MINISTÈRE
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Tresor-Economics

No. 287 • June 2021

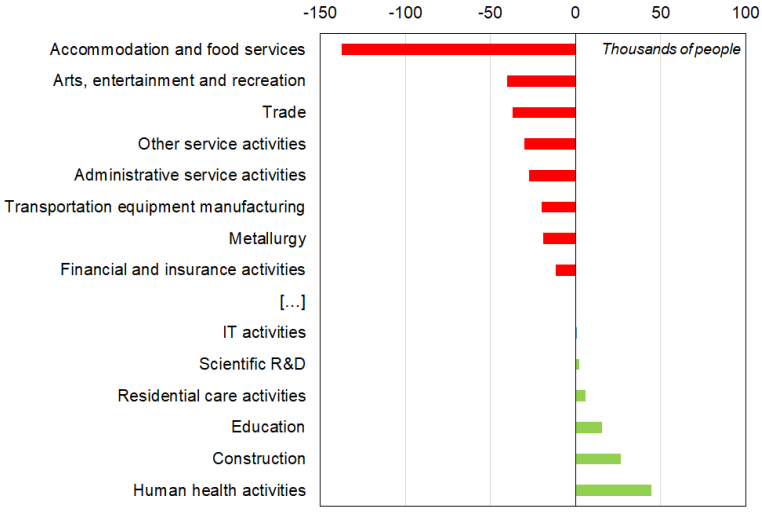
Direction générale du Trésor

Skills and Intersectoral Labour Reallocation in the aftermath of the COVID-19 Crisis

Mélanie Coueffe

- In 2020, France reported 296,000 net payroll job losses, or 1.2% of total jobs. Most occurred in a small number of sectors, including accommodation and food services, arts and entertainment, trade, and transportation equipment manufacturing. By contrast, sectors reporting net job creations included health, residential care activities, education and construction. All told, net job losses were limited compared to the 8% drop in GDP, and employment began rising again in the first quarter of 2021.
- While most workers will return to jobs in the same sector following the crisis, there will nevertheless be reallocations owing to long-term changes in demand, e.g. the expansion of teleworking and the decline in business travel. How smoothly the reallocations occur will determine the strength of the rebound in the economy and in productivity. The challenge is to avoid a situation in which high unemployment exists alongside unfilled job vacancies.
- A number of occupations faced recruitment shortages before the crisis. Some could continue, because the underlying factors will remain unresolved, e.g. those related to a lack of trained workers (nurses, nursing assistants, midwives, IT technicians and engineers, and R&D personnel).
- Some skills that are widespread in sectors with net job losses (e.g. team management, order management, computer proficiency) are also required in job-creating sectors, whereas others (inventory management, sales, customer relations) are in far less demand. As a general rule, there is more distance between the skills possessed by low-skilled workers and those required by occupations in growing demand.
- To facilitate intersectoral labour reallocation post-crisis, jobseekers and payroll employees should be fully informed regarding employment and career opportunities, and given support in addressing their training requirements. The Career Choice Act and the recovery plan provide significant resources for this purpose.

Net job gains and losses in 2020, by sector



Source: INSEE, DG Trésor calculations.
Note: Net job losses or gains correspond to differences in non-farm payroll employment (including temporary workers) between end-2019 and end-2020.

1. The impact of the crisis varied across sectors

Several sectors were particularly hard hit by net job losses in 2020: accommodation and food services; arts and entertainment; transportation equipment manufacturing; metallurgy; trade; administrative and support services; household services; and financial and insurance activities shed the most jobs in the year, ranging from 11,000 net job losses in financial and insurance activities to 137,000 in accommodation and food services. These sectors accounted for 35 percent of non-farm payroll employment in 2019 and all ended 2020 below pre-crisis levels.

In both the accommodation and food services sector and the arts, entertainment and recreation sector, jobs fell drastically in the first half of 2020 before a sharp rebound during the summer months between the two lockdowns, without however reverting to pre-crisis levels. In the transportation equipment manufacturing and metallurgy sectors, net job losses were slightly less pronounced early in the crisis, but the rebound was extremely modest during the summer months. Three other sectors – business services, trade, and financial and insurance activities – had limited net losses in percentage terms but account for a large share of total jobs and accordingly a high number of job losses (see Table 1).

Table 1: Top eight sectors for net job losses and top six sectors for net job gains in 2020

		Jobs in 2019, by sector (thousands)	Jobs in 2019, by sector (share %)	Net job losses/gains in 2020, including temporary workers, by sector of employment (thousands)	Share of net losses (%)
	Accommodation and food services	1 135	5%	-137	46%
	Arts, entertainment and recreation	298	1%	-40	14%
Top down 8	Trade	3 251	13%	-37	12%
	Other service activities	1 025	4%	-30	10%
	Administrative service activities	1 298	5%	-27	9%
	Transportation equipment manufacturing	388	2%	-20	7%
	Metallurgy	419	2%	-19	6%
	Financial and insurance activities	892	4%	-11	4%
	[...]				
	IT activities	473	2%	1	0%
	Scientific R&D	171	1%	2	-1%
	Residential care activities	1 925	8%	6	-2%
Top up 5	Enseignement	1 635	7%	16	-5%
	Construction	1 575	6%	27	-9%
	Activités pour la santé humaine	1 579	6%	45	-15%

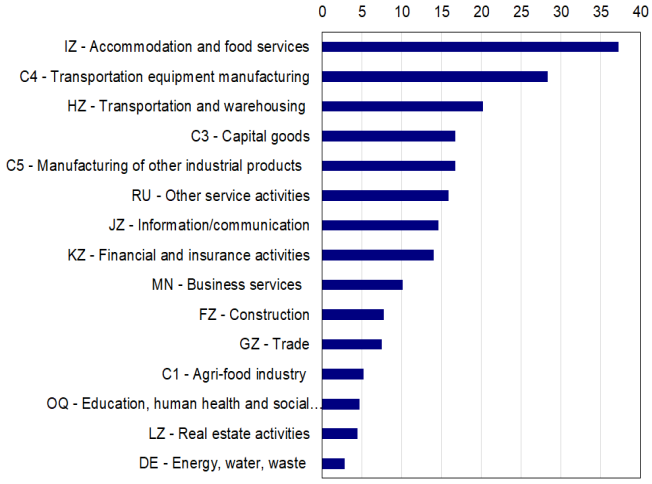
Source: INSEE, DG Trésor calculations.
Note : Net job gains or losses correspond to the difference between payroll employee levels (non-farm, including temporary workers, by sector) at 31 December 2019 and 31 December 2020.

The more generous short-time working scheme that was temporarily introduced in response to the crisis substantially mitigated the impact of slower activity on firms and households alike and prevented large numbers of redundancies on economic grounds (*licenciements économiques*). Employment fell by far less than economic activity, as market-sector employment contracted at an average annual pace of 1.5% (less than the 2.2% observed in 2009), whereas economic activity declined much more sharply (8% in 2020, compared to 2.8% in 2009).

Employer uptake of the short-time working scheme varied substantially across sectors. In the ten months from March to December 2020, three sectors accounted for over half the hours compensated under the scheme, namely accommodation and food services, trade, and business services. The breakdown across sectors evolved over time, as accommodation and food services accounted for 16% of total hours compensated during the first lockdown (March-May 2020) and over 40% during the second lockdown (November-December 2020).

Prospects for a rebound in activity in these sectors remain uncertain. According to the May 2021 DARES survey on labour force activity and employment conditions during the COVID-19 crisis (Acemo-Covid survey), 37.2% of employees in the transportation equipment manufacturing sector worked in firms that expected it would take over a year for activity to revert to normal levels. The corresponding figure is 28.3% for employees in the accommodation and food services sector (see Chart 1).

Chart 1: Percentage of employees in firms that expect it will take over one year for activity to return to normal, by sector



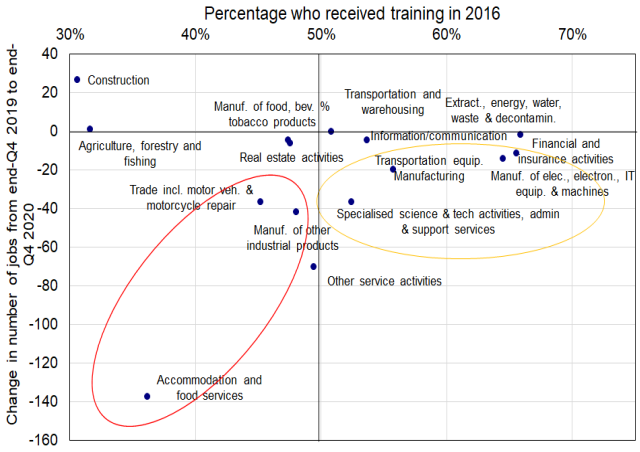
Source: Acemo-Covid Survey, DARES, March 2021.

The sectors most affected by the crisis face different challenges in terms of employment dynamics, human capital, and access to training. In the services, which were severely affected by the pandemic, pre-crisis employment growth had been particularly strong; in accommodation and food services, for instance, payroll employment (including temporary positions reallocated for statistical purposes to the sector) rose at an average annual rate of 1.7% between 2012 and 2019. By contrast, in industrial sectors (except pharmaceuticals and extractive industries), payroll employment (including temporary positions reallocated) had been falling for several years (down by an average annual rate of 0.9% over the 2012-2016 period), despite upticks in 2017 and 2018 (0.5% and 0.6%, respectively) as certain industries, e.g. manufacturing of equipment and other industrial products, had begun to report net job gains.

Sectors also differ in terms of the levels of qualification they require. The transportation equipment manufacturing sector; the arts, entertainment and recreation sector; and the financial and insurance activities sector are all characterised by high levels of educational attainment, whereas the administrative service activities sector and the accommodation and food services sector have a higher than average percentage of non-graduates.

Some of these service sectors are also characterised by low access to occupational training. The 2016 INSEE Adult Education Survey (AES) found that only 45% of workers in the trade sector had participated in at least one training course during the year - one of the lowest percentages of any sector (see Chart 2). This low degree of access to occupational training could make it difficult for workers to find jobs post-crisis if they wish to transition into other sectors.

Chart 2: Net job gains and losses in 2020, and percentage access to training pre-COVID crisis



Sources: INSEE (Labour Force Survey, Adult Education Survey), DG Trésor calculations.

Note: The sectors circled in red had substantial net job losses in 2020 and low access to occupational training; workers in these sectors could have difficulty in moving to new jobs. The sectors circled in yellow also had substantial net job losses in 2020 but show comparatively high access to training; these workers should have less difficulty moving to new jobs.

2. While some sectors reported net job losses, others reported net job gains in 2020

Several sectors reported net job gains in 2020. IT activities, scientific R&D, construction, human health activities, residential care activities, and education accounted for 29% of payroll employment pre-crisis and combined to chalk up 96,000 net job creations in 2020 (see Table 1).

The statistics division of the Ministry of Labour (DARES) and the national employment agency (*Pôle Emploi*)[1] reported difficulty in recruiting in 2019 for 57 occupations.[2] Recruitment shortages could have multiple causes: high frequency recruitment needs, unattractive working or employment conditions, lack of available manpower, mismatch between job-seekers' skills and those required by recruiters, or geographical imbalances between labour supply and demand.

Some of these shortages could be expected to continue after the crisis, particularly shortages related to the mismatch between jobseekers' training and the skills required by employers (skilled workers in construction and manufacturing; R&D personnel; IT technicians and engineers; nurses, nursing assistants and midwives); shortages related to difficult working conditions (skilled and unskilled workers in construction and manufacturing, nurses and nursing assistants); and shortages due to a geographical imbalance between employers and workers (skilled and unskilled workers in manufacturing; domestic workers; childminders; and managerial and technical staff in banking and insurance). These shortages represent opportunities for future employment. If vacancies are not filled within a reasonable time, shortages in these occupations could constrain productivity growth while unemployment remains high.

3. Job reallocations will reduce post-crisis unemployment

3.1 Historically, there has been significant mobility of workers across sectors

How the various sectors emerge from the crisis will determine the opportunities for intersectoral mobility of workers currently in employment and jobseekers alike. If activity in a given sector remains below its pre-crisis level, it would be desirable for some workers to change sectors to avoid unemployment, and for growth sectors to attract workers from other areas of the economy.

Historically, there has been significant mobility between sectors. Workers in the scientific and technical activities, administrative and support services sector are highly mobile: over the 2008-2018 period, 12% on average moved to a different sector within six quarters (compared with average intersectoral mobility of 4% in the economy as a whole, see Chart 3). On the other hand, workers in public administration, education and human health rarely switch sectors (only 2% on average). These observations are explained by a multitude of factors (see Box 1 on the determinants of occupational mobility).

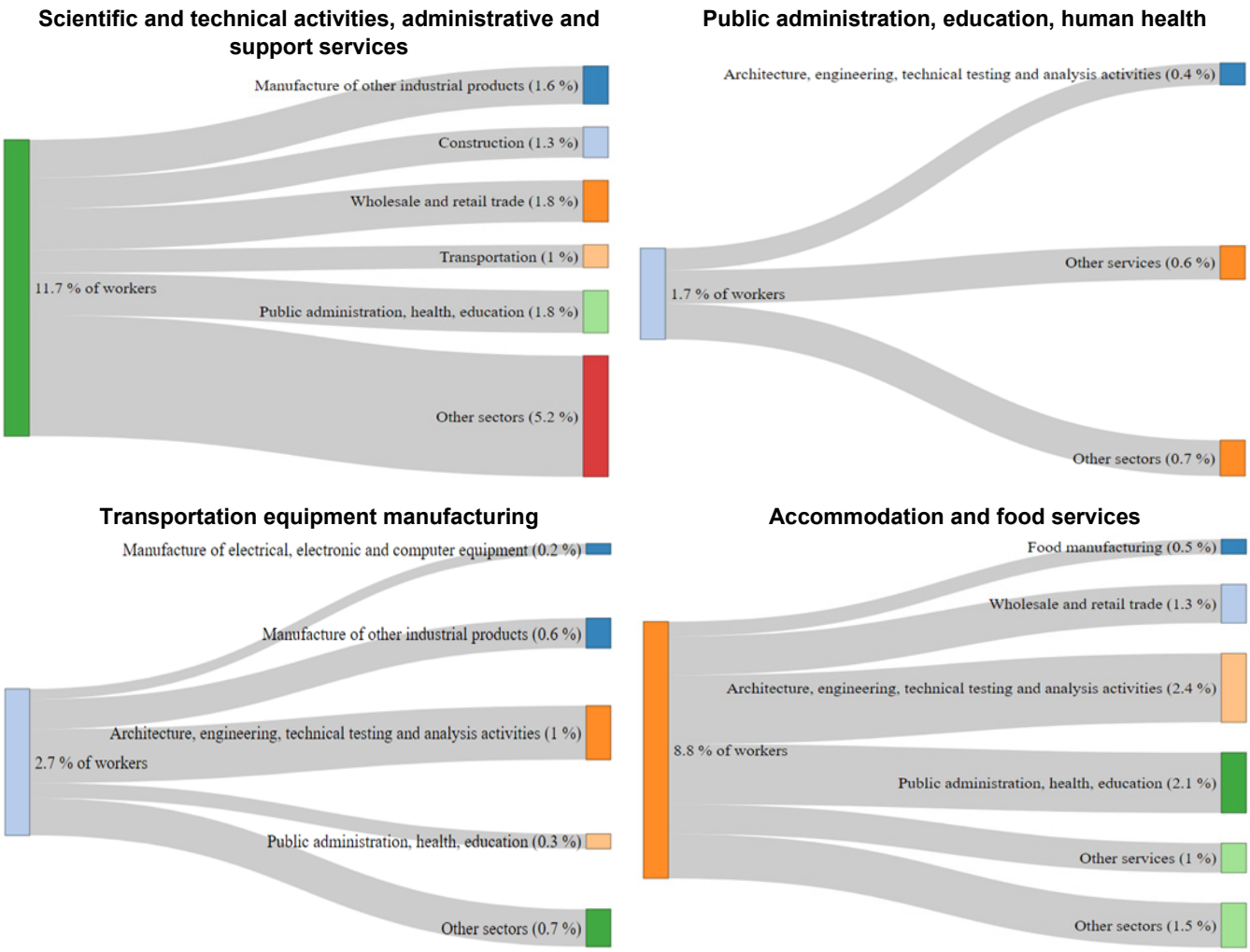
Sectors affected by the crisis present contrasting mobility patterns. Workers in the transportation equipment manufacturing sector, for instance, are historically not very mobile (3% change sectors), while workers in accommodation and food services often switch to other sectors (9%). Similarly, within any given sector, mobility may differ depending on workers' specific occupations.

The COVID-19 crisis could accelerate intersectoral reallocations. Even with the expected rebound after the lifting of restrictions, some sectors are unlikely to return to pre-crisis levels. This will mean job losses in negatively affected sectors and job creation in others, with the magnitude of job creations contingent on the ability of the economy to reallocate jobs. This does not mean that reallocations will be direct or only from sectors with net job losses to job-creating sectors.

Creative destruction could also involve intrasectoral reallocations, as the least productive firms close and others expand; this process is not addressed in this paper.

(1) "Les tensions sur le marché du travail en 2019", Dares Résultats 32, October 2020.
(2) Using the 87-category occupational classification. An occupation is here considered to exhibit a shortage when the composite shortage indicator calculated by DARES and Pôle Emploi is greater than or equal to 4 on a scale of 1 to 5.

Chart 3: Intersectoral mobility from four selected sectors (over six consecutive quarters, average 2008-2018)



Source: INSEE (Labour Force Survey, 2008-2018), DG Trésor calculations.
How to read this chart: On average over the 2008-2018 period, 11.7% of those employed in scientific and technical activities were working in another sector six quarters later. Of these workers who changed sectors, 1.8% went into public administration, 1.8% went into the trade sector and 1.6% went into manufacturing of other industrial products. Workers employed in public administration are far less mobile, as only 1.7% switched sectors. Only a small number of sectors have been selected for this chart.

Box 1: Determinants of occupational mobility

Occupational mobility can involve various changes – to a new firm, sector, occupation or level of qualification. In all cases, the frequency and nature of changes are dependent on the initial employment situation (seniority in the firm, level of skill, occupational position, firm size) and the socio-demographic characteristics of individual workers (gender, age, family situation).

Lainé (2010)[a], reported that mobility is highly dependent on seniority: the longest-serving employees, who have developed skills specific to their firm, are less likely to leave. Mobility is greater at the two extremes of the qualification scale: among managers and among unskilled workers. Their reasons for mobility differ, however, according to Lainé, as managers often secure moves to a desired new position, whereas unskilled workers' mobility is related to the insecure nature of their job. Workers on temporary or fixed-term contracts change occupations more often than those on permanent contracts.

a. Lainé F. (2010), "La mobilité professionnelle : facteurs structurels et spécificités de l'Île-de-France", *Économie et statistique* 431-432. The mobility examined in this study relates to changes in employer, position, occupation and level of qualification.

Mobility also depends on the occupation and the sector of activity. Mobility is more frequent when the skills required by the initial occupation are transferable to other fields. According to DARES[c], this is the case, for example, in the electricity/electronics and handicraft sectors. On the other hand, mobility is more limited in occupational fields where access is regulated or subject to competitive examination, as in education, training and healthcare; and in social, cultural and sports services. Lainé found that ICT proficiency is associated with changes in positions within the firm, changes in occupations, and overall upward mobility.

Mobility is also higher in small businesses than in the public service or large firms, due to fewer opportunities for internal mobility and the higher failure rate of small businesses.

Young people are more likely to be mobile: DARES found that one-third of 20- to 29-year-olds changed occupations between 2010 and 2015, compared with 22% for all age groups. Those at the start of their career are often overqualified, so changing jobs may allow them to find something more appropriate. The high level of mobility in this age group could also be explained by the more insecure nature of contracts early in one's career or by a willingness to test various career paths.

Women are more likely to change occupations than men. DARES offers several explanations: underemployment is higher among women, which could encourage them to change occupations in order to work more hours; and women are more likely prioritise work-life balance in making a career choice. Lainé (2010) found that women also face a higher risk of downward mobility than men.

Occupational mobility is also influenced by family configuration. DARES found that people living in a couple are less likely to change occupations. The effect of having children differs between male and female parents. Men with one or more children are less likely to change occupations, whereas mothers' occupational mobility is not significantly affected by the first or second child, but increases with third and subsequent children.

Finally, the business cycle has a general influence on the frequency and nature of mobility. Duhautois[d], reports that during cyclical troughs, there is an increase in flows of jobs from declining sectors to growth sectors, and that job creation remains somewhat higher in services than in the industrial sector.

c. *Dares Analyse*, "Changer de métier: quelles personnes et quels emplois sont concernés?", November 2018. This examines only changes in occupation.
d. Duhautois R. (2002), «"Les réallocations d'emplois en France sont-elles en phase avec le cycle?", *Économie et statistique* 351.

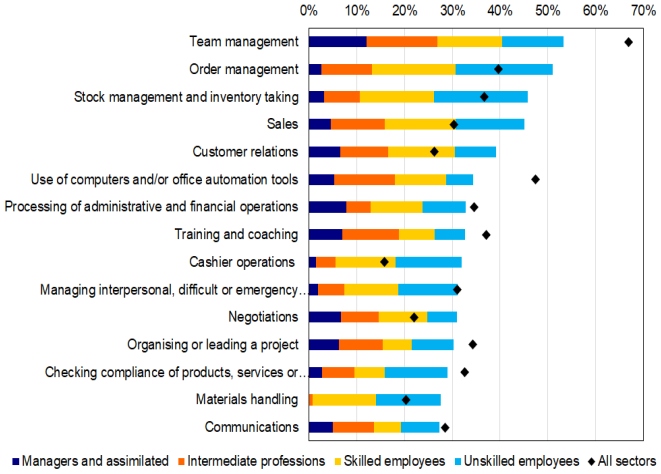
3.2 Comparing skills used in sectors with net job losses and net job gains in 2020 to identify the need for training and support

One way of shedding light on the issue of reallocation is to compare required skill sets between the most adversely affected occupations and the most promising occupations. Pôle Emploi data on skills in each occupation provides a basis for matching the skills of workers in sectors that shed jobs in 2020, on the one hand, to skills in greater demand in job-creating sectors and in occupations with labour shortages, on the other. The aim is to see how closely these skills match up: the greater the distance between them, the harder the job reallocation process will be. Cross-sector training and support schemes will have to make the relevant information available and focus on groups identified as being more vulnerable.

These data identify an average of 21 skills required for each occupation (see Box 2). Chart 4 shows the areas of competency most prevalent in sectors with net job losses, e.g. order management, stock management and inventory taking, sales, and customer relations. These skills correspond mainly to what are classified as manual and clerical workers, both skilled and unskilled. Team management, which is a more cross-cutting skill,[3] is also required for workers in sectors with net job losses, but to a lesser extent than in other sectors.

(3) France Stratégie, "Cartographie des compétences par métiers," *Note d'analyse* 101, May 2021.

Chart 4: The 15 most common skills in the top sectors for net job losses in 2020



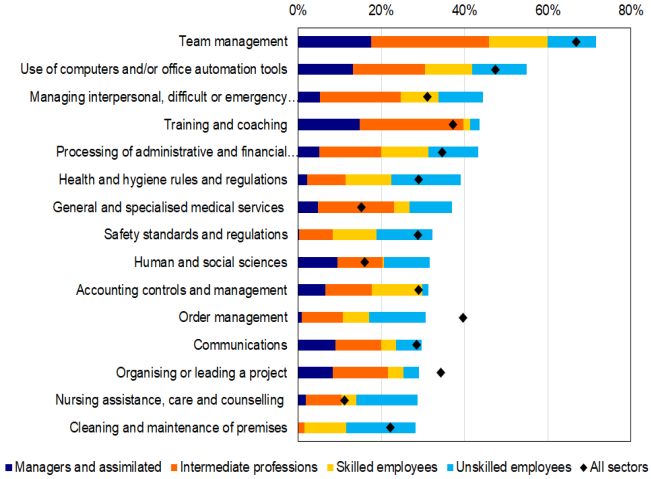
Sources: Pôle Emploi (node skills), INSEE (Labour Force Survey 2019).
How to read this chart: 45% of workers in the eight sectors with the greatest net job losses are skilled in the area of sales, with the following breakdown: managers and assimilated 5%, intermediate professions 11%, skilled employees 15%, and unskilled employees 14%. By comparison, 30% of all workers, all sectors combined, are skilled in this area.

A comparison of the 15 most prevalent skills in the eight sectors with the greatest net job losses to the 15 most prevalent skills in the six sectors with the greatest net job gains in 2020 (see Chart 6) shows that several are shared in both categories of sectors, namely team management, order management, computer use, and processing of administrative and financial operations.

However, skills may be applied in different ways that are not directly transferable between sectors. For example, "use of computers and/or office automation tools" may cover a wide range of skills depending on the sector: office automation tools, internet browsers, collaboration tools, digital processing, etc.

The most prevalent skills in the six sectors with the greatest net job creations tend to be used more by higher-level employees classified as managers and assimilated, and intermediate professions (see Chart 5), whereas in the sectors with net job losses they tend to be used more by skilled and low-skilled manual and clerical workers.

Chart 5: The 15 most common skills in the top sectors for net job gains in 2020

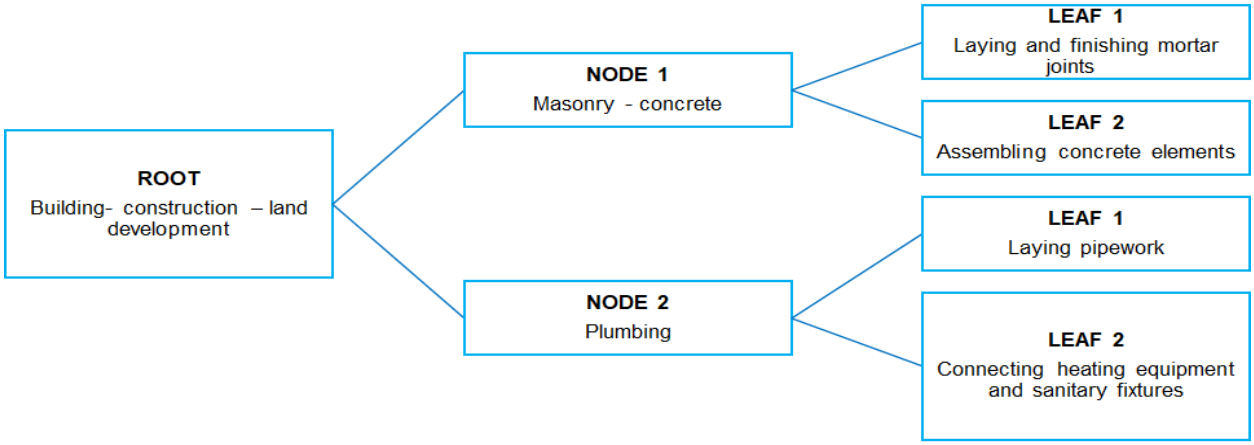


Sources: Pôle Emploi (node skills), INSEE (Labour Force Survey 2019).
How to read this chart: 39% of workers in the six sectors with the greatest net job gains in 2020 are skilled in the area of health and hygiene rules and regulations, with the following breakdown: managers and assimilated 2%, intermediate professions 9%, skilled employees 11%, and unskilled employees 17%. By comparison, 29% of all workers, all sectors combined, are skilled in this area.

Box 2: Measuring proximity of skills between sectors

1. 1.Mapping skill areas

Pôle Emploi publishes data on skills used in occupations according to the ROME classification of occupations and jobs.[a] Skills are classified in a tree structure, with the tree metaphor used to designate the three levels: root, node and leaf, as in the example below.



A further distinction is made between basic skills (e.g. "installing heating equipment") and specific skills (e.g. "installing underfloor heating").

The INSEE Labour Force Survey indicates the share of each occupation, using the classification for professions (4 digit code) and families of professions (FAP) in each sector. A correspondence table is used to link the over 10,000 names of occupations in ROME to the FAP occupations (87 aggregated families of professions and 225 detailed families of professions). Whenever a given occupation in ROME can belong to two or more FAP categories, it is apportioned equally across the FAP categories.

This makes it possible to calculate the number of occupations in the sector that require each skill. Each occupation is then weighted for its share of jobs in the sector, which is calculated from the Labour Force Survey. This yields the share of jobs in each sector that use each skill.

2. Computing a proximity indicator between sectors, or between groups of occupations

The proximity of skills between two sectors or between two groups of occupations is then defined as the coefficient of correlation between the two distributions of the use of skills (i.e. for each skill, the share of jobs in the sector that require that skill). The closer the coefficient is to 1, the closer the proximity between the two sectors (or groups of occupations) in terms of skills required, and the closer it is to 0, the greater the distance between the two sectors (or groups of occupations).

a. Répertoire Opérationnel des Métiers et des Emplois (operational directory of occupations and jobs).

Chart 6: The most prevalent skills in sectors with net job losses and net job gains in 2020

	Skills in the top eight sectors for net job losses	
1	Team management	53%
2	Order management	51%
3	Stock management and inventory taking	46%
4	Sales	45%
5	Customer relations	39%
6	Use of computers and/or office automation tools	34%
7	Processing of administrative and financial operations	33%
8	Training and coaching	33%
9	Cashier operations	32%
10	Managing interpersonal, difficult or emergency situations	31%
11	Negotiations	31%
12	Organising or leading a project	30%
13	Checking compliance of products, services or equipment	29%
14	Materials handling	28%
15	Communications	27%

	Skills in the top six sectors for net job gains	
1	Team management	72%
2	Use of computers and/or office automation tools	55%
3	Managing interpersonal, difficult or emergency situations	44%
4	Training and coaching	44%
5	Processing of administrative and financial operations	43%
6	Health and hygiene rules and regulations	39%
7	General and specialised medical services	37%
8	Safety standards and regulations	32%
9	Human and social sciences	32%
10	Accounting controls and management	31%
11	Order management	31%
12	Communications	30%
13	Organising or leading a project	29%
14	Nursing assistance, care and counselling	29%
15	Cleaning and maintenance of premises	28%

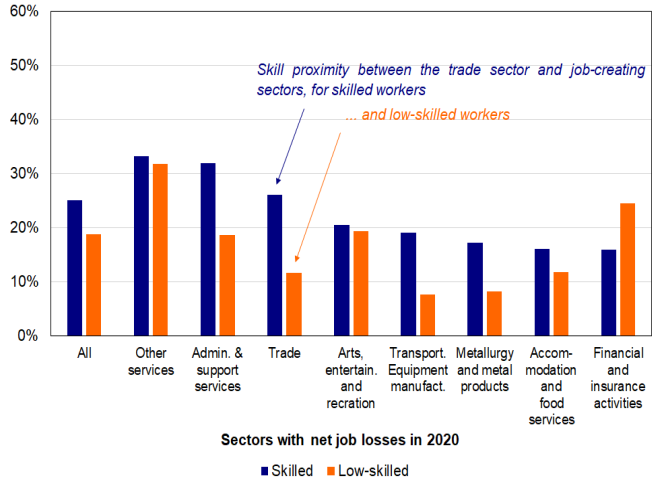
x Skill in common between sectors with net job losses and sectors with net job gains

x Skill specific to sectors with net job losses or with net job gains

Sources: Pôle Emploi (node skills), INSEE (Labour Force Survey 2019).
How to read this chart: 53% of jobs in the eight sectors with the greatest net job losses use the "team management" skill. The same skill is used in the six sectors with the greatest net job gains, where it is required in 72% of jobs. The skills in green are those that are common to the sectors with net job gains and net job losses.

The correlation between the distributions of workers' skills in sectors with net job losses during the crisis and in sectors that created jobs provides an indicator of the proximity between the skills required in the two categories of sectors. The proximity indicator can be calculated for both skilled and low-skilled workers. The indicator shows a greater convergence of skills for skilled workers than for low-skilled workers (see Chart 7). This highlights the importance of continuing training and support for low-skilled workers. Some employees, particularly in accommodation and food services, trade, and manufacturing and administrative services, have relatively few of the skills required for occupations in the job-creating sectors.

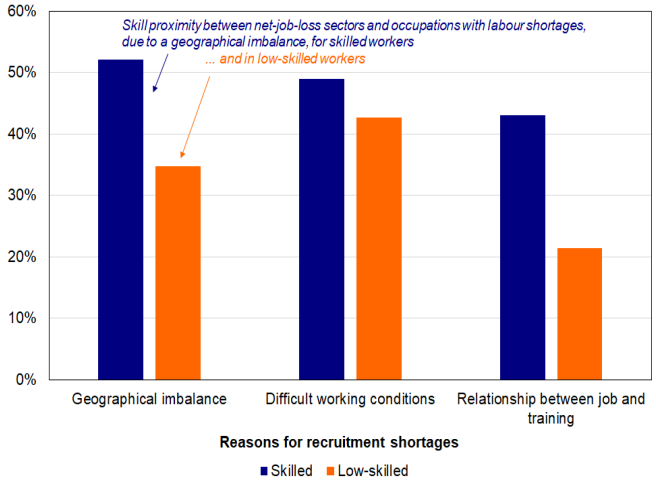
Chart 7: Skill proximity between workers in sectors with net job losses and workers in sectors with net job gains, by job-loss sector



Sources: Pôle Emploi (node skills), INSEE (Labour Force Survey 2019).
How to read this chart: The skills of low-skilled workers in net-job-loss sectors are more distant from the skills in sectors with net job gains (correlation coefficient 0.19) than those of skilled workers in sectors with net job losses (correlation coefficient 0.25). The skills of workers in accommodation and food services are more distant from those in sectors with net job gains than those of workers in administrative and support services.

However, if the comparison is narrowed down to occupations with labour shortages in the job-creating sectors, a degree of proximity can be seen. This is specifically the case in occupations with a labour shortage attributable to difficult working conditions,[4] and to a lesser extent in occupations with unfilled vacancies due to a geographical imbalance (see Chart 8). Enhancing the attractiveness of these occupations and facilitating geographical mobility will thus contribute to employment growth.

Chart 8: Skill proximity between workers in net-job-loss sectors and workers in sectors with labour shortages, by reason for the shortage



Sources: DARES, Pôle Emploi (node skills), INSEE (Labour Force Survey 2019).
How to read this chart: The skills of low-skilled workers in net-job-loss sectors are closer to those in occupations with shortages due to difficult working conditions (correlation coefficient 0.43) than to those in occupations with shortages due to the relationship between job and training (correlation coefficient 0.21).

Another source of proximity between two sectors is having a significant number of occupations in common between them; there are administrative, accounting and financial occupations and IT-related occupations that are found in many sectors. To take one example, occupations involving business administration and IT & communications account for 11% of jobs in the construction sector and 14% of jobs in the business administrative and support services sector. Workers in these and other "cross-cutting" occupations should have less difficulty changing sectors.

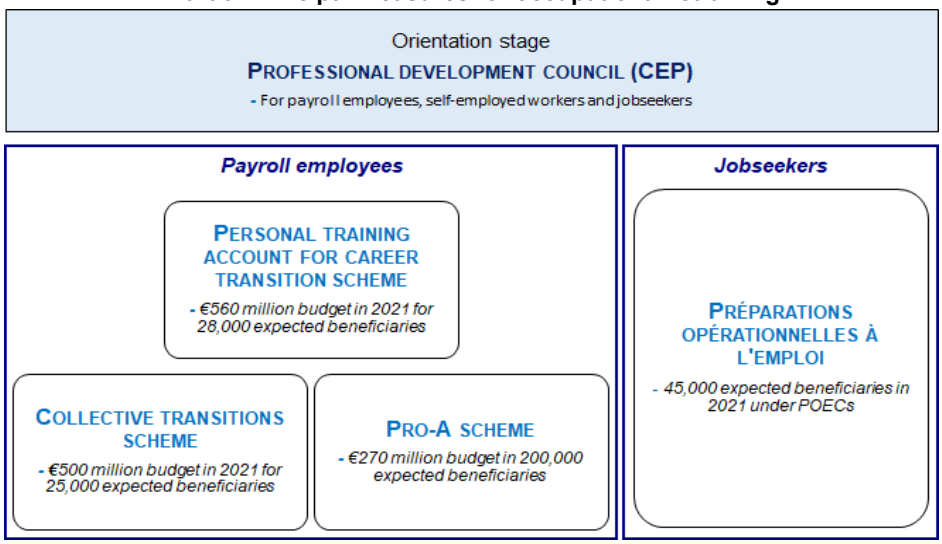
To illustrate the distance between skills, consider the case of a production worker employed as a mechanical fitter/assembler. This occupation accounts for nearly 59,000 jobs in the transportation equipment manufacturing sector and the metallurgy and metal products manufacturing sector, both of which had net job losses in 2020. The occupation has 11 skills in common with skilled workers specialising in the installation of electrical and telecommunication networks, which accounts for 54,000 jobs in the construction sector - skills including routine maintenance and maintenance tools; checking the conformity of products, services or equipment; and electricity. That means the mechanical fitter/assembler already has half the skills required for the position in the construction sector, giving them options for occupational mobility; the remaining skills can be acquired through training.

4. Instruments to assist occupational transitions and reduce unemployment post-crisis

The Career Choice Act of 5 September 2018 established instruments to promote occupational transitions, and was later supplemented by the recovery plan. More recently, the skills investment plan (PIC) has been redeployed to address the needs for skills in occupations facing labour shortages.

(4) This section considers employment in occupations with labour shortages in 2019, excluding the eight sectors with the greatest net job losses in 2020.

Chart 9: Principal measures for occupational retraining



Source: DG Trésor.

The professional development council (*conseil en évolution professionnelle, CEP*) informs employees about opportunities for career development and retraining. The system provides for two to eight hours of counselling, depending on the arrangements chosen, and allows workers to evaluate their current occupational situation, learn more about opportunities for career development, develop or obtain certification of skills, and even receive support in planning for a different occupation or for setting up a business. Career transition counselling is a gateway to retraining and therefore deserves to be more visible; it currently has a low profile, especially among those in employment. In 2020, 100,000 employees benefited from a CEP, or just over half of the initial target. Data on the skill required in each occupation, and on similarities between occupations, are also published online by *Pôle Emploi*, in the form of occupation-specific information sheets. These are used by *Pôle Emploi* to match labour supply and demand on the basis of jobseekers' skills profiles and the skills required by employers.

Several schemes provide support to workers undergoing retraining. They can cover the sometimes high cost of training, as in the case of the personal training account for career transition scheme (*compte personnel de formation de transition professionnelle*), or can address targeted occupations facing labour shortages, as in the case of the collective transitions scheme (*transitions collectives*). The Pro-A scheme for low-skilled employees includes both coursework and on-the-job experience.

- The personal training account for career transition scheme funds training courses that lead to formal certification for employees who wish to change occupations. Employees are entitled to take a leave of absence while continuing to be paid during the training period. This scheme was introduced on 1 January 2019 to replace the former "individual training leave" (*congé individuel de formation, CIF*) scheme. All employees can apply for the scheme if they have been employed for at least two years, not necessarily consecutively, including one year with the same employer.

- The "collective transitions" scheme was introduced at the start of 2021 as part of the economic stimulus plan and seeks to match supply and demand for specific skills at the local level, by identifying (a) firms facing sectoral changes or a trend decline in business activity and (b) firms seeking workers in the same geographical area. Workers whose jobs are potentially threatened can then retrain and gain certification in order to change to an occupation with growth potential. Throughout the retraining period, employees continue to be paid, and their contract of employment remains in effect.

- The "Pro-A" scheme was introduced by the 2018 Career Choice Act. It aims maintain the least skilled workers in employment through retraining that combines classes with work experience. Programmes run from 6 to 12 months, with training or other activities leading to validation of acquired experience (VAE) by the training organisation alternating with actual work experience related to the training course.

Within firms, training methods can also be transformed in order to promote redeployment and provide better support for low-skilled workers, who are less likely to seek training. The AFEST work-based training scheme (*Action de formation en situation de travail*), for instance, develops skills and/or qualifications in an individualised manner, by combining on-the-job situations with more theoretical phases intended to cement the lessons learned at work. These new training methods are intended to develop and certify skills as close as possible to what employers are looking for, thus improving workers' employability and career prospects. This type of applied, interactive training is considered suitable for low-skilled groups whose previous experience in education may make them reticent to participate in more conventional training programmes.[5]

Finally, to mitigate recruitment shortages, the operational preparation for employment scheme (*préparation opérationnelle à l'emploi, POE*) can train jobseekers for an occupation in areas where recruitment shortages have been iD. Brochier (2021), "Des reconversions aux transitions: un nouvel âge des mobilités professionnelles?", Cereq Bref 405, April. dentified. The recruitment need may have been identified by a firm, in which case the POE is implemented in an individual programme (POEI), or by an industry, in which case the POE is called "collective" (POEC) and can provide training for a group. The POE involves up to 400 hours' training and includes a period of real-world work experience. The POE is funded under the skills investment plan (PIC) and has been very effective in bringing people into the labour market.[6]

To encourage and then provide support for occupational transitions that could occur as the crisis eases, workers should be informed about all these measures. Special attention should be given to low-skilled workers, who on the whole have fewer opportunities for retraining and less access to vocational training, and whose skills are further from those of the job-creating sectors. As the crisis eases, it is also important to provide a connection between emergency measures that were designed to preserve jobs, and policies intended to facilitate the reallocation of labour resources.[7]

(5) D. Brochier (2021), "Des reconversions aux transitions: un nouvel âge des mobilités professionnelles?", Cereq Bref 405, April.
(6) In 2017, six months after completing an individual pre-employment programme (POEI), 88% were in employment, compared to 70% who completed a collective (sector-based) programme (POEC). The rate of return to employment is lower for the POECs because they do not include a formal hiring commitment by the employer. The POEI is reported to be the training programme with the highest net effect on achieving stable employment, with 34% employed after 12 months (see Blache G., *Études et recherches* 3, Pôle Emploi, 2015).
(7) "World Economic Outlook: Managing Divergent Recoveries", IMF, April 2021, Chapter 3: "Recessions and Recoveries in Labor Markets: Patterns, Policies, and Responses to the COVID-19 Shock".

Publisher:
Ministère de l'Économie, des Finances, et de la Relance
Direction générale du Trésor
139, rue de Bercy
75575 Paris CEDEX 12

Publication manager:
Agnès Bénassy-Quéré

Editor in chief:
Jean-Luc Schneider
(01 44 87 18 51)
tresor-eco@dgtresor.gouv.fr

English translation:
Centre de traduction
des ministères économique
et financier

Layout:
Maryse Dos Santos
ISSN 1962-400X
eISSN 2417-9698

https://www.tresor.economie.gouv.fr/Articles/tags/Tresor-Eco
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