France: Mismatch priority occupations

ICT professionals belong to high shortage occupations for France.

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

France

Shortage occupations

ICT professionals
Health professionals and veterinarians
Engineering professionals
Finance professionals
Legal professionals and legislators

Surplus occupations

Agricultural, forestry and fishery labourers
Animal producers
Forestry and related workers
Fishery workers, hunters and trappers
Market gardeners and crop growers
Manufacturing labourers
Mining and mineral processing plant operators
Metal processing and finishing plant operators
Food and related products machine operators
Garment and related trades workers
Printing trades workers
Other stationary plant and machine operators
Rubber, plastic and paper products machine operators
Assemblers
Other stationary plant and machine operators
ICT professionals

It is estimated that 90 thousand net jobs will be created in France for ICT professionals between 2012 and 2022. This corresponds to an annual job growth double than the national average. The workforce profile is young, highly educated and predominantly male. Women make up one employee in five.

The strong employment increase for ICT professions is expected to persist in the upcoming years due to increasing use of ICT notably by small and medium sized enterprises (SMEs). The development of big data, cloud computing and open sources activities will be the main levers of job growth in the digital sector. This will lead to the creation of new job profiles within companies requiring technical but also soft skills. Of note is that 68% of companies indicate difficulties finding candidates that fit their requirements. Furthermore, there is need to attract more students to enroll in ICT related study programmes. The rapid outdating of computer skills (language, technology, etc.) makes difficult the re-employment of unemployed specialists in the middle or the end of their careers.

Various initiatives have been carried out to encourage the participation of women in the ICT sector: the “AdaWeek” (a week dedicated to women in the digital and science sector), digital Syntec (provision of training, conferences and possibilities for working women) as well as establishment of clubs or associations for women in ICT such as Duchess France. However, further efforts can be made to promote the teaching of digital technology in education and, thus, develop the interest for digital tools within the context of learning. In order to improve the employability of jobseekers (who have been victims of restructuring plans), the Ministries of Education and Labour have recently put forward the first quality-labels Digital Grande Ecole (élite HE schools). The initiative covers 171 training programs across the country and the aims to train 10 thousand people up to 2017. Moreover, since 2014 EPSI in Nantes (one of the eight computing engineering schools in France) has implemented a study programme for computing consultants. The programme admits 30 jobseekers per year who are over 45 years old. The measure addresses the demand of three local digital service firms, and will be spread out to other regions.

Health professionals and veterinarians

Health professionals and veterinarians are expected to employ 354 thousand people by 2022. Health professionals are identified as a top-5 bottleneck occupation in France (2014). The health professionals benefit from strong employment dynamics due to the ageing French population and the increasing needs in terms of care and support of dependent people, in line with public health policy and insurance. In ten years, this group will benefit from numerous positions available, which will compensate for the numerous retirements. The exception is for medical doctors, who are distinctly older, whereby those who retire will not be replaced by 2022. This will lead to a job loss of more than 20 thousand positions in ten years, creating shortages for generalists and/or specialists across the country. Other reasons for shortages refer to selective access as well as length of studies. Since 2010, courses in medical studies start with a common first year and the number of places is fixed annually by the university and at national level. After the cut-off point of the competitive exam at the end of the first year, five to 10 years of intensive study are required to obtain the obligatory state diplomas in order to practice. Especially regarding doctors, since the end of the 1970s a significant decline of the numerus...
practice. Especially regarding doctors, since the end of the 1970s a significant decline of the *numerus clausus* (the quota for students for the 2nd year of medical studies) is observed which has led to decrease in the number of graduates. [20] It is worth noting that until 2012 a thousand internships (the internship is obligatory after the 6th year of medicine studies) were not taken because students prefer repeating the year rather than taking an internship in a specialty they did not choose but were assigned to. [21]

In order to maintain the continuity of care, both in hospitals and in general practices, local initiatives have been set up for doctors, such as: offering salary or accommodation benefits, helping setting up a practice, merging of medical homes, setting up initiatives, such as the “Operation Wanted” in the Allier region, that offers financing of studies. These initiatives are funded by local authorities, town districts and regional councils. There are also governmental measures, such as the regional area-health agreement in 2012, and financial allowances available to the students as soon as the 2nd year of medical studies is completed. These measures address the lack of doctors in some regions by offering medical graduates the chance to reduce their study costs. [22] On the other hand, it is deemed unlikely that the flow of foreign doctors [23] will provide a solution to shortages as access to the occupation is very difficult. [24] Therefore, a number of measures will be needed in order to cope with shortages. For example, the increase in the *numerus clausus* or a two-year delay for retirement would limit the reduction of supply numbers but it would not have an impact on the imbalance between specialists and general practitioners across the country. [25] Finally, a more prospective management of the distribution of internships would reduce local shortages [26] as three quarters of students begin their working life at the place of study. [27]

**Engineering professionals** [28]

The bottlenecks related to science and engineering professionals are considered particularly high in France. [29] Employment opportunities will continue to grow that by 2022, when 303 thousand people are expected to be employed in the occupation. [30] This increase will be due to the development of new technologies, [31] research and development efforts and the stability in technological sectors such as pharmacy, optics, aeronautics and the electronic sector. [32] In addition, the digital revolution has created new needs in transport, vehicles, connected products, energy efficiency, aid to elderly people, etc. Shortages relate to a lack of candidates with appropriate higher education. [33] As well as not being appropriately qualified, the lack of management, technical and/or language skills amongst the candidates is an obstacle to their recruitment. [34] Attracting good quality candidates is further hindered by the image of the engineering / manufacturing sector and the difficulty to attract the most talented engineering students to work in engineering.

Several marketing campaigns are carried out to increase interest in the manufacturing industry while are aimed at a wide target group including young people, jobseekers, and young women, which are under-represented in engineering occupations. These campaigns [35] are carried out on a national scale or locally by professional federations/trade unions supported by public agencies. Examples include the “Industry week”, the exhibition Plural Infinities (*Infinités Plurielles*) [40]; school in companies [41] where pupils are invited to visit companies and find out more about different occupations. A number of grants also exist aiming to fund higher education studies in the industrial sector, such as the Trajectories to
Industry initiative (*Trajectoires pour l’industrie*) implemented by local authorities, regional councils, and professional associations. Another possible solution is the continuing development of relationships between universities and companies and the recruitment of university graduates, *via* student-company get-togethers.

**Finance professionals**

In 2022 are expected to be 339 thousand finance professionals corresponding to a net creation of jobs of approx. 2% per year over the next ten years. Shortages for finance professionals can be explained by the needs for *highly qualified staff* due to the good dynamics of the sector (despite the economic crisis) as well as by *changes in financial activities.* The small traditional institutions have evolved into worldwide groups with diversified activities including finance and investment. The importance of on-line banking has increased while has led activities to be geared towards customer satisfaction, internal monitoring and risk assessment, management of activities and cost control, advising and expert assessment but also innovating and adapting to new forms of organisation. The sector is recruiting more and more highly educated young people trained in these occupations whereas in the past there was a policy of internal promotion for the recruitment of executives.

In anticipation of these skill needs, the sector has developed specific subsidised employment contracts between students enrolled in higher education institutions and firms. Training combines working experience in firms with schooling at higher education institutions. It is well developed for some fields such as management studies. Through these contracts a policy of pre-recruitment has been developed at bachelor’s and master’s levels. The banking and insurance sector has also developed an investment strategy in continuing training; in 2010, 70% of the employees in the banking and insurance sector benefitted from a training session *versus* 45% for all other sectors. The training is offered internally by the banking institutions and it corresponds to their needs. In most of the cases the successful completion of the training leads to a certificate recognised in the whole banking sector.

**Legal professionals and legislators**

The employment prospects for legal professionals and legislators appear to be very favourable with an increase of 1.5% per year over a ten year period (2012–2022), which is twice as high as that for all occupations. The number of workers in these occupations has increased over the years and is expected to reach 109 thousand in 2022 (they were less than 50 thousand in 2000). The increase in demand relates to *growing specialisation* of these occupations regarding the development of legal services. High demand can also be explained by the increasing needs of citizens (arranging of real estate affairs, family issues e.g. divorce, etc.), the housing market (buying a property) and the internationalisation of legal activities (due to a new regulation in France and Europe). The shortages for such professionals can be explained by the multitude of legislation and the complexity of legal mechanisms which require *rigorous and specialised training.* In addition, legal activities require more and more use of new technologies including digital ones, which may relate to changes in skills profile.
Several initiatives aiming to tackle the shortages have been proposed by legal professionals. In the case of lawyers (the most numerous of this occupation group), it is necessary to enhance access to further training as well as put in place mechanisms anticipating replacements due to the ageing working population. Representatives of the profession of bailiffs/judicial officers suggest assessing their future collective skill needs. Further training opportunities have been provided e.g. e-learning modules within the EJL (European judicial officers’ e-learning) project co-funded by the European Union (2012-2014). In the light of demographic developments (ageing population), it will be necessary to promote this occupation in order to attract new candidates as well as strengthen ties with the academic world.

Other shortage occupations

Shortages are also reported for: 1) managers, sales and marketing service professionals - due to replacement demands and high staff turnover because of the dynamics within the sales sector; 2) nurses and midwives - due to the lack of candidates; 3) primary and secondary teachers - due to the reform in the master study programme and the competition for access to these occupations; 4) qualified workers in craft trades, industrial trades (e.g. welders, structural metal workers...) and building trades – this is characteristic for some geographical areas whereby the shortage can be explained with lack of attractiveness of these occupations.

Surplus Occupations

Surpluses relate the low-skilled jobs and jobs in declining sectors, such as agriculture and industrial manufacturing (due to destruction of jobs and non-replacement of retirees as a result of the economic crisis). Surpluses include: agricultural, forestry and fishery labourers; animal producers; forestry and related workers; fishery workers, hunters and trappers; market gardeners and crop growers; manufacturing labourers; mining and mineral processing plant operators; metal processing and finishing plant operators; food and related products machine operators; food preparation assistants; textile, fur and leather products machine operators; garment and related trades workers; printing trades workers; other stationary plant and machine operators; rubber, plastic and paper products machine operators; assemblers; other stationary plant and machine operators. The continued development of digital technologies and the rationalisation of work organisation are expected to reduce the number of secretaries and administrative workers; keyboard operators’; numerical clerks; client information workers, cashiers and ticket clerks.

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 France.

Reference

[1] Software and application developers and analysts (ISCO 251); Database and network professionals (ISCO 252); Information and communications technology managers (ISCO 133).


[10] As mentioned by national experts.


[13] Medical doctors (ISCO 221); Other health professionals (ISCO 226).


[19] These reasons for shortages apply also to veterinarians.

[20] Despite the number of places being revised upwards at the beginning of the millennium de 3.9 thousand places to 7.1 thousand between 2000-2007 and 7.5 thousand today.

[21] Medical students pass national tests and according to their rank they choose a place of training and speciality of internship (*internat*). The best ranked students can really choose their speciality: only 28% of students have a choice of 30 specialties. In 2013, 7.5 thousand internships were allocated for 8 thousand students and some positions remained vacant in general medicine, psychiatry... Bachelet, M. (2014). Les affectations des étudiants en médecine à l’issue des épreuves classantes nationales en 2013 [The allocation of medical students at the end of the national classing tests in 2013], *Études et Résultats*, DREES, No 894.

[22] 1,500 public service contracts (*contrats d’engagement service public* CESp) planned for 2017, created by the Hospital, patients, health, regions Law of 21st July 2009.


medical demography 2015].


[28] Engineering professionals excluding electrotechnology (ISCO 214); Electrotechnology engineers (ISCO 215).


[37] or according to another national expert, directors of firms complain too transversal competences at the expense of technical skills.

[39] It is difficult to know the impacts of these many actions of communication without scientific assessment. La mixité des métiers. http://www.entreprises.gouv.fr/semaine-industrie/la-mixite-des-metiers


[41] Created and developed by FIEEC.


[52] Céreq (2014). *Quand la formation continue... Repères sur les pratiques de formation des employeurs et salariés.* [When training continues... Markers on the training practices of employers and employees]. www.cereq.fr/publications/Ouvrages/Quand-la-formation-continue-Reperes-sur-les-pratiques-de-formation-des-employeurs-et-salaries


[54] Legal professionals (ISCO 261); Legislators and senior officials (ISCO 111).


[57] Law of 13th of March 2000 writing on an electronic medium has the same convicting strength as writing on paper, or statements though Video or via internet.


[61] Stated by France Stratégie and the national experts interviewed.

[62] Business services and administration managers (ISCO 121), Sales, marketing and development managers (ISCO 122), Manufacturing, mining, construction, and distribution managers (ISCO 132), Professional services managers (ISCO 134), Other services managers (ISCO 143), Sales, marketing and
public relations professionals (ISCO 243), Sales and purchasing agents and brokers (ISCO 332), Business services agents (ISCO 333).

[63] ISCO 222.


[65] ISCO 412, 413, 431, 422, 523.