoting health, preventing disease: is there an economic case? Policy summary 6. Paris, Copenhagen: World Health Organization, OECD and European Observatory for Health Care systems.

Monthly Statistics Overview. Various issues. Ljubljana: Pension and Disability Insurance Institute of Slovenia.

Ministry of Finance. Fiscal policy. Pension and Disability Insurance Institute of Slovenia 1992–2019. Obtained in 2019 at: https://www.gov.si/teme/fiskalna-in-javnofinancna-politika/

Modra zavarovalnica. Internal data.

MOPACT. (2019). Age Platform Europe. Obtained at: https://www.age-platform.eu/project/mopact

Morel, N. (2006). Providing coverage against new social risks in Bismarckian welfare states: the case of long-term care. G. Bonoli et K. Armingeon. The politics of post-industrial welfare states, Routledge, pp. 227-247, 2006. halshs-823686.

Morino, A. and Lorenconi, L. (2019). The impact of technological advancements on health spending: A literature review. OECD Health Working Papers No. 113. Paris: OECD. Obtained at: http://www.oecd.org/els/health-systems/health-working-papers.htm

Muir, T. (2017a). Coordinating health and long-term care. OECD 6th Meeting of the Joint Network on Fiscal Sustainability of Health Systems. Obtained at: https://www.slideshare.net/OECD-GOV/longterm-care-integrating-health-and-social-care-tim-muir-oecd

Muir, T. (2017b). Measuring social protection for long-term care. OECD Health Working Papers. No. 93. Paris: OECD. Obtained at: https://www.oecd-ilibrary.org/social-issues-migration-health/measuring-social-protection-for-long-term-care_a411500a-en

Nagode, M. (2014). Vrednotenje kakovosti socialne oskrbe na domu: pristopi in instrumenti (Evaluating the quality of social home care: approaches and instruments). Master's thesis. University of Ljubljana. Faculty of Social Sciences. Ljubljana.

Nagode, M., Zver, E., Marn, S., Jacovič, A., Dominkuš, D. (2014). Dolgotrajna oskrba – uporaba mednarodne definicije v Sloveniji (Long-term care – use of the international definition in Slovenia). Working Paper No. 2/2014, Volume XXII. Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.gov.si/fileadmin/user_upload/publikacije/dz/2014/DZ_02_14p.pdf

Nagode, M. and Srakar, A. (2015). Neformalni oskrbovalce: kdo izvaja neformalno oskrbo, v kolikšnem obsegu in za koga (Informal care givers: who conducts informal care, to what extent and for whom). In: Značilnosti starejšega prebivalstva v Sloveniji – prvi rezultati raziskave Share. Institute for Economic Research. Editor: Majcen, B.

Neenakosti v zdravju (Health inequalities). Health inequalities in Slovenia during the economic crisis. (2018). Ljubljana: National Institute of Public Health. Obtained at: https://nijz.si/sl/neenakosti-v-zdravju-v-sloveniji-v-casu-ekonomske-krize.

New forms of employment. (2015) Luxembourg: Eurofound. Obtained at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1461en.pdf

Normand, C. (2015). Long Term Care in Slovenia: key policy issues and likely trends in costs. Trinity College Dublin and European Observatory on Health Systems and Policies. Posvet o dolgotrajni oskrbi (za Analizo zdravstvenega sistema). Ljubljana, 24. 11. 2015. Obtained at: http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/Analiza/24_11_2015/Long_Term_Care_in_Slovenia_Charles_Normand.pdf

Obrazložitve finančnega načrta ZZZS za leta 2016, 2017, 2018, 2019 (Clarifications of ZZZS financial plans for 2016, 2017, 2018, 2019).

OECD.Statistics. Finance – Pensions – Public Pension Reserve Funds. Obtained in October 2019 at https://stats.oecd.org/

OECD.Statistics. Health - Health expenditure and Financing – Revenues of health care financing shemes. Obtained at: https://stats.oecd.org/

OECD.Statistics. Health – Long-Term Care Resources and Utilisation – Long-term Care Recipients. Obtained in October 2019 at https://stats.oecd.org/

Paris, V., Hewlett, E., Auraaen, A. Alexa, J. Simon, L. (2016). Health care coverage in OECD countries in 2012. Paris: OECD. Obtained at: http://www.oecd.org/els/health-systems/health-working-papers.htm

Pension reforms in the EU since the early 2000's. Achievements and challenges ahead. Economic Papers 42. (2016). Brussels: European Commission. Obtained at: https://ec.europa.eu/info/sites/info/files/dp042_en.pdf

Pisu, M. (2014). Overcoming vulnerabilities of health care systems. Economic Department, Working Papers No. 1132. Paris: OECD. Obtained at: https://doi.org/10.1787/5jz159228n6j-en

Podatki o številu zavarovanih oseb in njihovi povprečni mesečni prispevki (Data on the number of insured persons and their average monthly contributions). (2018). Health Insurance Institute of Slovenia. Internal data.

Potočnik, E.Š. (2013). Razvoj zavarovanj za dolgotrajno oskrbo (Development of insurances for long-term care). Master's thesis. Ljubljana: University of Ljubljana, Faculty of Economics. Obtained at: http://www.cek.ef.uni-lj.si/magister/potocnik1293-B.pdf

Predlagane spremembe na področju socialnega varstva, trga dela in pokojninskega sistema (gradivo za medije) (Proposed changes in the fields of social care, labour market and the pension system (material for the media). Ministry of Labour, Family, Social Affairs and Equal Opportunities. Obtained at http://www.mddsz.gov.si/si/medijsko_sredisce/novica/8584/

Predlog zakona o demografskem rezervnem skladu v javni obravnavi (Draft Slovenian Demographic Reserve Fund Act under public discussion). (29). 6. 2017). Ministry of Finance. Obtained at http://www.mf.gov.si/si/medijsko_sredisce/novica/3232/

Predlog zakona o dolgotrajni oskrbi in zavarovanju za dolgotrajno oskrbo. (2017). Obtained at: https://www.irssv.si/upload2/20102017_o_Z_o_dolg__oskrbi_JR.pdf

Ramovž, J. (2013). Staranje v Sloveniji. Raziskava o potrebah, zmožnostih in stališčih nad 50 let starih prebivalcev Slovenije (Ageing in Slovenia. Study on the needs, capabilities and views of the Slovenian population over 50). Ljubljana: Anton Trstenjak Institute, Ljubljana.

Rangus, A. (2012). Zavarovalni principi in medgeneracijska pogodba tristebrnega sistema pokojninskega zavarovanja v Sloveniji (Principles of insurance and the intergenerational contract of the three-pillar pension insurance system in Slovenia). Doctoral thesis.

Rehm, J, Shild, K.D., Maximilien, X., Rehm, G. Gmel, U. F. (2012). Alcohol consumption, alcohol dependence and attributable burden of disease in Europe: Potential gains from effective interventions for alcohol dependence. Toronto: Centre for Addiction and Mental Health (CAMH).

Resolucija o nacionalnem planu zdravstvenega varstvo 2016–2025 – Skupaj za družbo zdravja (Resolution on the National Health Care Plan 2016–2025 – Together for a healthy society. Official Gazette of the RS, No. 25/16

Resolucija o nacionalnem programu duševnega zdravja 2018–2028, Uradni list RS, št. 24/18 (Resolution on the National Mental Health Programme 2006–2028). Official Gazette of the RS, No. 24/18.

Resolucija o nacionalnem programu varnosti in zdravja pri delu 2018–2027 (Resolution on the National Programme of Health and Safety at Work 2018–2027. Official Gazette of the Republic of Slovenia, No. 23/18.

Rodrigues, R., Ilinca, S., Schmidt, A. (2014). Analysing equity in the use of long-term care in Europe. Research note 9/2014. Applica and European Centre for Social Welfare Policy and Research. Brussels: European Commission.

Sassi, F., Belloni, A. and Capobianco, C. (2013). The Role of Fiscal Policies in Health Promotion. OECD Health Working Papers, No. 66. Paris: OECD. Obtained at: http://dx.doi.org/10.1787/5k3twr94kvzx-en

Schreyögg, J., Stargardt, T., Velasco-Garrido, M., Busse, R. (2005). Defining the "Health Benefit Basket" in nine European countries: Evidence from the European Union Health BASKET Project. Eur J Health Econ. 2005 Nov; 6(Suppl 1): 2–10. Published online 2005 Nov 24. doi: 10.1007/s10198-005-0312-3. PMCID: PMC1388078

SAPEA – Science Advice for Policy by European Academies. (2019). Transforming the future of ageing. Berlin: SAPEA. Obtained at: https://www.sapea.info/topics/ageing/

SHA 2011 – System of Health Accounts 2011. Revised edition (2017). Paris: Eurostat, OECD, WHO. Obtained at: https://ec.europa.eu/eurostat/documents/3859598/7985806/KS-05-19-103-EN-N.pdf/60aa44b0-2738-4c4d-be4b-48b6590be1b0

SI-STAT Data Portal. Economy – National accounts – Gross domestic product, annual data (EES, 2010). Obtained in November 2019: at: https://pxweb.stat.si/SiStat.

Slovenian Insurance Association. (2018). Interna priprava podatkov o številu zavarovancev in vplačanih premijah za zdravstvena zavarovanja (Internal preparation of data on the number of insured persons and health insurance premiums paid). Obtained at: https://www.zav-zdruzenje.si/statistika/

Social impact of the crisis - Demographic challenges and the pension system. (2010). Brussels: European Parliament. Obtained at: http://www.europarl.europa.eu/document/activities/cont/201001/20100129ATT68220/20100129ATT68220EN.pdf

Spasova, S., Baeten, R., Coster, S. (2018). Challenges in long-term care in Europe. A study of national policies. European Social Policy Network (ESPN), Brussels: European Commission. Obtained at: https://www.researchgate.net/publication/327573767_Challenges_in_long-term_care_in_Europe_A_study_of_national_policies

Spremembe pokojninske in zakonodaje s področja trga dela v javni razpravi (Changes in pension and labour market legislation under public discussion). (16.7.2019). Ministry of Labour, Family, Social Affairs and Equal Opportunities. Obtained at: https://www.gov.si/novice/2019-07-16-spremembe-pokojninske-in-zakonodaje-s-podrocja-trga-dela-v-javni-razpravi/

Stadhouders, N., Koolman, X., Tanke, M., Maarse, H., Jeurissen, P. (2016). Policy options to contain healthcare costs: A review and classification. Amsterdam: Health policy. Obtained at: https://www.researchgate.net/publication/301289301_Policy_options_to_contain_healthcare_costs_A_review_and_classification/citation/download

Strategija varstva starejših do leta 2010 – solidarnost, sožitje in kakovostno staranje prebivalstva (Strategy for care for older persons until 2010 – solidarity, co-existence and quality ageing). (2016). Obtained at: http://www.zdus-zveza.si/strategija-varstva-starejsih-do-leta-2010-solidarnost-sozitje-in-kakovostno-staranje-prebivalstva

SURS. (2018). Long-term care, Slovenia, 2016. Obtained at: https://www.stat.si/StatWeb/News/Index/7852

SURS. (2019). Health expenditure and sources of funding, 2019. Obtained at: https://www.stat.si/StatWeb/News/Index/8197

Tajnikar, M., Došenović Bonča, P., Čok, M., Domadenik, P., Korže, B., Sambt. J., Skela Savič, B. (2016). Prenova

gospodarskih vidikov slovenskega zdravstva (Transformation of Slovenian health care – economic aspects). Obtained at: http://www.ef.uni-lj.si/content/static_slovene/zaloznistvo/publikacija.asp?id_pub=452

The 2018 Ageing report: Economic & Budgetary Projections for the 28 EU Member States (2016-2070). (2018). Brussels: European Commission. Obtained at: https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en

The 2018 Ageing Report: Underlying Assumptions and Projection Methodologies. (2017). Brussels: European Commission. Obtained at: https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-underlying-assumptions-and-projection-methodologies_en

The 2018 Pension Adequacy Report: current and future income adequacy in old age in the EU. Volume II. (2018). Brussels: European Commission. Obtained at: https://ec.europa.eu/social/main.jsp?catId=738&langId=sl&pubId=8085&furtherPubs=yes

The Future of Social Protection: What Works for Non-standard Workers?, (2018). Paris: OECD. Obtained at: https://www.oecd.org/els/the-future-of-social-protection-9789264306943-en.htm

The Heavy Burden of Obesity. The Economics of Prevention. OECD Health Policy Studies. (2019). Paris: OECD. Obtained at: https://www.oecd.org/development/the-heavy-burden-of-obesity-67450d67-en.htm

Thomas, S., Thomson, S., Evetovits, T. (2015). Analysis of the Health System in Slovenia. Making Sense of Complementary Health Insurance. Final Report. Copenhagen, Ljubljana: European Observatory on Health Systems and Policies, WHO Regional Office for Europe, Republic of Slovenia Ministry of Health. Obtained at: http://www.euro.who.int/__data/assets/pdf_file/0011/336395/Making-Sense-of-Complementary-Health-Insurance-report-Slovenia.pdf?ua=1

Thomson, S., Cylus, J., Evetovitz,T.(2019). Can people afford to pay for health care? New evidence on financial protection in Europe. Barcelona: WHO Regional Office for Europe. Obtained at http://www.euro.who.int/en/health-topics/Health-systems/health-systems-financing/publications/clusters/universal-health-coverage-financial-protection/universal-health-coverage-financial-protection-regional-analysis

Toth, M. (2003). Health, health care, health insurance. Ljubljana: Health Insurance Institute of Slovenia.

Wren, M. A., Normand, C., Oreilly, D., Murphy, C. (2014). Towards the Development of a Predictive Model of Long-Term Care Demand for Northern Ireland and the Republic of Ireland. Obtained at: https://www.researchgate.net/scientific-contributions/2047315589_Wren_MA

Yermo, J. (2008). Governance and Investment of Public Pension Reserve Funds in Selected OECD Countries. In OECD Financial Market Trends, No. 94, Volume 2009/1. Obtained at: https://www.oecd.org/daf/fin/financial-markets/40196093.pdf

Zakon o o interventnih ukrepih za zagotovitev finančne stabilnosti javnih zdravstvenih zavodov, katerih ustanovitelj je Republika Slovenija (Act Determining Intervention Measures to Ensure the Financial Stability of Public Healthcare Institutions Established by the Republic of Slovenia). Official Gazette of Republic of Slovenia, No. 54/17.

Zakon o pokojninskem in invalidskem zavarovanju (ZPIZ-2) (Pension and Disability Insurance Act). (2012). Official Gazette of the Republic of Slovenia, No. 96/2012.

Zakon o zdravstvenem varstvu in zdravstvenem zavarovanju (ZZVZZ) (1992) (Health Care and Health Insurance Act). Official Gazette of the Republic of Slovenia, No. 9/1992, and amendments until October 2019.

Zakon o socialnem varstvu (Social Assistance Act). (1992). Official Gazette of the Republic of Slovenia, No. 3/07 – official consolidated text and amendments until October 2019.

Zver, E., Jošar, D., Srakar, A. (in press). Can people afford to pay for health care? Slovenia. New evidence on financial protection in Slovenia. WHO Regional Office for Europe.

Zver, E. (2019). Neenakosti v finančni dostopnosti do zdravstva v Sloveniji z vidika mednarodnih primerjav (Inequalities in financial access to health services in Slovenia from the perspective of international comparisons). Zbornik. Pravilne odločitve – osnova za razvoj slovenskega zdravstvenega sistema. 26. strokovno srečanje ekonomistov in poslovodnih delavcev v zdravstvu, Bohinjska Bistrica, 23 and 24 May 2019. Ljubljana: Društvo ekonomistov v zdravstvu.

Živimo zdravo – promocija zdravja v ruralnih lokalnih skupnostih (Let's live healthy – a health promotion programme in rural Slovenia). (2015). Obtained at: https://www.nijz.si/sl/program-zivimo-zdravo-promocija-zdravja-v-ruralnih-lokalnih-skupnostih

III. Overview of developments in public finances

Summary

Public finance conditions have improved in the last few years, while in the coming years fiscal policy will also have to focus on dealing with medium- and long-term development challenges. In 2018 revenue substantially outpaced expenditure for the first time, thus generating a surplus in the amount of 0.8% of GDP. Since 2015 the general government debt has been rapidly falling. From 82.6% of GDP in 2015, when in was at its highest, it declined to 70.4% of GDP by 2018. The structural deficit, over 4% of GDP in 2008–2011, was close to the balanced position in 2018 according to the IMAD estimate of the output gap. The overall improvement in the structural balance benefited from temporary measures and a reduction in flexible expenditure. During the crisis fiscal policy measures were mainly aimed at dealing with short-term challenges of stabilising public finances, while in the future fiscal policy should also focus on addressing medium- and long-term development challenges through tax policy and prioritisation of expenditures. The improvement in public finance conditions is opening up possibilities for a greater developmental role of fiscal measures, which is essential in view of a number of challenges that have been insufficiently addressed thus far. An overview of medium-term development planning documents and budgetary documents for 2020 and 2021 clearly shows that the set of measures addressing the key development challenges will have to be upgraded and expanded in the future.

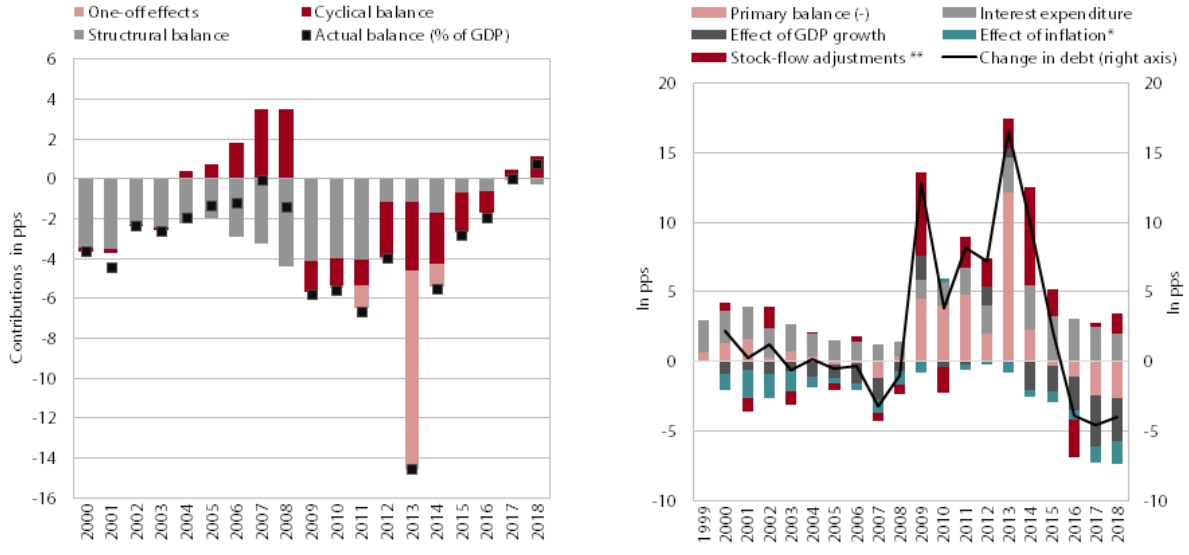
Overview of fiscal developments

Under favourable economic conditions, the general government position continued to improve in 2018. In 2018 revenue substantially outpaced expenditure for the first time, generating a surplus in the amount of 0.8% of GDP. The steady improvement in the balance since 2013, following a period of high deficits during the crisis, reflected stabilisation measures, improved economic trends, and measures for increasing revenue and restraining expenditure.[1] Throughout the period since the onset of the economic crisis, the containment of overall expenditure growth was to a significant extent achieved by a contraction of flexible expenditure, in particular investment, which remained relatively low despite rebounding in the last two years.[2]

Since 2015 the general government debt has been rapidly falling. From 82.6% of GDP in 2015, when it was at its highest, it declined to 70.4% of GDP by 2018. The decline in the general government debt as a share of GDP reflected an improvement in the primary balance (surplus). The contribution of economic growth, which in the last three years exceeded the negative effect of interest expenditure, was also favourable. The debt-to-GDP ratio was rapidly falling, even in comparison to other countries and faster than required by the Stability and Growth Pact for the transition period (2016–2018) following the abrogation of the excessive deficit procedure. In nominal terms, debt has remained unchanged for several years, partly under the impact of the strengthening of liquidity reserves[3] for the pre-financing of liabilities in favourable international financial market conditions. Under such conditions and due to active debt management, which in 2018 continued to involve buy-backs of dollar-denominated bonds with high interest rates that had been issued during the crisis, the implicit interest rate dropped from 5.7% in 2008, when it was the highest in the last decade, to 2.9% in 2018. The debt level is nevertheless still above the Stability and Growth Pact ceiling (60% of GDP), which is limiting the room for fiscal manoeuvre to deal with negative shocks.

The structural position of public finances has improved in recent years, but the consolidation has been largely based on temporary measures. The structural deficit, having totalled more than 4% of GDP in 2008–2011, was close to the balanced position in 2018 according to the IMAD estimate of the output gap.[4] . The improvement in the structural balance has been to a great extent due to temporary measures and a reduction in flexible expenditure. The majority of measures on the expenditure side having been relaxed in recent years, the growth of primary expenditure is set to exceed revenue growth in 2019.[5] The challenge for the new

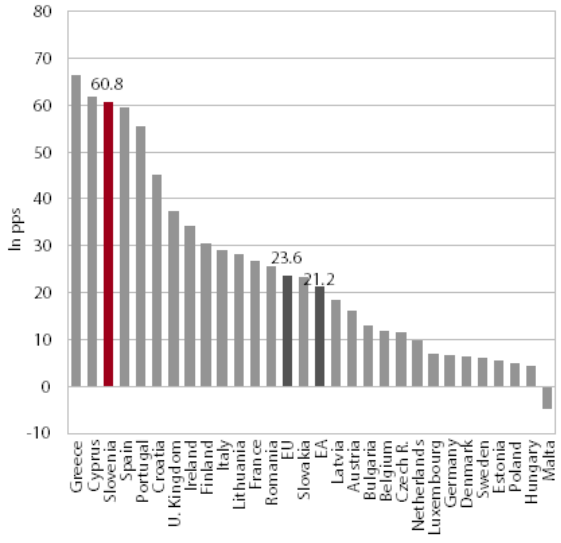
Figure 1: Balance and structural balance of the general government sector (left) and contributions to change in general government debt (right), Slovenia

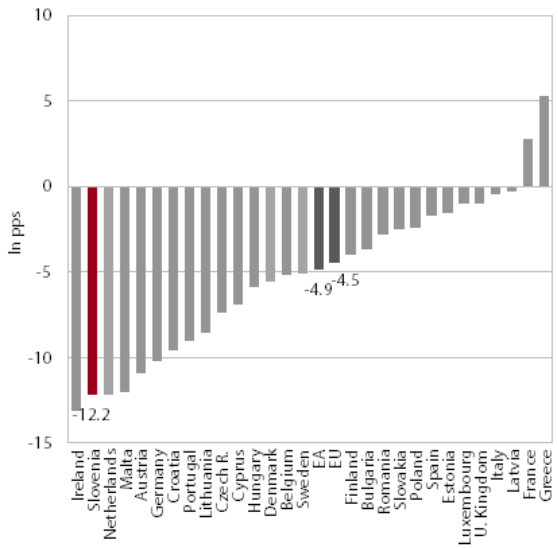


Source: SI-STAT Data Portal – Economy – National accounts – General government accounts – Main aggregates of the general government, October 2019.
Notes: * Measured by the GDP deflator. ** The change in the debt-to-GDP ratio that is not a consequence of the primary balance or the snowball effect (currency, deposits, loans and other liabilities). Some totals and calculations do not add up due to rounding.

[1] For a detailed overview of the adopted measures, see Development Report 2018 and Economic Issues 2018.
[2] General government investment was at 3.1% of GDP in 2016 and 2017, the lowest on record, before increasing to 3.6% of GDP in 2018.
[3] Assets of the treasury single account reached EUR 6.4 billion (14.2% of GDP) at the end of December 2018.
[4] On the basis of the Autumn Forecast of Economic Trends 2019.
[5] This is confirmed by the movements of the consolidated balance of public finances in the first nine months of the year.

Figure 2: Change in general government debt in 2008–2015 (left) and 2015–2018 (right)

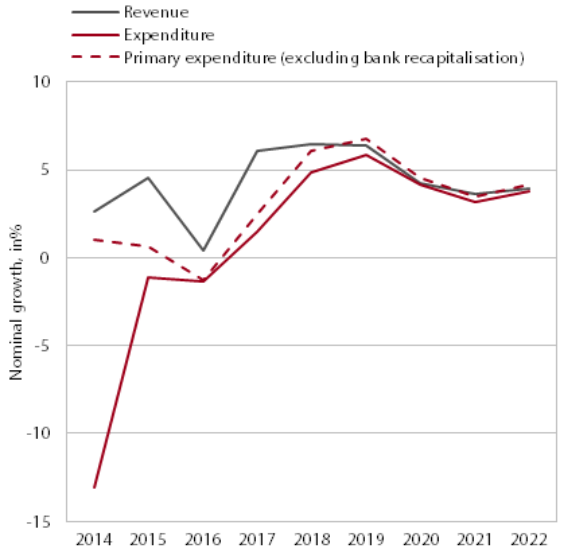




Source: Eurostat – Government finance statistics, October 2019.

medium-term period is therefore to formulate a durable economic policy mix that will preserve the achieved favourable structural position indicated by the current output gap estimates, which are however volatile.[6]

Figure 3: Growth of general government revenue, expenditure and primary expenditure, Slovenia

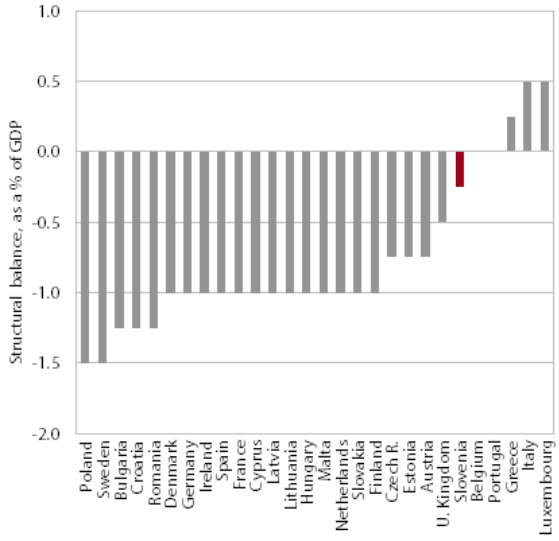


Sources: SI-STAT Data Portal – Economy – National accounts – General Government Accounts – Main aggregates of the general government, April 2019; Ministry of Finance, Stability Programme 2019. Calculation of primary expenditure by IMAD.

[6] For more on the volatility of output gap estimates, see Economic Issues 2016 (Box 5) and "Uncertainty surrounding output gap estimates" (Glažar M.).

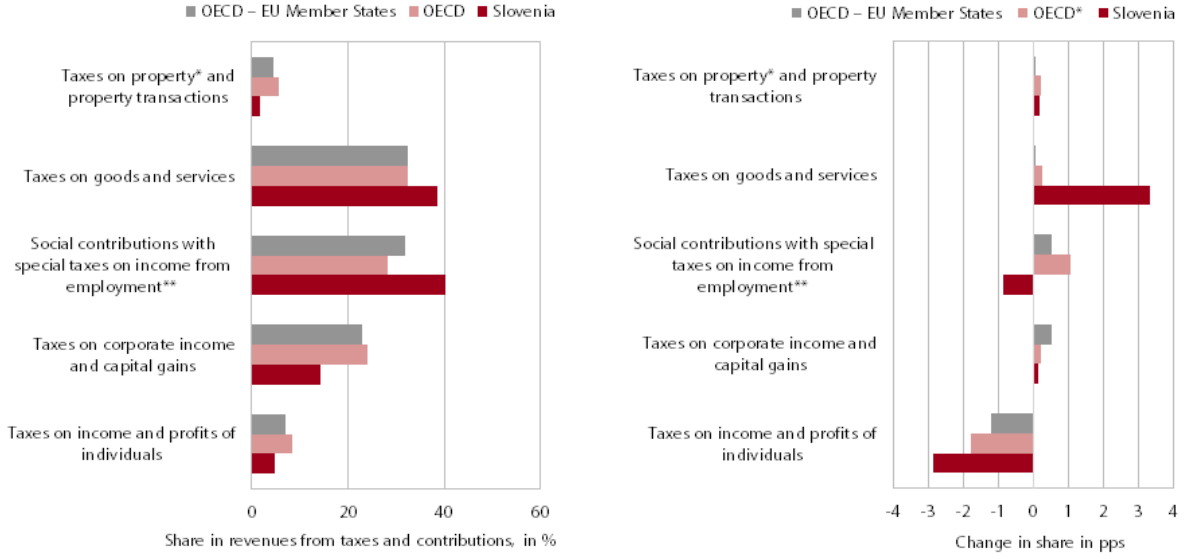
Under EU fiscal rules, Slovenia will have to ensure a structural balance of –0.25% of GDP in the coming years, but to comply with the domestic fiscal rule, a structural surplus will be necessary according to the assessment of the Fiscal Council. The medium-term budgetary objective (MTO), which refers to the structural balance, is based on the estimate of a country's progress in achieving medium-term fiscal sustainability. It is set by the European Commission every three years according

Figure 4: Medium-term fiscal objective (MTO) for 2020–2022 in EU Member States



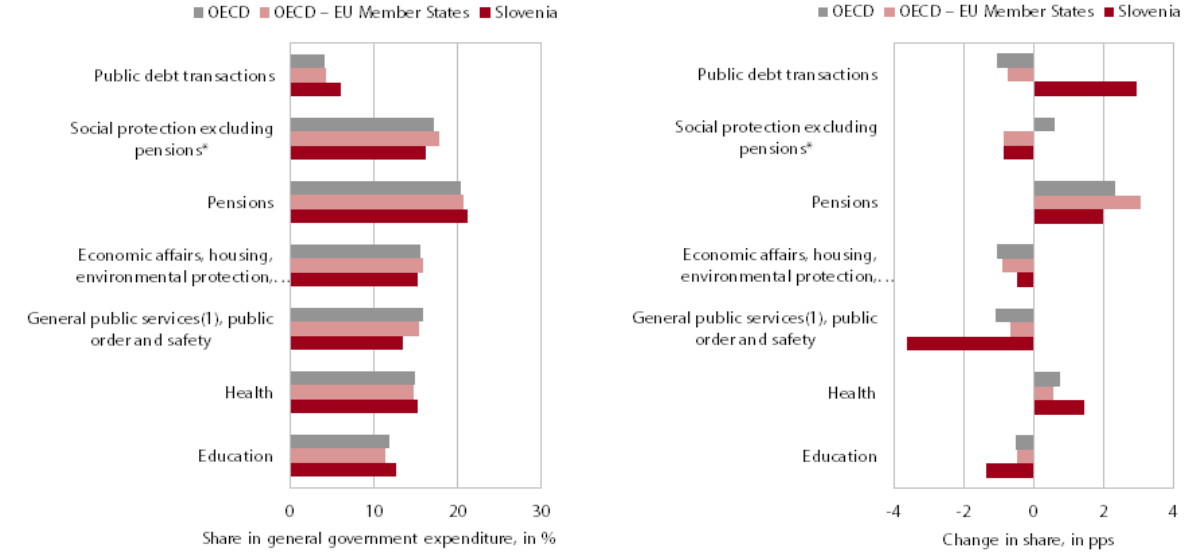
Source: Vade Mecum on the Stability & Growth Pact, 2019 Edition.

Figure 5: Comparison of the tax structure in Slovenia and OECD members in 2017 (left) and the change in cyclically adjusted revenues from taxes and contributions in 2007–2017 in Slovenia and OECD members (right)



Source: OECD.Stat – Taxation - Revenue Statistics - Comparative tables, June 2019; calculations by IMAD.
Notes: The average for the OECD – EU Member States is the unweighted average for OECD members that are also members of the EU. The OECD classification of taxes at the lowest level is taken into account; the tax categories are grouped into logical units according to the results of analyses of how the tax wedge structure affects economic activity. * Taxes on property include recurrent taxes on property and taxes on inheritance and gifts. ** Special taxes on income from employment include the payroll tax (which was already abolished in Slovenia) and other taxes on labour (in Slovenia, the special tax on specific categories of income arising from a work contract).
For the purpose of graphical presentation of changes in the structure of revenues from taxes and social contributions, individual revenue categories are adjusted for the business cycle based on their elasticities with respect to the output gap according to the OECD (Price et al., 2015).

Figure 6: Comparison of the structure of general government expenditure in Slovenia and OECD members in 2017 (left) and the change in cyclically adjusted expenditures in Slovenia and OECD members in 2007–2017 (right)



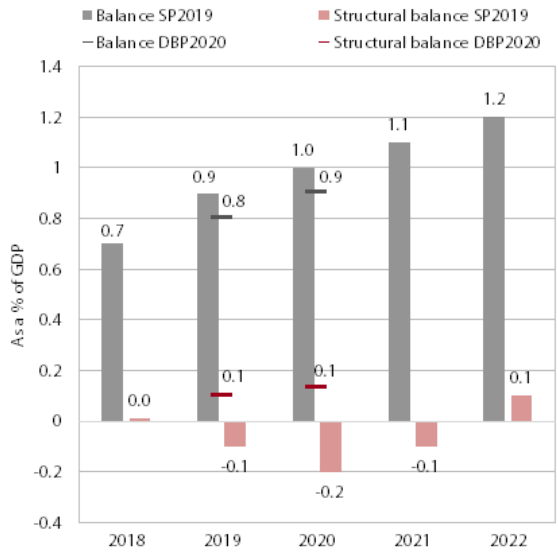
Source: OECD.Stat – Government expenditure by function (COFOG), June 2019; calculations by IMAD.
Notes: The average for the OECD– EU Member States is the unweighted average for OECD members that are also members of the EU.
* For the purpose of determining changes in the structure, the unemployment benefits are cyclically adjusted on the basis of their elasticities with respect to the output gap according to the OECD (Price et al., 2015).
(1) General public services excluding public debt transactions.

to three criteria.[7] Member States are expected to achieve their MTO or to at least ensure appropriate progress towards it. The MTO for 2016–2019 for Slovenia was defined as a surplus in the amount of 0.25% of GDP, while for 2020–2022 a new MTO has been set as a deficit of 0.25% of GDP. The change in the MTO is mainly related to the reduction in general government debt in the period between the latest and previous calculations. The new MTO for the next three-year period set by the EC is thus less ambitious than that determined in national legislation.[8] This envisages – after the MTO has been achieved – a balanced structural position or a surplus over the entire economic cycle. According the the estimates of the Fiscal Council, Slovenia achieved its MTO in 2018, within the permitted deviations, but for ensuring the medium-term balance in compliance with the domestic fiscal rule, structural balance surpluses will also be necessary in the future.[9]

In achieving the fiscal targets, the developmental role of public finances should also be paid more attention in the future. Since the beginning of the crisis Slovenia has introduced a variety of tax changes, which have been largely targeted at the achievement of fiscal objectives in an environment of severely disrupted fiscal balances. The majority of these changes were permanent in nature, which contributed to the improvement in the structural position of public finances. The changes were also reflected in the structure of revenues from taxes and contributions, particularly in a shift to consumption taxes (see Figure 5), which are considered less distortionary for economic growth according to empirical studies. On the expenditure side, the measures taken during the crisis were focused on short-term challenges of stabilising public finances. The majority of these measures were therefore temporary. In the structure of general government expenditure, the share of expenditure on debt servicing, which has otherwise been declining in the last few years, and the share of expenditure on pensions and health increased the most between 2007 and 2017 (see Figure 6).[10] Through tax policy and by setting expenditure priorities, Slovenia should also put resolving medium- and long-term development challenges to the forefront of fiscal policy in the future.

The improvement in public finance conditions is opening up possibilities for a greater developmental role of fiscal measures, which is essential in view of a number of challenges that have been insufficiently addressed thus far. With changing demographic structure of the population, the challenges for Slovenia include labour shortages and the related risk of low

Figure 7: Projections of fiscal targets of the Stability Programme 2019 and the Draft Budgetary Plan 2020



Source: Stability Programme 2019, Draft Budgetary Plan 2020.

potential growth. It will therefore also be necessary to strengthen other factors of development for increasing productivity,[11] taking into account environmental challenges. Demographic change is also related to the challenge of providing sustainable financing of social protection systems. These areas are pointed out because of the large shares of general government expenditure allocated for these purposes (social protection) and because of a lack of the strategic guidelines and policy responses they will require in the medium term. The necessary structural adjustments could also be financed by non-national funds (see Box 1). Resolving these challenges should also be supported by changes to the budgetary planning procedure, which would tie decisions of fiscal and broader economic policies on the allocation of the limited resources to set priorities.

In the framework of the fiscal objectives laid out in Stability Programme 2019 and Draft Budgetary Plan 2020, which retain the nominal surplus at around 1% and a balanced structural position, the revenue side includes tax restructuring measures to narrow the tax wedge on labour, while the expenditure side involves in particular measures under which social benefits and transfers will continue to grow at the fastest pace (see Figure 8):

- **Revenue projections** in SP 2019 account for the reduced taxation of the holiday allowance effective as of 2019. This measure was a constituent part of broader changes designed to redistribute tax burdens and reduce taxation of labour with the aim of increasing

[7] For more detail see Economic Issues 2016, Box 4: Rules of the Preventive Arm of the Stability and Growth Pact.
[8] Some other Member States have also set more ambitious fiscal targets with their own fiscal rules than the EC with the MTOs.
[9] Assessment by the Fiscal Council: Compliance of the Proposal of Budgets of the Republic of Slovenia for 2020 and 2021 with the Fiscal Rules, October 2019.
[10] See also Economic Issues 2018, Section 2, "Changes in the structure of general government revenue and expenditure".
[11] See Development Report 2019 .

Box 1: Financing of public expenditure using EU instruments

Slovenia realises an important portion of development policy goals with the support of various EU financial instruments which are implemented under its Multiannual Financial Framework (MFF). For Slovenia cohesion and agricultural policy are key and these are managed in partnership with the EC; a number of other instruments are implemented in a centralised fashion. The Connecting Europe Facility (CEF) is an important source of financing of infrastructure investments in transport, communications and energy, the same applying to Horizon 2020 in research and development and several other instruments.

In early May 2018 the European Commission published its Proposal for a New Multiannual Financial Framework 2021–2027. This was followed by the release of the cohesion regulations, which, once finalised, will determine the implementation of individual financing instruments. The draft regulations set out that the European Regional Development Fund (ERDF), the European Social Fund plus (ESF+), the Cohesion Fund (CF) and the European Maritime and Fisheries Fund (EMFF) should focus on the following five objectives:[1]

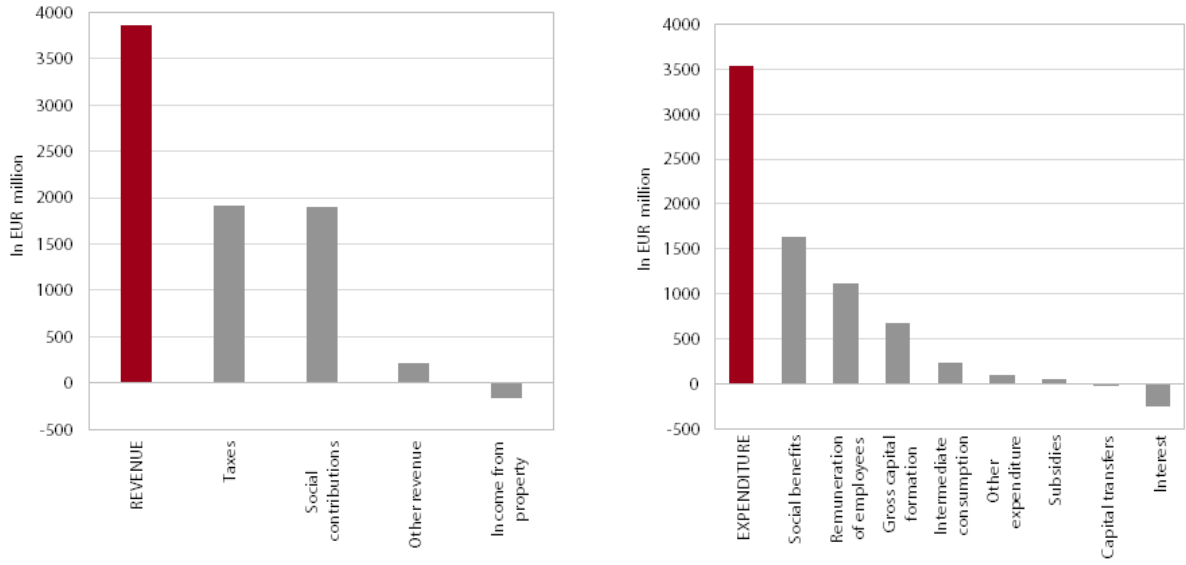
1. A smarter Europe, through innovation and smarter economic transformation;
2. A greener low-carbon Europe, by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation, and risk prevention and management;
3. A more connected Europe, by enhancing mobility and regional ICT connectivity;
4. A more social Europe, by implementing the European Pillar of Social Rights; and
5. A Europe closer to citizens, by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives.

In accordance with the EC proposal, the bulk of the ERDF funds would be dedicated to the objective of a smarter and greener Europe; in Slovenia's case at least 45% of the funding would be set aside for smart economy and 30% for green economy.

In the course of 2019 the key properties were agreed of the new budgetary Instrument for Convergence and Competitiveness (BICC) for euro area countries, which represents a financial incentive for implementation and execution of reforms and investments. This instrument, the scope of which will be defined in the new Multiannual Financial Framework, is designed to encourage reforms in the area of country-specific recommendations issued by the European Commission. The draft regulation envisages two kinds of measures that may be adopted by the Council. For the euro area as a whole, the Economic and Financial Affairs Council, following discussions within the Eurogroup, may adopt strategic orientations on reforms and investment priorities for the euro area; for the individual euro area Member States, the Council may formulate country-specific guidance setting out the objectives for reforms and investments relevant for convergence and competitiveness, which the Member States concerned may want to submit to the Commission under this budgetary instrument. The country-specific guidance will be consistent with the strategic orientations for the euro area and with the country-specific recommendations adopted within the framework of the European Semester. The latest Council recommendations for Slovenia address adoption and implementation of health care, long-term care and pension system reforms, increasing the employability of low-skilled and older workers, supporting the development of debt security markets, improving the business environment, and encreasing the competitiveness of public procurement. The Council also recommended that Slovenia should focus its investments on research and innovation, low-carbon and energy transitions, sustainable transport, in particular rail, and environmental infrastructure.

[1] There are 11 thematic objectives in the current financial framework. The legislative package also proposes certain other objectives that have not yet been agreed by the Member States and the European Commission and whose provisions are still subject to change (a reduction of EU co-financing rates, which objectives are to be financed from which funds, etc.).

Figure 8: Forecast increase in revenue and expenditure in Stability Programme 2019 for 2018–2022



Source: Stability Programme 2019.

disposable incomes and increasing the supply of labour; they were confirmed in October 2019 and are included in the Draft Budgetary Plan 2020 (see Box 2).

- **Expenditure projections** show fastest expenditure growth in 2019, which then eases off in subsequent years. High growth of primary expenditure, which will exceed revenue growth in 2019 (see Figure 3), is a consequence of the relaxation of past stop-gap measures and the introduction of certain new measures in social benefits and transfers[12] and pay raises under an agreement adopted in December 2018.[13] The agreement on wages and labour costs resulted in pay raises for the majority of public employees as of 2019, with raises for several other groups to follow in the second half of 2019 and in 2020. In mid-2020 the curbs on funds for performance bonuses, which have limited the scope for rewarding public employees, will also be relaxed. Unlike in the previous four-year period (2014–2018), when investments declined during the transition to the new Multiannual Financial Framework 2014–2020, investments are rising in the projection period 2018–2022 in accordance with the forecast faster dynamics of the drawing of EU funds; investments financed from national sources are also envisaged to increase. Interest payments will continue decreasing in the coming years. This will reduce the crowding-out of other expenditures, which had accelerated to 3.2% of GDP by 2015. By 2022 interest payments are projected to decline further, to 1.2% of GDP. The nominal decrease in interest expenditure is a consequence of the restructuring of the debt profile in recent years and lower interest rates in this period, a trend that is expected to persist.

An overview of medium-term budget planning documents for 2020 and 2021[14] shows that in the future the toolbox of measures designed to address key development challenges will have to be significantly upgraded and expanded. Model estimates show that the tax changes implemented in 2019 and 2020 will have a positive impact on economic activity by increasing labour supply incentives (see Box 2). However, tax changes alone will not be sufficient to resolve labour shortages, which are driven by demographic change (see Chapter I). Other changes regarding taxes and contributions are not planned. Expenditure-side measures increase in particular remuneration of employees and social benefits and transfers.[15] In the public sector wage system the main challenge in the future will be to implement changes

[12] In 2019 social transfers to individuals and households will be indexed to inflation and regular indexation of pensions will be accompanied by an extraordinary indexation plus a higher holiday allowance for pensioners. Eligibility restrictions for state scholarships are being relaxed, as are certain parental benefits and transfers (maternity, parental and paternal benefits and large-family allowance). Minimum income remains at the same level as in the second half of 2018. The Personal Assistance Act and Social Inclusion of Disabled Persons Act of 2018 expanded eligibility and increased benefits, resulting in higher expenditure on disability benefits and attendance and assistance allowance.

[13] Agreement on wages and other labour costs in the public sector (Official Gazette of the RS, No. 80/2018).

[14] Stability Programme 2019, National Reform Programme 2019, Draft Budgetary Plan 2020, Draft National Budget for 2020 and 2021.

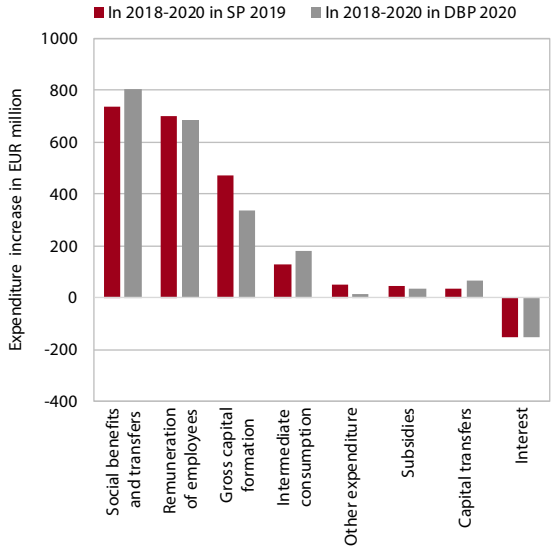
[15] The proposal to increase the accrual rate will increase pensions, with special attention dedicated to raising minimum pensions. Consideration will be given to raising the retirement age and to other measures that would contribute to the long-term sustainability of the system (National Reform Programme 2019–2020).

that would more closely link wages to performance in order to improve motivation to deliver better results. This did not happen with the latest wage agreement, but negotiations are under way to change the wage system towards increasing the variable portion of wages.[16] In social transfers several additional measures have recently been adopted, on top of the relaxation of austerity measures, to address the living standards of socially disadvantaged groups. In October 2019 the Government also adopted changes to the pension act that address the adequacy of pensions, though no changes to tackle the long-term sustainability of the pension system. Meanwhile, there are still no measures defined for the next few years in health care and long-term care that would adress the challenges of the systems and put them on a sustainable footing in the long term (see Chapter II).[17] Investments funded from EU sources as well as national sources are projected to

[16] The Government has also prepared the Analysis of Career Advancement in the Public Sector.

[17] In response to specific recommendations that Slovenia has received in these areas, the Draft Budgetary Plan predicts that the Long-Term Care Act will be put to public debate at the end of 2019 with the objective of adoption in 2020.

Figure 9: Comparison of increase in general government expenditure in 2018–2020 in Draft Budgetary Plan 2020 and Stability Programme 2019



Source: Stability Programme 2019, Draft Budgetary Plan 2020.

Box 2: Model estimates of macroeconomic effects of 2019/2020 tax reform

After the reduction of the tax burden on holiday allowance, the National Assembly adopted legislation in October 2019 that further cuts the taxation of labour as of 2020. The tax reform[1] envisages a change in personal income tax brackets and an increase in personal income tax relief. It increases the thresholds for all personal income tax brackets, while lowering the tax rate in the second and third brackets from 27% to 26% and from 34% to 33% respectively. At the same time, it raises the general personal income tax allowance from EUR 3,302 to EUR 3,500. The level of the additional general tax allowance for taxpayers with the total gross income of up to EUR 13,316.83 is determined by the following equation: EUR 18,700.38 – 1.40427 x total income. This means that it is linearly reduced depending on the amount of the total income.[2] Additionally, as of May 2019 the annual holiday allowance is exempt from the personal income tax and social security contributions up to the amount of the average wage.[3] The financial effect of the adopted measures is estimated at around EUR 255 million (EUR 135 million due to the changed income tax brackets and EUR 90 million due to the lower taxation of holiday allowance).

To partially offset part of the revenue loss, the tax rates on capital income and rental income of individuals will be raised and a minimum effective corporate income tax rate introduced.[4] The tax reform involves an increase in the rate of personal income tax on capital income (dividends, interest, capital gains) from 25% to 27.5%. It also raises the rates of personal income tax on capital gains earned from capital disposal, which depend on the period of ownership of the capital in question.[5] The tax rate on rental income is also raised (from 25% to 27.5%), as

Table 1: Change of income tax brackets and general personal income tax allowance

	Previous system	New system
Income tax brackets, net annual tax base and rates	Up to 8,021 a rate of 16%	Up to 8,500 a rate of 16%
	8,021–20,400 a rate of 27%	8,500–20,000 a rate of 26%
	20,400–48,000 a rate of 34%	25,000–50,000 a rate of 33%
	48,000–70,907 a rate of 39%	50,000–72,000 a rate of 39%
	Over 70,907 a rate of 50%	Over 72,000 a rate of 50%
General personal income tax allowance	3.302 EUR	3.500 EUR

Source: Act Amending the Personal Income Tax Act (Official Gazette of the RS, No. 66/2019).

is the percentage of flat-rate expenses taken into account in determining the tax base (from 10% to 15%). At the same time, the tax reform introduces a minimum effective corporate income tax rate of 7%. The financial effect of the measures is estimated at EUR 64 million, of which EUR 13.4 million is attributed to the changed rates of tax on capital income, EUR 3.6 million to changes in the taxation of rental income, and EUR 47 million to the introduction of a minimum effective corporate income tax rate.

The results of model estimates show a positive impact of the tax reform on economic activity.[6] Lower personal income tax is projected to reduce the tax wedge, which will result in higher net wages and lower labour costs. The model, which is a stylised representation of the economy, shows that lower labour costs would have a positive impact on labour damand while higher net wages will improve labour supply, which would be reflected in an increase in labour market participation and the number of hours worked. The model assumes that higher employment would lead to higher investments to preserve the ratio between capital and labour. Higher household income would increase spending. The model estimates show that personal income tax changes would increase GDP by around 0.42% in the first year after the reform and by 0.63% in the long term. On the other hand, higher taxation of capital and corporate profits would lead to adjustment of investments and capital, which would have a more pronounced negative effect on GDP only in the long term. In this case, GDP would decline by 0.15% in the long term, whereas in the short term, the effects would be small (0.05%). Since the applied model does not enable a direct simulation of soft measures such as taxation of the grey economy, which the proponents of the tax changes assumed would partially offset the tax revenue shortfall, we closed the budget gap with a combination

Table 2: Estimate of macroeconomic effects of the entire tax reform on selected macroeconomic variables

Selected variables / Years post-reform	1	2	3	4	5	10	20	Long term
GDP	0.22	0.24	0.25	0.25	0.26	0.27	0.28	0.27
Investments	0.16	0.15	0.14	0.13	0.13	0.11	0.11	0.13
Consumption	0.39	0.41	0.43	0.44	0.44	0.48	0.52	0.26
Gross wage (hourly labour costs)	-0.44	-0.39	-0.38	-0.37	-0.37	-0.35	-0.34	-0.33
- The low-skilled	-0.25	-0.19	-0.18	-0.17	-0.17	-0.16	-0.14	-0.11
- The medium-skilled	-0.33	-0.27	-0.26	-0.26	-0.26	-0.24	-0.22	-0.18
- The high-skilled	-0.57	-0.53	-0.52	-0.51	-0.50	-0.48	-0.49	-0.53
Net wage	1.02	1.07	1.08	1.09	1.09	1.11	1.12	1.13
- The low-skilled	0.98	1.04	1.05	1.05	1.06	1.07	1.09	1.12
- The medium-skilled	1.02	1.07	1.08	1.09	1.09	1.11	1.13	1.17
- The high-skilled	1.11	1.15	1.16	1.17	1.18	1.20	1.19	1.15
Average hours worked per employee	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Participation rate (15–69 years) (Δ in pps)	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11
- The low-skilled	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11
- The medium-skilled	0.11	0.12	0.13	0.13	0.13	0.13	0.13	0.13
- The high-skilled	0.08	0.09	0.08	0.08	0.08	0.08	0.08	0.08
Employment (No. of workers)	0.22	0.25	0.25	0.25	0.25	0.25	0.26	0.26
- The low-skilled	0.23	0.27	0.27	0.27	0.27	0.27	0.25	0.21
- The medium-skilled	0.25	0.27	0.28	0.28	0.28	0.28	0.27	0.26
- The high-skilled	0.18	0.19	0.20	0.20	0.20	0.21	0.24	0.28
Unemployment rate (in pps)	-0.06	-0.07	-0.07	-0.07	-0.07	-0.07	-0.08	-0.08
- The low-skilled	-0.06	-0.07	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
- The medium-skilled	-0.07	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.09
- The high-skilled	-0.05	-0.05	-0.06	-0.06	-0.06	-0.06	-0.06	-0.05

Source: IMAD estimates based on LMM model for Slovenia.

Note: The results should be interpreted as deviations from the baseline, no-policy-change scenario, in % (unless stated otherwise). In interpreting the results it is necessary to consider the mechanisms underlying the model (for details, see description of the model).

of a decline in lump-sum transfers to households and higher consumption taxes.[7] Even so, the entire tax reform is still projected to have positive, albeit smaller, effects on key macroeconomic variables. In the long term, we expect an increase in employment (0.26%), net wages (1.13%), private consumption (0.26%), investments (0.13%) and GDP (0.27%) and a decline in the unemployment rate (by 0.08 pps).

[1] Act Amending the Personal Income Tax Act (Official Gazette of the RS, No. 66/2019); Act Amending the Tax on Profit from Disposal of Derivatives Act (Official Gazette of the RS, No. 66/2019); Act Amending the Corporate Income Tax Act (Official Gazette of the RS, No. 66/2019).

[2] The simulations of personal income tax changes are based on the calculations of age- and skill-specific tax rates obtained using an adjusted OECD Tax Benefit model and EU-SILC data. The changes of these tax rates with regard to the baseline calibration of the model are then entered into the simulation as input data.

[3] The simulations of holiday allowance are based on the most recent data available (from 2016). In 2016 approximately 89% of employed persons received holiday allowance of up to 70% of the average wage or EUR 790 on average. Approximately 10% of employed persons received holiday allowance between 70% and 100% of the average wage, or EUR 1,172 on average, while fewer than 2% received holiday allowance higher than 100% of the average wage. The latter group received somewhat less than EUR 1,900 on average.

[4] The remainder of the shortfall should be offset with "soft measures", according to the Ministry of Finance. These mainly include measures to fight tax evasion and tax fraud, which will be implemented by the Financial Administration of the Republic of Slovenia.

[5] Up to 5 years of ownership 27.5% (previously 25%), after 5 years of ownership 20% (previously 15%), after 10 years of ownership 15% (previously 10%), after 15 years of ownership 10% (previously 5%).

[6] Assessment of the macroeconomic effects of the proposed tax reform was conducted using the Labour Market Model (LMM). This is a dynamic general equilibrium model with a detailed labour market structure that was developed by Berger et al. (2009). The model was calibrated for a number of countries, including Slovenia, and is an upgrade of the QUEST model (D'Auria et al., 2009). The calibration for Slovenia took place in cooperation between the European Commission, the Austrian institute for Economic Research EcoAustria and IMAD. For a detailed description of the model see Berger et al. (2009) and Economic Issues 2018, Challenges for further fiscal consolidation, Section 2.2.

[7] 70% taxes on consumption and 30% lump-sum transfers. The same approach is also often used in the simulations of the reduction of the tax burden on labour by the IMF (see for example Republic of Slovenia: Selected Issues, IMF Country Report No. 19/59).

rise, but, much like in the past, there are downside risks to realisation. The risks are associated with the flexibility of this expenditure, which tends to adjust the most to deteriorating macroeconomic conditions, as well as the absence of a system to set strategic investment priorities, under which key strategic documents would be tied to a long-term plan of government investment. Such an approach, hitherto sidelined, is essential from the aspect of preparations for future challenges, but also from the aspect of responsiveness to cyclical swings and mitigation of the consequences thereof. A comparison of expenditure planned in the Stability Programme 2019 and the Draft Budgetary Plan 2020 shows that some of these risks have already materialised, as investment expenditure declined the most in expenditure projections for 2018–2020, while some other expenditure categories increased (see Figure 9).[18]

[18] Since the differences between the two documents in terms of capital revenue, which includes EU sources, are minimal, we assume that the reduction in planned investment funds stems from domestic source rather than EU funds.

Bibliography and sources

Berger, J., Keuschnigg, C., Miess, M., Strohner, L. and Winter-Ebmer, R. (2009). Modelling of Labour Markets in the European Union - Final Report, Study on behalf of DG EMPL of the European Commission.

D'Auria, F., Pagano, A., Ratto, M. and Varga, J. 2009). A comparison of structural reform scenarios across the EU member states: Simulation-based analysis using the QUEST model with endogenous growth. Economic Papers 392. Brussels: European Commission. Obtained at: https://ec.europa.eu/economy_finance/publications/pages/publication16461_en.pdf

Dogovor o plačah in drugih stroških dela v javnem sektorju (Agreement on Salaries and Other Payments of Labour Costs in the Public Sector). Official Gazette of the Republic of Slovenia, No. 80/2018.

Economic Issues 2016. (2016). Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.gov.si/fileadmin/user_upload/publikacije/izzivi/2016/EkonomskiIzzivi2016.pdf

Economic Issues 2018. (2018). Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.si/fileadmin/user_upload/publikacije/izzivi/2018/popravek2018/Ekonomski_izzivi_2018.pdf

Eurostat. Economy and Finance – Government statistics – Government finance statistics. Obtained in October 2019 at: https://ec.europa.eu/eurostat/data/database

National Programme 2019. (April 2019). Ljubljana: Government of the Republic of Slovenia. Obtained at: https://www.gov.si/assets/ministrstva/MF/ekonomska-in-fiskalna-poltika/evropski-semester/Nacionalni-reformni-program-2019-2020.pdf

Assessment by the Fiscal Council: Compliance of the Proposal of budgets of the Republic of Slovenia for 2020 and 2021 with the fiscal rules. (October 2019). Ljubljana: Fiscal Council. Obtained at: http://www.fs-rs.si/wp-content/uploads/2019/10/Ocena-oktober-2019.pdf

OECD.Statistic. National Accounts – Annual National Accounts – General Government Accounts – Government expenditure by function (COFOG). Obtained in June 2019 at: https://stats.oecd.org/

OECD.Statistics. Public Sector, Taxation and Market Regulation – Taxation - Revenue Statistics; OECD Member Countries: Comparative tables. Obtained in June 2019 at: https://stats.oecd.org/

Osnutek proračunskega načrta 2020 (Draft budgetary plan 2020). (October 2019). Ljubljana: Government of the Republic of Slovenia. Obtained at: https://www.gov.si/assets/ministrstva/MF/ekonomska-in-fiskalna-poltika/evropski-semester/Osnutek-proracunskega-nacrta-2020-.pdf

Development Report 2019. (2019). Ljubljana: Institute of Macroeconomic Analysis and Development. Obtained at: http://www.umar.si/fileadmin/user_upload/razvoj_slovenije/2019/slovenski/POR2019_splet1.pdf

Price, R., Dang T.-T. and Botev, J. (2015). Adjusting fiscal balances for the business cycle: new tax and expenditure elasticity; Estimates for OECD countries. Economics Department Working Papers No. 1275. Obtained at: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2015)93&docLanguage=En

Stability Programme 2019. (April 2019). Ljubljana: Government of the Republic of Slovenia. Obtained at: https://www.gov.si/assets/ministrstva/MF/ekonomska-in-fiskalna-poltika/evropski-semester/Program_stabilnosti_2019.pdf

Republic of Slovenia. Selected Issues. (February 2019). IMF Country Report No. 19/59. Obtained at: https://www.imf.org/en/Publications/CR/Issues/2019/02/19/Republic-of-Slovenia-Selected-Issues-46621

Vade Mecum on the Stability & Growth Pact; 2019 Edition. (April 2019). Institutional Paper 101. Brussels: European Commission. Obtained at: https://ec.europa.eu/info/sites/info/files/economy-finance/ip101_en.pdf

Zakon o spremembah in dopolnitvah Zakona o davku od dobička od odsvojitve izvedenih finančnih instrumentov (Act amending the Law on tax on profit from disposal of derivatives). Official Gazette of the Republic of Slovenia, No. 66/2019.

Zakon o spremembah in dopolnitvah Zakona o davku od dohodkov pravnih oseb (Act Amending the Corporate Income Tax Act). Official Gazette of the Republic of Slovenia, No. 68/2016.

Zakon o spremembah in dopolnitvah Zakona o dohodnini (Act Amending Personal income tax Institutions). Official Gazette of the Republic of Slovenia, No. 28/2019.

economic issues 2019

ISSN 2536-359X