**Slovenia: Mismatch priority occupations**

10/2016  European Skills Index, People and Skills, Matching Skills and Jobs, Future Jobs, Labour Market Context, Slovenia, Mismatch priority occupations in countries

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**Summary**

ICT professionals belong to high shortage occupations for Slovenia.

Looking at past, current and future trends (3-4 years), a number of occupations have been identified as mismatch priority occupations for Slovenia, i.e. they are either in shortage or surplus. **Shortage occupation**: an occupation that is in short supply of workers, and for which the employers typically face difficulties finding a suitable candidate. **Surplus occupation**: an occupation for which there are plenty of suitable workers available but low demand. The employers have no problems filling such posts.

The list below is based on an assessment of the labour market of Slovenia. The occupations presented are not given any rank. All of them present high mismatch.
The demand for ICT professionals in Slovenia has been increasing. This can be related to the fact that the ICT sector in Slovenia has been less affected by the world economic crisis, but also to sectoral developments e.g. the number of enterprises in the ICT sector in Slovenia in the period 2005-2013 increased by almost 120%, the number of manufacturing ICT companies by 16%, and the service ICT sector by almost 130%. While there were approx. 29 thousand ICT professionals in 2005, the number...
had risen to over 41 thousand in 2015.\(^6\) For 2016, employers expect that information and communication activities will be amongst the fastest growing (+ 1.3% employees).\(^5\) On the other hand, the American giant HP closed the branch in Slovenia in 2015, which meant that a number of domestic computer experts lost their job.\(^6\) Nevertheless, more than half of enterprises in Slovenia had problems to fill vacant positions with ICT professionals.\(^7\) When finding staff, information and communications companies place little attention on certificates and formal education, and a lot more on experience, references, recommendations and specific knowledge.\(^8\) Companies also look for new recruits at educational institutions.\(^9\) Although the economic crisis slightly softened the demand for ICT professionals, organisations still face the problem of obtaining them.\(^10\) Due to the problems finding ICT professionals, some companies (e.g. Krka) employ human resources from abroad, mainly from Croatia.\(^11\) On the other hand, many ICT professionals find work abroad. In Austria and Germany, wages are almost twice as high as in Slovenia, which causes a substantial outflow of workers from the Styrian area.\(^12\) Switzerland is also a desirable destination.\(^13\)

A number of initiatives exist aiming to combat shortages. A new study program Multimedia, which brings together multiple disciplines and includes knowledge of telecommunications, computing, multimedia production and interactive user applications, was launched in 2014.\(^14\) In January 2016 the Ministry of education, science and sport developed the new strategy for ICT in education: “Strategic guidelines for continuous implementation of ICT in the Slovenian educational institutions until 2020”. The document involves all levels of education. The strategic guidelines were harmonised with a document “Digital Slovenia” that the Government of the Republic of Slovenia adopted in March 2016.\(^15\)

The Ministry of education, science and sport also ordered the project CODE Q - Learning programming with automatically generated tips, which is open to all and is useful for self-learning or as a supplement to regular courses.\(^16\) There was also a pilot initiative from the Centre for Knowledge Promotion aimed to bridge individual capacities and skills and labour market needs. Among the training courses offered were computer courses.\(^17\) One of the solutions for the ICT sector is greater investment in the education and training of existing and potential/new ICT professionals.\(^18\) When it comes to the ICT industry in Slovenia, women are still in the background as they are less interested to work there.\(^19\) In 2014, less than 30% of ICT professionals were women.\(^20\)

**Health professionals**\(^21\)

In 2012, there were more than five thousand doctors employed in Slovenia, which was 2% more than in 2011.\(^22\) However, at the same time unemployment and a shortage of doctors is observed.\(^23\) For example, the number of registered unemployed doctors almost doubled from 2011 to 2013 (from 200 to 397); chronic shortages of anaesthetists, haematologists and pathologists were identified.\(^24\) The reason for lack of personnel in the Slovenian health system is the unsystematic human resource policy in recent decades, as well as the uncontrolled importation of foreign doctors\(^25\) e.g. due to the lack of Slovenian doctors, Slovenia imported 958 doctors and dentists in the last twelve years. To deal with current shortages, Slovenia would need around 740 family doctors\(^26\), with some regions particularly affected by these shortages - Prekmurje, Carinthia and Posavje region.\(^27\) Some doctors (e.g. paediatricians) avoid tenure in the most affected regions, as they would have to treat more patients
Every year around 200 doctors ask for the certificate of good repute that they need to work abroad. There is high demand for healthcare staff in Switzerland, Germany, Austria and also Qatar. The salaries in those countries are about two times higher than in Slovenia (or even higher in Switzerland), and other advantages are perceived, such as more time for patients.

A decade ago, the state decided on three measures: to increase enrolment at the Faculty of Medicine in Ljubljana, to establish a new Faculty of Medicine in Maribor, and to adopt the emergency act (in 2011) to import foreign doctors. In the context of the preparation of the strategic document Resolution on National Health Care Plan 2015-2025, the Ministry of Health prepared a systemic analysis of the need for doctors in Slovenia and a training plan for additional healthcare personnel. They announced changes in the education of medical specialists, additional funding for those medical personnel who are most lacking, and measures to make it more attractive to specialise in these fields. In 2013, the Slovenian Medical Association and Medical Chamber of Slovenia recommended to retire 300 doctors (who were eligible to take a pension) and employ nearly 200 young doctors without jobs. They warned that unemployment among young doctors should be tackled immediately, otherwise they will go abroad.

Science and engineering professionals

The reputation of the engineering profession began to decline in Slovenia after independence, when young people began to go to other occupations (the belief that Slovenia would not need technological development started to prevail). High school students in Slovenia decide less frequently to study of science and technology, and especially girls do not study engineering. With 1.3 thousand graduates in natural sciences, mathematics and engineering per 100 thousand students employed, Slovenia is below the average of OECD. Due to the lack of interest, the Faculty of Electrical Engineering in Ljubljana halved enrolment places from 300 to 150. It also reduced the number of places due to stricter selection, with the aim to attract the best students who really want to study. The University of Maribor also reduced the number of places at the Faculty of Energy Technology, Faculty of Civil Engineering, Faculty of Natural Sciences and Mathematics and Faculty of Mechanical Engineering. There are rather few students in natural sciences in higher education. In 2014 Slovenian employers predicted 168 vacancies for mechanical engineers. Despite high unemployment in Slovenia, one third of employers have difficulties in finding appropriate staff. Some companies (e.g. Pipistrel) operate with composite material, which is not “taught” at the Faculty of Mechanical Engineering. Moreover, companies also have problems recruiting electrical engineers, who are on the other hand easily employable abroad. Skills shortages also relate to the fact that many engineers emigrate. In Italy and Austria in particular there is demand for mechanical engineers. Furthermore, demand in Italy is higher for electro-mechanics, electrical technicians and electrical engineers.

The project “We will be Engineers” is an answer to the needs of the economy that is clearly lacking engineers. The project initiators and participating companies are attending high schools and to try to generate interest in further education in engineering and science. The honorary patron of the project is also President Borut Pahor. Years ago one of the proposed solutions to promote technical engineering was to re-introduce more technology lessons in schools. Other solutions might include continuous professional development (CPD) for engineers, given the fact that every year 20% of
engineering knowledge becomes obsolete. In Slovenia, the idea, policy and potential of CPD have not yet become part of everyday life. Introducing a methodical approach to managing activities of CPD in enterprises would add value both at the corporate level in the companies and at the national level. [47]

**Other possible shortage occupations**

Other occupations with shortages include health associate professionals; cooks; waiters, butchers; toolmakers; bricklayers; welders; machine technicians; locksmiths; metal workers. It is expected that in the future, experts in the areas of new (green) technologies; healthcare experts; pharmaceuticals; accountants; and generally experts who will provide a variety of consulting services will also have better employment opportunities. Financial analysts, financial, tax and insurance advisors and agents; market researchers; biochemists and biomedical experts; event organizers; logistics and transport experts will also be much in demand in the coming years. In addition, some companies are already launching jobs that indicate the emergence of new occupations for which there is currently no educational pathway, e.g. executive salesperson; key clients’ manager; investment banker; virtual currency expert; data miner. After more than 20 years, there is again a possibility to educate for a metallurgical technician, although the occupation was recently regarded as a surplus. Technicians will have good opportunities for employment due to mass retirement and because the industry has grown in recent years. In 2013, the Association of Free Trade Unions of Slovenia analysed the situation of young people in the labour market. They found that vocational education in Slovenia had almost ceased. That is why the Slovenian Government supports vocational education and training and practical skills that have been neglected too long in Slovenia. The Government of Slovenia prepared a new industrial policy in 2013 which might help more skills orientation in the near future with more involvement of employers in VET development and active labour market policy planning for better productivity and competitiveness. Furthermore, the Government adopted the Policy of scholarships (2015–2019). In particular, attention is on the monthly scholarship of 100 euros for jobs in demand (e.g. stonemason, baker, butcher, carpenter, mason, forester, electrician, chimney sweep). With scholarships, Slovenia will try to endorse the enrolment of young people in educational programmes of upper secondary vocational and upper secondary technical education to qualify for occupations in demand. Currently, more students attend gymnasiums than vocational secondary schools. Supported by the Ministry, the programs "Training of candidates for graduation at the workplace and subsidy for employment of graduates/Candidate for graduation - activate and employ yourself!" (from 2010) helped 149 participants to integrate into the labour market and get their first full-time employment for 6 months.

**Surplus Occupations**

The economic crisis and the increasing number of redundancies greatly altered the balance in the labour market of Slovenia. The crisis led to a large number of unemployed hairdressers and construction workers (e.g. while in 2007 there was a shortage of occupations in construction industry, in 2010 the value of construction works decreased by approx. 17%). Employment Service Data shows that the number of registered unemployed in construction sector from 2011 to 2013 increased by more than one thousand. However, employment in the construction sector increased again in 2015, but still remains in
surplus. Several surpluses have been identified, including building and related trades workers; excluding electricians; science and engineering associate professionals; metal, machinery and related trades workers; handicraft and printing workers; drivers and mobile plant operators; business and administration associate professionals; stationary plant and machine operators; personal service workers; and general and keyboard clerks.

According to the Employment Service of Slovenia, there are currently surpluses of sociologists, anthropologists, philosophers, political scientists, journalists and translators. For several years, Slovenian youth mostly decided to study in social sciences and humanities fields which had the image of “superiority”. That is why social sciences personnel are hard to employ nowadays. On the other hand, social scientists have a wider range of employment opportunities than natural scientists. Among the unemployed, there are also many economists, although employers predicted around 150 new jobs for them in 2014. Due to fewer pupils and due to public sector cuts, the demand for teachers fell in recent years. According to the Employment Service of Slovenia, there is currently a surplus of teachers in elementary schools and there were less than 250 vacancies for job seekers with educational qualifications in summer 2015. This is far too few for the number of teachers who are in the register of unemployed. However, in 2014 Slovenian employers predicted almost 200 vacancies for educators and early childhood educators. Lower enrolment of pupils also leads to redundancies of teachers in some Slovenian schools.

Turning to measures aiming to reduce such surpluses, the government of Slovenia adopted the Partial Reimbursement of Payment Compensation Act in 2009. The Act proposed reimbursement of the cost of additional training or retraining of workers. The Government adopted in 2016 a plan for the implementation of active employment policy measures for 2016 and 2017. The first measure addresses training and education. For example, the Ministry of Labour, Family, Social Affairs and Equal Opportunities supports programs of informal education and training for professions in demand designed according to employers’ actual needs. The second measure targets promoting employment with various subsidies for employers. In the programme “The first challenge 2015”, the employer can receive 7.250 € to employ a young (aged 15 to 29) unemployed person in eastern Slovenia. Employment must be maintained for at least 15 months, including 3-month probation. The imbalance in the labour market - surplus of social scientists - can be solved in two ways. Slovenia can:

1. further limit enrolment in the field of social sciences (e.g. Higher education institutions were invited to reduce available places in the fields of humanities and social sciences by 20% for the academic year 2012/13) or,
2. along the lines of other foreign countries, reskill current graduates into profiles or professions which are in demand in the labour market. Thus, several former social scientists can be found among future accountants. A possible solution could therefore be retraining some social scientists. In 2016, the Ministry of Education, Science and Sport published a call for tenders, named “First job in the field of education”, the aim of which is to recruit 300 teachers – beginners, up to the age of 29. Nevertheless, young teachers who already had experience in education or were over 29, labelled the
move of the ministry as a wrong one. [80]

**Note on the methodology**

The list has been compiled by Cedefop in the first half of 2016 combining quantitative and qualitative methods. In particular, a list of mismatch occupations was formulated following quantitative analysis of labour market indicators. Country experts were then asked to build on and scrutinise this list. Their expert assessment and knowledge of the country’s labour market has provided rich insights about the reasons behind the skills shortages or surpluses at occupational level. These are also accompanied by measures and policies that aim to tackle such mismatches. Country’s stakeholders have also been included in validating the final list of occupations.

Find here more data and information about Slovenia.

**References**


mrezi.html [accessed 2.5.2016].


[21] Medical doctors (ISCO 08: 221); Other health professionals (ISCO 08: 226).


Engineering professionals (excluding electrotechnology) (ISCO 08: 214); Electrotechnology engineers (ISCO 08: 215).


Other health associate professionals (ISCO 08: 325).


As above.


[66] Building and related trades workers, excluding electricians (ISCO 08: 71).

[67] Science and engineering associate professionals (ISCO 08: 31).


[69] Handicraft and printing workers (ISCO 08: 73).

[70] Drivers and mobile plant operators (ISCO 08: 83).

[71] Business and administration associate professionals (ISCO 08: 33).

[72] Stationary plant and machine operators (ISCO 08: 81).

[73] Other personal services workers (ISCO 08: 516).

[74] General office clerks (ISCO 08: 411); Secretaries (general) (ISCO 08: 412); Keyboard operators (ISCO 08: 413).

[75] Legal, social and cultural professionals (ISCO 26)


