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RP 1ST RESULTS 2021 N°12

ACTIVE RESIDENTS

Dynamic, segmented employment

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In 2021, Luxembourg will have almost 280,000 resident workers, 59.2% of whom were born abroad. The main sector of activity is public administration (31.1% of resident employment), which is made up of 70% native-born employees and 58.5% women. Luxembourgish is the most widely used language. In terms of occupations, native-born workers outnumber foreign-born workers in all sectors, but only in intermediate and administrative occupations. Next, sectors involving various types of professional services (finance, insurance, communication, specialised and scientific activities and other services) collectively account for 36.3% of resident employment. Luxembourg City and its conurbation absorb 80% of these jobs, where English is predominant, followed by French. Nine out of every ten university graduates employed in these services were born abroad. Finally, elementary, manual and technical occupations in the private sector account for almost a quarter of residents' employment. 80% of these jobs are filled by foreign-born workers, and Portuguese is over-represented. Almost 90% of these workers are men, except in the elementary professions where women are in the majority. Overall, French is the language most used at work (69.2% of resident workers).

What topics are covered in this publication?

After a previous issue detailing the economic situation of the resident population¹, the focus of this publication will be on people who are economically active in Luxembourg (employed and unemployed). A number of questions in the census make it possible to describe the employment of residents in terms of various aspects, such as professional status, occupation, sector of activity, level of education and working hours.

These different aspects of employment (in particular sectors and occupations) will then be analysed in relation to gender, the country of birth of resident workers and the languages spoken in the workplace. A more detailed analysis of the country's three main employment poles will also reveal significant geographical differences. Finally, jobseekers, who are also part of the working population, will be the subject of the last section.

¹ See also «What is the situation in relation to economic activity? RP, 1ers Résultats, n°11.

1. Demographics, occupations and sectors of resident workers

The census offers a rich panorama of the employment of residents

Before going into this description of employment based on population census data, it should be pointed out that the census does not, of course, include cross-border workers. However, the 220,600 jobs they held in Luxembourg in November 2021 (at the time of the census) represent 44% of the country's total employment². Although its focus on residents gives only a partial view of employment, the census is nevertheless one of the rare sources of data relating to certain special statuses such as international civil servants or outgoing cross-border commuters (see inset), making it possible to draw up a cross-tabulated table of occupations and/or sectors with numerous individual characteristics (education, country of origin, place of residence and work, etc.).

The proportion of women among residents in employment in Luxembourg is 46.4%. However, this proportion varies according to age. Between the ages of 25 and 49, the proportion of women among employed residents is closer to parity (47.8%). On the other hand, it is lower among workers aged under 24 (43%) and over 50 (44.1%). In terms of education, less than one in five resident workers (18.3%) has not completed secondary education, and more than one in three (36.7%) has completed upper secondary education³. Workers who have completed non-university post-secondary education account for 5.8% of the resident population in employment, while graduates of the first cycle of higher education (licence / bachelor) account for 12.5%. Finally, more than one in four resident workers has a long university degree (24.2% have a master's degree, and 2.4% have a doctorate).

1.1. Age, gender and education of resident workers

Almost one in two workers is under 40 (46.7%).

In the 2021 census, 279,437 residents indicated that they had a job in Luxembourg. We are interested in residents whose activity is carried out on Luxembourg territory, and not abroad (such as outgoing cross-border commuters). This population of workers is relatively young and educated. In fact, almost half of employed residents are under 40 (46.7%), while 27.1% are aged between 40 and 49. Just over an eighth of workers are aged between 50 and 54 (13.1%), and the remaining 13.2% are over 55.

² GSS/CCSS data at 30 November 2021, salaried and non-salaried employees.

³ Education was measured in the census on the basis of the International Standard Classification of Education (ISCED), which structures education into eight levels. <https://ilostat.ilo.org/fr/reSources/concepts-and-definitions/classification-education/>

1.2. Employment of residents and sectors of activity

Almost a third of residents work in public administration

Table 1: Breakdown of all resident workers, by occupation and sector

All residents	Intellectual and scientific occupations	Intermediate occupations	Direct services to individuals	Elementary occupations	Administrative occupations	Industrial and craft trades	Management occupations	Machine operators, assemblers	Farmers	Military occupations	Total
Public administration	11.5%	6.3%	4.4%	3.4%	2.7%	0.9%	0.6%	0.5%	0.5%	0.3%	31.1%
Commerce, transport, catering	1.9%	1.6%	5.3%	2.0%	2.1%	1.4%	1.6%	2.1%	0.0%	0.0%	18.0%
Specialised activities	6.7%	1.5%	0.6%	2.8%	1.0%	0.2%	1.3%	0.1%	0.2%	0.0%	14.4%
Finance and insurance	5.6%	1.3%	0.1%	0.1%	1.6%	0.0%	1.3%	0.0%	0.0%	0.0%	10.1%
Construction	0.8%	0.9%	0.1%	0.9%	0.4%	4.2%	0.4%	0.4%	0.0%	0.0%	8.2%
Other services	3.4%	0.9%	1.1%	1.4%	0.6%	0.1%	0.3%	0.1%	0.0%	0.0%	8.0%
Manufacturing and industry	0.9%	0.5%	0.2%	0.3%	0.4%	1.0%	0.3%	0.8%	0.0%	0.0%	4.4%
Information and communication	2.2%	0.3%	0.1%	0.2%	0.5%	0.1%	0.4%	0.0%	0.0%	0.0%	3.8%
Real estate activities	0.2%	0.5%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	1.0%
Agriculture	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	1.0%
Total	33.3%	13.8%	11.9%	11.3%	9.4%	8.1%	6.4%	4.0%	1.5%	0.4%	276114

Source: STATEC, RP2021.

Note: Numbers only include respondents to questions on occupations and sectors.

The breakdown of employment of resident workers by sector of activity confirms the country's specialisation in skill-intensive sectors⁴. The sectors (sometimes also called branches of activity) are grouped into 10 groups according to the NACE nomenclature in force in November 2021. The sector that provides the most jobs for residents is public administration (85,786 jobs, or 31.1% of the resident workforce), well ahead of trade, transport and storage, accommodation and food service activities (18%) (see table 1).

Next, we will regularly refer to an aggregate of sectors linked to 'professional services', which account for 36.3% of resident employment. We will use this term for the sake of brevity and because of the homogeneity of the sectors that comprise it in the Luxembourg economy, in particular

in terms of the distribution of occupations, the proportion of immigrant workers, and changes in the volume of employment over time. These are also the only four sectors in which more than half of workers use English in the workplace. This aggregate of professional services includes the following sectors:

- Specialised activities (scientific, technical, administrative and support services): 14.4% of the total employment for residents,
- Financial and insurance activities: 10.1%,
- Information and communication: 3.8%,
- Other services: 8%.

The remaining sectors are construction (8.2%), manufacturing (4.4%), real estate (1%) and agriculture (1%).

⁴ It should be pointed out that not all working people indicated their sector of activity or occupation at the time of the census. The portrait of resident workers therefore covers only the 97% of them, since 279,106 gave their sector of activity, and 286,085 their occupation.

Inset: focus on international civil servants

In national accounts, and for calculations relating to Luxembourg's balance of payments, it is common practice to consider international civil servants working in Luxembourg as outgoing cross-border commuters, as they do not contribute to the country's economy. The census is an opportunity to get to know them better. Thus, 9,572 residents, or 3.4% of respondents to the question on professional status, indicated that they had the status of international civil servants and that almost all of them worked in Luxembourg. Of these, more than half are women (54.7%) and just 4% were born in Luxembourg. Most of them come from France (10.5% of international civil servants were born in France), followed by Italy (8.7%), Spain and Belgium (6.9% and 5.6% respectively). The capital is clearly attractive to these international civil servants, as 46.7% of them live there.

1.3. Employment of resident workers and occupations

One in three resident workers is employed in intellectual and scientific professions

The employment of resident workers can also be described in terms of occupations, with each occupation being represented to varying degrees across the different sectors. The distribution of resident workers according to ISCO⁵ reveals a Luxembourg economy strongly focused on intellectual and scientific professions, which represent the most significant share with 33.3%. Next come intermediate occupations (scientific, technical, administrative and support occupations; 13.8%), personal services workers (11.9%), and elementary occupations (11.3%). Next come administrative occupations (9.4%), skilled craft and industrial workers (8.1%) and managers (6.4%). Finally, the occupations that each occupy less than 5% of total resident employment are machine operators and assembly workers (4%), farmers (1.5%) and military occupations (0.4%).

Demographically, the age of workers varies somewhat by occupation. The majority of military personnel are under the age of 30, and the majority of workers in professional, intermediate and personal service occupations are under the age of 35. All other occupations have a median age of between 40 and 44.

Compared with the European Union average, Luxembourg is characterised by an economy specialising in highly qualified professions. More specifically, it is characterised by a much higher concentration in intellectual and scientific professions (33.3% of resident employment, compared with 19.5% of employment in the EU, according to official Eurostat figures) and in managerial professions (6.4% in Luxembourg, compared with 5.2% in the EU). Elementary occupations are also more represented in Luxembourg (11.3%) than in the EU (8.7%).

1.4 Cross-analysis of occupations and sectors

A cross-analysis of employment by sector and by occupation reveals that the distribution of occupations varies significantly between sectors.

Farmers account for 69.1% of jobs in the agricultural sector, construction jobs include 51.6% of skilled industrial and craft occupations, and real estate activities involve 43.7% of intermediate occupations. Last but not least, intellectual and scientific professions dominate professional services, accounting on average for 49% of jobs held by residents in finance and insurance, information and communication, specialised activities and other services. In addition, intellectual and scientific occupations are versatile, accounting for 37.1% of occupations in public administration and around 20% in manufacturing, mining and real estate.

Finally, certain cross-occupations and sectors are particularly prevalent in the employment of residents. In particular, 11.5% of the total employment of residents is made up of professional occupations in public administration (see table 1). Other combinations each account for more than 5% of this employment: professional occupations in specialised activities, the financial and insurance sector, as well as intermediate occupations in public administration, and personal services staff in the trade and catering sector.

⁵ The ISCO (International Standard Classification of Occupations) classification of occupations was developed to make labour market statistics internationally comparable. It is the EUROSTAT standard classification. <https://ilostat.ilo.org/en/resources/concepts-and-definitions/classification-occupation/>

2. Geography of professions and sectors

Before describing the distribution of residents' employment according to employment poles and municipalities of work, it should be mentioned that, compared to the previous section, 91,668 individuals cannot be taken into account in this section. These are the 82,974 people who did not communicate their commune of work, as well as the 8,694 people who declared that they had a variable commune of work in Luxembourg (commercial workers, fairground workers, etc.). In fact, as stated at the beginning of this publication, people working outside the country (outbound cross-border commuters) are not taken into account here either (see insert).

Inset: Outgoing cross-border commuters: a place of work outside of Luxembourg

Outgoing cross-border commuters are workers who live in Luxembourg but have a job on the other side of the border. Very little is known about this population, which can only be approached through the population census, which recorded 4,447 in 2021, or 1.6% of employed residents. Of these, 47% are women. In most cases, the activity carried out on the other side of the border is salaried, for both men and women (63% of men and 60.9% of women). The second most common status among outgoing cross-border commuters is that of civil servant/public employee in another country (for 15.5% of them), which is nevertheless under-represented compared to all employed residents (21.6%). Self-employment, farming and apprenticeships are also over-represented among outgoing cross-border commuters. In terms of occupations, in the vast majority of cases (59.2%), these outgoing workers carry out an intellectual or scientific activity, and this is even more evident than for residents as a whole. It should also be noted that in almost three-quarters of cases, these outgoing cross-border commuters have a high level of education (Bachelor's, Master's or Doctorate). In addition to these few descriptive elements, it would be interesting to know the motivations of these rather atypical working people, who go against the grain of traditional cross-border flows to Luxembourg.

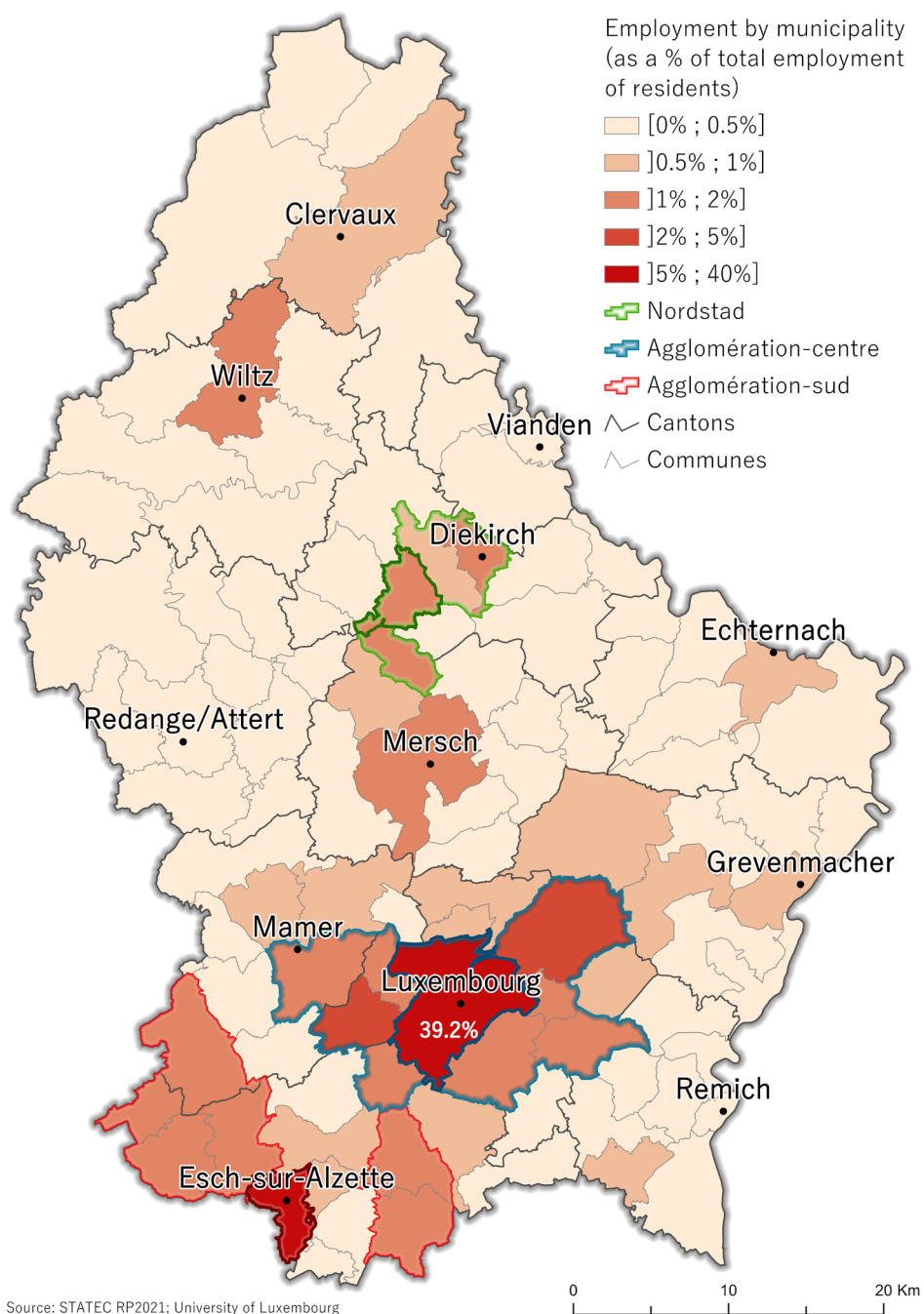
2.1. Geographical breakdown of residents' employment

Cahier n°10 of the Population Census⁶ has already revealed that almost three quarters of the jobs held by residents (74.2%) are located in three employment centres⁷. The first centre, which alone absorbs more than half of the jobs held by residents (53.5%), is the Agglomération-centre (shown in blue on map 1 below). The second centre (15.2%) is the Agglomération-sud, shown in red. The third centre, which accounts for 5.5% of total employment, is Nordstad (green). The map below illustrates this distribution, including the employment centres of Mersch and Wiltz. On this map, the lighter municipalities (mainly in the north, east and west of the country) each account for at least 0.5% of total employment, while all the darker municipalities alone account for 87.4% of total resident employment.

⁶ See «Une polarisation croissante des déplacements domicile-travail au Luxembourg», 2024, Premiers Résultats, n°10.

⁷ The conurbation includes 9 municipalities: Luxembourg (39.3% of total resident employment), Bertrange, Niederanven, Mamer, Strassen, Leudelange, Hesperange, Contern and Sandweiler. The Agglomération-sud includes the municipalities of Esch-sur-Alzette (5.6% of resident employment), Dudelange, Differdange, Sanem, Pétange, Bettembourg and Käerjeng. The Nordstad includes Ettelbruck, Diekirch, Colmar-Berg and Erpeldange-sur-Sûre.

Map 1: Employment by municipality of work (as a % of total resident employment)



Source: STATEC RP2021, University of Luxembourg.

Note: Numbers include respondents only.

Note for the reader: 39.2% of employed residents work in Luxembourg-City.

Table 2 describes the composition of residents' employment (in terms of sector, occupation and education) within the three main employment centres and the other municipalities in the country.

Table 2: Breakdown of occupations and sectors by employment zone

	CENTRE	SUD	NORDSTAD	Other municipalities
Employment (as % of total resident employment)	53.5%	15.2%	5.5%	25.8%
Breakdown of employment by occupation				
Intellectual and scientific professions	45.0%	28.3%	26.4%	22.7%
Intermediate occupations	12.8%	15.3%	16.0%	15.5%
Personal services, sales	9.1%	14.1%	13.8%	15.3%
Elementary occupations	7.3%	12.0%	10.3%	12.2%
Administrative employees	11.0%	8.6%	7.7%	7.4%
Skilled industrial and craft trades	4.3%	10.4%	9.0%	12.3%
Directors, executives, managers	7.7%	4.5%	2.9%	4.8%
Machine operators, assembly	2.2%	5.4%	8.2%	5.6%
Farmers	0.5%	1.3%	1.5%	4.1%
Military professions	0.2%	0.1%	4.2%	0.1%
	100%	100%	100%	100%
Breakdown of employment by sector				
Public administration	28.6%	45.3%	51.3%	37.2%
Commerce, transport, accommodation and catering	14.1%	19.7%	14.9%	21.1%
Specialised acts (sci. techn. admin. support)	16.9%	8.5%	8.6%	7.5%
Financial and insurance activities	17.0%	2.3%	1.5%	2.6%
Construction	3.4%	9.3%	5.4%	11.9%
Other services	12.2%	4.2%	2.7%	4.8%
Manufacturing and mining	1.8%	6.4%	13.1%	7.3%
Information and communication	5.0%	2.9%	1.0%	2.7%
Real estate activities	0.9%	1.1%	0.7%	1.2%
Agriculture, forestry, fishing	0.1%	0.3%	0.8%	3.7%
	100%	100%	100%	100%
Education				
University graduates (as a % of employment in the area)	52.1%	29.8%	24.8%	24.6%

Source: STATEC, RP2021.

Note: Numbers only include individuals who declared their occupation, sector of activity and municipality of work.

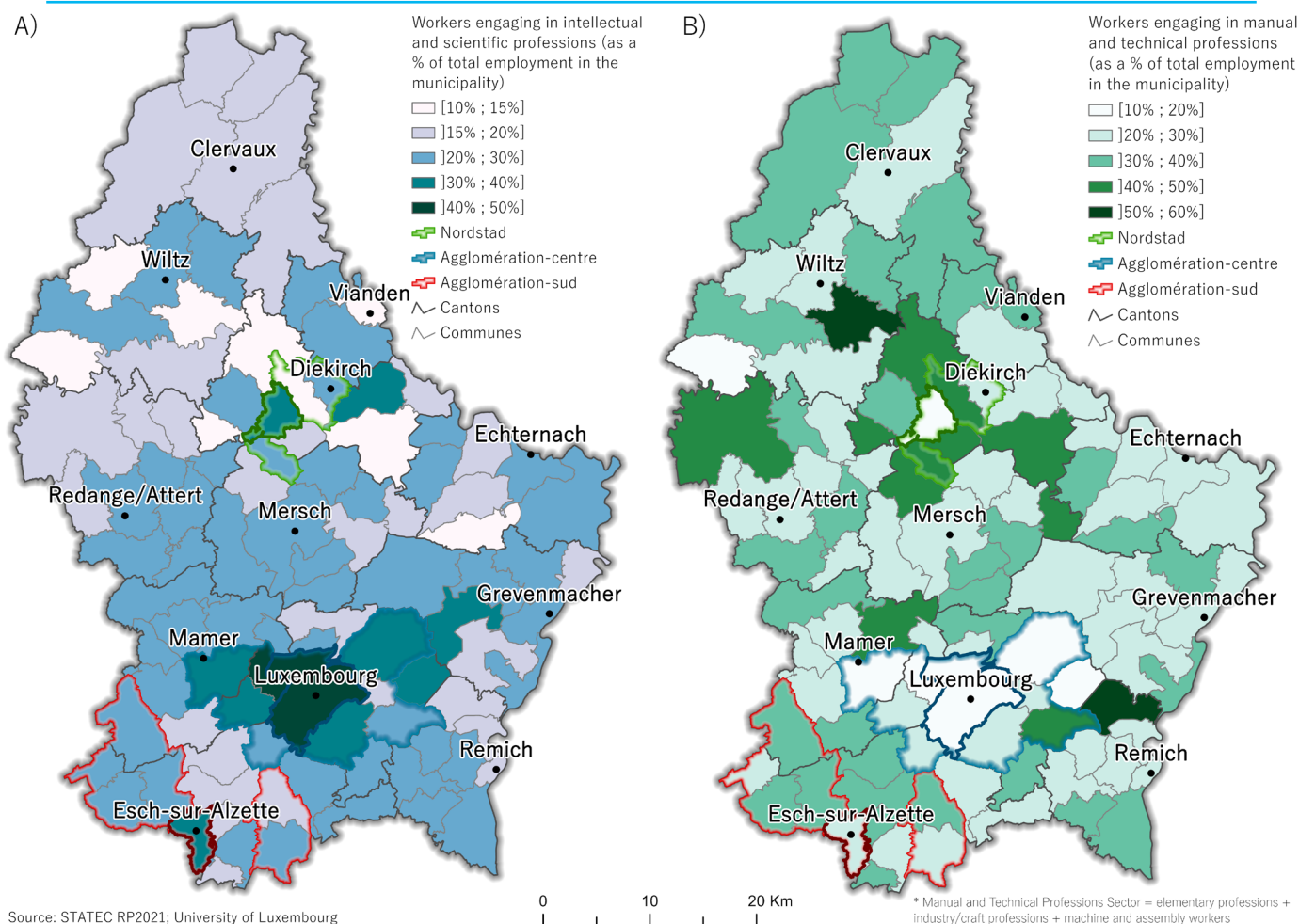
2.2. Geography of resident workers' occupations

First of all, the conurbation is by far the most intensive centre for highly skilled work. In fact, 45% of its jobs are in intellectual and scientific occupations (see map 2.A), 7.7% in management occupations and 11% in administrative occupations, with these three types of occupation being much more prevalent than in the rest of the country as a whole (see table 2). The Southern Agglomeration, Nordstad and the municipalities

that do not belong to any of the three main centres are fairly similar in terms of the distribution of occupations. They employ higher proportions than the national average of intermediate occupations, services to individuals, and manual and technical occupations⁸ (see map 2.B).

With the exception of the Agglomération-Centre, the rest of the country has a distribution of occupations that is fairly similar to that of the EU on average, except that the proportions of professionals and elementary occupations are both higher than in the EU. However, it is interesting to note that some municipalities outside the three employment poles have high proportions of manual and technical occupations (see map 2.B).

Maps 2: Workers in (A) intellectual and scientific occupations and (B) manual and technical occupations (as a % of total employment in the municipality)



Source: STATEC RP2021, University of Luxembourg.

Note: Numbers only include respondents to questions on occupations and sectors.

Note 2: Manual and technical occupations include skilled industrial and craft occupations, machine operators and skilled tradesmen, assembly workers and elementary occupations.

⁸ Manual and technical occupations include skilled industrial and craft trades, machine operators and assembly workers and elementary occupations, see map 2.B.

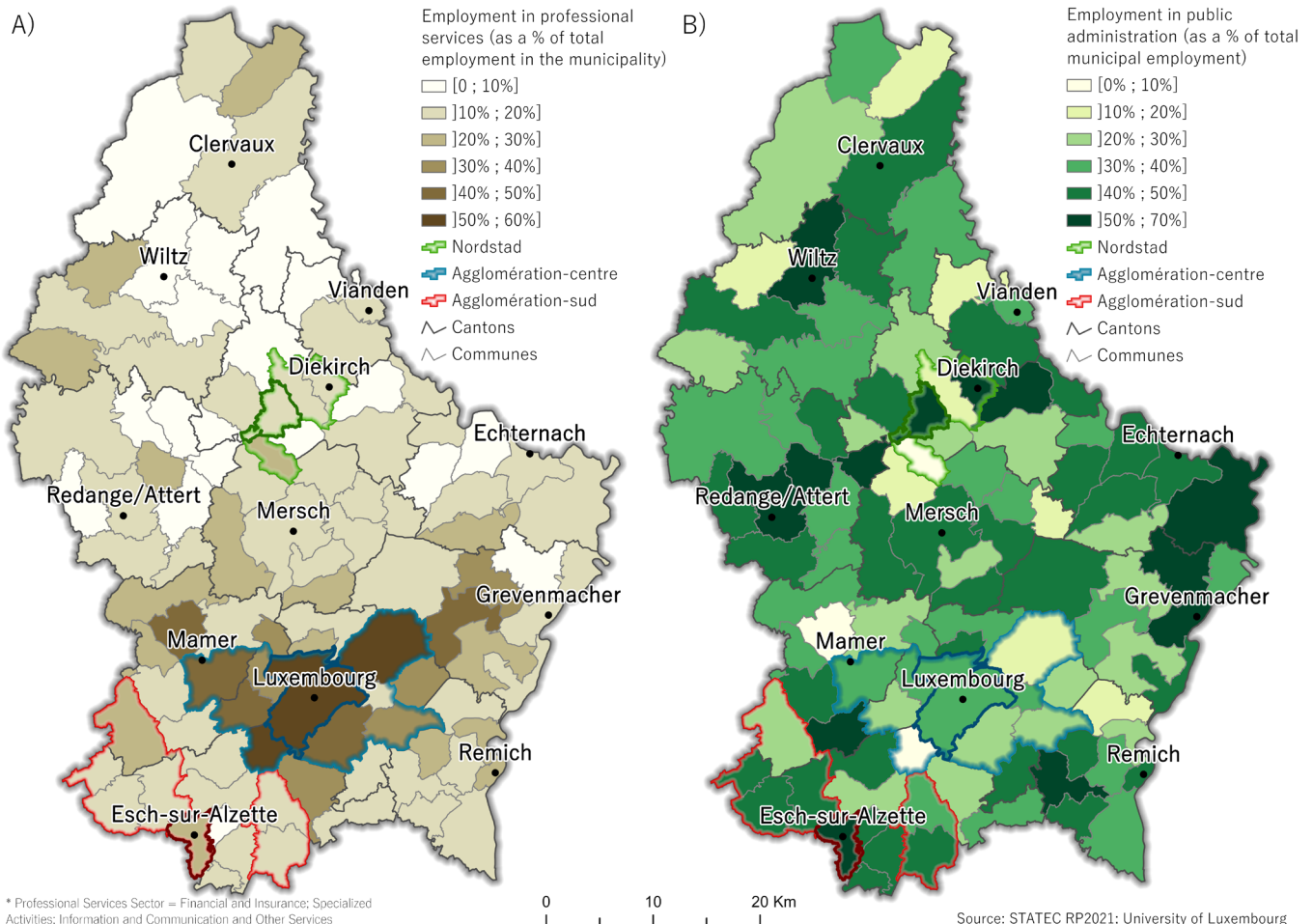
2.3. Geography of resident worker sectors

A geographical analysis of the sectors of activity reveals that the employment of residents in the conurbation centre is concentrated in professional services (51% of employment in this centre, see map 3.A and table 2). This breaks down into finance and insurance (17%), specialised activities (16.9%), information and communication (5%), and other services (12.2%)⁹. Public administration (28.3%) and trade, transport and catering (14%) account for the remainder of employment in the conurbation.

As for the other two centres and the rest of the country, some interesting nuances emerge. Firstly, as map 3.B illustrates, public administration accounts for almost half of employment in the country's other two main centres (51.3% in the north, 45.3% in the south), whereas this proportion is lower in the rest of the country (37.2%).

Nordstad is also more involved in industry (13% of its employment). However, all other sectors are less present than in other parts of the country. The Southern Agglomeration and the rest of the country are more intensive in trade, transport and catering, construction and industry. Lastly, it is in the municipalities outside the 3 employment centres that agriculture is most present (3.8% of employment outside the 3 centres).

Maps 3: Workers employed (A) in professional services and (B) in public administration (% of total workforce in the municipality)



Source: STATEC RP2021, University of Luxembourg.

Note 1: Numbers only include respondents to questions on occupations and sectors.

Note 2: Professional services include finance and insurance, specialised activities, information and communication services, communication and other services.

⁹ The term «professional services», which encompasses these 4 sectors, was explained in Section 1.2.

3.

Employment and origins

Having described the employment of residents as a whole and then in greater geographical detail, let us now look at this employment from the point of view of the workers' country of birth. People born abroad and working in Luxembourg in 2021 will account for 59.2% of all residents in employment¹⁰.

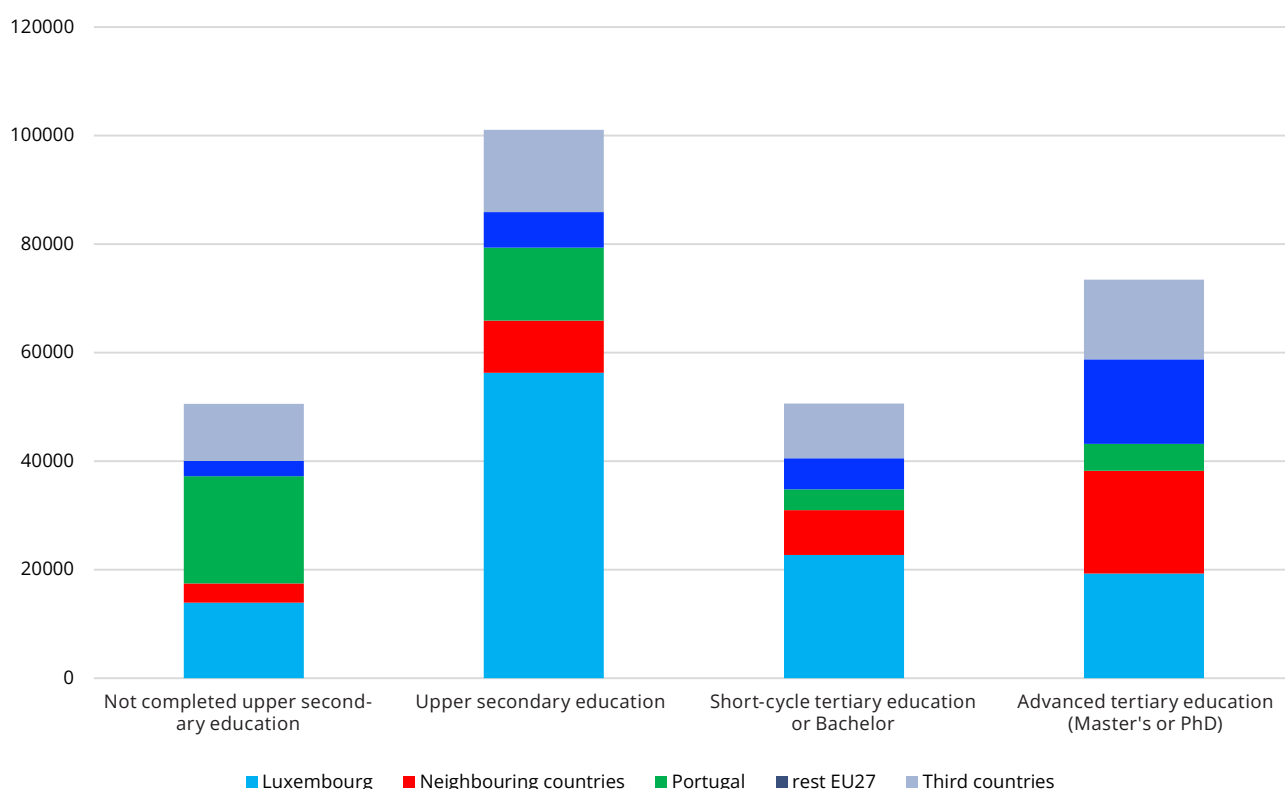
3.1

Education and origins

Before going into the details of sectors and occupations, let's start by describing the role played by immigration in the workforce in terms of levels of education.

As well as describing the distribution of educational levels among the resident population in employment, graph 1 breaks down this distribution by country of birth. This breakdown highlights the key role played by immigration, which provides a workforce with a variety of profiles, both highly educated and less so¹¹.

Figure 1: Distribution of the resident population in employment by level of education and country of birth



Source: STATEC, RP2021

¹⁰ For more details on the migratory background of the population in the broad sense, and on the geographical distribution of the population, see the publications RP 1ers résultats n°6 and 9.

¹¹ A forthcoming publication will look in detail at the level of education of the resident population, and of immigrants in particular.

The distribution of native-born workers (in blue) is markedly different from that of non-native workers, with a marked tendency towards intermediate levels of education. In fact, workers born in Luxembourg make up just over half of all workers with secondary education qualifications (55.7%) and just under half of workers with short or undergraduate tertiary qualifications (44.8%). On the other hand, they account for only a quarter of graduates of long university courses (26.3%) and a quarter of workers who have not completed secondary education (27.5%). Thus, almost two-thirds of workers born in Luxembourg do not have a higher education qualification (62.6%), while two-thirds of workers born abroad do (66.1%). Consequently, among resident workers with a post-secondary qualification, only one in three was born in Luxembourg (33.8%), almost one in two is from another EU country (46.2%), and the remaining 19.9% are from non-EU countries.

If we analyse higher education levels in more detail, distinguishing between short (non-university and undergraduate) and long university degrees, the comparison is to the advantage of foreign-born workers. In fact, less than half of native workers with higher education have a long university degree (46%), while two-thirds of non-native workers with higher education have one (66%). Insofar as, as we saw earlier, the employment of residents is strongly based on intellectual and scientific professions, this finding highlights the country's strong dependence on qualified foreign workers.

Beyond the comparison of education levels between natives and non-natives, there is a certain divide in the education levels of foreign-born workers. On the one hand, almost half of workers born in Portugal do not have a secondary school diploma (47.6%). On the other hand, almost half of resident workers born in Belgium, France and Germany have a long university degree (47.6%). This proportion is even higher among workers from the rest of the EU (50.7%). Although this phenomenon is slightly less marked among workers from non-EU countries, 29.1% of them also have a long university degree.

In order to provide more detail on the origin of the human capital of resident workers, we examine here the countries in which they completed their studies¹². 40% of respondents said that they had completed their studies in Luxembourg, compared with 28% in neighbouring countries and 23% in other EU countries¹³. This question is interesting because it highlights the variety of places of education and the sectoral orientation of these courses for people working in Luxembourg. Of course, country of study is also linked to country of birth and age at the time of arrival in Luxembourg. However, we did not go into this level of detail.

If we focus on the individuals who completed their training in Luxembourg, it appears that they are mainly active in public administration (48.1% of them) and the trade, transport and catering sector (18.4%) (see Table 3). Those who completed their training in Portugal also tend to work in the latter sector (21.8% in trade, transport and catering), as well as in construction (28%). It is also interesting to note that 37.8% of people who completed their studies in neighbouring countries have a job in public administration. They are also over-represented in finance and insurance. It should be noted here that these sectors employ people who often have higher education qualifications, and that the University of Luxembourg is only 20 years old. It would therefore be pertinent to supplement these results by focusing on individuals who began their professional careers once the University of Luxembourg was created.

If we broaden our analysis to include individuals who completed their studies in non-European areas, such as Africa, South America, Asia or the North America-Oceania-England grouping, we also see the emergence of key sectors of the economy, with an over-representation in specialised activities, linked to the high proportion of skilled immigrants. An examination by occupation confirms that neighbouring countries, if not Europe, are often the place where employees in key occupations, such as intellectual and scientific professions, complete their studies (57% of those completing their studies in neighbouring countries, which account for 28% of those completing their studies).

12 During the census, people aged 15 and over were asked to specify the highest level of education they had successfully completed and the country in which they had completed their studies.

13 The response rate for this variable was 71.4%.

Table 3: Sector of activity by country of completion of studies

	Agriculture	Manufacturing industry	Construction	Trade, transport, catering	Information and communication	Finance and Insurance	Real estate activities	Special activities	Public administration	Other services	All sectors
Luxembourg	1.9	5.2	4.8	18.4	3.3	7.1	1.0	6.4	48.1	3.8	100
Portugal	0.5	6.6	28.0	21.8	1.1	1.9	0.9	14.7	12.6	11.7	100
Border countries	0.6	3.2	2.3	10.6	4.6	14.4	1.3	16.7	37.8	8.4	100
EU15	0.4	4.6	15.7	16.9	3.2	10.8	0.7	17.4	14.1	16.2	100
EU28	1.8	3.5	3.6	13.7	5.9	12.1	0.4	13.3	8.3	37.5	100
Other Europeans	0.3	5.2	10.5	20.0	4.0	8.1	1.2	20.6	20.7	9.5	100
Africa	0.1	5.7	12.4	25.2	5.2	5.9	0.6	23.3	16.7	4.8	100
South and Central America	0.3	4.4	5.7	23.2	6.8	12.3	1.2	21.9	12.8	11.4	100
Asia	0.3	3.2	1.8	18.4	12.0	15.8	0.4	31.3	10.7	6.1	100
North America, Oceania, UK	0.1	1.9	0.5	5.2	7.3	23.9	0.7	20.5	22.7	17.1	100

Source: STATEC, RP2021

Note: the numbers only include those who answered the questions on sector and country of completion of studies.

3.2 Professions and origins

Almost six out of ten resident workers were born abroad (59.2%). How does this average distribution vary according to occupational category?

Firstly, in the intellectual professions (one third of resident employment), the proportion of foreign-born people is very similar (60.8%) (see table 4).

On the other hand, immigrant workers are more represented in management occupations (75.4%), but also in elementary occupations (76%), skilled trades and crafts (66.3%), and machine operators and assembly workers (64.2%). Next, foreign-born workers make up around half of those employed in direct services to individuals (53.7%) and administrative professions (47.5%). Finally, foreign-born workers represent a minority of residents working in intermediate occupations (45.1%), farmers and skilled agricultural workers (34.6%), and military occupations (18.6%).

Table 4: Share of jobs held by foreign-born workers, by sector and occupation

	Intellectual and scientific professions	Intermediate Professions	Direct services to private individuals	Elementary Professions	Administrative Professions	Industrial and craft trades	Management Professions	Machine operators, assemblage	Farmers	Professions militaires	All sectors
Public administration	Farmers	Military professions		49.2%	21.3%	21.9%	36.1%	31.1%	31.1%	12.8%	29.6%
Commerce, transport, catering	All sectors	56.8%	67.9%	81.9%	49.3%	55.9%	74.2%	63.0%	60.2%	50.0%	64.8%
Specialised activities	78.6%	66.7%	75.8%	92.9%	69.3%	61.6%	86.0%	73.4%	79.3%	50.0%	79.7%
Finance and insurance	80.5%	62.5%	72.1%	82.5%	61.0%	83.6%	86.4%	81.0%	0.0%	NA	75.7%
Construction	79.0%	69.4%	58.4%	93.5%	65.0%	83.7%	75.5%	91.8%	72.2%	100.0%	81.7%
Other services	87.0%	62.4%	67.4%	91.8%	77.9%	68.7%	74.9%	77.8%	62.8%	100.0%	80.6%
Manufacturing and industry	60.6%	45.8%	57.2%	69.3%	50.1%	54.8%	66.1%	68.7%	50.0%	83.3%	59.1%
Information and communication	76.8%	55.9%	62.4%	64.6%	39.9%	31.6%	80.1%	50.0%	10.0%	20.0%	67.8%
Real estate activities	64.4%	54.6%	58.2%	79.7%	54.4%	60.0%	59.3%	80.0%	50.0%	NA	59.7%
Agriculture	29.8%	26.0%	31.8%	48.3%	37.5%	31.9%	26.9%	38.1%	20.3%	100.0%	25.9%
All professions	60.8%	45.1%	53.7%	76.0%	47.5%	66.3%	75.4%	64.2%	34.6%	18.6%	59.2%

Source: STATEC RP2021

Note for the reader: Among residents working in an intellectual or scientific profession (1st column) in the public sector (1st line), 28.4% of them were born abroad (and 72.6% were born in Luxembourg).

3.3. Sectors of activity and origins

The difference between natives and non-natives by sector of activity is even more marked than the distinction by occupation. Firstly, and unsurprisingly, non-natives are much less represented in public administration (29.6% of resident workers employed in this sector). In fact, more than one in two native-born workers is employed in public administration (53.6%), while only 15.2% of foreign-born workers work in this sector. Agriculture is the second sector in which foreign-born workers are in the minority (25.9%).

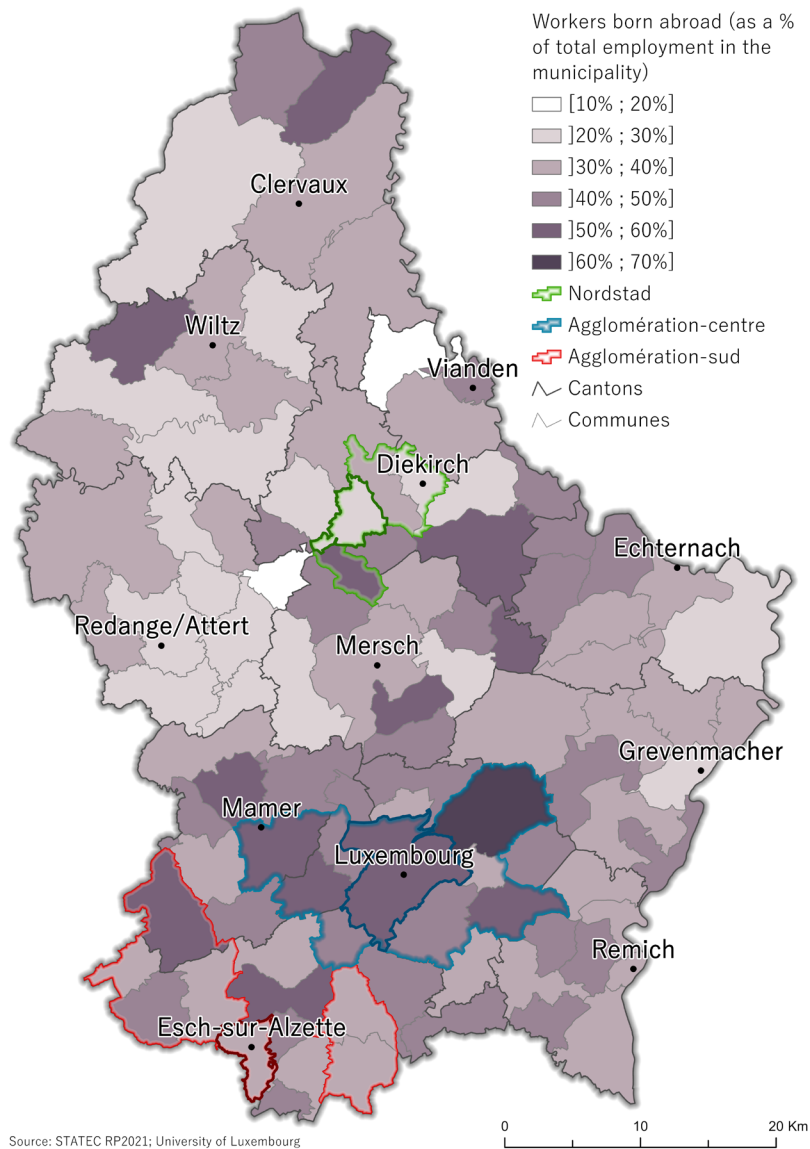
Conversely, foreign-born workers are largely dominant in professional services: their proportion is close to 80% in the specialised activities, finance and insurance, and other services sectors. The construction sector relies mainly on foreign-born workers (81.7% of resident employment in this sector).

3.4. Geographical breakdown of foreign-born workers

In this sub-section, we describe the distribution of immigrant workers according to job location. First of all, the municipalities in the central agglomeration, where employment is highest, also tend to be the municipalities with the highest proportions of foreign-born workers (see map 4). This can be explained in particular by the fact that these municipalities are also those with the highest concentration of professional and scientific occupations and jobs in professional services. On the other hand, other high-employment municipalities have lower proportions of immigrants than the national average. These include Esch-sur-Alzette and most of the municipalities in the southern conurbation, as well as many municipalities in the Nordstad region, where public administration is the main sector of employment.

Finally, some municipalities close to the borders with Belgium and Germany, where employment is comparatively low, have higher than average proportions of foreign-born workers. This finding confirms that the three main employment centres, as well as the rest of the country, have very different characteristics in terms of sectors, occupations and proportions of immigrant workers.

Map 4: Foreign-born workers (% of workers per municipality)



Source: STATEC, RP2021.

Note: Numbers only include respondents to questions on occupations and sectors.

3.5 Level of education of working immigrants by year of arrival

Having given an overall description of the population of foreign workers in employment in Luxembourg in 2021, we distinguish them here according to their year of arrival. It should be noted, however, that the size of the arrival cohorts - and of the oldest in particular - is undoubtedly underestimated, given the nature of the census data used here. Indeed, these data do not take into account immigrants who, for various reasons, left the Luxembourg labour market before 2021 or who are no longer in employment. Nevertheless, this sub-section does suggest some interesting trends.

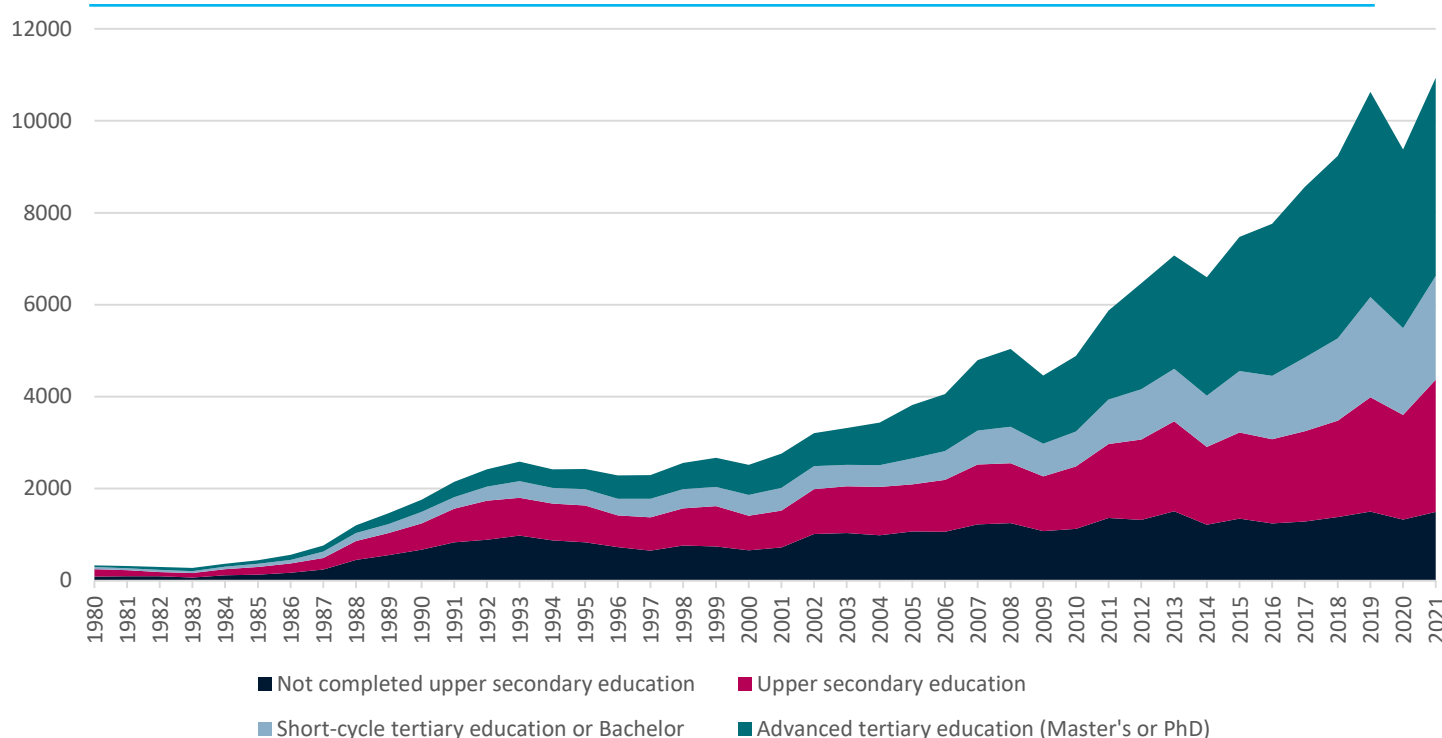
The number of workers arriving in Luxembourg - and still in employment in 2021 - is below 1,000 per year for the cohorts arriving

between 1980 and 1987. From 2002 onwards (when 3,000 individuals who are still working in 2021 arrived), the size of the cohorts increased sharply, by an average of 9% per year until 2021. From then on, the 2008 cohort exceeds 5,000 individuals, and the 2019 cohort has more than 10,000.

Only two notable exceptions have disrupted this growth: the financial crisis of 2009 and the COVID-19 pandemic in 2020, which led to a reduction in the size of each of these two cohorts of just over 10% compared with the previous year. Finally, the cohort of foreign workers arriving in 2021 amounts to 10,933 individuals.

Of the people who arrived in the 80s and will still be working in Luxembourg in 2021, more than 30% have at most a lower secondary education qualification. This proportion peaked at almost 40% for the 1991 cohort, then fell steadily to represent only 13.6% of workers arriving in Luxembourg in 2021. Conversely, the proportion of workers with a higher education qualification increases over the years of arrival, reaching 60% in 2019.

Figure 2: Number of foreign-born workers still employed in Luxembourg in 2021, by year of arrival and by level of education



Source: STATEC RP2021

Note: the graph only covers respondents to the questions on education, year of arrival in Luxembourg and economic activity, and still in operation in 2021.

4. Employment and gender

Men and women often do not work in the same sectors or professions, and do not necessarily have the same levels of education. However, with the sharp rise in women's educational levels and their access to jobs that were closed to them in the past, these gender differentials are expected to narrow over time. This section presents the gender breakdown by sector, occupation and level of education, as well as the working hours of men and women.

Table 5: Share of female and male employment by sector (in %)

	Women	Men	Total
Agriculture, Forestry, Fishing	30.8	69.2	100
Manufacturing, Mining	23.7	76.3	100
Construction	10.1	89.9	100
Commerce, Transport and warehousing, Accommodation and catering	39.5	60.5	100
Information and communication	29.8	70.2	100
Act. Financial and insurance	45.3	54.7	100
Real estate	47.9	52.1	100
Specialised, scientific and technical, administrative and support services	51.9	48.1	100
Public administration	58.5	41.5	100
Other services	65.9	34.1	100

Source: STATEC, RP2021

Note: Numbers include only respondents to the question about the sectors.

As expected, the results show an unequal presence of men and women by sector (table 5). Only three sectors show a certain gender balance. These are financial and insurance activities, real estate activities and professional, scientific and technical activities and administrative and support service activities. The five most male-dominated sectors are agriculture, manufacturing, construction, trade, transport and storage, accommodation and food, and information and communication. Women are more present in only two sectors: public administration and other services.

These differences can be explained by a number of factors. We can group them into different groups. The first group of factors has to do with gender stereotypes, with, for example, sectors traditionally seen and considered as destined for one gender or the other. A second group has to do with more effective barriers applicable to training, recruitment or the exercise of

professional activity. A third group of factors relates to the attractiveness of jobs in a given sector, such as pay. However, more detailed and numerous data are needed to investigate the underlying mechanisms leading to these differences.

Table 6: Share of female and male employment by occupation (%)

	Women	Men	Total
Directors, executives, managers	36.3	63.7	100
Intellectual and scientific professions	47.6	52.4	100
Intermediate occupations	56.4	43.6	100
Administrative employees	49.0	51.0	100
Direct customer service staff, shopkeepers, sales staff	57.1	42.9	100
Farmers and skilled agricultural and forestry workers	27.2	72.8	100
Skilled trades and industry and crafts	10.4	89.6	100
Machine operators, assembly workers	13.8	86.2	100
Elementary occupations	63.8	36.2	100
Military professions	21.0	79.0	100

Source: STATEC, RP2021

Note: Numbers include only respondents to the question about professions.

Examination of occupations shows that the differences are slightly less marked than by sector (see table 6). The most feminised occupations are intermediary professions, retail and sales workers, and elementary occupations. On the other hand, the most male-dominated occupations are blue-collar workers (skilled industrial and craft trades, machine operators and assembly workers), otherwise those in the primary sector (farmers and skilled agricultural and forestry workers), the armed forces (middle occupations) or directors and senior managers. Men are also more present in the intellectual and scientific professions, but the gap is smaller.

However, women are also over-represented in elementary occupations. What remains to be examined is the nature of these elementary occupations held by women, who are often of Portuguese or African origin. That said, it is clear that working women and men are heterogeneous groups, with both low-skilled and skilled or even highly skilled jobs.

Table 7: Distribution of education levels for women and men (in %)

	Women	Men
Less than primary education	1.1	1.2
Primary education	6.5	7.2
1st secondary cycle	7.9	10.2
Secondary cycle 2	36.5	37.5
Post secondary non-tertiary	0.9	2.9
Short higher education	4.9	3.4
Licence	15.1	10.4
Master	25.0	24.5
Doctorate	2.1	2.9
Total	100.0	100.0

Source: STATEC, RP2021

Note: Numbers include only respondents to the question on education.

The differences between men and women are reduced when we examine their distribution by level of education (see table 7). In particular, there are few gender gaps at the lower levels of education, corresponding to the lowest qualifications. There are, however, differences at the highest levels. Women are less present in doctorate courses. On the other hand, they are more likely than men to have a bachelor's degree.

Significant differences seem to emerge when we examine the declared working hours of men and women. During the census, residents were asked to indicate the usual weekly working hours of their main job¹⁴. While 35.8% of women stated that they worked less than the legal 40 hours, and therefore part-time¹⁵, only 7.6% of men responded in this way.

Some women have part-time contracts by choice, for example in order to have time to look after their children or relatives. Other part-time jobs, on the other hand, are more likely to be non-voluntary, due in particular to the organisation of professions or sectors.

Table 8 shows the proportion of women working part-time in each occupation. Our results tend to indicate that it is in male-dominated occupations (over-representation of male employees) that the proportion of women working part-time is lowest: machine operators, the military and skilled industrial occupations. Women also appear to be less likely to work part-time in occupations requiring a high level of investment in human capital, such as managers and intellectual and

scientific professions¹⁶. In contrast, female part-time work is relatively widespread in the more feminised sectors of elementary professions, intermediate professions and personal services. In fact, while 15.4% of female managers work less than 40 hours a week, 39.7% do so in intermediate occupations and 57.6% in elementary occupations. Various factors could explain these results. It is possible that in the more male-dominated professions, there are few opportunities for part-time work, regardless of gender. On the other hand, these contracts are often offered in certain occupations where women predominate. It could also be that part-time jobs are less in demand by the candidates themselves in occupations where part-time work is uncommon. Managers come to mind here.

Table 8: Share of women working part-time by main occupation (%)

	% of women working part-time
Male-dominated occupations	
Industrial and craft trades	27.0
Machine operator, assembly	29.0
Military professions	33.8
Professions requiring significant investment in human capital	
Management profession	15.4
Intellectual and scientific professions	28.6
Female-dominated occupations	
Intermediate occupations	39.8
Direct services to individuals	38.6
Elementary occupations	57.6

Source: STATEC, RP2021

Note: Numbers include only respondents to the question about professions.

¹⁴ 72,201 individuals (including 29,673 women) in employment did not indicate their working hours. They will not be taken into account in the calculations in this section.

¹⁵ Part-time workers are defined as individuals who declare that they work 39 hours a week or less, in accordance with STATEC's analysis methods based on the Structure of Earnings Survey.

¹⁶ Agricultural occupations, which include a large number of self-employed workers who may work longer than the legal working hours, were excluded from the analysis.

5. Employment and languages

212 127 people employed in the Grand Duchy answered this question by giving one or more answers. They make up the population studied in this section.

The word 'usually' used in the question was intended to encourage respondents not to indicate languages used only occasionally. This question is not intended to examine language knowledge or skill levels: not 'usually' speaking a language does not necessarily mean not knowing it or using it occasionally at work. Respondents may master other languages that they speak only occasionally or in other situations¹⁷.

At 69.2%, French tops the list of languages spoken at work, followed by Luxembourgish (54.4%) and English (40.0%) (see table 10). Far behind come German and Portuguese, used by 29.5% and 14.8% of employed respondents respectively. This table only reflects spoken language use. It can be assumed that German and English are more widely used in writing. The use of English increased by 11.5 percentage points between the two censuses, while that of Luxembourgish and German fell by 5.1 and 4.7 percentage points respectively. The average number of languages indicated by respondents has not changed.

Table 9: Languages spoken at work (several possible answers)

	2011	2021
French	68.2%	69.2%
Luxembourgish	60.5%	54.4%
German	34.2%	29.5%
English	28.5%	40.0%
Portuguese	14.6%	14.8%
Italian	4.8%	4.1%
Other languages	7.3%	6.9%
Total	226 916	212 127
Average number of languages indicated	2.18	2.19

Source: STATEC, RP2021 and RP2011.

Note: Numbers only include respondents to the question on languages at work who work in the Grand Duchy.

¹⁷ On the 2011 census: Fernand Fehlen and Andreas Heinz: Regards sur les langues parlées au travail, April 2016, STATEC, <https://statistiques.public.lu/dam-assets/catalogue-publications/regards/2016/regards-11-16.pdf> Fernand Fehlen und Andreas Heinz: Die Luxemburger Mehrsprachigkeit. Ergebnisse einer Volkszählung, transcript, 2016.

5.1

By origin and nationality

Table 10: Languages spoken at work by country of birth (multiple answers possible, % in rows)

Country of birth	Luxembourgish	French	German	Portuguese	Italian	English	Other	No. of languages*
Luxembourg	94.1%	64.3%	44.4%	7.7%	2.8%	30.7%	2.2%	2.5
France	15.6%	90.5%	11.9%	3.9%	3.2%	56.9%	2.7%	1.8
Germany	51.0%	56.2%	71.5%	3.0%	2.6%	57.7%	4.7%	2.5
United Kingdom	10.5%	37.9%	9.1%	0.7%	2.3%	94.3%	3.5%	1.6
Portugal	24.5%	85.6%	12.8%	62.6%	1.9%	16.0%	1.9%	2.1
Italy	12.0%	69.9%	9.0%	4.1%	48.9%	65.5%	5.2%	2.1
Other countries of birth	19.8%	64.7%	16.6%	7.8%	3.2%	57.5%	19.7%	1.9
Total	54.4%	69.2%	29.5%	14.8%	4.1%	40.0%	6.9%	2.2

Source: STATEC, RP2021

*average of the number of languages indicated

Note: Numbers include only respondents working in the Grand Duchy who indicated their country of birth and the language spoken at work.

Cross-referencing languages spoken with country of birth shows that French is the true lingua franca of the Luxembourg workplace. People born in Luxembourg usually speak Luxembourgish at work by an overwhelming majority (94.1%), while immigrants, irrespective of their origin, speak French more often than Luxembourgish (see table 10). French has the highest rate among people born in France. French, Lëtzebuergesch and

English are used to varying degrees by the different communities. Portuguese and Italian, however, are used almost exclusively by immigrants born in Portugal or Italy. People born in France or the UK, who are assumed to be Francophone or Anglophone respectively, report on average the lowest number of languages usually used. This may be taken as an indication of the vehicularity of their language on the labour market.

Table 11: Languages spoken at work by nationality (multiple answers possible, % in rows)

Nationalité	Luxembourgish	French	German	Portuguese	Italian	English	Other
Luxembourger	88.4%	66.1%	42.8%	7.9%	2.7%	32.9%	3.9%
French	10.3%	90.8%	9.9%	1.8%	3.2%	60.2%	3.6%
German	38.2%	49.9%	76.7%	1.6%	2.0%	63.2%	5.6%
United Kingdom	3.6%	27.9%	4.8%	0.4%	1.8%	96.5%	3.3%
Portuguese	18.8%	86.2%	10.2%	63.0%	1.8%	15.1%	2.4%
Italian	14.4%	70.5%	10.2%	5.3%	45.4%	61.4%	6.0%
Other nationalities	9.8%	58.4%	12.8%	4.2%	3.0%	66.1%	22.3%
Total	54.4%	69.2%	29.5%	14.8%	4.1%	40.0%	6.9%

Source: STATEC, RP2021

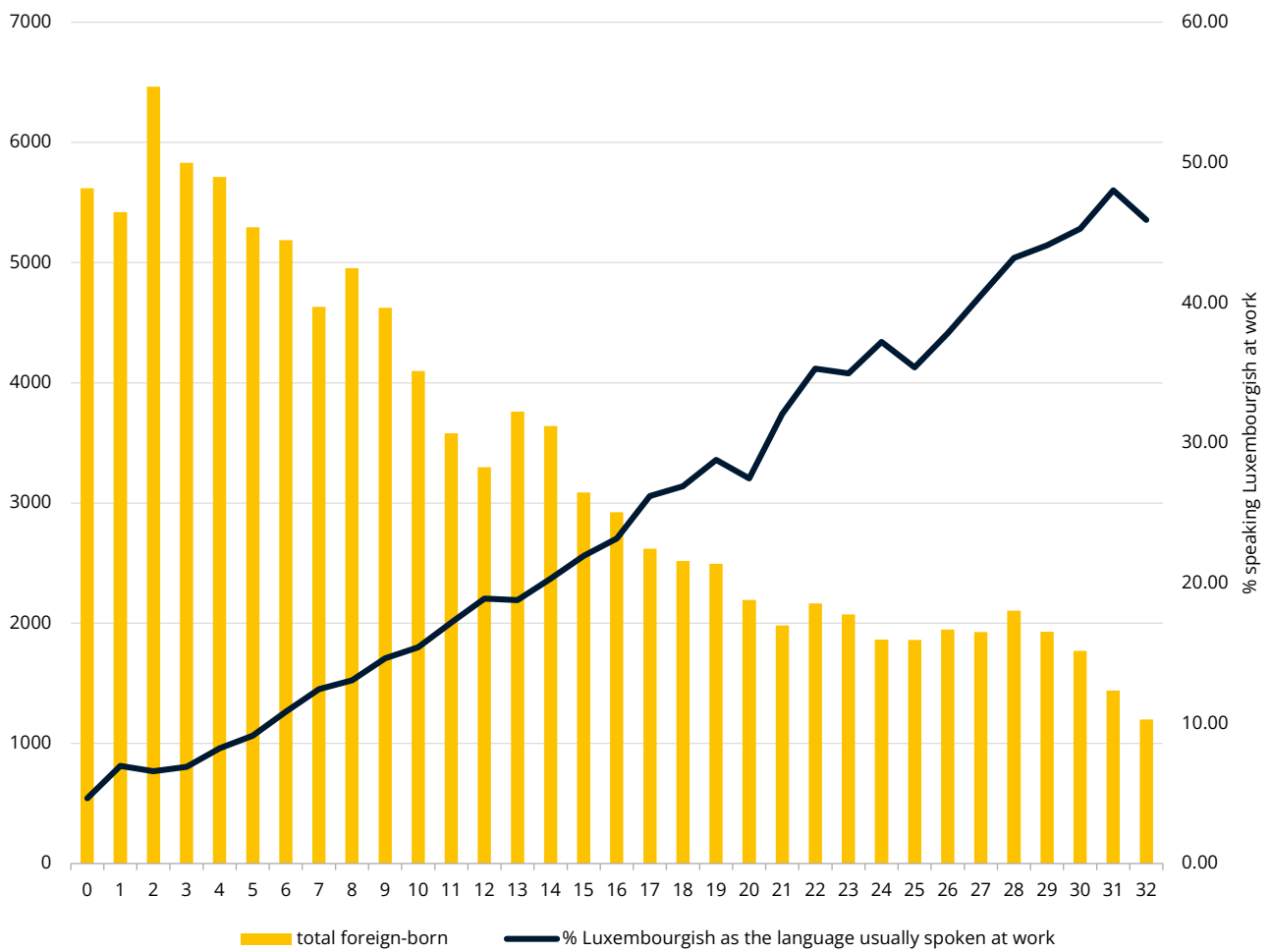
Note: Numbers include only respondents working in the Grand Duchy who indicated their country of birth and the language spoken at work.

As immigrants generally have the nationality of their country of birth, there is a high degree of congruence between tables 10 and 11. However, a large number of immigrants have recently taken Luxembourgish nationality, without necessarily changing their working environment. As a result, the number of people who do not use Luxembourgish at work is usually higher

among Luxembourg citizens (11.6%) than among Luxembourgish natives (5.9%).

Graph 3, which looks at the immigrant population whose year of immigration is known, shows that linguistic integration takes place over time.

Figure 3: Percentage of immigrants indicating Luxembourgish as a language usually spoken at work, by year of immigration (left-hand scale: number of immigrants)



Source: STATEC, RP2021

Note: the table covers 165,380 people who indicated the year of immigration and the language spoken at work.

5.2 By sector of activity and occupation

Table 12: Languages spoken at work by sector of economic activity (NACE) (Multiple answers possible, % in lines)

	Luxembourgish	French	German	Portuguese	Italian	English	Other
Agriculture	84.3%	28.4%	24.4%	5.1%	0.3%	7.5%	3.9%
Manufacturing industry	53.6%	75.3%	35.5%	19.6%	2.8%	32.3%	4.5%
Construction	28.6%	78.7%	20.7%	54.2%	2.4%	10.1%	5.8%
Commerce, transport, catering	52.2%	77.1%	31.1%	20.8%	6.0%	30.7%	8.8%
Information and communication	40.5%	66.9%	25.5%	5.8%	3.2%	70.3%	6.7%
Finance and insurance	31.9%	65.8%	23.3%	4.8%	6.6%	73.9%	8.5%
Real estate	54.8%	82.9%	31.9%	14.5%	5.1%	40.6%	6.3%
Scientific and technical, administrative and support services	29.0%	71.2%	23.9%	14.0%	4.8%	58.1%	6.3%
Public administration	86.7%	63.5%	36.8%	9.1%	2.1%	27.0%	3.0%
Other services	24.7%	71.9%	20.8%	10.2%	7.4%	59.2%	19.2%

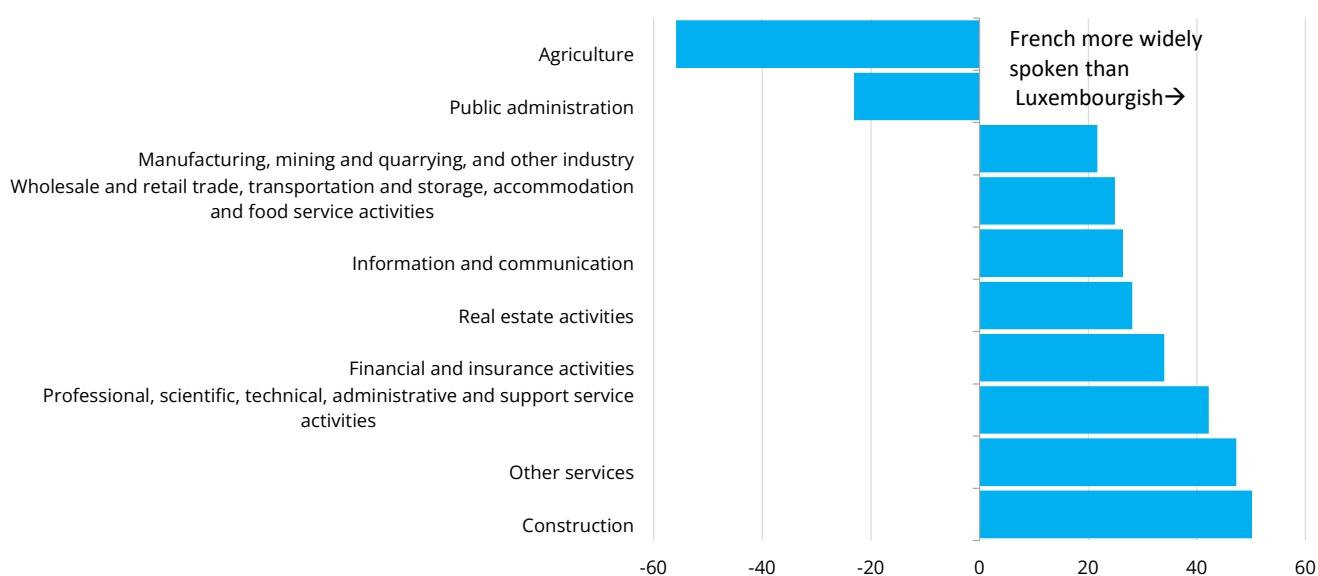
Source: STATEC, RP2021

Note: the table covers 209,068 people who indicated the NACE sector and the language spoken at work.

Public administration and agriculture are the only two sectors where Luxembourgish is more often indicated than French as the language spoken at work (86.7% vs. 63.5% and 84.3% vs. 28.4% respectively). Graph 4 compares the use of French and Luxembourgish in different sectors of the economy. At the bottom of the graph are the sectors where the gap between the number of

people who speak French and those who speak Luxembourgish at work is most pronounced. In the construction sector, 78.7% say they speak French and 20.7% Luxembourgish. This sector is also the stronghold of Portuguese, used by 54.2%.

Figure 4: Languages spoken at work by NACE sector: difference between use of French and Luxembourgish (in percentage points)



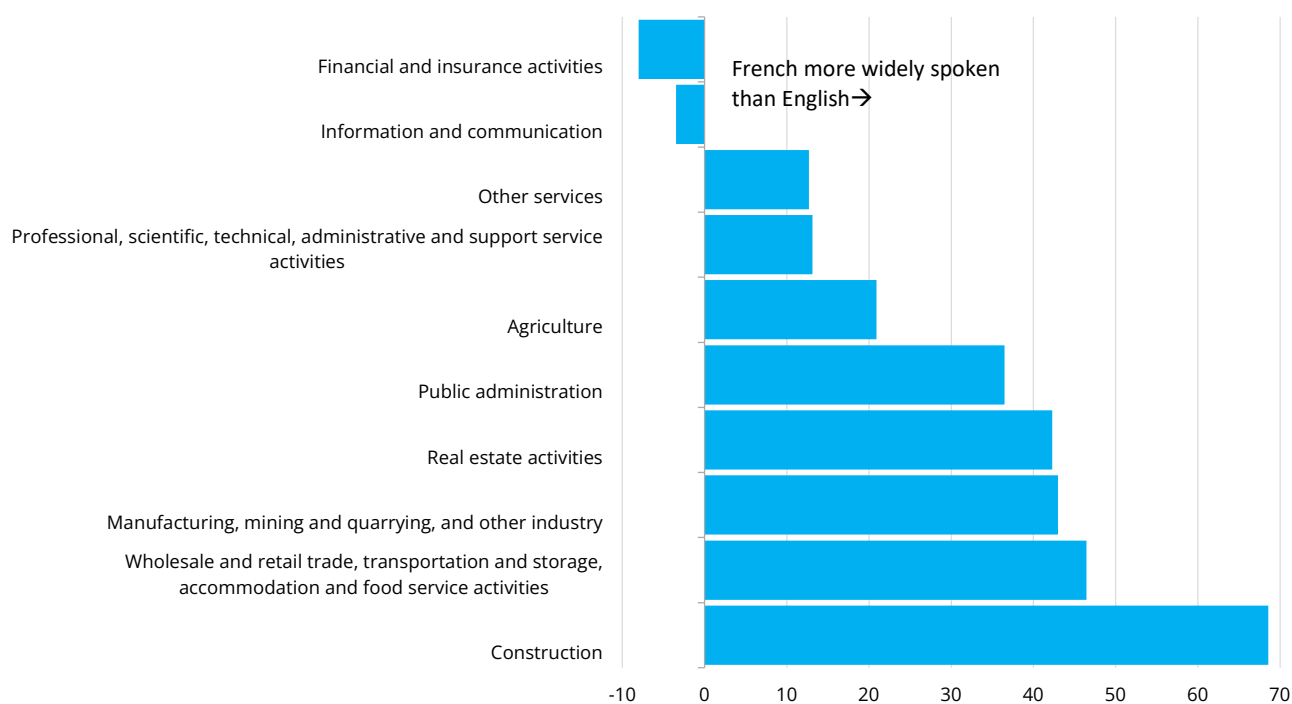
Source: STATEC, RP2021

Note: the graph relates to 209,068 people who indicated the NACE sector and the language spoken at work

Graph 5 compares the use of French and English in the different sectors of the economy. Finance and insurance and information and communication are the two sectors where English is used more often than French (73.9% vs. 65.8% and 70.3% vs. 66.9% respectively). In

all other sectors, French dominates. In construction, the lead is 68.6 percentage points, and 46.4 points in the “commerce, transport and storage, accommodation and catering” sector

Figure 5: Languages spoken at work by NACE sector: difference between use of French and English (in percentage points)



Source: STATEC, RP2021

Note: the graph relates to 209,068 people who indicated the NACE sector and the language spoken at work

Tableau 13: Languages spoken at work by occupation (ISCO) (multiple answers possible, % in rows)

	Luxembourgish	French	German	Portuguese	Italian	English	Other	Skills level
Managers	33.4%	68.2%	25.3%	6.9%	7.0%	64.3%	9.3%	3 resp. 4
Professionals	49.7%	65.2%	30.9%	4.7%	4.5%	59.5%	8.5%	
Technicians and associate professionals	73.5%	71.2%	38.2%	13.0%	4.1%	39.3%	5.5%	
Clerical support workers	69.0%	70.2%	36.2%	11.4%	4.6%	42.8%	6.3%	2
Service and sales workers	67.5%	73.0%	32.6%	18.3%	5.1%	25.3%	7.8%	
Skilled agricultural, forestry, and fishery workers	77.7%	42.9%	21.8%	8.6%	0.6%	8.9%	4.1%	
Craft and related trades workers	44.7%	71.4%	24.0%	40.4%	2.1%	11.9%	4.6%	
Plant and machine operators, and assemblers	51.1%	75.8%	26.0%	29.0%	2.3%	14.2%	5.0%	1
Elementary occupations	33.3%	76.7%	12.8%	32.3%	2.7%	9.8%	4.6%	
Armed forces occupations	92.8%	41.3%	26.7%	5.8%	0.5%	25.0%	2.3%	1 + 4
total	54.4%	69.2%	29.5%	14.8%	4.1%	40.0%	6.9%	

Source: STATEC, RP2021[4]

Note: 212 127 people who indicated their occupation and the language spoken at work

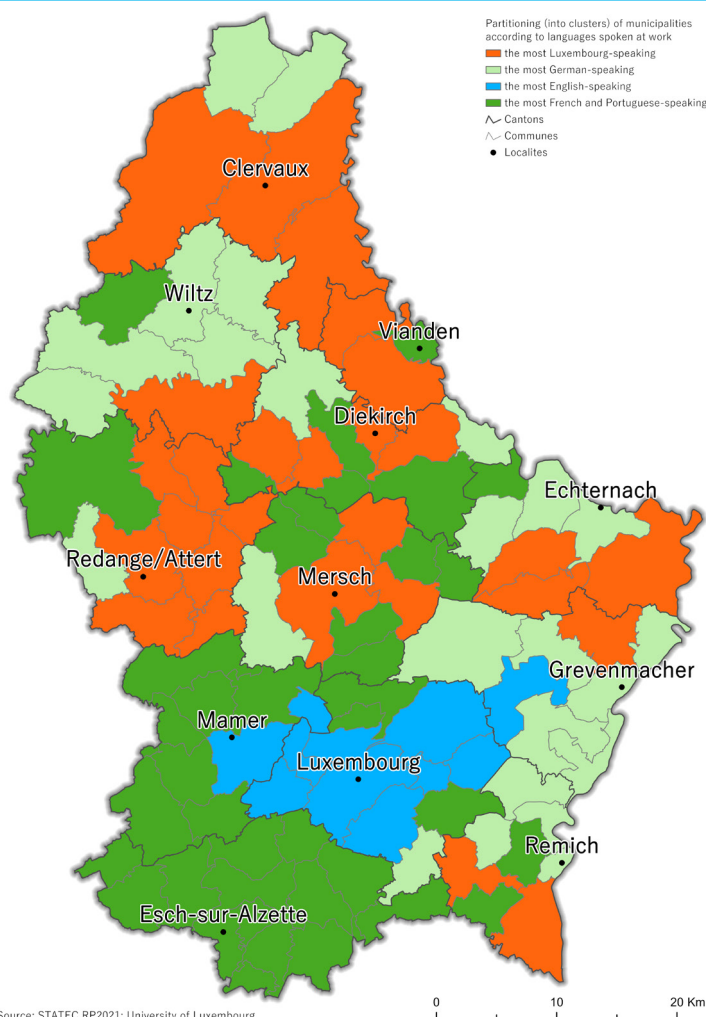
French has a strong presence in practically all professions. It is particularly present among elementary occupations (76.7%), - unskilled workers and employees - among skilled workers (75.8%), among personnel in personal services, commerce and sales (73%) and among intermediate occupations¹⁸ (71.2%). These occupations belong to three different skill levels, and illustrate the presence of French across the entire spectrum of the professional hierarchy. Lëtzebuergesch is the most widely used language in the military (92.8%) and in agriculture (77.7%); it is least used by managers and executives (33.4%) and unskilled workers (33.3%).

English is mainly used by executives (64.3%), intellectual and scientific professions (59.5%), i.e. at a high skill level. Unlike Portuguese, which is particularly present in occupations corresponding to skill levels 1 and 2: skilled occupations in industry and crafts (40.4%), elementary professions (32.3%) and skilled workers (29%).

5.3 By municipality

As mentioned above, the different economic sectors are not homogeneous across the country. As a result, there is considerable geographical variation in the use of languages at work. This is shown in the publication on linguistic diversity¹⁹, which contains maps of the different languages spoken. We are going to present a global view using cluster analysis to group into sub-sets, called partitions or clusters (see map 5), the municipalities where the use of languages at work is similar.

Map 5: Breakdown of municipalities by languages spoken at work



Source: STATEC RP2021, University of Luxembourg.

¹⁸ According to ISCO: «Occupations whose main tasks require technical knowledge and experience in one or more disciplines of the physical and life sciences, or the social sciences and humanities.

¹⁹ See “Une diversité linguistique en forte hausse”, RP2021, Premiers Résultats, no. 8, <https://statistiques.public.lu/dam-assets/catalogue-publications/rp-2021/rp08-diversit-linguistique/rp08-03-02-fr.pdf>.

An initial division into two major clusters divides the country: in the north and on the border with Germany, Luxembourgish and German dominate, while French and English have a stronger presence around the capital and in the south. By refining the analysis, these two clusters are each split into two, giving 4 clusters (map 5).

Cluster 1 (in orange) is the most rural and most Luxembourgish-speaking subset of communes. It also contains the three communes with the highest use of Luxembourgish at work: Diekirch (83%), Vichten (87%) and Putscheid (95%). With a few exceptions (e.g. Schengen), these municipalities are located in the north of the country. With the exception of German, which is slightly over-represented, all other languages, especially English, are particularly under-represented.

Cluster 2 (in light green) differs from the first cluster in that German is more strongly represented, while Lëtzebuergesch is less strongly represented. All other languages are under-represented, as in the first cluster. Geographically, the communes in cluster 2 are spread across the whole country, but are over-represented

towards the German border, especially on the banks of the Moselle, and towards German-speaking Belgium. The importance of German is highest in Grevenmacher (45%), Merttert (55%) and Biver (56%).

Clusters 3 and 4 differ from the first two in their lower use of German and Luxembourgish. Cluster 3 (in blue) mainly comprises the capital and surrounding municipalities. English in particular, but also Italian, is over-represented. This is the cluster where Lëtzebuergesch is least commonly used at work. The commune of Niederanven, for example, holds the record for use of English at work (63%) and the negative record for Lëtzebuergesch (31%).

Cluster 4 (in dark green) groups together municipalities mainly in the south of the country and parts of the capital's inner suburbs. Added to this are the strongholds of Portuguese. This is the partition where the habitual use of Portuguese at work is highest, e.g. Schieren (32%), Ernzy Valley (40%) and Heffingen (43%). Luxembourgish and French are slightly over-represented, and English under-represented.

Table 14: Languages spoken at work by cluster (average profile)

Cluster	Luxembourgish	French	German	Portuguese	Italian	English	Other
1	78.5%	55.1%	32.5%	13.1%	1.6%	16.8%	3.8%
2	69.0%	61.8%	39.1%	12.9%	1.2%	22.0%	7.2%
3	50.8%	68.5%	32.1%	13.9%	5.4%	49.6%	6.7%
4	59.3%	72.6%	29.5%	23.0%	2.8%	22.4%	4.9%

Source: STATEC, RP2021

Note: 212 127 people who indicated their place of work in Luxembourg and the language spoken at work.

6. Unemployed residents

Among the respondents, 2% of all residents (working and non-working) declared themselves unemployed, i.e. 12,032 people at the time of the census (end 2021). This percentage²⁰ is higher among 15 to 64 year olds (3.1%) and even higher among women aged 25 to 49 (3.9%). It should also be noted that the average age of the unemployed is 40. It is important to note that these figures are not to be interpreted as unemployment rates (the employment administration being the reference institution in this exercise), but simply as an indication of the proportion of self-declared unemployed in the census.

Women make up the majority of residents who declare themselves unemployed (52.9%), and if we calculate an unemployment rate, the rate for women (4.6%) is higher than that for men (3.6%).

3.1% of foreign-born residents declared themselves unemployed, compared with 1.1% of native-born residents. Residents born in a non-EU European country, the Caribbean, South or Central America, Asia or Africa have the highest percentages (6.1%, 5.8%, 5.9% and 5.1% respectively). It is interesting to note that these same residents are also the most likely to be in employment (between 54% and 69% of them), reflecting their younger age structure and their immigration to Luxembourg for work reasons.

The level of education may be one of the factors characterising mismatches between labour supply and demand, and/or between training and employment. Nearly two-thirds of the unemployed (65.9%) have a level of education below level 3 (i.e. upper secondary education, i.e. no baccalaureate). A further 29.3% have a level of education above the baccalaureate. It should be pointed out that unemployment is highly seasonal, and that as the census took place at the end of the year, it is possible that these people are young graduates who have not yet found a job.

Depending on the country of birth, there are differences in the level of education of the unemployed. For example, among unemployed people born in Luxembourg, low levels of education are vastly over-represented, with 83.6% having less than upper secondary education. Although the demand for less-skilled workers remains high in Luxembourg, the overall trend over the last few decades has been towards an intensification of highly-skilled jobs.

²⁰ These percentages are those of the self-identified unemployed among all respondents. They are not unemployment rates. The unemployment rate is another measure which divides the unemployed population by the total working population (employed + unemployed).

For non-natives, levels of education higher than a bachelor's degree are over-represented among the unemployed, especially for people from South America, Asia and North America, where these higher levels of education are in the majority (49.9%, 56.2% and 72.6% respectively have a bachelor's degree, a master's degree or even a doctorate). These observations could be explained by difficulties in recognising diplomas for new arrivals, a necessary adaptation period, or language barriers. The possible need for a period of adaptation is suggested by the fact that 30.3% of these unemployed people emigrated to Luxembourg in the three years preceding the census.

The level of education of unemployed people also varies according to the period of arrival in Luxembourg. Three-quarters of unemployed people who arrived in Luxembourg before the 2011 census had less than upper secondary education, whereas this was the case for only half of immigrants who arrived since 2011. On the other hand, 45.2% of immigrants who arrived since then have a higher level of education (bachelor's degree and above), and this percentage only increases over time (the more recent the arrival, the higher the percentage, rising to 49.6% for those arriving in 2020, and 63.4% for those arriving in 2021). This upward trend in the qualification levels of unemployed immigrants follows that of employed immigrants.

Conclusion

At the time of the 2021 census, Luxembourg has almost 280,000 residents in employment, nearly half of whom are under the age of 40, and almost 40% of whom have completed higher education. Compared with the EU, resident employment is more concentrated in intellectual and scientific occupations (one job in three) and elementary occupations (11.3%). Two-thirds of residents' jobs are either in public administration (31.1%) or in professional services (specialised activities, financial activities, information and communication, and other services; 36.3%).

Geographically, almost three-quarters of Luxembourg residents' jobs are concentrated in three main areas, including the Agglomération-Centre, which alone accounts for more than half of total employment. More than half of these jobs are in intellectual or managerial professions. The South Agglomeration (15% of employment) and Nordstad (5.5%), as well as the other municipalities outside the poles, have proportions of intermediate, manual and technical occupations

comparable to the EU. In sectoral terms, the Agglomeration-Centre is dominated by professional services (51%), while public administration is predominant in Nordstad (51.3%) and Agglomeration-South (45.3%).

Of every ten residents in employment in 2021, four were born in Luxembourg and six were born abroad. More than half of the native-born population have at most a secondary education, and one in two works in public administration. What's more, native-born workers account for the majority of resident employment in intermediate and administrative occupations. Foreign-born workers have more polarized profiles than natives. The first group is made up of lower-skilled jobs, a very large proportion of which come from Portugal. Among resident workers employed in the construction sector who have at most a secondary school diploma, foreign-born occupy more than 80% of jobs. Outside the public administration and agriculture sectors (where immigrants are everywhere in the minority), these less-skilled workers occupy more than two-thirds of jobs in sales, industry, crafts, assembly and machine operation, and almost 90% of elementary occupations.

The second group of foreign-born workers occupies the most highly-skilled jobs. This second group is the largest, with two-thirds of foreign-born workers holding a higher education qualification. Seven out of every ten workers with a university degree are foreign-born. This proportion varies by sector, however, being only three out of ten in public administration, while it approaches nine out of ten in finance, specialized activities and other services.

In terms of languages spoken at work, French dominates (69.2%), followed by Lëtzebuergesch (54.4%) and English (40.0%). The use of English increased by 11.5 percentage points between the two censuses, while that of Luxembourgish and German fell by 5.1 and 4.7 percentage points respectively. Lëtzebuergesch predominates in the public administration and agriculture sectors, while French prevails in the others, particularly

in the trade and catering, construction and real estate sectors. English is more common among managers and scientists, and Portuguese among skilled workers. Geographical analysis shows a linguistic divide, with Lëtzebuergesch and German dominant in the north and east, while French and English predominate around the capital and in the south.

Examination by gender reveals that men and women often work in different sectors and professions, and their use of part-time work also varies. It is in male-dominated professions (blue-collar workers, farmers, military personnel, managers and executives) that the proportion of women working part-time is lowest. The distribution of levels of education is fairly similar between men and women, except that differences appear in the highest levels of education.

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