Denmark: Mismatch priority occupations

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Summary

Teachers belong to high shortage occupations for Denmark.

Looking at past, current and future trends (3-4 years), a number of occupations have been identified as mismatch priority occupations for Denmark, 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 Denmark. The occupations presented are not given any rank. All of them present high mismatch.

### Shortage occupations

- Teachers
- Medical doctors and nursing and midwifery professionals
- Financial service professions
- ICT professionals

### Surplus occupations

- Mining and energy supply
- Culture and recreation

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**Shortage Occupations**

**Teachers** [1]

According to the ‘Positive List’ [2], a list of shortage occupations by the Agency for Labour Retention and International Recruitment [3], the following professions in the education sector are currently experiencing shortages: assistant professors (social science), associate professors (social science; natural science and technology), remedial teachers, social educators/ workers, continuation school teachers [4], primary, lower secondary and secondary school teachers, etc. [5] In all education sectors a substantial share of teachers is not sufficiently qualified. A poll among school leaders organised by KL (Local Government) [6] revealed that 69% of school leaders face some challenges in recruiting staff for community schools. [7] Shortages are especially recorded for high school teachers in natural sciences. [8] Also, the Ministry of Higher Education and Science suggests that a substantial number of the educated
teachers (around 7.5 thousand, which accounts for approx. 10% of the employed teachers) do not work as teachers or in the public sector at all.

In 2013 the government initiated a reform programme for primary schools, which came into force in 2014. One of its core elements is the competence development of teachers, educators and management leaders. The objective is that by 2020 all teachers have to be fully qualified in teaching their subject. In relation to this, prior to 2020 all VET teachers must acquire occupational-pedagogical skills corresponding to 10 ECTS points, e.g. based on a pedagogical diploma programme. The evaluation of a teacher’s need for skills improvement will be based on the school’s existing continuing education efforts and on mapping of the present pedagogical and vocational competency level of teachers. Skills improvement of VET teachers is a necessary requirement for improving the overall quality of VET programmes. In this context, a reform of the Danish vocational education and training programmes was initiated in August 2015.

Medical doctors and nursing and midwifery professionals

Shortages in the healthcare sector have been identified for: nursing and midwifery professionals, medical doctors, dentists, physicists, medical consultants/specialists, anaesthetic nurses, bio-analysts, chiropractors, physiotherapists, radiographers, opticians, etc. Demographic trends (aging of population) and the rise in the number of elderly patients with multiple long-term conditions are generating pressure on general practitioners (GPs) to coordinate patient care safely and effectively, making best use of resources and avoiding unnecessary hospitalisation. The total number of employees (FTE) in public hospitals in Denmark was a bit nearly 103 thousand in 2011. For 2025, the need for hospital personnel is expected to increase by between 11 and 17 thousand. The increase in hospital demand will require additional nursing staff and physicians. A shortage of doctors is expected in the long term. According to the Doctor forecast, for example, the supply of medical doctors is expected to increase by approx. seven thousand specialists (49%) as of 2040, while the total number of doctors is expected to increase by approx. 14 thousand (59%). In Denmark a shortage of general health practitioners and doctors in some areas is reported. Specifically, the recruitment of doctors is getting increasingly difficult in rural areas as practising specialists are concentrated in the capital and other urban areas.

Measures that can be undertaken to increase the attractiveness of working in hospitals and outpatient practices include: reduction of workload, more flexibility in working times, ways to improve work-life balance. To increase the potential workforce in nursing and care, more men have to be encouraged to work in these traditional female occupations. In general, measures have to be undertaken to reduce the number of health professionals working outside the healthcare sector or who are not directly engaged in the provision of healthcare to patients. During the past 5–10 years, there has been active recruitment of health workers from outside Denmark. Regulations were introduced with the aim to encourage foreign professionals to work in Denmark. Thus foreign qualified professionals from other countries can easily access the Danish labour market in professions currently experiencing a shortage of personnel. However, their recruitment is limited due to ethical principles e.g. health professionals will not be recruited from countries showing a shortage of healthcare workforce. Nursing education in Denmark is free for students from EU/EEA, Lichtenstein, Norway, Island and Switzerland. In general, there are no tuition
fees and government financial support (the Education Grant and Loan Scheme in Denmark) is available depending on certain criteria. This also applies to foreign students.²⁸

(Financial) service professions²⁹

Shortages in (financial) service sector include accountants, business/financial controllers, lawyers, legal assistants and accounting managers.²⁰ Reasons for shortages refer to recruitment difficulties in finding candidates with appropriate skills e.g. job vacancy rate in the financial, insurance and real estate sector increased from being below 1% (2012Q4) to 1.4% (2015Q3).²¹ Sectoral developments and emergence of new skills profiles present another reason for shortages. For example, the Financial Services Union noticed that the sector is developing rapidly and the demand for competent compliance personnel will grow in the future. As this is still a relatively new area and there are differences in employees’ educational background and the skills requirements of individual departments, it is difficult to train someone directly to work as a compliance officer. The Financial Uddannelsescenter (Financial training centre) has no proper training in compliance yet and at the moment compliance officers are self-taught or are graduates with a background in law, economic or banking that have followed a specific trainee program.²²

To attract more workers for the profession of compliance officer several initiatives are put in place. The Financial Services Union holds annual theme days for compliance staff. Furthermore, there is an ongoing dialogue with the sector about training needs.

ICT professions²³

The Agency for Labour Retention and International Recruitment provides a Positive List showing the professional fields that are open for foreign professionals. This list includes database/software/system developers, ICT/network consultants and ICT project managers.²⁴ In total there are 111 thousand employees working in the information and communication sector.²⁵ There seems to be a lack of experienced employees due to new developments within the ICT sector and therefore employers seek both experienced software developers and recent graduates. This can explain the fact that in total there were approx. 3 thousand vacancies in the ICT sector in 2015Q3.²⁶ A forecast of DI ITEK²⁷ (the trade association of the Confederation of Danish Industries for companies in ICT, telecommunications, electronics and communication) indicates that Denmark requires a further 3 thousand ICT specialists. Another forecast of DI ITEK shows that in 2020, ICT and the electronics sector will require 3 thousand additional specialists despite doubling of university admissions. Also the government plan for growth (2014) indicates that the increasing student numbers do not match the demand from employers.²⁸

In the last decade the Government invested in ICT education resulting in doubling student numbers in ICT related programmes from 1 thousand in 2004 to 2.5 thousand in 2014.²⁹ In 2014, the Danish government published the Growth Plan for digitization in Denmark³⁰ launching 23 initiatives in four areas including promotion of digital skills and learning resources. These initiatives have led to the establishment of partnerships with e-commerce, Big Data and digitization, the establishment of a work council for ICT security as well as a business-oriented development fund for digital learning resources. Demand for employees with ICT skills is increasing in both digital businesses and in the industry at large. Despite the aforementioned increase of ICT professionals, it remains a challenge for Danish companies...
Despite the aforementioned increase of ICT professionals, it remains a challenge for Danish companies to obtain all the digital skills they demand. Better coherence between education and the labour market must be ensured in this area of rapid development. In collaboration with industry, the Government will also identify industrial digital competence needs, creating better links between education and business demand for specialized ICT skills.[31]

**Other shortages**

The Agency for Labour Market and Recruitment (STAR) publication on recruitment in fall 2015[^2] provides an overview of occupations where employers face recruitment difficulties. These refer to: **carpenters, sales consultants and cooks** Demand outstrips supply and employers have to fill vacancies with recruits whose skills do not entirely match their requirements. Also, due to lack of suitable candidates, the position is eliminated in 9% of vacancies.[^3] Further analysis[^4] indicates considerable shortages for metal workers, production operators and process operators.

The employment reform (2014) focuses on vocational training and education to ensure an overall boost of the educational level of those unemployed who have the fewest skills. An additional measure represents the reform of the Danish vocational education and training programmes initiated in August 2015. The reform aims at increasing the number of young people choosing VET (25% by 2020) and students completing a VET programme in order to secure sufficient supply of skilled labour. The reform also includes fast track VET programmes for adults beyond 25 years promoting the transition of unskilled workers to skilled ones.

**Surplus Occupations**

While there is no information available on surplus occupations, there is information on sectors that face little difficulties in recruitment: the STAR publication on recruitment in fall 2015[^5] indicates that the sectors of mining, energy supply and culture and recreation have the least difficulty recruiting. There are indications that the massive expansion of the higher education sector might lead to a surplus of highly skilled workers and at the same time shortages of (vocationally) skilled workers. In order to re-direct people studying surplus subjects (e.g. humanities) to shortage subjects (natural sciences), wider use is made of a centrally determined number of study places within institutions and areas of study, where there are continuing high levels of unemployment.[^6]

**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 Denmark.

### References

[1] ISCO 232 Vocational education teachers, ISCO 231 University and higher education teachers

[2] When someone wishes to apply for a residence and work permit in Denmark, it depends, first and foremost, on qualifications. A number of schemes have been designed in order to make it possible for highly qualified professionals to get a residence and work permit in Denmark. One of these schemes is the Positive List: a list of the professions currently experiencing a shortage of qualified professionals. Persons who have been offered a job in one of these professions, and who have completed the required education, have particularly easy access to the Danish labour market


[4] The Danish continuation school (efterskole) is an independent, educational and residential institution for learners typically aged 14–18, who can choose to spend one, two or three years to finish their upper secondary education. It is in many ways similar to the concept of boarding school, but has rather clear distinctions. The Danish efterskole is based on the idea of combining academic learning with that of general ‘life-learning’ as a preparatory tool for all aspects of life, as well as facilitating an understanding of ‘the individual in a community. One of the things that are unique about the efterskole is the teacher-learner relationship - the teacher is responsible for both teaching and supervision outside of school hours, [http://www.ranumefterskolecollege.com/index.php/about/the-danish-efterskole](http://www.ranumefterskolecollege.com/index.php/about/the-danish-efterskole)


Nursing and midwifery professionals (ISCO 222), Medical doctors (ISCO 221), Other health professionals (ISCO 226) and Nursing and midwifery professionals (ISCO 322)


As above, p. 39.

Lægeprøgnose 2015-2040

Sundhedsstyrelsen (2016), Langt flere læger de kommende år https://sundhedsstyrelsen.dk/da/nyheder/2016/langt-flere-laeger-de-kommende-aar


Nursing Education in Denmark (2014), http://nursedu.dk/Education/Economy.aspx [accessed 29-03-2016]

ISCO 134 Professional services managers, ISCO 241 Finance professionals and ISCO 242 Administration professionals


See: LSK01: Job vacancies by industry, unit and size [accessed 29-03-2016] www.statbank.dk/LSK01


Database and network professionals (ISCO 252), Information and communications technology service managers (ISCO 133), Software and applications developers and analysts (ISCO 251).


Statistics Denmark. See here: http://www.statbank.dk/10309 [accessed 29-03-2016]

Statistics Denmark. See here: www.statbank.dk/3%LSK01 [accessed 29-03-2016]


[31] EVM (2014), FAKTAARK: Digitale kompetencer og læremidler skal fremmes


[33] As above

[34] Arbejderbevægelsens Erhvervsråd (2016), http://www.ae.dk/ [accessed 29-03-2016]
