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**RAISING LIVING STANDARDS AND SUPPORTING INVESTMENT BY BOOSTING SKILLS IN SLOVENIA**

**ECONOMICS DEPARTMENT WORKING PAPERS No. 1432**

**By Rory O'Farrell**

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**ABSTRACT/RÉSUMÉ****Raising living standards and supporting investment by boosting skills in Slovenia**

Higher living standards and well-being, as well as convergence with more advanced economies, will depend on achieving higher productivity, which in turn would be boosted by more investment in capital. In particular, investment in knowledge-based capital and greater inward FDI can help Slovenia develop its economy and improve global integration. Complementing such investments requires a workforce that is given the opportunities and incentives to continuously engage in upskilling and seek employment where they are most productive, in the process raising their incomes. Reskilling can be improved by boosting the links between educational institutions and local and foreign firms, helping Slovenia to overcome its problems of long-term unemployment and low employment rates of older workers. Improving life-long learning will allow workers to adapt to a changing economic environment and thereby contribute to their own well-being. Adjusting wage determination and broadening labour market activation measures can smooth these adjustments.

This Working Paper relates to the 2017 OECD Economic Survey of Slovenia ([www.oecd.org/eco/surveys/economic-survey-slovenia.htm](http://www.oecd.org/eco/surveys/economic-survey-slovenia.htm)).

JEL codes: J21, J24, J32.

Keywords: human capital, reallocation, skills, labour market, productivity, training, adult education

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**Rehausser le niveau de vie et soutenir l'investissement en renforçant les compétences en Slovénie**

Pour améliorer le niveau de vie et le bien-être, tout en assurant une convergence vers les économies plus avancées, il faudra renforcer la productivité, ce qui passe par une augmentation des investissements en capital. La réalisation d'investissements en capital intellectuel et une augmentation des investissements directs de l'étranger, en particulier, peuvent aider la Slovénie à développer son économie et à améliorer son intégration mondiale. Pour compléter ces investissements, il faut que la main-d'œuvre ait la possibilité d'améliorer en permanence ses compétences et de chercher du travail là où elle sera la plus productive, et qu'elle soit incitée à le faire, ce qui lui permettra par la même occasion d'accroître ses revenus. Il est possible d'améliorer le processus de recyclage des travailleurs en resserrant les liens entre les établissements d'enseignement et les entreprises locales et étrangères, ce qui aiderait la Slovénie à surmonter ses problèmes de chômage de longue durée et de faiblesse du taux d'emploi des seniors. Améliorer la formation tout au long de la vie permettra aux travailleurs de s'adapter à un environnement économique changeant et, partant, contribuera à leur propre bien-être. Adapter le processus de détermination des salaires et élargir le champ d'application des politiques actives du marché du travail peuvent faciliter ces ajustements.

Ce Document de travail se rapporte à l'Étude économique de l'OCDE de la Slovénie 2017 (<http://www.oecd.org/fr/economie/etude-economique-slovenie.htm>)

Classification JEL: J21, J24, J32.

Mots clés: capital humain, réallocation, compétences, marché du travail, productivité, formation, enseignement pour adultes

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## **RAISING LIVING STANDARDS AND SUPPORTING INVESTMENT BY BOOSTING SKILLS IN SLOVENIA**

**By Rory O'Farrell**

Following the international financial crisis Slovenian living standards began to fall relative to Western European economies, and Slovenia lost its lead over other Central and Eastern European members of the OECD (CEECs). This was exacerbated by a domestic banking crisis in 2013. In order to ensure that future growth will be sustainable, the government is developing a National Development Strategy, whose main goal is to ensure a better quality of life in an inclusive society. However, greater investment in capital, and knowledge-based capital in particular, is necessary to achieve this goal. Furthermore, it is necessary to invest in people to ensure they have the complementary skills to facilitate such investment and to ensure they are included in the changes brought about by economic development and digitalisation.

This chapter starts by showing how an increase in investment in both capital and people is necessary for Slovenia to achieve its goals. This is followed by an analysis of the vocational training system and how training and life-long learning can be used to increase the supply of skills and ensure older workers contribute to attracting investment. How labour market institutions affect the reallocation of workers is then discussed, including an assessment of how to increase the participation of older workers in the labour market. The chapter ends with an assessment of how the skills of the tertiary educated can be improved in addition to how policies can be changed to ensure such workers are retained in Slovenia.

### **Investment in capital and people can help Slovenia achieve its goals**

Following the onset of the international financial crisis in 2008, the investment share of GDP fell sharply to a low level among CEECs (Figure 1). This was driven by a near halving in business-sector investment, which experienced a stronger boom-bust cycle than in most countries, and accentuated by a 55% decline in housing investment to a comparatively low share of GDP (Figure 2). Despite public investment being largely sustained, non-residential investment is far below what could be expected given long-term relationships between GDP, the capital stock, and investment; and the share of business investment in GDP lags both other CEECs and many advanced euro area economies (Figures 1 and 3). This share of non-residential investment is below the rate (20% of GDP) that allows more rapid economic convergence with advanced euro area economies (Lewis et al., 2014).<sup>1</sup>

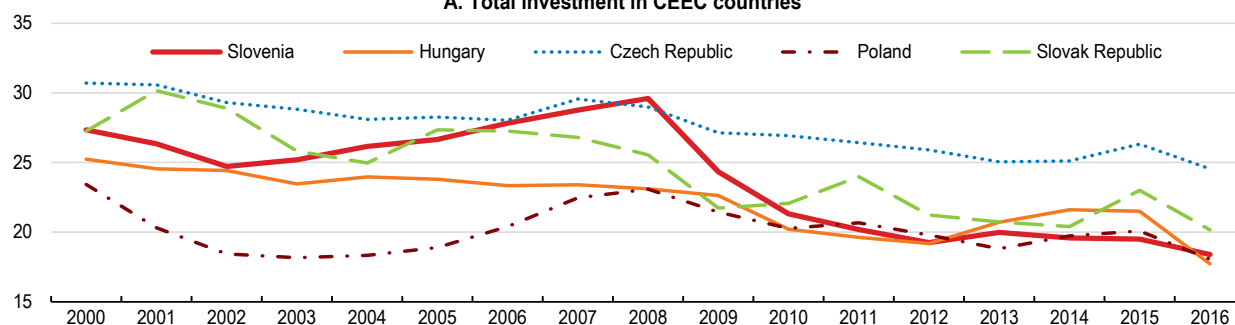
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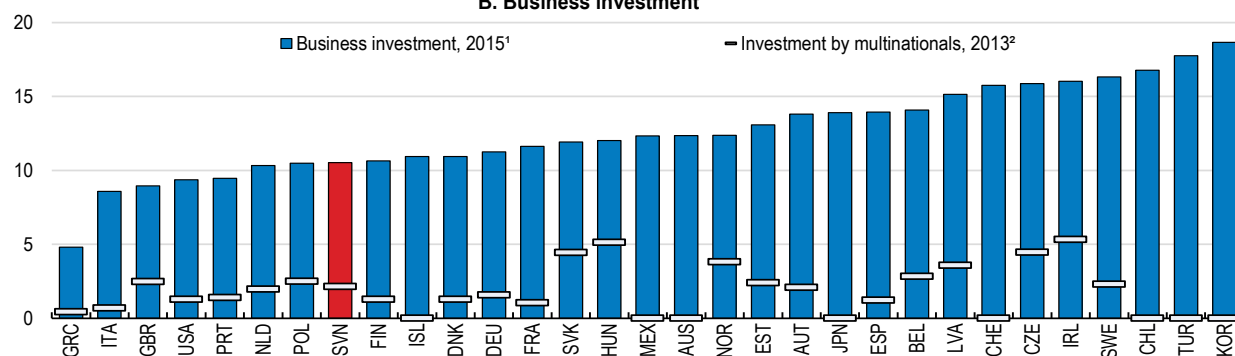
**Figure 1. Investment has shifted down**

As a percentage of GDP

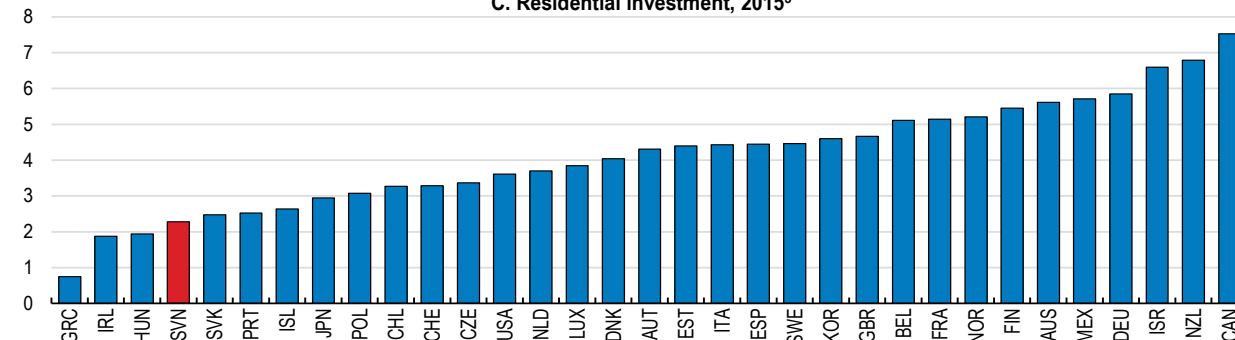
**A. Total investment in CEEC countries**



**B. Business investment**



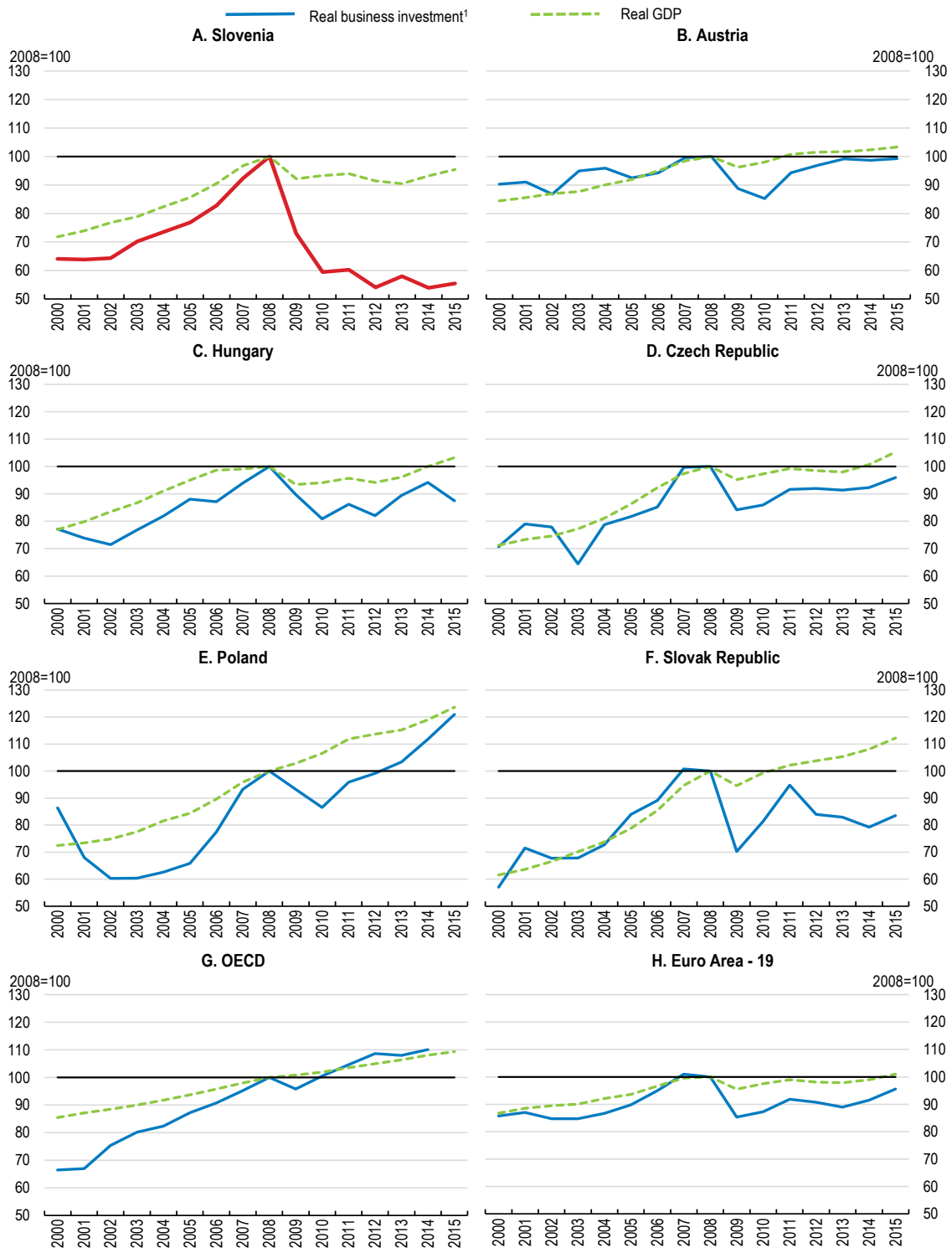
**C. Residential investment, 2015<sup>3</sup>**



1. Non-financial corporations. 2014 for Chile, Iceland, Italy and Korea.
2. Gross investment in tangible goods by multinationals in % of GDP in 2013, except for Ireland 2012.
3. 2014 data for Chile.

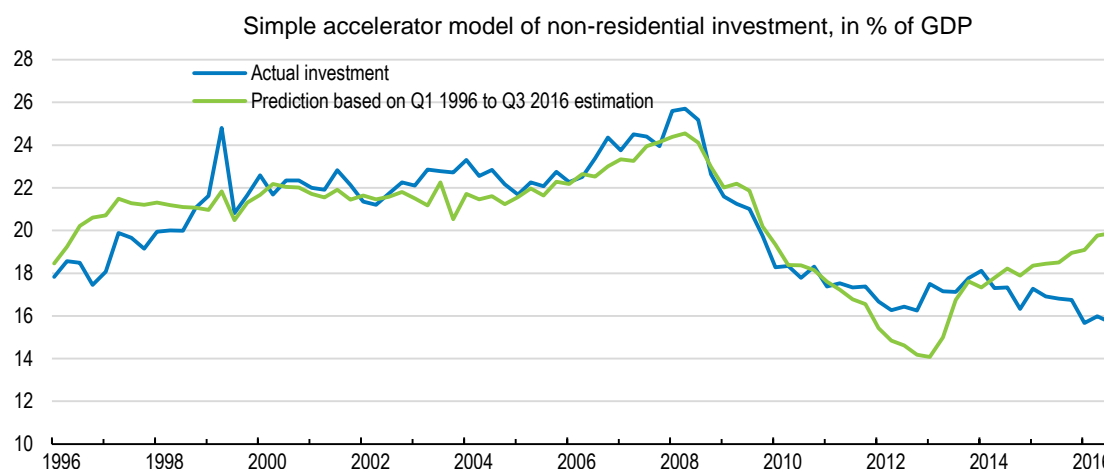
Source: OECD (2016), Analytical Database; OECD (2016), OECD National Accounts Statistics (database); OECD (2015), OECD Statistics on Measuring Globalisation (database).

**Figure 2. Slovenia's business cycle has been particularly pronounced**



1. Non-financial corporations.

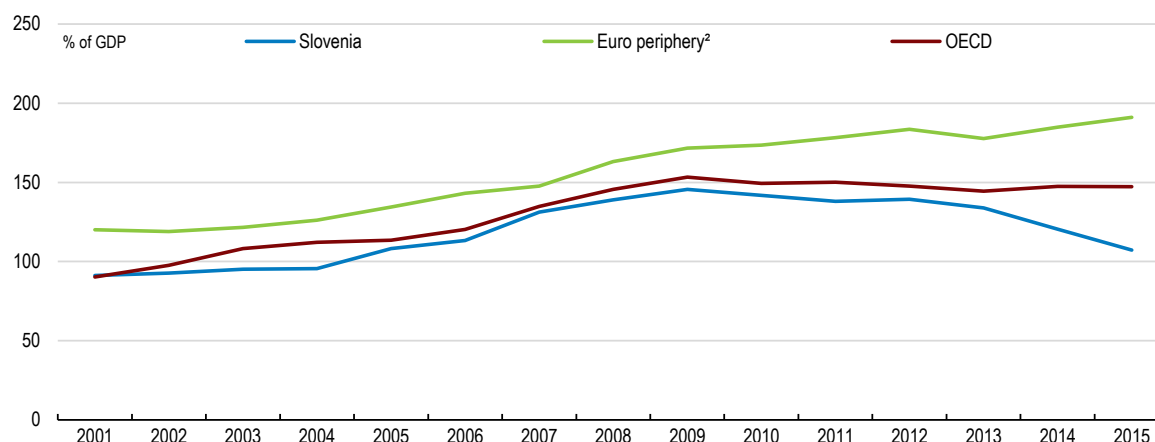
Source: OECD calculations based on OECD, National Accounts Statistics (database).

**Figure 3. Since the beginning of the recovery, investment has been weaker than expected**

Note: In real terms. Four-quarter moving average applied. Actual GDP and capital stock series used to calculate the forecast based on estimating over the period 1996 Q1-2016 Q3. In the estimations, the level of investment is explained by current and lagged changes in real GDP and replacement investment. For more information on the methodology see OECD (2015), *OECD Economic Outlook*, Vol. 2015, No. 1, June, Annex 3.1.

Source: OECD (2015), OECD calculations based on OECD Economic Outlook: Statistics and Projections Database.

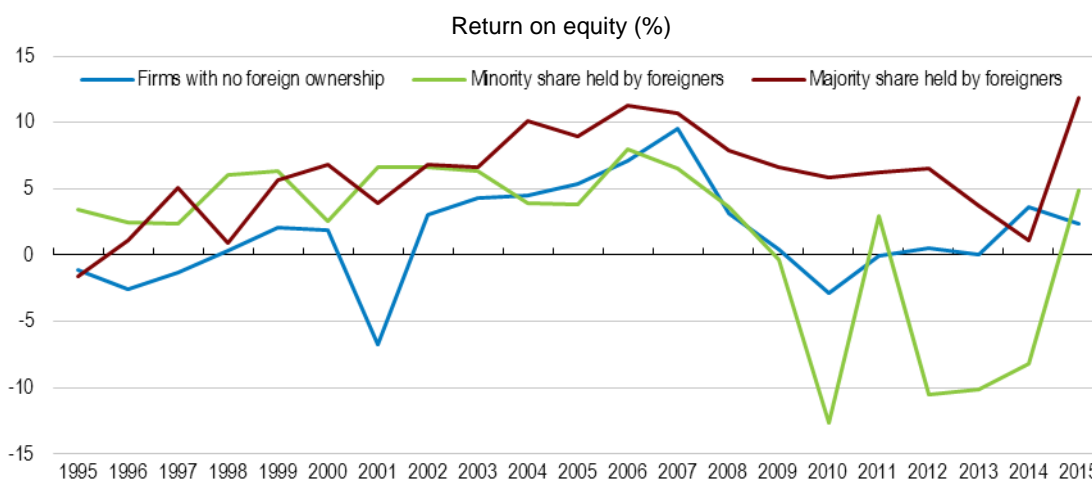
The contraction in business investment was concentrated in sectors oriented towards the domestic economy, with investment in the hotel accommodation and the food sector plunging almost 70%, reflecting the fall in domestic demand following an unsustainable boom. Firms became reluctant to invest due to high debt (Figure 4). Though financially constrained firms reduced investment the most, unconstrained firms also reduced their investments during the financial crisis (Črnigoj and Verbič, 2014). Firms that remained profitable were most likely to have deleveraged, while other highly indebted firms went bankrupt in a process of creative destruction (Bank of Slovenia, 2016a). Despite a recovery in firm profitability, such profits have been mainly directed towards debt reduction or invested in sight deposits (Figure 5) (Bank of Slovenia, 2016a and 2016b). In contrast, investment in the export-orientated manufacturing sector (which is less dependent on domestic financing due to a high level of foreign ownership) has fared better. Although such investment fell by almost one quarter in 2009, it soon stabilised and in the wake of stronger exports a recovery in investment for that sector began in 2011 (IMAD, 2012).

**Figure 4. Corporate leverage has declined**Indebtedness<sup>1</sup> of non-financial corporations

1. Debt is defined as all liabilities that require payment or payments of interest or principal by the debt to the creditor at a date or dates in the future. It comprises all debt instruments except share, equity and financial derivatives.

2. Euro periphery is composed of Greece, Portugal, Spain and Ireland.

Source: OECD Financial Dashboard.

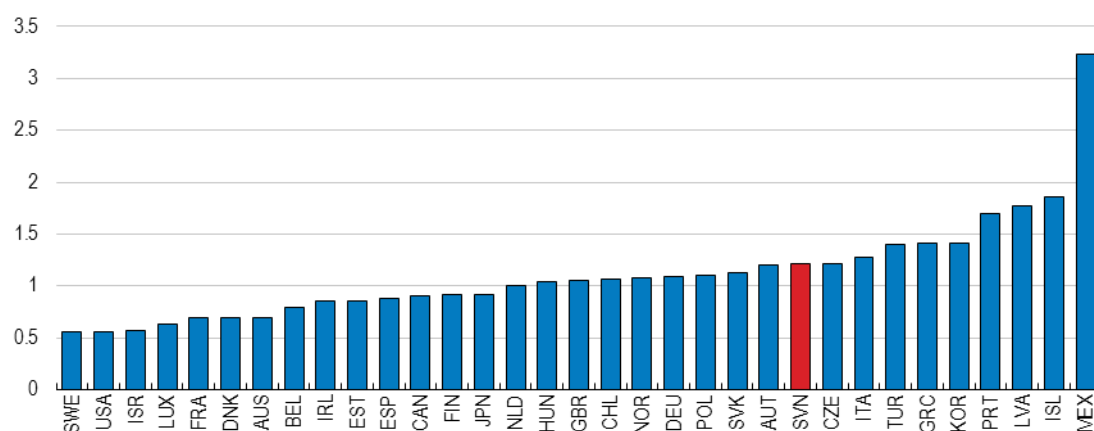
**Figure 5. Profitability has recovered**

Source: Bank of Slovenia.

In addition to a lack of willingness to invest, business investment by SMEs was also held back by the lack of private funding following the international financial crisis. Domestic investors, and especially SMEs, are highly reliant on debt finance (Figure 6). Other sources of finance, such as corporate bonds and equity funding play only a very minor role (Figure 7) (Bank of Slovenia, 2017). Access to alternative sources of finance for start-ups, such as venture capital or crowd-funding, is also very limited (Figure 8). Due to the small size of the capital market, financing that is not subject to banking regulation (referred to as ‘shadow banking’) comprising mainly money-market funds, bond investment funds and leasing firms has been slow to develop but is now estimated at 8% of the financial system’s total assets (Bank of Slovenia, 2016c). In addition, other non-bank credit channels, such as business-to-business loans, have become more important.

**Figure 6. Firms rely heavily on debt finance**

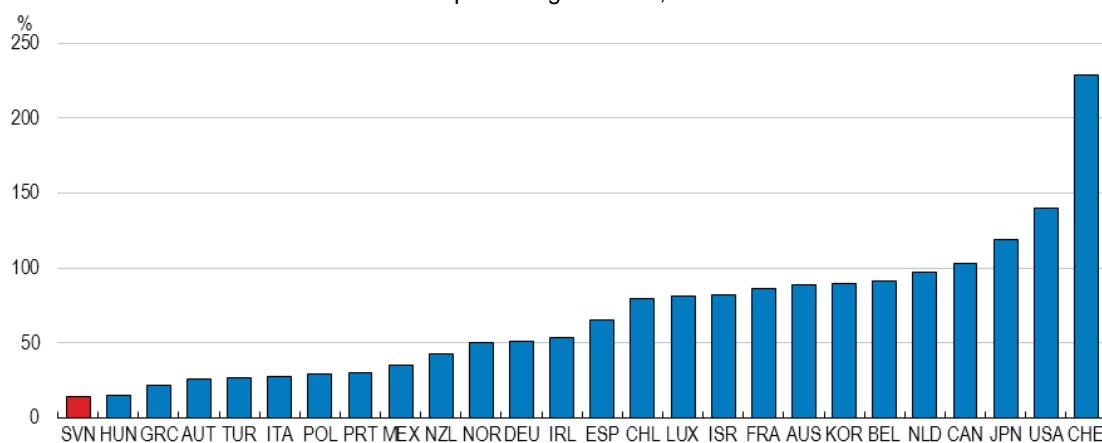
Debt-to-equity ratio of non-financial corporations, 2015



Source: OECD Financial dashboard.

**Figure 7. Stock market capitalisation is low**

As a percentage of GDP, 2016

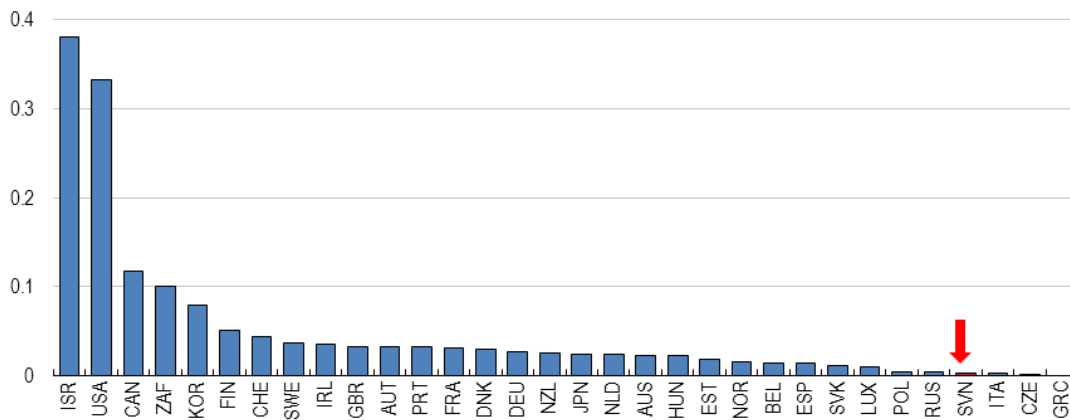


Note: Market capitalisation (also known as market value) is the share price times the number of shares outstanding (including their several classes) for listed domestic companies. Investment funds, unit trusts, and companies whose only business goal is to hold shares of other listed companies are excluded. Data are end-year values.

Source: World Bank, World Development Indicators Database.

**Figure 8. Venture capital investments as a percentage of GDP**

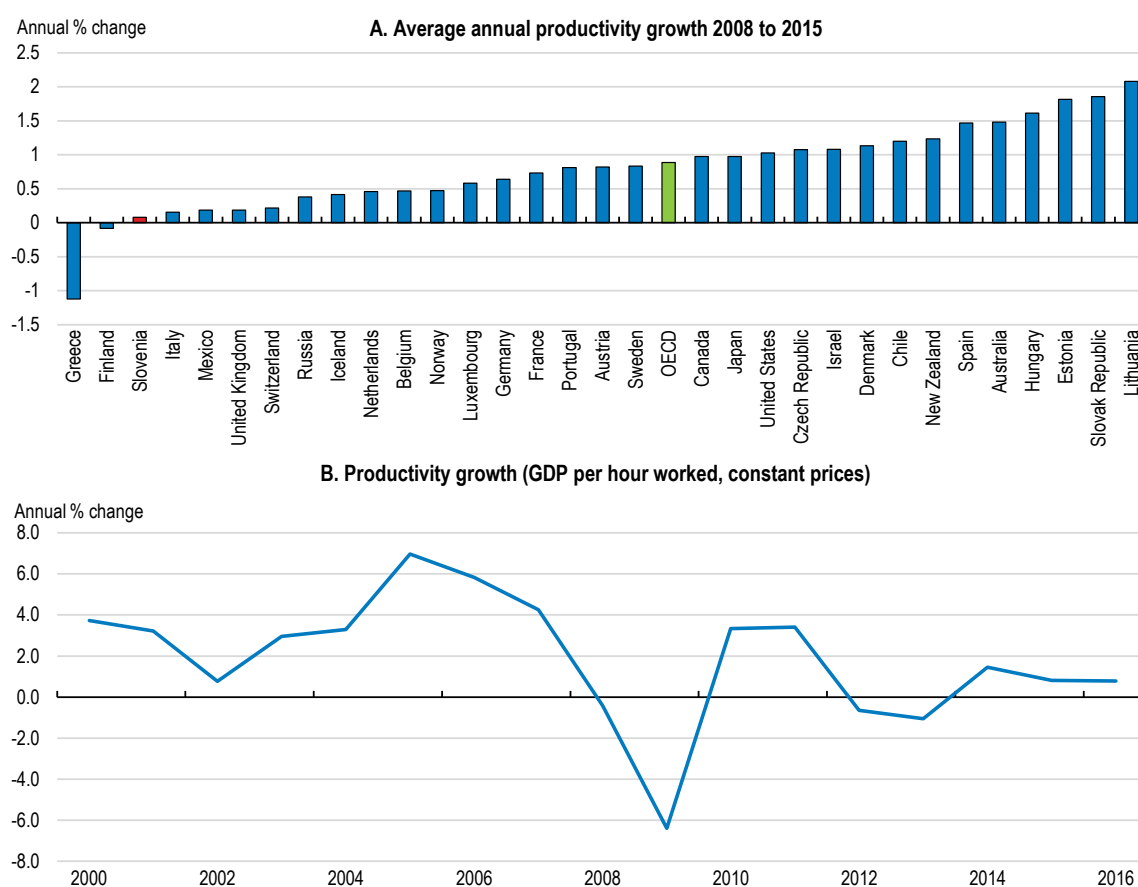
Percentage, 2015 or latest available year



Source: OECD (2016), *Entrepreneurship at a Glance 2016*.

There are also a number of governmental supports to firms, which increased in value in the early stages of the crisis (Lautar, 2016). These include the SPIRIT Agency (which aims to boost exports and attract FDI), the Slovene Enterprise Fund, and the Slovene Regional Development Fund. Some of these funding sources also include other supports, such as mentoring. However, such sources are too small in scale to replace private funding.

The impact of such low investment has been to slow productivity growth to amongst the lowest rates in the OECD since the international financial crisis (Figure 9). As a result, Slovenia has been losing pace with the rest of the OECD, hampering its ability to increase living standards and achieve its goals under the National Development Strategy.

**Figure 9. Productivity growth has been slow since the international financial crisis**

Source: OECD.Stat, Level of GDP per capita and productivity and OECD Economic Outlook Database.

### ***Greater FDI can help create quality jobs***

In addition to increasing investment to boost productivity, changing the investment mix can facilitate achieving the goal of an inclusive labour market with high-quality jobs. There is scope to boost FDI that brings with it modern technology and work practices. Foreign-owned firms tend to require higher skilled staff and pay higher wages (OECD, 2009). The available evidence suggests that this is true for Slovenia as well, as those employed in foreign-owned firms are paid 12.1% above the average, and value added per employee for firms with FDI is almost a quarter higher than for domestic firms (Bank of Slovenia, 2016d).

The ample profitability of foreign-owned firms should indicate a high attractiveness for inward FDI. However, compared with other OECD countries, the stock of inward FDI is low (Figure 10). As the majority of inward FDI takes the form of mergers and acquisitions (Canton and Solera, 2016), low levels of FDI can in part be explained by the absence of a major privatisation programme, in contrast to other CEECs where state assets were acquired by foreign-owned firms and production was modernised to become internationally competitive. Even today, the scope of the current privatisation programme remains limited (Chapter 2). In addition, there is also a particularly low level of greenfield FDI (Figure 11), suggesting other impediments, such as uncompetitive markets with restricted access and an inability for firms to find sufficient numbers of workers with relevant skills.

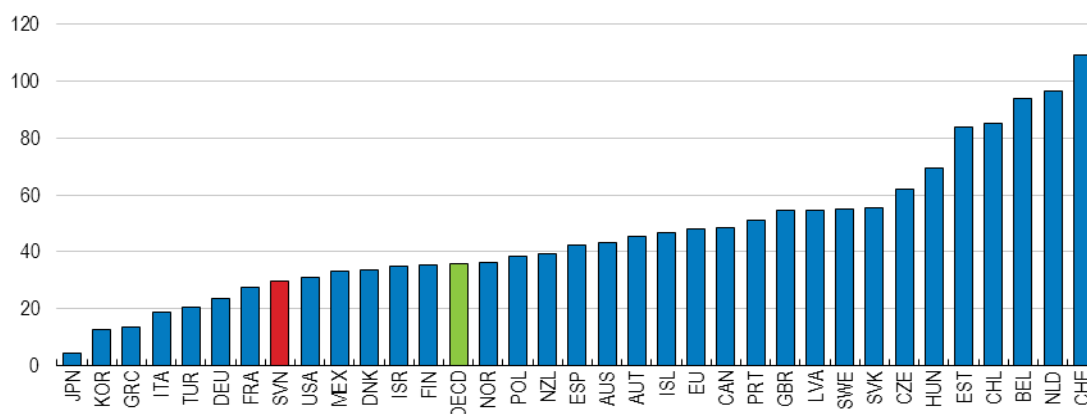
Despite the lack of success in attracting FDI, the foreign-owned firms that are present play an important role in the economy, with almost a quarter (23.4%) of employees in the corporate sector and 30% of net sales. Inward FDI also plays a crucial role in terms of achieving the goal of a globally integrated Slovenia: foreign-owned firms generated almost 40% of total exports in 2015 (Bank of Slovenia, 2016d).

### ***Greater investment in KBC would raise productivity***

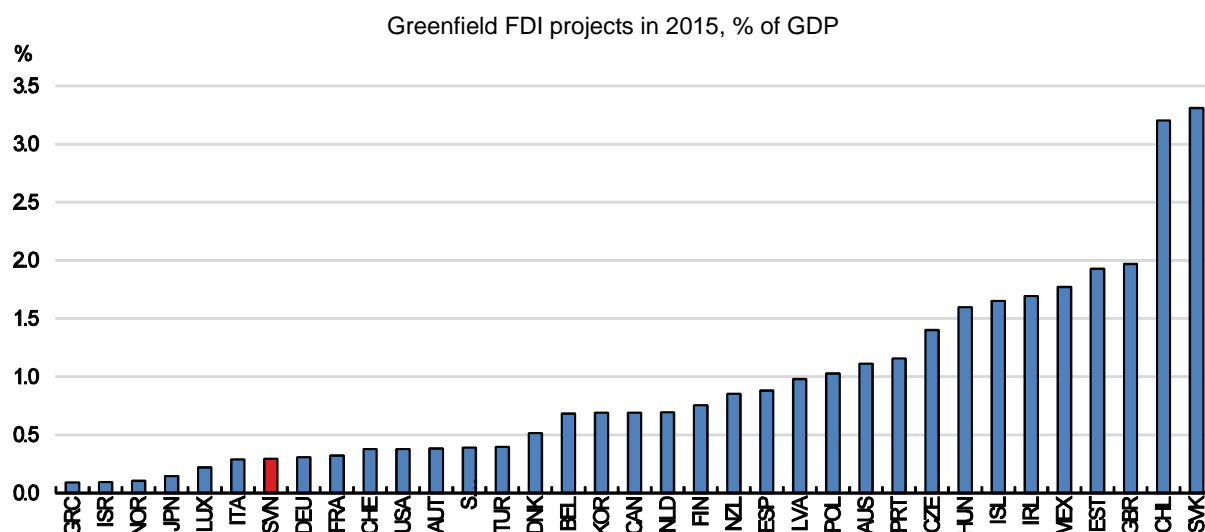
Further increasing investment in knowledge-based capital (KBC) would also help raise productivity and create high-quality jobs. Slovenia is a middle-ranked country, outperforming other CEECs, for the share of intangible capital in investment, such as R&D, software, and design (Figure 12). Greater investment in KBC allows faster adaptation of new technology and innovation, such as digitalisation and automation, and an expansion of knowledge-intensive service-sector activities. The need for such investments is seen by the fact that Slovenia lags behind more advanced OECD economies in terms of the high-technology intensity of merchandise exports, although the share of high and medium-high tech manufacturing in total manufacturing is relatively high (Sila et al., 2016). Slovenia also trails in the share of knowledge-intensive exports in service exports (IMAD, 2016) (Figure 13).

**Figure 10. The stock of inward FDI is very low**

As a share of GDP, 2016



Source: OECD, Globalisation FDI statistics database

**Figure 11. Slovenia receives a particularly small amount of greenfield FDI**

Note: Data refer to estimated amounts of capital investment. Totals exclude the financial centres in the Caribbean.

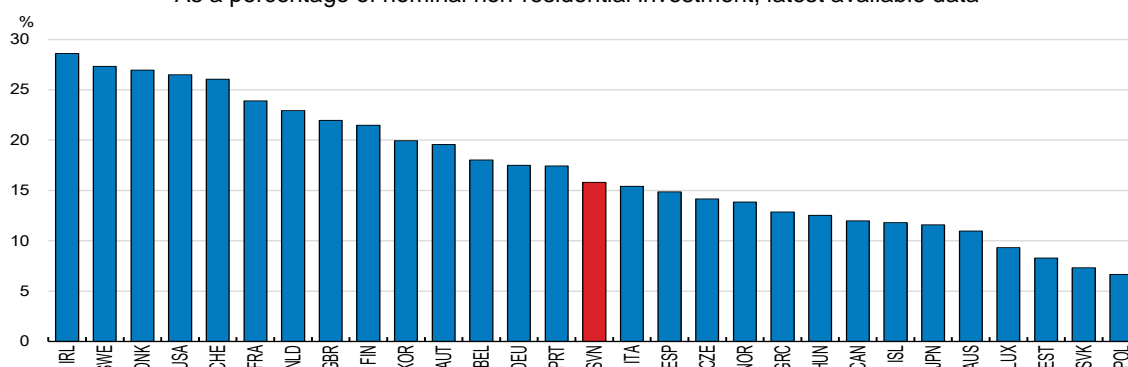
Source: ©UNCTAD, based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

### Slovenia has invested heavily in upskilling its workforce, though many workers were left behind

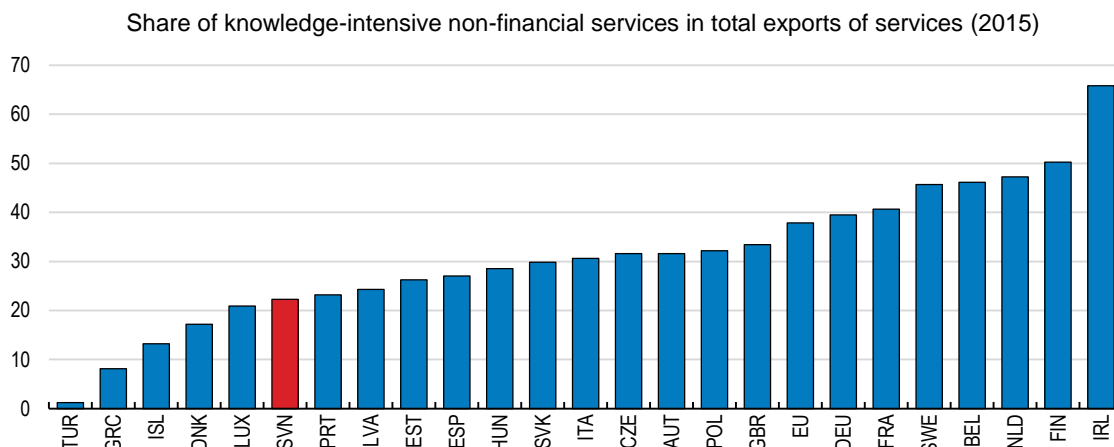
To successfully attract such investment and to ensure workers benefit, it is important for workers to have complementary skills. Other policies, including in the area of regulation and competition, are also important for bolstering investment incentives and are considered in Chapter 2. The skill needs of firms that invest in modern production methods, are integrated into global value chains and use high performance work practices are different to those present in Slovenia today, with higher skills in greater demand (OECD, 2016a; OECD, 2017a). Therefore retraining and reallocating workers is necessary for them to take advantage of new opportunities. Looking ahead, increasing productivity will require production workers with high-quality vocational training that can flexibly adjust to rapidly changing technologies and graduates with strong problem-solving skills and the capacity to work independently.

**Figure 12. Slovenia outperforms CEECs for investment in intangible capital**

As a percentage of nominal non-residential investment, latest available data



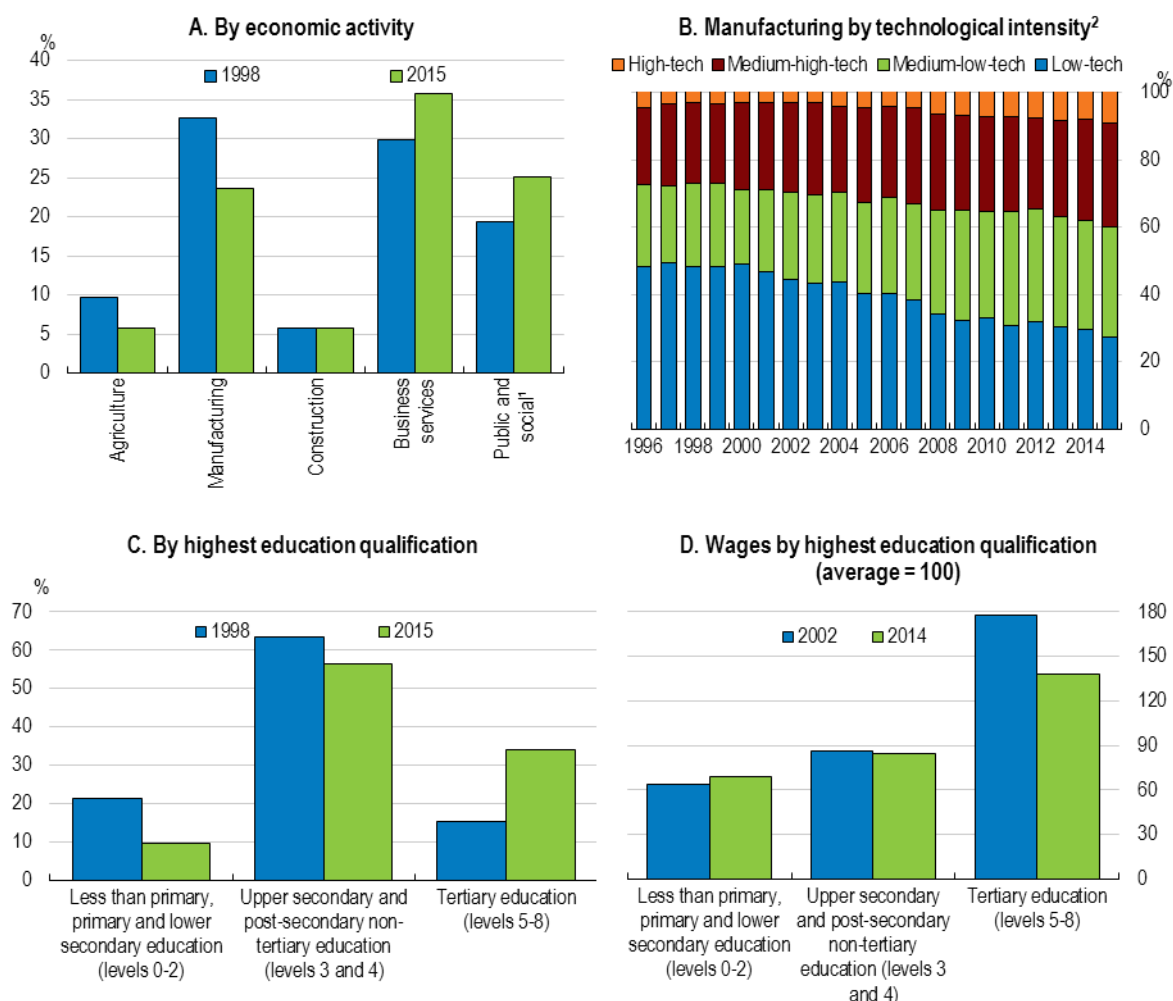
Source: OECD (2015), OECD Economic Outlook: Statistics and Projections (database); national statistical offices; OECD calculations.

**Figure 13. The share of knowledge-intensive services exports is low**

Note: Exports of knowledge-intensive non-financial market services are calculated as the sum of the exports of telecommunications, computer and information services (SI) and other business services (SJ)

Source: Eurostat Database, International trade in services.

Slovenia has already made much progress in upskilling its workforce as the structure of the economy has changed dramatically since independence in 1991, though some workers were left behind. Rapid change in the type of workers demanded by firms helped drive convergence with advanced economies and favoured those with higher education, referred to as skill-biased technical change (Eurofound, 2016a). The structural change included a broad expansion across the service sector. In particular, new jobs have appeared in business services, including accounting and the legal profession (Figure 14, Panel A). Furthermore, employment has shifted towards technology-intensive industries and has led to changes in Slovenia's occupational structure and skill requirements (Panel B) (Nenadič, 2012). The share of workers with tertiary education has increased, converging with the euro area average at a time when employment requiring tertiary attainment was also expanding there (Panel C). The nature of work has also changed, including a general increase in “job discretion” (the extent to which a worker has control over how to work and the pace of their work), which indicates the need for higher skilled workers who can work independently (Eurofound, 2015a).

**Figure 14. There have been large structural changes in employment shares**

1. Public administration and defence; compulsory social security; education; human health and social work activities; other service activities.
2. Manufacturing technology intensity is an aggregation of manufacturing industries according to technological intensity (R&D expenditure/value added) and is based on the Statistical classification NACE at 2-digit level according to Eurostat High-tech classification of manufacturing industries.

Source: Eurostat, Employment-LFS series database and earnings.

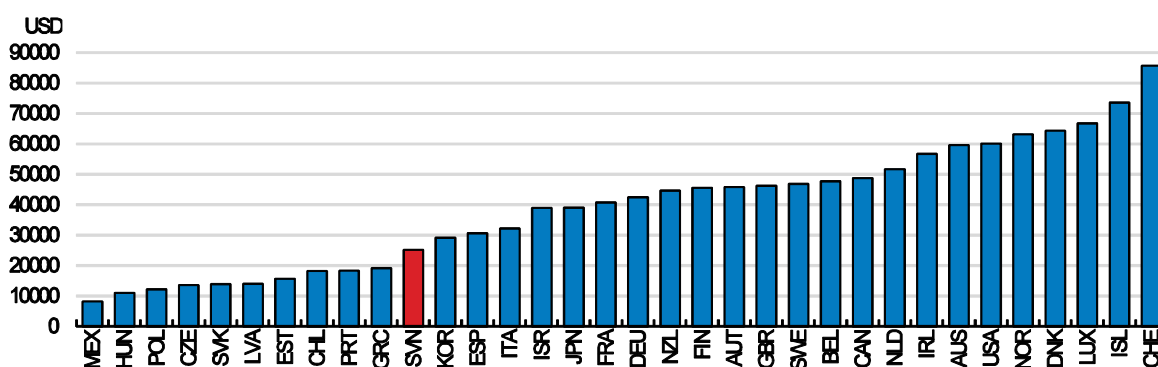
As a result of the associated productivity increases, Slovenia has succeeded in becoming a relatively high-wage economy, achieving the highest wages amongst CEECs (Figure 15). The minimum wage is also highest amongst CEECs and is one of the highest in the OECD in relation to median earnings (Figure 16). Adjusting for price differences, it is higher even than in western European economies such as Portugal and Spain. The high minimum wage allows even low paid workers in employment to enjoy relatively high living standards. However, such high wages also mean that workers need sufficiently high productivity to keep them attractive, or they risk becoming unemployed.

Indeed, workers with obsolete skills have tended to retire or become unemployed, leading to high long-term unemployment and particularly low employment rates for older people (Figure 17). Long-term unemployment has been a problem for over 20 years (OECD, 2016b), and a generous social security system allowed those with inadequate skills to retire rather than retrain (discussed below). Population

ageing means this is no longer feasible. By 2016 the number of people under 20 years of age was 30% lower than 30 years before, reducing the flow of younger people who can be trained to fill skills shortages. Also, a growing share of the elderly makes it too expensive to allow early retirement.

**Figure 15. Wages are higher than in other CEECs**

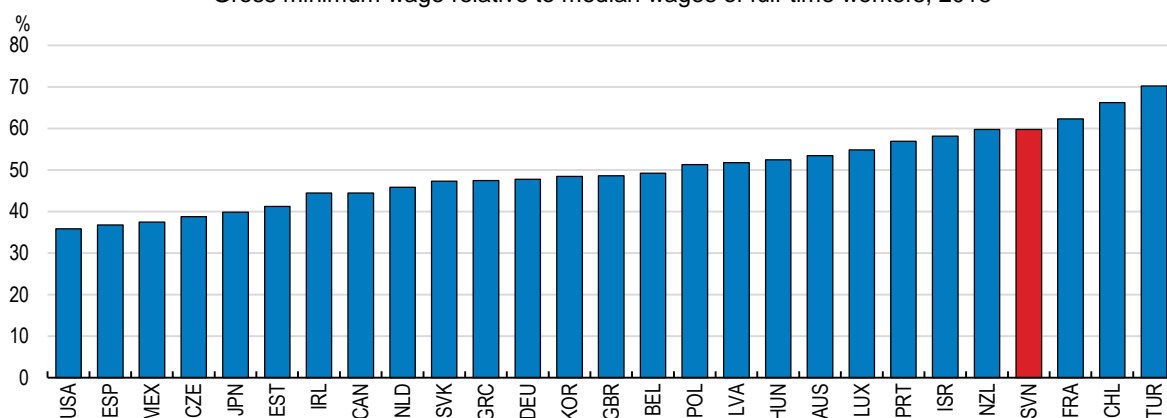
Average annual wage, USD (market exchange rates) 2016



Source: OECD, Labour-earnings database

**Figure 16. Minimum wages are high relative to median wages**

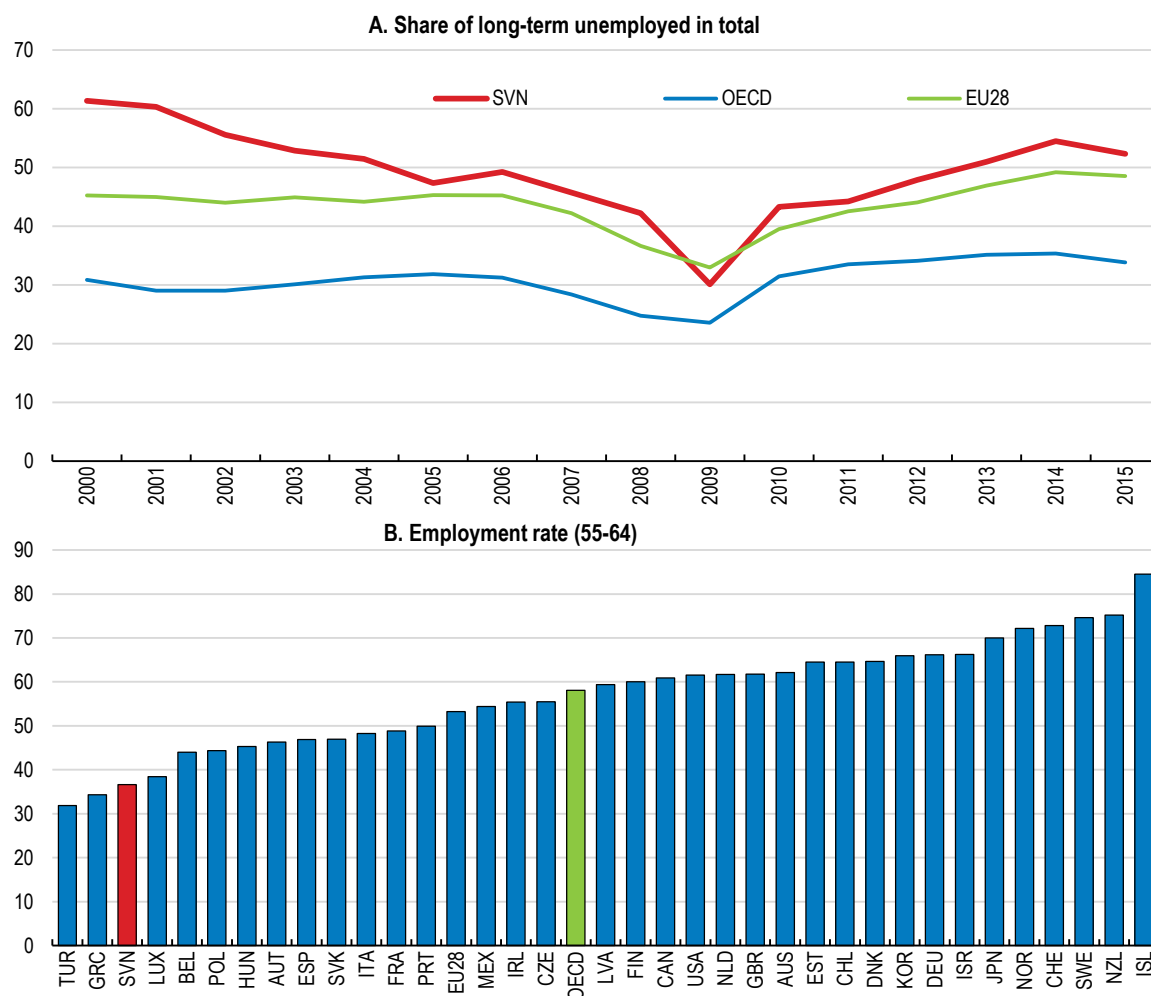
Gross minimum wage relative to median wages of full-time workers, 2015



Source: OECD, Labour-earnings database.

At the current conjuncture, there are already signs of more substantial labour shortages than elsewhere despite the still high unemployment rate (Figure 18). Noticeably, there has been an increase in the shortage of skill workers (Statistical Office of the Republic of Slovenia, 2017a). A third of employers across a range of industries are experiencing difficulties in finding adequate staff (rising to half for larger firms), and there are shortages in a wide range of occupations such as handicrafts, computer science, mechanical engineering, electrical engineering, food processing, construction, forestry, wood processing, chemical technologies and services such as hotel management and catering (ESS, 2017; ReferNet Slovenia, 2016). There has also been a doubling to almost half of firms that cannot recruit information and communications technology specialists (IMAD, 2016). Those shortages have contributed to a quarter of new jobs being filled by foreign workers in 2016.

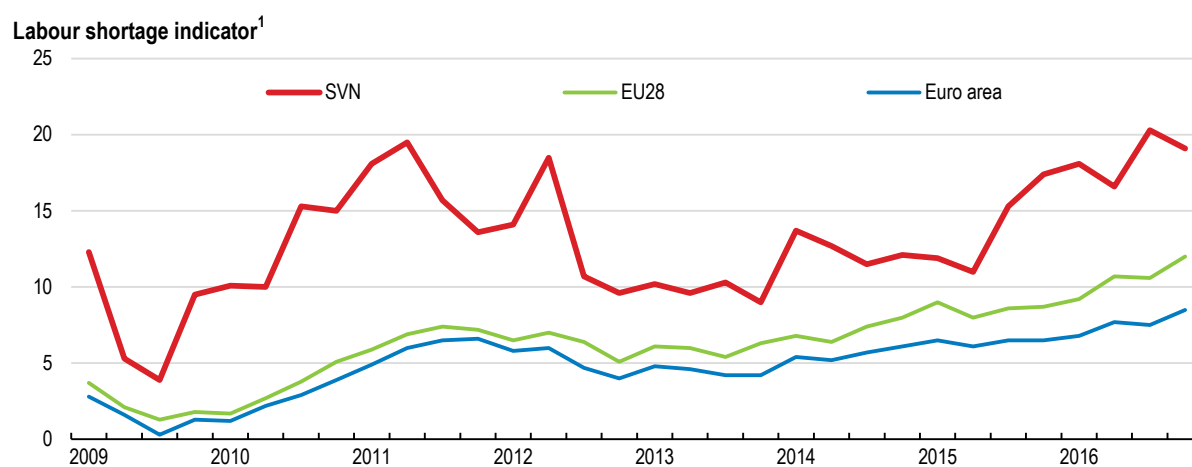
**Figure 17. Slovenia has persistent problems in reallocating workers**



Source: OECD, Labour Force Survey - Sex and Age composition database

**Figure 18. Labour shortages limit manufacturing production**

Percentage of manufacturing firms pointing to labour shortages as a factor limiting production



Source: Eurostat, Industry database.

## Developing vocational skills to bolster inclusiveness

A vocational training system that responds quickly to changing needs in the labour market provides students with the skills for the occupations required today and allows them to take advantage of continuing training opportunities and necessary retraining. This can be achieved by maintaining strong links with firms and ensuring students' literacy, numeracy and problem-solving skills. The education and training system has been largely focused toward giving young Slovenians the skills necessary to find employment. However, life-long learning for those in employment has been neglected. By building on the good track record of increasing the employability of young workers, Slovenia can further develop its training system to promote life-long learning for older Slovenians.

### *There is an extensive system of vocational education for the young*

The vocational training system is broader in scope than in most countries, and students have numerous options as to the type of programme they can follow. Programmes are provided through the upper secondary school system, typically beginning at age 15. Most last two to four years and cover traditional vocational occupations, such as plumbing, and 'technical' occupations, such as laboratory technicians (Box 1). There is much flexibility in the system, with a substantial proportion of course time (30% to 40%) in all programmes devoted to general subjects, and students have the option to switch to academically orientated general streams.

#### **Box 1. Slovenia's education system**

Attendance at pre-school is not compulsory, but nonetheless three-quarters of those aged one to six attend. In addition to fostering social and emotional development, pre-school introduces children to skills such as reading and writing. Pre-school receives 20% of total expenditure for educational institutions (almost equal to that of tertiary education). Compulsory education typically begins at age six and lasts nine years.

Upon completion of compulsory education, the first sorting of students into different education pathways begins (usually at age 15, in line with the OECD average). Such sorting is flexible, with general and vocational-technical education being frequently offered by the same school. Students sometimes leave the family home to attend such schools, making use of boarding facilities. Upper-secondary education is run by the Ministry of Education.

One pathway followed by roughly 40% of students is to pursue four more years of general secondary education leading to a general 'Matura' (baccalaureate). This allows direct access to university or, with an extra year of study, it is possible to graduate with a vocational Matura - an occupational qualification. A second option (pursued by almost 45% of students) is to complete four years of 'technical' upper secondary education (which provides training for occupations such as nursing, laboratory technicians and pre-school teaching). Students graduate with a vocational Matura, which allows direct access to professional higher education (similar to a polytechnic), and if the student passes extra exams (s)he can pursue academic higher education. The third option (pursued by almost 15% of students) is to pursue a 'vocational' course of three years (giving qualifications for electricians, butchers, chefs and bakers), and three-quarters of such students engage in two years of extra study to gain the vocational Matura (and they also have the option of studying for an additional year to gain a general Matura) (Lovšin, 2014). A final option pursued by under 1% of students is a short vocational programme, which does not lead to progression within the education system.

Tertiary education takes the form of a five-to-six-year integrated Master's programme or a three-to-four-year bachelor's degree that can be followed with a one-to-two-year Master's degree. Bachelor's degrees can have an academic or professional orientation. Following a Master's degree, students can pursue a PhD. Outside of the universities and higher education institutions, higher vocational colleges offer two-year diploma courses. These aim to give those with vocational skills the skills to manage and control work so they can hold jobs such as that of a foreman.

The vocational training system for those pursuing three-year programmes has well-established links with local employers and can flexibly adapt to their current needs. Such students spend 25% of course time in work-based practical training. In addition, 15% of programmes are determined by schools in cooperation

with local companies to meet their needs (giving a total of 40% of content set in cooperation with employers) (Ministry of Education, Science and Sport, 2015). For those in two-year programmes there is considerably less employer-based training, though 20% of the programme can be determined with local employers (and taught within the school). In contrast, the four-year ‘technical’ programmes are only nominally focused on preparing students for the workplace and are less responsive to the needs of the labour market. Though students gain some workplace experience, it forms only a minor part of the programme, contributing to negative perceptions of the work experience gained by Slovenian students (Eurobarometer, 2014). Also, only 10% of (school-based) programme content is determined by the school in cooperation with local firms. Graduates leave with an occupational qualification, but in practice 90% of those in four-year programmes progress directly to tertiary education (Lovšin, 2014).

In addition, there is a system of tertiary-level vocational training. These two-year “higher vocational” programmes aim to equip students with more advanced, vocational competencies in managing, planning and controlling work processes, to meet the needs of the economy. They result in Diplomas, and cover all fields of education. Students in these courses usually already have work experience. Workers with higher vocational qualifications enjoy wage premiums of 40% over upper-secondary vocational and technical graduates (OECD, 2017b).

Although three-year programmes prepare students for the current needs of the labour market (with quite similar employment rates for those with vocational and tertiary qualifications), the programmes do not develop the problem-solving skills necessary for their employers to move up the value chain. Adults with upper-secondary education (who are predominantly those with vocational qualifications) perform poorly in terms of literacy and problem solving in a high-tech environment (which includes basic computer skills), though near average for numeracy (Figure 19 and Figure 20). Such skills are important to facilitate life-long learning and occupational mobility (OECD, 2017b). The skills gap contributes to the particularly wide earnings gap between those with upper-secondary qualifications and tertiary graduates (although wage differentials among tertiary graduates are narrow) (Figure 21).

To address the lack of problem-solving skills the government introduced reforms to vocational education in 2011 to increase the use of problem-solving and experimental-learning teaching methods. However, adopting problem-solving-based learning requires that teachers be given the necessary pedagogical training, and so far this has been lacking (Ermenc and Mažgon, 2015). Such a lack of further training is characteristic of life-long learning in Slovenia as a whole (discussed below). Teachers have identified a need for further training in new developments in their subject area, dealing with disciplinary and behavioural difficulties and skills for ICT-assisted teaching (Vršnik Perše et al., 2012). Although teachers have the right to five days of training per year, including pedagogical and ICT-assisted training, this appears to be of poor quality. Only 13% of teachers consider such training to have contributed most to the development of their ability to teach (on a par with self-education via literature and the Internet), compared to 45% considering their own professional experience being most important (Vršnik Perše et al., 2012). In 2016 a series of EU-funded programmes were introduced to improve the teachers' competencies. Although it is too early to evaluate their effectiveness, introducing a continuous teacher training system to adopt the pedagogical practices used in countries that have successfully implemented problem-solving-based learning would probably be beneficial.

Due to poor market signals (discussed below) the Slovenian government encourages students to pick VET courses where there are labour market shortages. A ‘Scholarship for Shortage Occupations’ scheme was launched in 2015, with a monthly stipend of EUR 100 (equivalent to 12% of the minimum wage). The occupations covered are decided by the Ministry of Labour, Family, Social Affairs and Equal Opportunities using data provided by the Employment Service and in consultation with social partners and youth representatives. The system can be combined with other scholarships, and demand easily outstripped the number of available scholarships in 2015 (CEDEFOP, 2016). However, not all scholarships were

awarded in 2016 due to the introduction of selection criteria (such as academic success) and a reduction in the number of eligible study programmes. Although it is too soon for a full evaluation, a concern is that the scheme can conflict with the advice pupils receive from counsellors who tend to advise them based on their academic results and aptitude tests, rather than training students to plan their careers (Lovšin, 2014).

**Figure 19. Literacy skills are comparatively poor for adults from all education attainment groups**

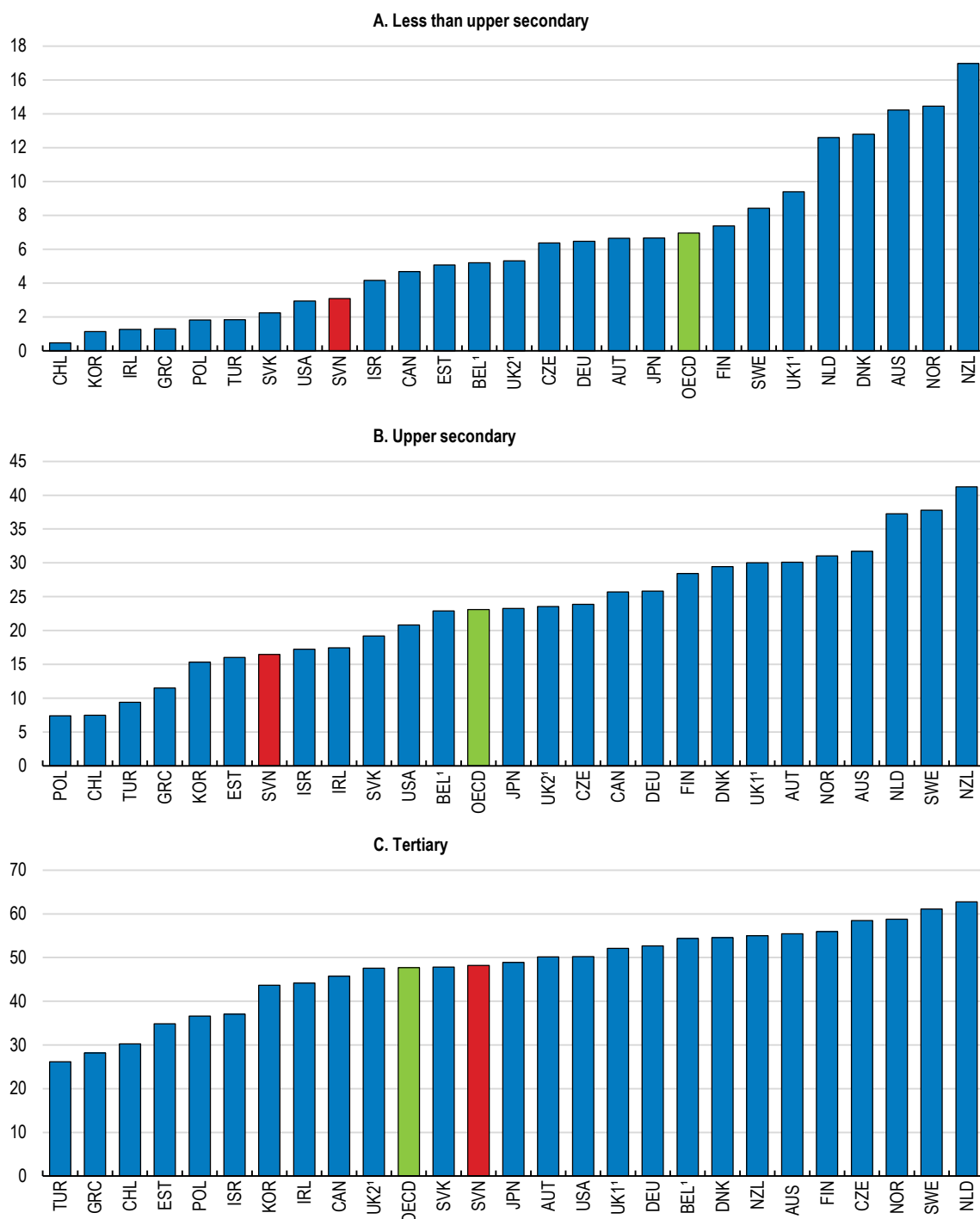


1. For regions: Flanders for Belgium, Northern Ireland (UK2) and England (UK1) for the United Kingdom.

Source: Survey of Adult Skills (PIAAC), Table A3.2 (L) and (N).

**Figure 20. Slovenians with less than tertiary education lack digital skills**

Percentage of adults scoring high in problem solving in technology-rich environments, by educational attainment



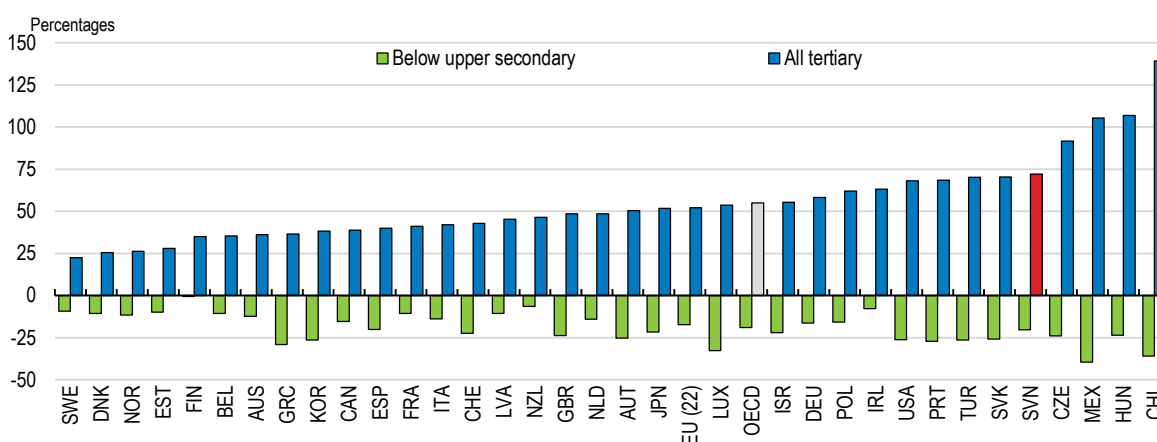
1. For regions: Flanders for Belgium, Northern Ireland (UK2) and England (UK1) for the United Kingdom.

Source: Survey of Adult Skills (PIAAC), Table A3.2 (L) and (N).

The use of apprenticeships is another option to help students learn workforce skills and make useful contacts with potential employers. The Slovenian government has proposed a pilot programme (to be co-financed by the Ministry of Education and the European Social Fund) for a dual apprenticeship-training system starting with the school year 2017-18. The new system will increase time spent in practical training to at least 50% of the total educational programme. An apprenticeship plan will be set by the school, the employer and the chamber of commerce. The employer will provide appropriate apprenticeship positions and mentors, and pay social contributions, compensation for meals and travel expenses. Chambers of Commerce will verify the apprenticeship posts, prepare and publish tenders for them, participate in setting the final exams and report results. In addition to the typical cohort of students, it will also be possible for the employed and unemployed to participate in the system.

**Figure 21. The difference between tertiary and upper-secondary wages is particularly wide**

Annual gross earnings of 25-64 year-olds working full-time relative to those with upper secondary education (2014)



Note: Tertiary education includes short-cycle tertiary, bachelor's, master's and doctoral or equivalent degrees.

Source: OECD (2016), *Education at a Glance 2016*, Table A6.1. See Annex 3 for notes ([www.oecd.org/education/education-at-a-glance-19991487.htm](http://www.oecd.org/education/education-at-a-glance-19991487.htm)).

Using the four-year programmes as an entry path into tertiary education may be an inefficient use of resources, particularly as the programmes typically give only restricted access to related studies and more flexible study choice requires passing additional exams. The authorities should conduct an audit to investigate the advantages of students pursuing four-year programmes rather than general education programmes. At the same time, the four-year technical programme could lead to better employment outcomes upon graduation by including more workplace training. This could be achieved, for example, through the existing Practical Training with Work (PUD) programme, which helps link four-year students with local firms for temporary work experience during term time, by extending it to promote work experience during school holidays. In addition, firms' take-up of this measure could be used as an indication of the relevance of individual vocational training courses.

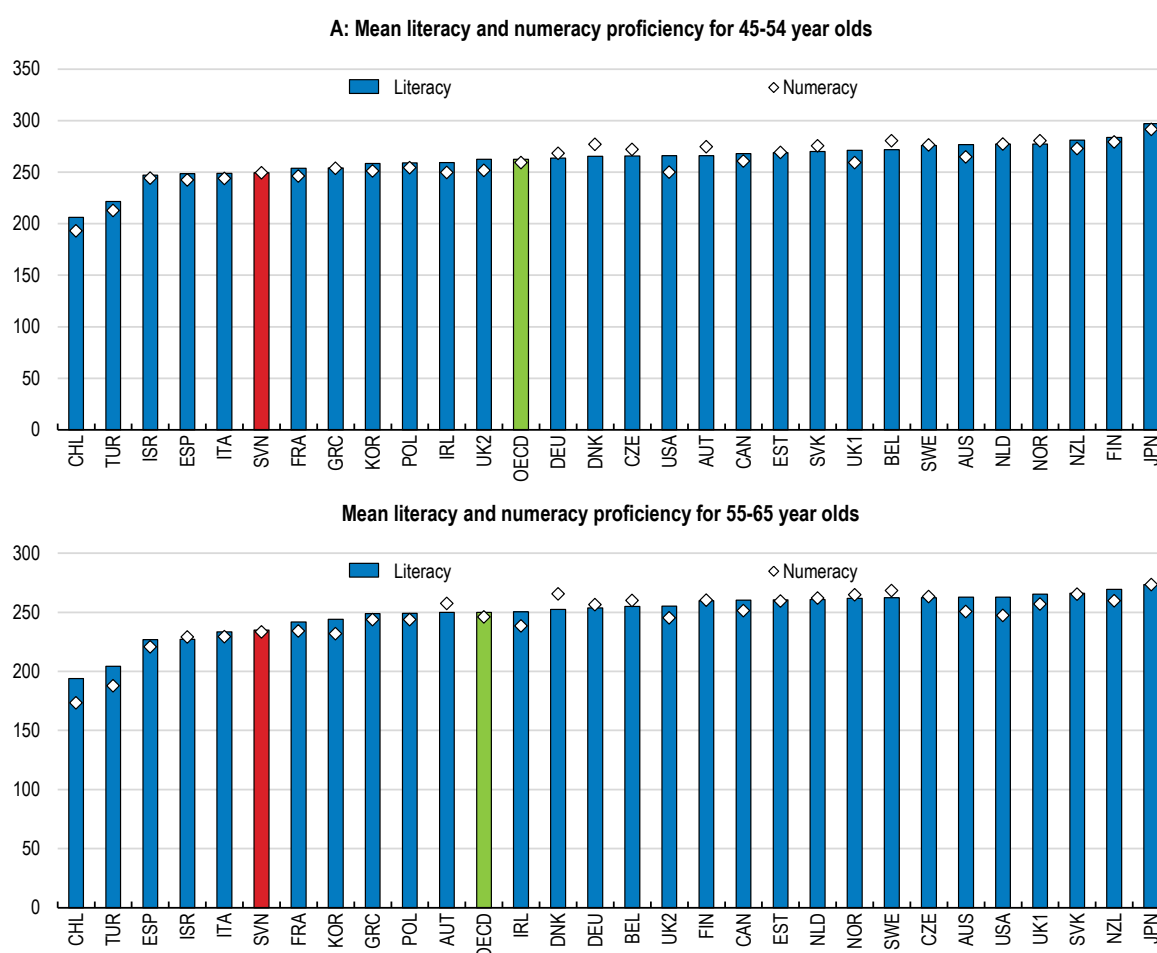
To ensure students are trained in the most modern techniques VET schools could develop greater links with firms based abroad. Though links with local firms are effective, such links limit training to work practices and technology within Slovenia. International mobility for VET graduates is low compared to general upper-secondary school or tertiary graduates, with only 2.1% of 18-34 year-olds having spent at least two weeks learning abroad - about half the Dutch rate (EP-Nuffic, 2016). Students and staff can participate in the European Union's Leonardo da Vinci programme, which facilitates cross-border studies for VET students (CEDEFOP, 2015). The most common destination country for Slovenian students in this programme is Germany (which also accounts for almost 10% of FDI), followed by Finland and Spain, neither of which are important source countries for FDI in Slovenia. While welcome, VET schools should

aim to boost links with countries that are important sources of its inward FDI to gain a competitive advantage in attracting FDI.

### *Life-long learning could boost labour market inclusion of older workers*

The education system plays an important role in initial skills formation. However, for workers to have the best employment prospects in the face of changing labour market requirements, they must be able to renew and upgrade their skills. Life-long learning is particularly important as population ageing and changes to the pension system will result in longer working lives. Also, due to a declining youth population it will no longer be possible to meet labour requirements caused by investment in new technologies by only training younger Slovenians. In the future older workers will have to adjust their labour market situation more frequently. Such training is needed all the more given that older Slovenians rank amongst the bottom in the OECD for literacy, numeracy and problem solving in a high-tech environment (Figure 22).

**Figure 22. Mean literacy and numeracy proficiency for older Slovenians**



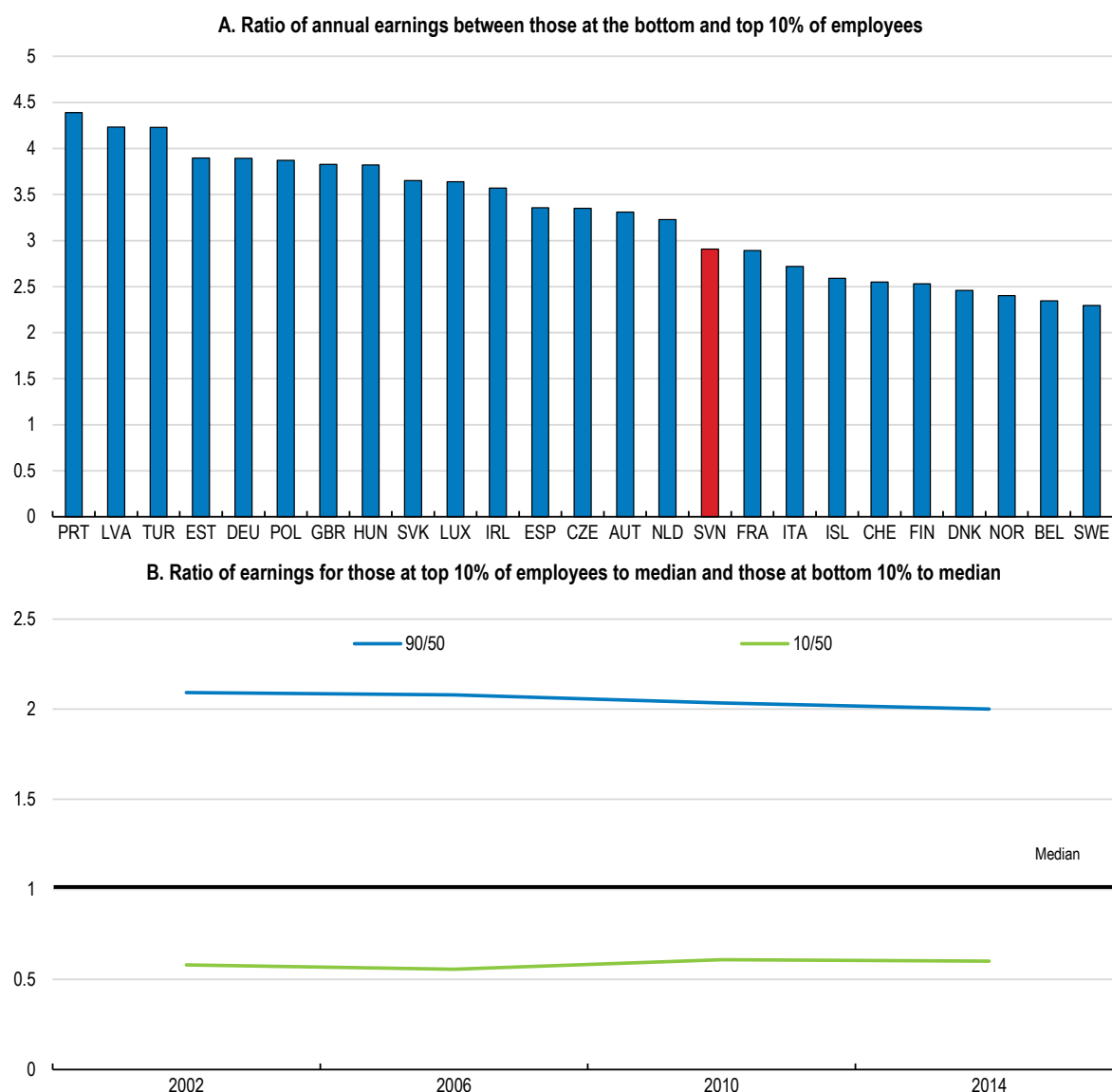
Note: for region, Flanders for Belgium, Northern Ireland (UK2) and England (UK1) for the United Kingdom.

Source: Survey of Adult Skills (PIAAC), Table A3.5 (L) and (N).

There is a lack of opportunities for adults to retrain. Existing programmes aim to help adults complete secondary education (with almost 15 000 adults engaged in upper-secondary education compared to 61 000 youths), rather than help them retrain for new occupations (Ministry of Education, Science and

Sport, 2015). The government has taken some initiatives to change this. In 2013 it introduced co-financing (alongside employers and participants) of part-time post-secondary vocational education (Čelebič, 2014). Also, a programme entitled 'Comprehensive Support to Companies for Active Aging of Employees' has been recently introduced with the aim of improving the competencies of older employees to help them have longer working lives. The goal is to have 12 500 older employees in training programmes by 2022 (Slovene Human Resources Development and Scholarship Fund, n.d.), though it is too early to assess the impact of these initiatives. Such training should also be targeted not just at those nearing the end of their careers but also at those who are mid-career to prevent problems of skills obsolescence.

Participation in formal or informal training for adults (aged 25-64) is on a par with other countries. However, the average hours of training for participants are the second lowest in the OECD. As elsewhere those that are already highly skilled are more likely to participate in training, with 78% of the high skilled (judged by PIAAC literacy proficiency scores) participating in either formal or informal education and training, compared to only 30% for the low skilled. Although the participation rates for the low skilled is at the OECD average, the skills gap is particularly wide, reflecting a bias towards helping the higher skilled. Low participation rates can in part be explained by generous unemployment benefits for low paid workers, a compressed wage structure and the possibility to retire early, reducing the incentives for training for the low skilled (discussed below) (Figure 23).

**Figure 23. The relatively compressed wages have been stable**

Note: The 90/50 ratio compares the annual earnings of employees at the 90<sup>th</sup> percentile with the median. The 10/50 ratio compares annual earnings with employees at the 10<sup>th</sup> percentile with the median.

Source: Eurostat 2014 Structure of Earnings Survey.

There are also restrictions on who can participate in many training programmes, such as the on the Job programme, which is restricted to those under 30 or over 55 and unemployed for at least three months (ESS, n.d.). Such training is largely done in educational institutions, whereas in other countries it is more evenly split between the school and at the workplace (OECD, 2016c). Although basic (primary and lower secondary) education is free, participants in other forms of adult education typically have to pay one-third of the cost. Of adults with low literacy or numeracy skills, 28% do not pursue education or training because it is too expensive (though the vast majority that participate get some support from their employer), and 12% to 14% cite a lack of time (OECD, 2017b).

The low level of participation in training contributes to only a third of older workers (aged 55-64) with upper secondary education being employed, compared to 56% for the tertiary educated (and an OECD average of 71%). In contrast, the gap for younger workers (4%) is smaller than the OECD average (OECD, 2016c). In addition, the positive return to education suggests that increasing training opportunities is likely to boost employment prospects of older workers (Figure 21).

The participation of adults could be improved if education providers offer a more user-friendly approach, such as more on-line and distance learning, part-time and modular courses. The government could also adjust incentives so that the low-skilled more actively seek such training as part of unemployment activation measures, but also for the employed to prevent future spells of joblessness. Incentives could be altered by giving workers training vouchers or tax credits. Introducing a comprehensive system of training and retraining could help workers maintain the relevance of acquired skills. Also, the provision of training that enables the long-term unemployed to change occupation should be increased when a person cannot find work with their current skills. Existing adult education programmes should also facilitate changing occupation mid-career.

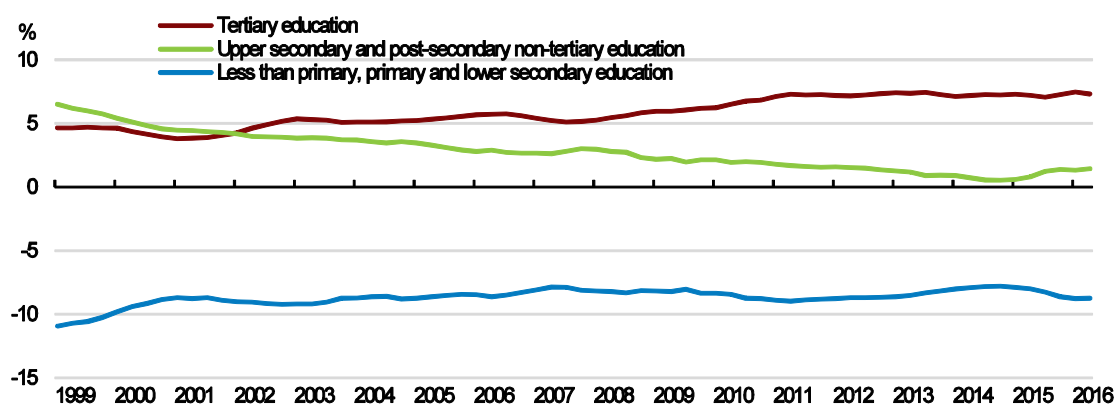
Informal learning also plays an important role in maintaining a worker's skills. Recognition for informal learning is now available, but it is questionable as to whether this is responding to labour market needs. Since 2000 workers have been able to have their informally learned skills accredited as a National Vocational Qualification (NVQ), with occupations chosen in cooperation with the social partners. However, a survey of managers in the tourism and hospitality industry shows only limited knowledge of the system of NVQs, although 19% of respondents participated in the system, with a similar number rejecting it and only recruiting based on formal education or work experience (even though NVQs formalise work experience) (Rok, 2012). A weak link between the qualifications available (such as Cheese Sommelier) and employer needs was also reported. The government is introducing 'Competence Centres for Human Resource Development', in part to improve the identification of occupations where informally attained skills are valued. The government should also survey a wider range of firms when deciding which occupations to include amongst NVQs.

### **Reforming labour market institutions to increase inclusiveness**

A key aspect of well-functioning labour market institutions is that they enable workers to find new jobs if their current job disappears and to upskill to raise their productivity and wages. This also has the advantage of making the country an attractive place for business investments, increasing productivity. However, despite the progress made, many low-skilled workers have been left behind despite economic growth. There are sustained differences between the education of workers with jobs compared to the population as a whole, with the low-skilled left behind, and with years of education playing a particularly large role in determining wages and employment (Figure 24; OECD, 2016d). A combination of weak wage signals, poor worker activation and pathways to early retirement has led to those who cannot find a job with their current skills leaving employment rather than changing occupation or upskilling.

**Figure 24. There is a persistent mismatch between the education of those in employment and the population**

Share in employment (15-64) less share in population by education, four-quarter moving average



Source: Eurostat, EU labour force survey and OECD calculations.

### *The wage-setting system leads to compressed wages*

Wage-setting systems play an important role in creating incentives for workers to be employed where they are most productive. Slovenia's wage-setting system has much in common with those in Western Europe. The social partners have institutionalised access to policymaking through the tripartite Economic and Social Council, including minimum-wage setting and non-pay topics such as employment and social policies, pension and labour market reforms (Eurofound, 2015b; Stanojevic et al., 2016). The current government abstains from influencing private-sector bargaining, except through tax measures and minimum wages. Although only larger firms tend to be unionised, roughly 65% of workers are covered by collective agreements, in line with Western European economies. The high coverage rate is due to the high level of firm membership in chambers of commerce, rather than union density, which stands at 21.3% (Jemec and Vodopivec, 2016; Visser, 2016). Collective bargaining coverage is high in the manufacturing, electricity, real estate, hotels and restaurants sectors (Jemec and Vodopivec, 2016).

Sectoral bargaining is the norm. By 2010 the role of national employer and union confederations had been reduced to issuing centrally negotiated bargaining guidelines. Collective agreements can be extended by the Ministry of Labour, depending on the representativeness of the signatory parties (Jemec and Vodopivec, 2016). Until 2008 extension of collective agreements was widespread but since then has been less frequent, though agreements have been extended in parts of the tourism, trade, road transport, electric utilities and manufacturing sectors (Eurofound, 2015b; Jemec and Vodopivec, 2016). However, sectoral agreements can be amended at the firm level with the consent of the union, for example to avoid redundancies (Stanojević et al., 2016). The share of firms that cut base wages rose following the domestic banking crisis from 3.3% in 2011 to 6.5% in 2013 (Jemec and Vodopivec, 2016). Though the informal practice by which certain leading firms have acted as 'rule makers' in coordinated bargaining has been reduced since the 2008-09 crisis, overall coordination of agreements remains strong (Stanojević et al., 2016; Eurofound, 2015b).

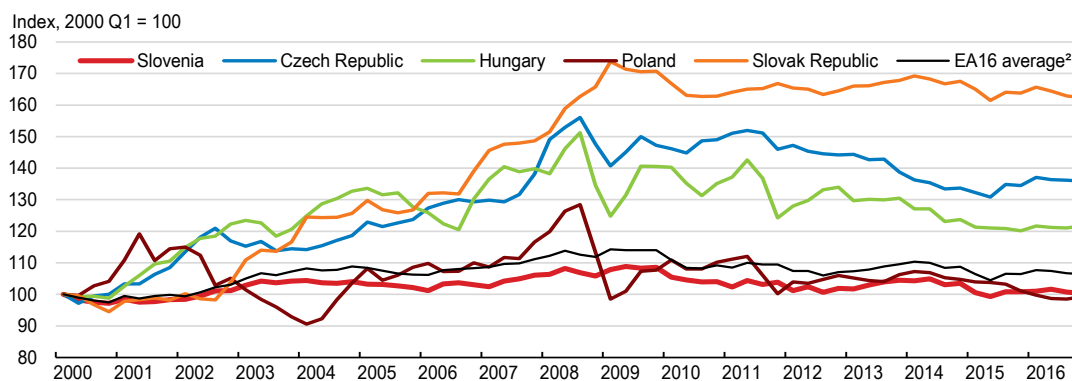
Firms have the ability to set incentive pay within collective bargaining structures, offering flexibility. Slovenia is the top ranked EU country for offering variable pay linked to individual performance and profit-sharing schemes (Eurofound, 2016b). Pay linked to group performance is also popular (offered by almost half of Slovenian private-sector firms). A relatively high 15% of wages takes the form of variable pay, with 5% linked to individual performance. Following an increase in the minimum wage by almost a

quarter in February 2010, 30% of firms increased variable rather than basic pay for workers who had previously been paid above the minimum wage to try to maintain wage relativities (Jemec and Vodopivec, 2016). Though there is some variability regarding which occupations receive larger bonuses, this is largely in proportion to annual earnings, limiting their role as a wage signal as to which occupations are in demand. In total, 82% of private-sector establishments offer some form of variable pay (compared to an EU average of 62%), with larger firms more likely to pay bonuses (Eurofound, 2016b).

The wage setting system has succeeded in keeping overall wage developments in line with productivity increases, safeguarding external competitiveness (Figure 25). The influence of bargaining on wages has decreased since the financial crisis, and there has been evidence of negative wage drift, with actual compensation growing more slowly than collectively agreed wages (Eurofound, 2014). This can be explained in part by collective agreements referring to basic wages, while premium payments such as overtime and bonuses are more likely to be cut in and after a recession. Combined with relatively fast productivity growth this has preserved external cost competitiveness despite depreciations in other CEECs.

**Figure 25. Slovenia has maintained cost competitiveness**

Cost competitiveness<sup>1</sup>, Rise = deterioration



1. Real effective exchange rates based on unit labour costs for the total economy.
2. Simple average.

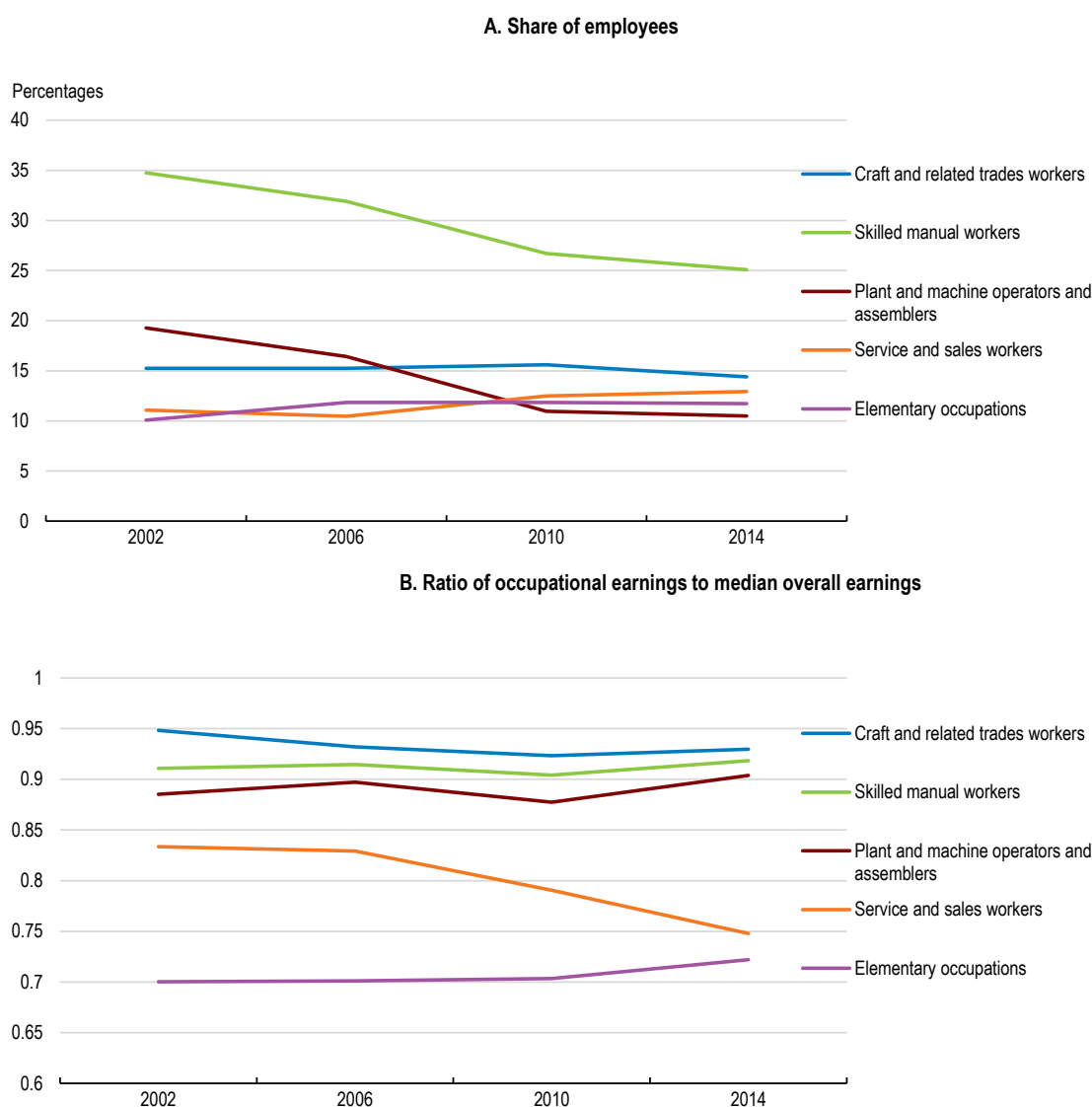
Source: OECD Economic Outlook 101 database.

The wage-setting regime has led to a compressed wage structure (Figure 23). It became even more compressed following the 2010 minimum wage increase, weakening wage signals and boosting the share of minimum wage recipients from 8 to 11% (Laporsek et al., 2015; Jemec and Vodopivec, 2016). There have been major changes in employment shares of lower paid jobs (with large falls in the share of plant and machine operators and skilled manual workers in employment), and associated divergent patterns of unemployment for those trained in these occupations. Despite this, relative wages have been stable except for higher paid occupations (Figure 26). Unemployment can signal which occupations are experiencing a surplus of workers, but it is a sub-optimal signal, as it is hard to distinguish longer-term trends from cyclical variations.

The bargaining regime therefore does not facilitate directing workers to where they are needed most. Compressed wages can reduce training incentives by decreasing the reward for training. Although there is a considerable wage premium for tertiary graduates over other workers, there is little variance in wages by field of study, so there is little wage incentive for students to select subjects in high demand. This wage compression amongst tertiary graduates contributes to an overall compressed wage structure. In addition, evidence from Italy shows that bargaining regimes similar to Slovenia's reduce the ability of firms to adjust salaries and conditions to attract suitable workers (Monti and Pellizzarini, 2016). A greater element of firm-level wage determination could enhance such wage signals. This could be achieved, for example,

through greater possibilities for local social partners to opt out of sectoral agreements, by extending opt-out duration and broadening the set of valid reasons for using them. Similar measures have recently been taken in Italy, Portugal, and Spain. In Italy tax incentives are being offered by the Italian government to promote productivity-enhancing firm-level bargaining, though this comes at a fiscal cost.

**Figure 26. Relative wages for the low paid have generally been fairly stable, despite changes in job shares**



Source: Eurostat database, Structure of earnings survey: hourly earnings.

As outlined in the previous *Survey*, the high minimum wage can potentially reduce employment prospects for the low skilled (OECD, 2015a). Slovenia should therefore continue to moderate minimum wage growth to gradually increase the gap between the minimum and median wage. Furthermore, older long-term unemployed may be particularly affected, as long spells of unemployment erode their productivity and human capital. This could be addressed by introducing entry wages that are below the minimum wage for the long-term unemployed, but which increase over time to capture on-the-job skills development, combined with a refundable earned income tax credit to prevent poverty and discouragement.

Decisions regarding working part-time are distorted by the generous system of mandatory tax-free meal and travel allowances, which are calculated per shift rather than per hour worked. This contributes to Slovenia having amongst the lowest rates of part-time employment (at 9.2% compared to the OECD average of 16.8%) (OECD, 2017c). Firms are legally obliged to pay for workers' (mostly tax-free) commuting costs. The amount paid is subject to collective agreement and accounts on average for approximately 10% of net wages and 15% for lower paid workers (OECD, 2016b). The amount is irrespective of the travel mode (though public-sector workers are allowed only the costs of public transport). Not surprisingly Slovenians spend the highest amount on personal transport in the European Union (with 16% of household expenditure going to personal transport compared to an EU-28 average of 13%) and mostly on cars as the spending on public transportation is less than half the EU-28 average. (Statistical Office of the Republic of Slovenia, 2017b). Indeed, providing incentives for longer commuting is harmful to the environment and congestion. In addition, they also further increase labour costs and narrow wage differentials. Replacing the tax incentive for meal and travel allowances with a fixed employment tax credit (of the same value as the average tax saving from meal and travel allowances resulting in a cost neutral change) could remove this distortion and benefit those living near their workplace.

A peculiarity of Slovenian wage setting is that firms are legally obliged to pay a premium based on a workers' entire work history, rather than agreeing tenure premiums through negotiations between workers (or their representatives) and firms. Although the precise amount of the premium is subject to collective agreement, it averages 0.5% per year, and results in older workers costing on average 15% more to hire than their younger counterparts (OECD, 2016c). This discourages hiring of those who change careers, who do not have job-specific work experience to justify the premium, and who are older but trying to get back into the labour force after, say, a period of unemployment. It can also reduce the incentives for workers to retrain to maintain and increase their income as pay increases are not dependent on increasing one's skills. The premium may lead to unrealistic reservation wages in the event of unemployment. Labour market inclusiveness could be enhanced by removing the legal requirement.

The government offers firms that hire older workers (+55 years) that have been unemployed for six months (+55 years) an exemption from paying social insurance contributions for up to 24 months. The government plans to replace this incentive with a 30% reduction in employers' social insurance contributions for all workers aged 60 years or over (and 50% for those with 40 years of social security contributions who are eligible for retirement) by the end of 2017. Such incentives place a fiscal burden on taxpayers, as reducing labour costs of older workers could instead be achieved by reducing mandatory seniority pay and related holiday entitlements.

### ***Directing workers with obsolete skills to high-demand occupations***

The Employment Service of Slovenia (ESS) collects data on occupations with shortages, which it relays to the education system to decide on numbers of occupational scholarships for vocational school students. However, it is questionable to what extent such data can predict future skills needs, and the data no longer covers all vacancies, limiting its usefulness (OECD, 2016b). The ESS offers a comprehensive set of services to employers compared to similar agencies in other OECD countries: for example, it helps in organising job fairs, assisting firms in drafting vacancy notices and pre-selecting suitable applicants.

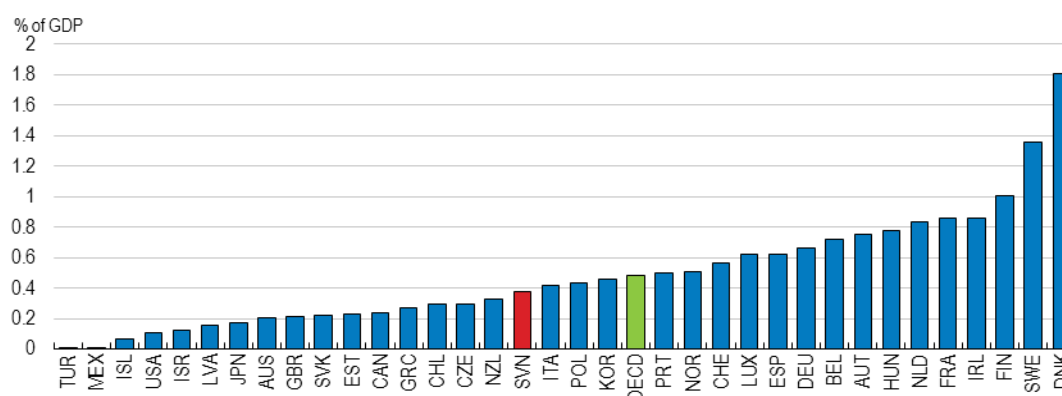
The ESS's match-making role is inhibited by the relatively high benefit replacement rate for the low skilled, reducing their search and training incentives, which is capped at 60% of the average wage but can be as high as 80% for the lower paid. A relatively long required contribution period means that many younger and prime-age workers are not entitled to unemployment benefits, and instead receive other social benefits, though in 2014 as many as half of unemployed did not receive any income support. Both the ESS and Centres for Social Work (CSW) pay benefits to the unemployed, with the ESS responsible for paying

Unemployment Insurance benefits (a third of newly registered and a fifth of all unemployed receive such benefits), and the CSW paying social assistance (which is means tested). Those in receipt of unemployment benefit need to interact only with the ESS, while those receiving social assistance must register with both the CSW and ESS (OECD, 2016b).

Generous unemployment benefits need not inhibit the reallocation of workers if strong active labour market policies (ALMPs) are in place. However, Slovenia spends less on ALMPs than most other OECD countries, and only about a third of ALMP spending was directed towards training in 2015 (Figure 27; OECD, 2016b). The ESS performs poorly in assisting those who require more help, such as the long-term unemployed, as it lacks the resources to perform in-depth counselling. Moreover, the numbers considered employable only with intensive support have continued to increase, while falling or stabilising for the directly employable and those with more minor barriers to employment (OECD, 2016b).

**Figure 27. Relatively little is spent on active labour market programmes**

Public expenditure on active labour market programmes, 2013 or latest data available



Source: The OECD Social Expenditure Database.

The formal rules for ensuring effective job search require that jobseekers accept jobs within three hours commuting time, or two hours for those with children under 15. In addition, after four months of unemployment they must accept jobs one level below their level of education. In reality, however, the ESS only infrequently assesses the job-search intensity of the unemployed (OECD, 2016b). The efficiency of the system is weakened by poor links between the ESS and the CSW. For example, those who receive social assistance may agree an action plan with the ESS, and a different action plan with the CSW, with no coordination between the two. Coordination could be improved by merging the activities of the ESS and CSW at the local level, as is currently being considered (OECD, 2016b).

Over 1.6% of the labour force people took part in some form of active labour market training in 2015, though some of the programmes are quite short in duration. On-the-job training (with a quarter of training participants) has been most successful in leading to employment, with 60% of participants in 2012 having a job within a year (OECD, 2016b). However, participation in some programmes (such as the Development and Training Programme, which lasts anywhere from three days to six months) declined sharply in 2015 due to the withdrawal of financing from the European Social Fund. Only 350 people in activation programmes participated in formal education (which lasts one to three years). The retraining conducted by local CSWs is focused on improving clients' social integration, rather than the needs of the labour market. The CSW deals with less immediately employable people and those in crisis situations, including those with difficult personal or social problems (including mental illness and drug addiction).

Though finding work for the easy to employ may have been efficient during a period of high unemployment by placing a maximum number of people in jobs with minimum resources and avoiding spells of long-term unemployment, tackling unemployment of more difficult to place workers now demands greater effort (OECD, 2016b). A ‘work-first’ approach is taken for more employable jobseekers, but other strategies, such as retraining, could be used for the less employable. However, a lack of resources limits the use of other strategies with client-to-staff caseloads too high for individualised counselling. It may also be necessary to alter the skill mix of front-line counsellors to include softer skills such as psychology (OECD, forthcoming). The Labour Market Regulations Act states that benefit recipients from vulnerable groups who have not yet participated in ALMPs should be prioritised, but this may result in employers losing confidence in the ESS’s ability to refer high-quality candidates. Nonetheless, older workers and those with low educational attainment continue to have far below-average rates of referral to ALMPs (OECD, 2016b).

There is no incentive for workers to register when they have received notice of termination of employment (workers can even claim payments retroactively), and job-search assistance during the notice period is unpopular with ESS staff due to excessive administration (OECD, 2016b). Those who have lost their jobs have 30 days to register with the ESS and claim unemployment benefit. Re-employment could be accelerated to the benefit of both the highly employable and those that are less immediately employable by the introduction of early activation.

### ***Reducing disincentives for older workers to remain in work***

Despite reforms, the social insurance system still offers pathways into early retirement, which also leads to a lack of incentives for workers to pursue life-long learning. The pension system has net replacement rates in the middle range for OECD countries (at 57% for men and 60% for women). However, the average effective retirement age is the OECD’s third lowest for women and in the bottom third of OECD countries for men (OECD, 2015b). Recent pension reforms will increase the retirement age for both men and women to 65 (from ages 63 and 61, respectively) by 2020. Moreover, early retirement will still be possible for those with more than 40 years of pension contributions, as in France.

Unemployment and disability insurance offer paths to early retirement. Those aged 50 and over can receive unemployment benefits for 19 months, rising to 25 months for those aged 55 and over (compared to 12 months for the under-50s). In addition, those over 57 do not have to requalify for unemployment benefit after a spell of unemployment and can also gain two additional years of pension contributions while unemployed (if they have under two years left to retirement) (OECD, 2016b). The requirement for those with a disability to undergo vocational rehabilitation also becomes less stringent with age. Those who have lost half their ability to work in their current occupation can receive a disability pension from the age of 55 (without any requirement for rehabilitation) and from the age of 50 for those who cannot work even part-time in their current occupation without rehabilitation. Also, those aged over 45 with the right to a benefit are not subject to mandatory medical checks. In 2015 the number of people receiving a disability pension was equivalent to 8.4% of the labour force (gradually declining from 9.4% in 2006), and the total number of unemployed partial disability recipients has been increasing for those aged 55-59. Ending the link between age and social insurance would remove a work disincentive, enhancing labour market inclusiveness.

As the pension age and length of working lives increases, manual workers may be unable to work efficiently past a certain age. Therefore, the definition of disability should be changed to acknowledge the possibility of changing occupation, and a programme of retraining should be provided before the worker becomes unproductive. Also, there has been an increase in the number of long-term unemployed receiving disability benefit in recent years (OECD, 2016b). The 2016 White Paper on pension reform recommends

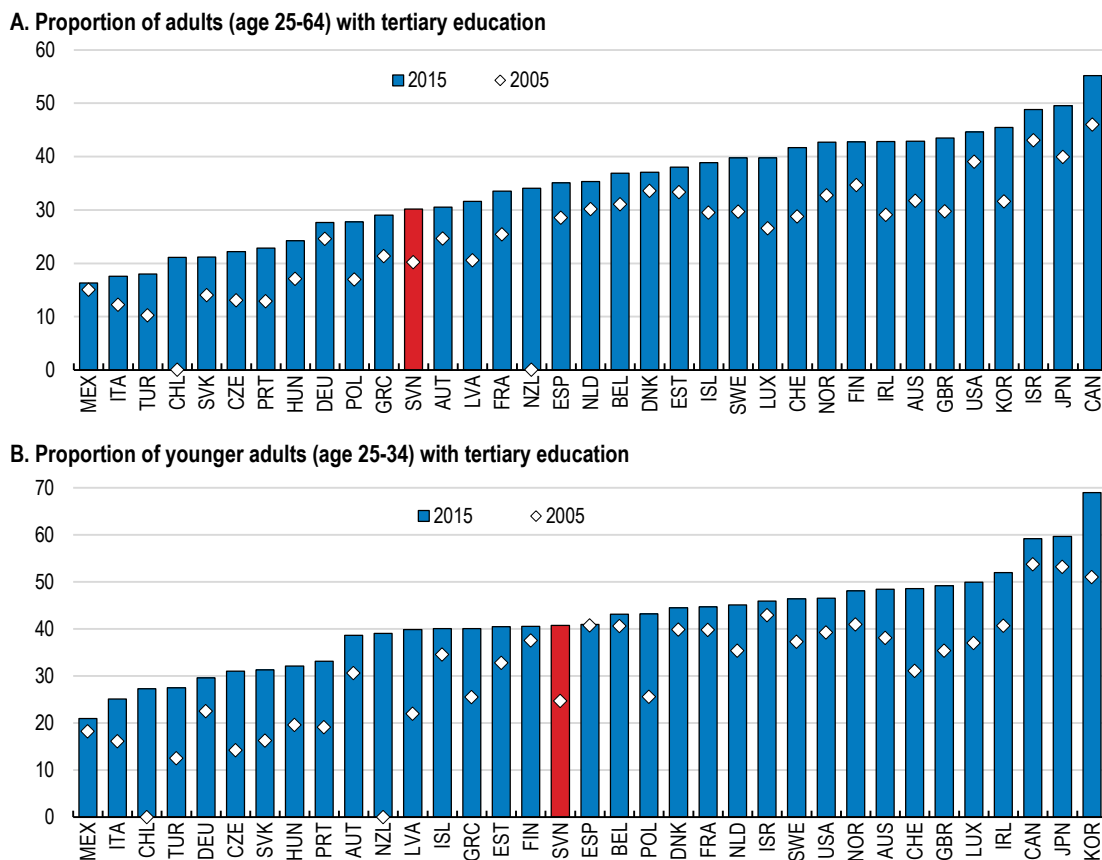
mandatory rehabilitation should be introduced for those receiving partial disability benefits. The costs of such retraining can be partly offset by the reduced need to pay disability pensions (OECD, 2016b).

Even well-educated older workers retire relatively early, removing both their tertiary skills and work experience from the market. In part, this is because, prior to the 2013 pension reform, those who attended tertiary education needed fewer years of contributions to be eligible for retirement (OECD, 2016b). The result is that Slovenia is an outlier in terms of its retention rate of older workers. Only 18% of those aged 55-59 who were employed in 2009 continued to be employed five years later (the lowest level in the OECD, which averages 44%), and fully a third of people retiring do so via unemployment.

For workers there is little to be gained by working past the age of 60. Although there is a partial retirement scheme, whereby those who have reached retirement age can work part-time and also claim part of their pension, in 2015 this was taken up by only 800 people (or 0.1% of all pensioners). The actuarial compensation for delaying retirement is far from fair: every year worked beyond 60 leads to a 4% cut in net pension wealth (OECD, 2016b). One possibility for a simpler and fairer system would be to allow those who decide to work past their retirement age to claim a full pension while working. This would have minimal deadweight losses due to the low numbers who work past retirement. The government would also continue to gain tax revenue from their time working past retirement.

### **Developing and attracting high skilled workers**

Slovenia's tertiary education has expanded considerably, and its graduation rates now exceed the OECD average (OECD, 2016c). Tertiary attainment for those aged 25-34 has reached 41%, almost at the OECD average, up from 25% in 2005 (Figure 28). Such increases are impressive, but it partly reflects a shrinking youth population (while the number of university places has declined more gradually) and a move to three-year from five-year degree programmes (as part of reforms aimed at EU harmonisation of tertiary education under the so-called Bologna process) (European Commission, 2010).

**Figure 28. Slovenia outperforms other CEECs for the share of tertiary graduates**

Source: OECD (2016), *Education at a Glance 2016*, Table A1.3.

Despite a high level of educational attainment, tertiary graduates lack important skills. Slovenian employers are amongst the least likely in the European Union to consider that tertiary graduates have the skills required to work in their company (Eurobarometer, 2010). Moreover, the OECD's PIAAC study of adult literacy shows that Slovenian adults, including graduates, are among the OECD's bottom performers in terms of literacy and are merely average for numeracy (see Figure 19). Also of concern, given technological trends, is that although graduates are the most likely in the OECD to use the Internet, email and word processors daily (reflecting the skills needed by employers), they are merely average in their ability to solve problems in a technology-rich environment (see Figure 20). As skills gaps relative to other OECD countries tend to be smaller for younger Slovenians, there is also an apparent problem in terms of maintenance and upgrading of existing skills.

### *Linking courses with employment prospects*

A reason for Slovenia's underperformance may be that less is spent on tertiary education than the OECD average, but also that up to 2016 university funding was not linked to employment prospects (OECD, 2016c). Institutions were paid a lump sum per full-time undergraduate student enrolled, ensuring institutions' responsiveness to students' demands, although those demands do not always correspond to labour-market opportunities. Input-based funding also creates incentives for universities to enrol as many students as possible and to ensure they continue in tertiary education, potentially eroding quality. The introduction of the 2016 Higher Education Act has led to a significant fall in the proportion of funding

based on the number of students. At end-2016, the funding formula was changed so 75% comes in the form of a fixed amount per institution, and the rest is related to student enrolment and output indicators, such as scientific output, graduates' employment prospects and collaboration with industry. Increasing the share of funding dependent on graduates' labour market performance would help to better align the supply and quality of education with the needs of society. Publishing such labour market scores would help students identify the best institutions in this respect.

Universities' responsiveness to the future job opportunities of their students is also influenced by links with industry. There are good relations between innovative Slovenian firms and tertiary and public research institutions (OECD, 2015a). Some firms also provide scholarships to tertiary students, which can facilitate links and communication between tertiary institutions and firms (Box 2). However, these relationships do not translate into firms having an institutional role in influencing skill formation in the tertiary sector. In contrast to upper-secondary level, such ties exist only on an *ad hoc* basis, and, in contrast to higher vocational colleges, there is no requirement to have employers represented on universities' management boards (Eurydice, 2016). Action has been taken to improve links with the labour market as a number of new programmes have been launched, such as the 'Creative Path to Practical Knowledge' (*Pokreativni poti do praktičnega znanja*), whereby students take part in small research projects in the corporate sector to gain workplace competencies (Slovenian Human Resources Development Fund, 2015). Over EUR 7.9 million was invested, with 3 400 students participating from 2013 to 2015, though it is too early to evaluate its effectiveness. A next step would be to combine such programmes with student work incentives such as by promoting weekend and summer work with such companies.

#### Box 2. Support for tertiary students

The Slovenian government offers a range of supports that make it attractive to pursue tertiary education. Tuition is free for full-time students, though annual fees can be thousands of euros for employed part-time students. Acceptance as a full-time student depends on one's Matura results, though as the number of full-time places has been stable while the youth population has fallen, this has become less competitive, allowing a decline in the number of part-time students.

Although there is no system of student loans, various scholarships are offered. Students from low-income families can receive a grant ranging from 840 to 4 320 euros a year (received by 20% of students), with the maximum roughly equal to half the minimum wage, and smaller scholarships are also awarded based on merit (received by 4% of students) (European Commission/EACEA/Eurydice, 2016). Full-time and unemployed part-time students are offered subsidised food and accommodation (in student dormitories), health insurance and travel allowances (European Commission, 2010). Scholarship income up to the level of the national minimum wage is tax exempt (OECD 2017d).

Corporate scholarships also exist whereby firms sponsor a student's education, and in return the student commits to working at the firm (usually for the same duration as they receive support). The student may work at the firm during the summer months and prepare coursework on a topic of relevance to the firm (Slovenian Human Resources Development and Scholarship Fund, 2015). An average of almost 1 000 such scholarships are offered each year (compared to a total student population of almost 80 000). However, not all scholarships are taken up, suggesting stronger wage signals are also needed to attract students into such occupations.

Related to corporate scholarships are 'Regional Scholarship Schemes' (which are also available at upper secondary level) which aim to retain young people in regions affected by outward migration. Students typically receive a scholarship of several hundred euros (which is funded 50% by employers and the remainder by the European Social Fund and the Ministry of Labour) and students are required to work for the employer during the summer holidays.

Despite the adoption of the 'Strategy for the Internationalisation of Slovenian Higher Education 2016-2020', universities' ability to respond to changing technologies and new discoveries is limited by their lack of internationalisation. This has been hindered by resistance from Slovenian academics, particularly with regard to teaching in foreign languages. While the vast majority of academics are in favour of publishing in international journals and using foreign literature, only roughly half are in favour of

joint-degree programmes to attract foreign students (Flander and Klemenčič, 2014). The lack of internationalisation has led to Slovenia lagging behind other OECD countries in attracting foreign students (OECD, 2016c). Also, although almost 70% of academics are in favour of attracting foreign scholars to visit their home institution, only half are in favour of offering courses in foreign languages (teaching in foreign languages is not permitted unless the course is also offered in Slovenian) (Flander and Klemenčič, 2014). This restriction effectively limits the hiring of academics to Slovenian speakers. To ensure that students are educated with the latest from the global knowledge frontier and that investors with the latest technology have access to a sufficiently skilled labour force, tertiary institutions should allow foreign academics to teach in foreign languages. An effort should also be made to make it easier for Slovenian academics working abroad to return, as they may lack the network of contacts in Slovenia needed to find a job.

### ***Work experience can develop students' skills***

Slovenia has a system of student work that has the potential to help students develop both generic and job-specific skills. Student work is popular with employers, as there is greater flexibility in terms of dismissal (Clauwaert et al., 2016; European Commission, 2016a). Also, as students do not receive (shift-based) meal or travel allowances, student work addresses the demand for flexible part-time workers. In the past strong incentives for student work have included exemptions from employee and employer social security contributions, regulation and taxation. As a result, 87% of tertiary graduates gained some work experience during their studies (Statistical Office of the Republic of Slovenia, 2017c). However, these advantages have been pared back in recent years: the fee employers pay to student work agencies increased from 14% to 25% in June 2012, and employers have been liable for full social insurance contributions since February 2015 (OECD, 2016b; Clauwaert et al., 2016). There is mixed evidence as to how effective this has been in mitigating this labour market duality, as declines in the temporary employment share of total labour may be because such flexible workers were laid off during and following the recession or else due to labour market reforms (IMAD, 2016; Vodopivec et al., 2016; European Commission, 2016a).

Of the roughly half of students that work while studying (European Commission, 2015), only a third of these report working in a job closely related to their field of study (European Commission, 2015; Hauschildt et al., 2016). Though part-time employment in areas unrelated to a student's course of study is likely to be beneficial for developing inter-personal and general work skills, this can be pursued outside of a student work scheme. Indeed, student work can crowd out low-skilled workers from low-skill jobs and lead to labour market duality, and there is little to be gained in giving students a hiring advantage over non-student lower skilled workers. As Slovenia is currently phasing out the special student work regime, this should be combined with measures to remove obstacles to flexible part-time employment (such as meal and travel allowances, discussed above).

### ***Aligning students' incentives with employment prospects***

There are strong incentives to pursue tertiary education, including free tuition and scholarships (Box 2). However, part-time students and those older than 26 are generally excluded from financial support (though full-time students receive free tuition regardless of age), reducing life-long-learning incentives for employees who wish to upgrade their skills (European Commission/EACEA/Eurydice, 2016). In large part due to such low private costs, the pre-tax pay premium required for an individual to recoup the costs of their tertiary education over their remaining years in the workforce is the second lowest in the OECD (at 9% compared to an unweighted OECD average of 15%). The social rate of return on education is high as, due to the high tertiary wage premium the discounted future taxes collected by the government are on average roughly 60% greater than the costs of providing education, the sixth largest gain in the OECD (Figure 21 above; OECD, 2017d).

The generosity of education supports, which are not linked to a student's progress, means that there are strong incentives to pursue tertiary education for its own sake, not only for future expected returns. In contrast, in other countries the incentives to pursue tertiary education are more closely aligned with market signals such as wage premia (OECD, 2017d). Generous support combined with high youth unemployment due to the weak economy has led to 57% of Slovenian 20 year-olds being enrolled in tertiary education, the third highest in the OECD, and to one of the lowest completion rates, with an estimated 47% of students completing their course (OECD, 2016c). Despite the available support, it is questionable whether the poorest get the support they need: only 16% of those with native born parents without upper secondary education complete tertiary education, compared to an OECD average of 23% (OECD, 2016c).

Restricting education support to those aged under 26 means that only 6% of new entrants to tertiary education are over 24, compared to the OECD average of 18%. From 2005 to 2014 enrolment rates for 30-64s actually halved, at a time when they were increasing on average in the OECD. While full-time undergraduate education is over-subscribed (and rationed according to a student's Matura results; see Box 2 above), part-time courses - attractive for employees - are undersubscribed. This can be explained by the fees (in the range of thousands of euros) that part-time students must pay. Instead, raising the age-limit at which support is withdrawn would allow young Slovenians to delay pursuing tertiary education until they are more certain of which course they wish to pursue and facilitate upgrading of occupational qualifications later in life.

Access to tertiary education would be improved by rebalancing the system of support. The equalisation of tuition fees for full-time and part-time courses would allow the reduction of fees for those who are in employment and wish to pursue part-time tertiary studies. Increased provision of needs-based scholarships could be used to help maintain equitable access to education. Tuition fees would also incentivise students to complete their studies on time and to give greater consideration to future career prospects. A student loan scheme (with income-contingent repayment) should also be introduced to help students cover the new tuition fees and the costs of living away from home.

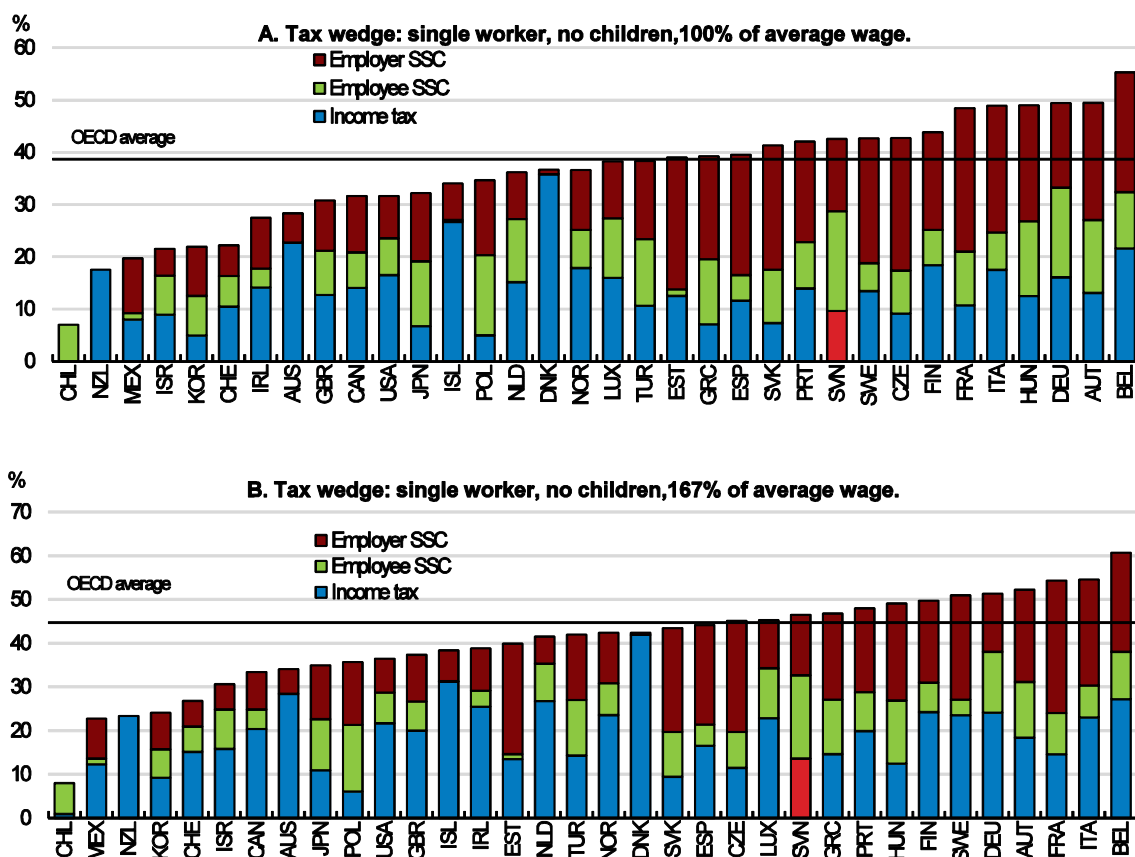
### ***Retaining high-skilled workers***

Proximity to Italy and Austria makes international commuting an option for Slovenian workers, while Slovenia receives 3 000 daily international commuters (0.4% of total employment), half of whom come from Croatia (Statistical Office of the Republic of Slovenia, 2017d). Slovenia has a relatively large share of foreign born residents (16.5% of the population compared with an OECD average of 12.6%) in part due to previous migration waves resulting from the breakup of the Yugoslavia (OECD, 2017e). However, such migration waves were not linked to the skill needs of Slovenia. In 2015 more tertiary educated people left Slovenia than arrived, with emigrants (mainly Slovenian citizens) more likely to have a tertiary education than immigrants (who are mainly foreign citizens) (Statistical Office of the Republic of Slovenia, 2016). In some important occupations, such as doctors, the emigration is to a large extent offset by immigration as Slovenia hosts a greater share of foreign-trained doctors (14% of all doctors) than France or Germany. However, almost 80% of these doctors come from the former Yugoslavia, suggesting that Slovenian's attractiveness to high skilled workers is due to linguistic similarities, cultural familiarity, and difficulties such migrants have in accessing the EU labour market (OECD, 2017f).

To the extent that migration is circular (whereby Slovenians migrate and gain new skills, before returning) it can be beneficial. However, despite migration being largely balanced in 2015 (with net inward migration of only 500 people), approximately 8 700 Slovenian citizens emigrated with only 2 800 returning (OECD, 2017e). Return may be deterred by the inflexibility of hiring practices in Slovenia, which favour those who remain in the internal labour market, rather than gain experience abroad.

Slovenia has high personal tax rates which may hamper the possibility to attract and retain high skilled workers. The employee social security rate (22.1%) is second highest in the OECD (after the Netherlands) and the top marginal tax rate (61.1%) is also the second highest (after Portugal), with employers' social insurance lying in the middle range of OECD countries (OECD, 2016e). Although the size of the tax wedge depends on family type and income level, compared to other countries it is burdensome for mobile childless single workers. The wedge is higher in western neighbours (Austria and Italy) and Germany (a major destination for Slovenian migrants) although the negative effect is offset by higher wages (Figure 29).

Figure 29. The tax wedge for single workers is large (2016)



Source: OECD, Taxing wages database.

A progressive tax system can reduce the ability of investors to attract and retain highly skilled internationally mobile workers. However, how the government distributes the burden of taxation between average workers and the high-skilled influences their relative willingness to remain in Slovenia. In 2016 it introduced a tax-neutral policy package that cut personal tax rates (from 41 to 39% on income between 48 400 and 70 907 euros, while a new 34% tax bracket for incomes between 20 400 and 48 000 was introduced, though the top marginal rate remained unchanged at 50%) and increased the relatively low corporation tax rate (from 17 to 19%). Although the reduction in personal tax is welcome, further measures should be taken to reduce the top marginal tax rate (funded by increases in property, green and consumption taxes, which are less inimical to growth; Johansson et al., 2008).

### **Main recommendations for upskilling to encourage investment**

#### **Helping workers avail themselves of employment opportunities**

##### ***Key recommendations***

- Improve general skills of vocational students through use of problem-based learning, combined with retraining of teachers.
- Raise the work-experience content of technical programmes.
- Increase training to help long-term unemployed to re-enter the labour market, including through a change in career.

##### ***Other recommendations***

- Conduct an audit to investigate the advantages of four-year technical programmes rather than general education programmes.
- Ensure VET schools intensify links with foreign firms, particularly those located in FDI source countries.
- Extend the permitted duration of opt-outs from sectoral agreements for local social partners, and broaden the set of valid reasons for using them.
- Replace tax benefit for travel and meal allowances with a universal tax credit.

#### **Promote longer working lives and life-long learning**

##### ***Key recommendations***

- Distribute adult training vouchers or provide tax credits to increase workers' training opportunities.
- Eliminate the legal requirement that wages increase automatically with age.
- Harmonise the maximum duration of unemployment benefit across age groups.

##### ***Other recommendations***

- Introduce rehabilitation requirements for the disabled that are independent of age.

#### **Develop and retain highly educated workers**

##### ***Key recommendations***

- Link university funding to students' labour market outcomes.
- Equalise tuition fees for full and part-time students on a per course basis, coupled with grants and loans for those from poor families.

##### ***Other recommendations***

- Remove the restriction that tertiary-level courses taught in a foreign language must also be taught in Slovenian.
- Reduce the top marginal personal income tax rate.
- Raise the age at which financial support for tertiary education is withdrawn.

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