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Population census | Luxembourg

RP 1ST RESULTS 2021 N°08

LINGUISTIC DIVERSITY ON THE RISE

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The Luxembourgish language is the main language of the inhabitants of Luxembourg who have lived there for a long time (and who, as a general rule, also have Luxembourg nationality). Only a tiny proportion of immigrants know this language when they arrive. Some of them, and especially their children, will learn it. Another part will integrate through French, which for many years was presented as the language of integration by government policy and which to this day remains the most widely spoken language on the labour market. This integration model, which has been well established since the Thirty Glorious Years, is now facing two new challenges. 1) Luxembourg's economic growth has taken off. This is leading to a demographic growth that no other EU country is experiencing, and an even stronger growth in its working population. Since the 2011 census, the population has increased by 25.7%, from 512,353 to 643,941. 2) The linguistic profile of new immigrants is increasingly diverse. The importance of English and other languages is increasing, both as the language usually used and as the main language.

Issues

This is the general finding of the language component of the census, the initial results of which are presented in this publication. Main language" and "language usually used" are the two central concepts used throughout the study to describe the linguistic landscape. They are borrowed from Switzerland, which has a long tradition of demolinguistics.¹ Firstly, the main language is the language we know best, the language we think in. It largely overlaps with the concept of mother tongue and is mainly used to count and delimit territorialised linguistic communities in Switzerland. It is also useful for identifying linguistic minorities, but does not really correspond to Luxembourg, which sees itself as a country with a single linguistic community, whose members are all multilingual and generally master the country's three administrative languages, or even English or other languages. This is a limitation to bear in mind, as is an even more important one: the absence of cross-border commuters, who determine the use of language in the public arena but who, by definition, do not appear in a census.

Summary

This is the second time that two questions on language practices have been asked in the census. This makes it possible to describe the current linguistic landscape and how it has changed over the last ten years.

In this publication, we begin with a study of the main language. The absolute number of residents indicating Luxembourgish as their main language is increasing slightly, while their relative weight in the population is falling sharply.² On the other hand, the population indicating French as their main language is increasing both in absolute terms and in proportion. The number of those indicating English or another language as their main language is increasing sharply. In the second section, we describe the languages usually spoken at home and in public places, and note a relative fall in the number of habitual speakers for German and Luxembourgish. The largest relative increase can be seen for 'other languages' and, to a lesser extent, for English. A third section will be devoted to spatial analysis, which shows a less and less homogeneous distribution of languages across the country. The segmentation observed in 2011 is only becoming more pronounced. The capital and its environs, as well as the south, are home to the greatest linguistic diversity, while the rural communities, especially in the north, are bastions of Luxembourgish. Fourthly, the link between Luxembourgish as the main language and the migratory background (grouped together, then detailed) is examined, in relation to the demographic transformations 2011-2021. The use of Luxembourgish as a main language varies from a rate close to 100% for 'natives' of the country whose parents were born in Luxembourg, to almost 0% for the most recent migrants: this linguistic gradient thus shows a progressive deterioration according to the level of integration of the populations. Examination by age group makes it possible to identify the segments of the population where the erosion of Luxembourgish as the main language is strongest, and confirms the role of the 'new Luxembourgers' (non-native Luxembourg citizens born abroad) in this erosion.

¹ <http://www.bfs.admin.ch/asset/fr/2203-2200>

² All comparisons are with the 2011 census, which asked the same language questions for the first time (Fehlen and others 2013 a and b; Fehlen, Heinz 2016).

1.

The main language, the one you know best

“Which language do you think in and know best?” Only one answer was allowed. The language indicated will be referred to as the main language. The term “mother tongue” was avoided for two reasons. 1) The mother tongue is defined once and for all, whereas the main language can vary over the course of a lifetime, as we shall see when we look at the linguistic integration of immigrants. 2) A person, especially if born into a mixed family, may learn two or even more languages from an early age at home. They will therefore have several “mother tongues”. For these people and those who master two languages to the same level of proficiency, the constraint of having to indicate a single main language certainly constitutes a difficult choice, which will sometimes be dictated by psychological or political motivations. In some cases, the answer given will constitute an allegiance to family roots or to the host country, which will sometimes be irrespective of actual language skills. The response rate to this question was fairly high. Only 10.4% of the 643,941 inhabitants did not answer the question, and on 2.2% of the questionnaires, the answer “not old enough to speak” was ticked. This means that the main language of 87.4% of the population was entered. The relatively high non-response rate for second-generation immigrants (table 10) is probably due to the fact that their experience was too complex for the definition of main language, which allowed only one response.

1.1

Population by main language in 2021 and 2011

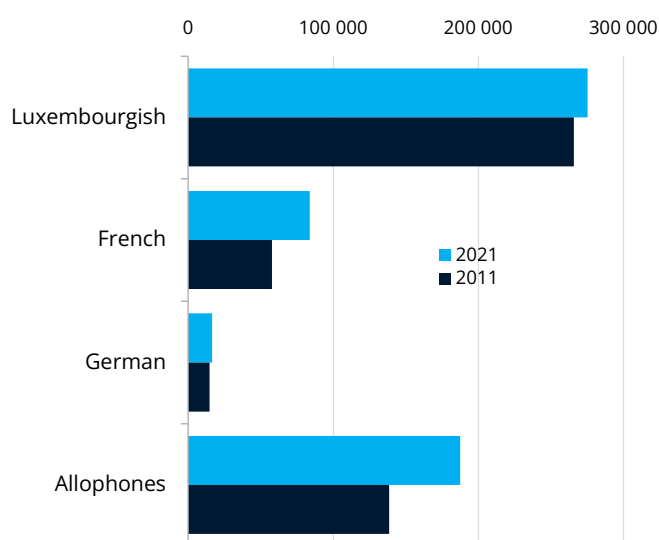
Table 1 gives the absolute number of responses and the percentage for people whose main language is known. The same question was asked in 2011, which makes it possible to study changes in the language situation. However, it is important to bear in mind the increase in the population, which means that the number of responses increases mechanically. On the other hand, the number of non-responses varies between the two censuses and differs according to the migratory background (see insert: Methodological note). Luxembourgish is by far the most important language, accounting for just under half of the responses, with Portuguese coming in second place ahead of French, far ahead of English and Italian, followed by German. The number of respondents indicating Luxembourgish as their main language rose slightly from 265,731 to 275,361, corresponding to an increase of 3.6%. As a result of high immigration during the intercensal decade, its relative presence fell sharply, from 55.8% to 48.9%, a drop of 6.9 percentage points. The percentages of Portuguese fell slightly (-0.3 points), while the presence of French and English as main languages increased (+2.8 points and +1.5 points) and also Italian (+0.7%). The number of people indicating English as their first language almost doubled in absolute terms, rising from 10,018 to 20,316. The number of people indicating other languages rose sharply. It rose from 40,042 to 60,582 (+2.4 points). Graph 1 shows the increase for the country's three administrative languages and for allophones.

Table 1: Population by main language in 2021 and 2011

Main language	No. of people	% in 2021	No. of people	% in 2011
Luxembourgish	275 361	48.9%	265 731	55.8%
Portuguese	86 598	15.4%	74 636	15.7%
French	83 802	14.9%	57 633	12.1%
English	20 316	3.6%	10 018	2.1%
Italian	20 021	3.6%	13 896	2.9%
German	16 412	2.9%	14 658	3.1%
Other language	60 582	10.8%	40 042	8.4%
Total	563 092	100%	476 614	100%

Source: STATEC, RP2021, RP2011

Graph 1: Population by main language in 2021 and 2011



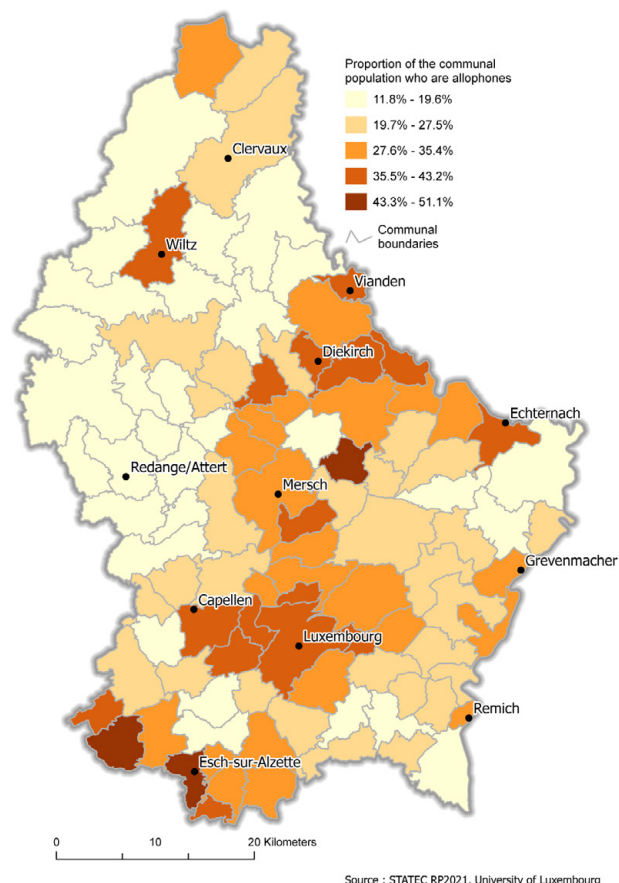
Source: STATEC, RP2021, RP2011

1.2 Allophones

In some officially multilingual countries, people whose mother tongue or main language is not one of the official languages are called allophones. This term is used mainly in English and French, particularly in Canada. In Switzerland, allophones are referred to by the German word *Nichtlandessprachler*. Luxembourg has three administrative languages, commonly known as the country's languages. Table 2 shows that 33.3% of the population are allophones. This rate has increased by 4.2 percentage points since 2011 when it was 29.1%. As Map 1 shows, allophones are concentrated around the capital (43%) and in the south of the country, especially in Differdange (48.1%) and Esch-sur-Alzette (45.7%). The

record is held by Larochette (51%). The lowest proportions of allophones are found in the rural communes of the north and west, with Ell (11.8%), the commune of Lac de la Haute-Sûre (12.1%) and Wahl (12.8%).³

Map 1: Inhabitants who have none of the country's three languages as their main language



Source : STATEC RP2021, University of Luxembourg

Source: STATEC, RP2021

³ See the section on spatial analysis.

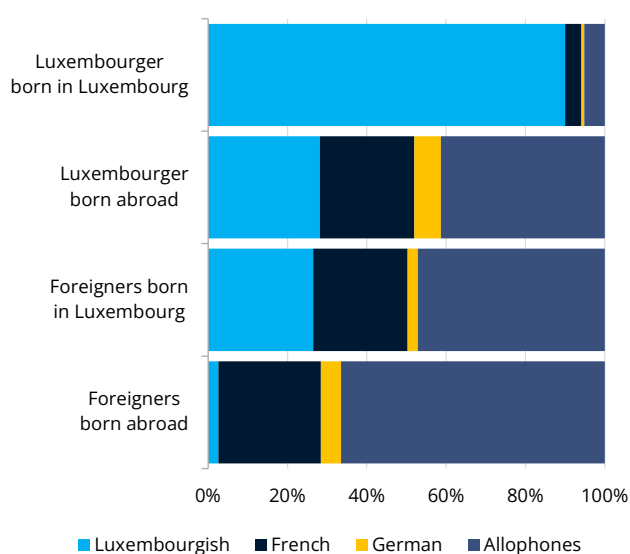
Table 2: Allophones and population indicating a local language as their main language in 2021 and 2011

Main language	No. of people	in 2021	No. of people	in 2011
Luxembourgish	275 361	48.9%	265 731	55.8%
French	83 802	14.9%	57 633	12.1%
German	16 412	2.9%	14 658	3.1%
Allophones	187 517	33.3%	138 592	29.1%
Total	563 092	100%	476 614	100.0%

Source: STATEC, RP2021, RP2011

The proportion of allophones varies greatly according to immigration status. Of Luxembourg nationals whose two parents were born in the country, 99% have Luxembourgish as their main language. Among Luxembourg nationals born in Luxembourg, 90% have Luxembourgish as their first language, 4% have French and 5% are allophones; while 66% of foreigners born abroad are allophones.⁴

Graph 2: Main language by migration status



Source: STATEC, RP2021

1.3 Minor languages

The option of indicating a language other than the six proposed on the form was used by 60,582 people, corresponding to 10.6%, a rate that has increased since the last census (8.4%). After manual recoding of these handwritten entries, 52 'minor' language communities with more than 100 speakers were identified (table 3). In 2011, there were only 43, which is another indication of the increase in linguistic diversity.

Changes compared to 2011 include the appearance of new languages, reflecting recent waves of migration: for example, Arabic, Tigrigna brought by asylum seekers from the Horn of Africa, Ukrainian and Pular, a variety of Fulani spoken mainly in Guinea, Guinea-Bissau and Mali. The variations are illustrated in Graph 3, in which the languages spoken in the successor states of Yugoslavia have been grouped together under the acronym BCMS.

⁴ The end of this publication provides a more detailed analysis of the link between the Luxembourgish language and migration status.

Table 3: Other main languages with more than 100 speakers

Spanish	6473	Bulgarian	982	Icelandic	208
Arabic	3904	Swedish	978	Catalan	207
Dutch	3661	Tigrigna	961	Vietnamese	201
Russian	3325	Croatian	934	Filipino	188
Polish	3251	Lithuanian	793	Afrikaans	166
Romanian	3092	Slovak	780	Flemish	158
Chinese	2855	Czech	718	Tamil	151
Serbian	2736	Finnish	650	Farsi	147
Bosnian	2601	Persian	592	Nepalese	145
Greek	2485	Hindi	343	Armenian	140
Montenegrin	1721	Ukrainian	337	Latvian	128
Cape Verde Creole	1510	Yugoslavian	331	Tagalog	121
Albanian	1357	Thai	326	Pular	113
Hungarian	1283	Estonian	310	Norwegian	109
Creole	1148	Kurdish	307	Bengali	104
Serbo-Croatian	1086	Japanese	294	Korean	101
Danish	1059	Slovenian	262		57146
Turkish	1053	Macedonian	261		

Source: STATEC, RP2021

1.4 The languages of the Balkans

The collapse of the Socialist Federal Republic of Yugoslavia in 1992 led to the creation of new states, which had an impact on the linguistic landscape of the region. “The language spoken today in Bosnia-Herzegovina, Croatia, Montenegro and Serbia goes by four names related to the names of these countries: Bosnian, Croatian, Montenegrin and Serbian. Linguistically, it is a South Slavic language which has also had a single name, Serbo-Croatian, over the last century”⁵. For the sake of neutrality, linguists refer to it in French and English as BCMS for Bosnia-Herzegovina, Croatia, Montenegro and Serbia, and in German as BKS for Bosnisch, Kroatisch and Serbisch. From a sociolinguistic point of view, these languages are in the process of developing their own standard varieties to mark the political and identity differences between the new states. The old designations Yugoslavian and Serbo-Croatian are claimed by fewer and fewer speakers, who prefer designations based on the names of the states. With a total of 11,682 people, these speakers make up the seventh largest linguistic community in the Grand Duchy, ahead of the Spanish-speaking community, which has 6,473 speakers, plus 207 people who claim Catalan.

Table 4: The BCMS language according to the name given by speakers in 2021 and 2011

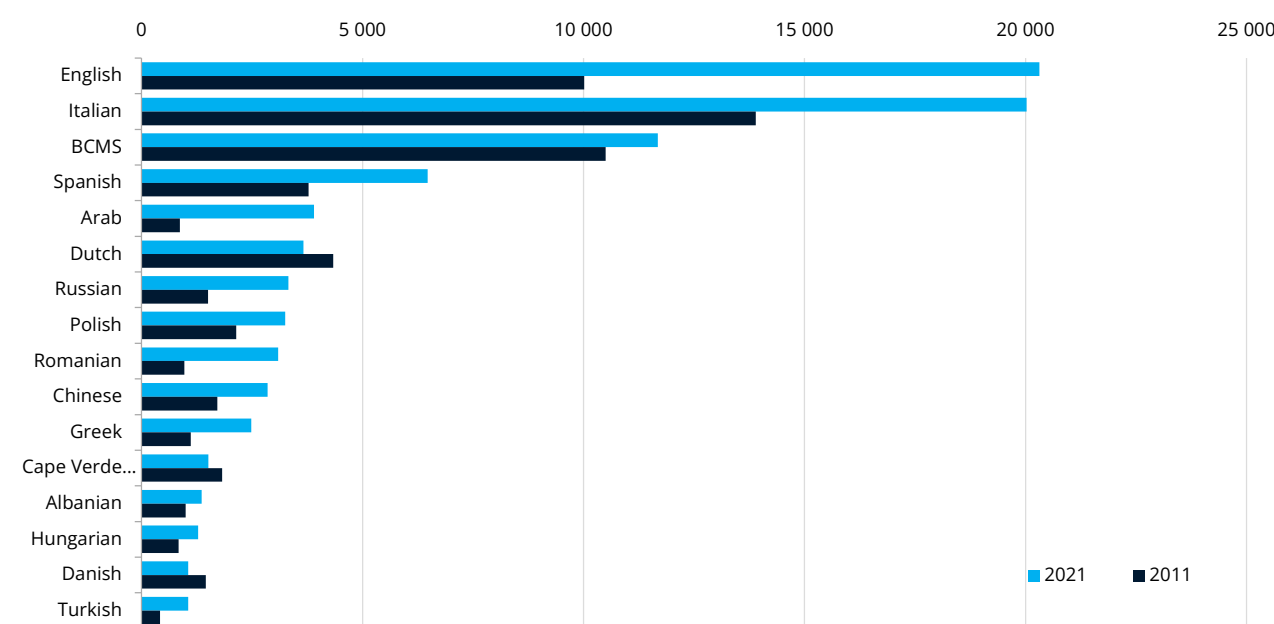
	2021	2011
Serbian	2736	2173
Bosnian	2601	1959
Montenegrin	1721	1295
Serbo-Croatian	1077	1332
Croatian	934	393
Yugoslavian	331	1104
Macedonian	261	230
BCMS	11682	10497

Source: STATEC, RP2021, RP2011

Generally speaking, a direct comparison between the figures from the two censuses should be treated with caution for the reasons given above (see also methodological insert). For ‘minor’ languages, there are also the problems of manual coding, with, for example, the designation ‘Creole’, which can designate the languages of various regions belonging to different linguistic families; French Creoles such as Haitian and Mauritian have been mentioned, as have Portuguese Creoles such as that of Guinea-Bissau and, above all, Cape Verde. The decrease in the number of Cape Verdean speakers in Graph 3 may also be due to different encoding procedures.

⁵ <https://lgidf.cnrs.fr/bcms>

Graph 3: Comparison of main languages (allophones)⁶ between 2021 and 2011



Source: STATEC, RP2021, RP2011

Graph 3 shows changes in the number of speakers for all Allophone languages with more than 1,000 speakers, with the exception of Portuguese, whose number (86,598) is more than four times greater than that of the English-speaking community and therefore too high to be represented on the scale. As a result of strong demographic growth, the number of speakers of each main language is increasing, except for Danish and Dutch. Particularly strong increases can be seen for Arabic, where the number of speakers has multiplied by 4.5 (corresponding to an increase of 350%), followed by Romanian, where the number of speakers has tripled (+218%), and four other communities that have more than doubled: Turkish (+151%), Greek (+123%), Russian (+120%) and English (+103%).

1.5 Main language and national communities

In the minds of many people, there is a close relationship between nationality and the main language, with the nationals of a state supposed to speak the same language. Table 4 helps to clarify and put this view into perspective. Among Luxembourgers, 81% indicated Luxembourgish as their main language, followed by French (7%). 94% of the French indicated French as their main language. Among the Belgians, 77% indicated French as their main language, while 13% indicated 'another language', presumably Flemish; 2.7% indicated German, Belgium's third official language. 87% of the Portuguese indicated Portuguese as their main language, followed by 7% indicating Luxembourgish and 3% French.

⁶ with more than 1,000 speakers, with the exception of Portuguese

Table 5: Main language by nationality

Languages	Nationalities							
	Luxembourger	Total Foreigners	Portuguese	French	Italians	Belgians	Germans	Other
Luxembourgish	81.1%	5.3%	7.4%	1.9%	7.3%	5.1%	8.9%	3.8%
French	7.0%	25.6%	3.3%	94.0%	6.5%	76.6%	3.0%	7.7%
German	1.5%	4.8%	0.2%	0.2%	0.4%	2.7%	80.8%	2.0%
Portuguese	3.5%	31.5%	87.3%	0.4%	1.4%	0.3%	0.5%	3.8%
Italian	0.9%	7.2%	0.0%	0.2%	79.2%	0.2%	0.2%	0.3%
English	1.6%	6.3%	0.3%	1.3%	2.0%	1.9%	3.0%	20.0%
Other	4.5%	19.3%	1.5%	1.8%	3.2%	13.2%	3.5%	62.3%

Source: STATEC, RP2021

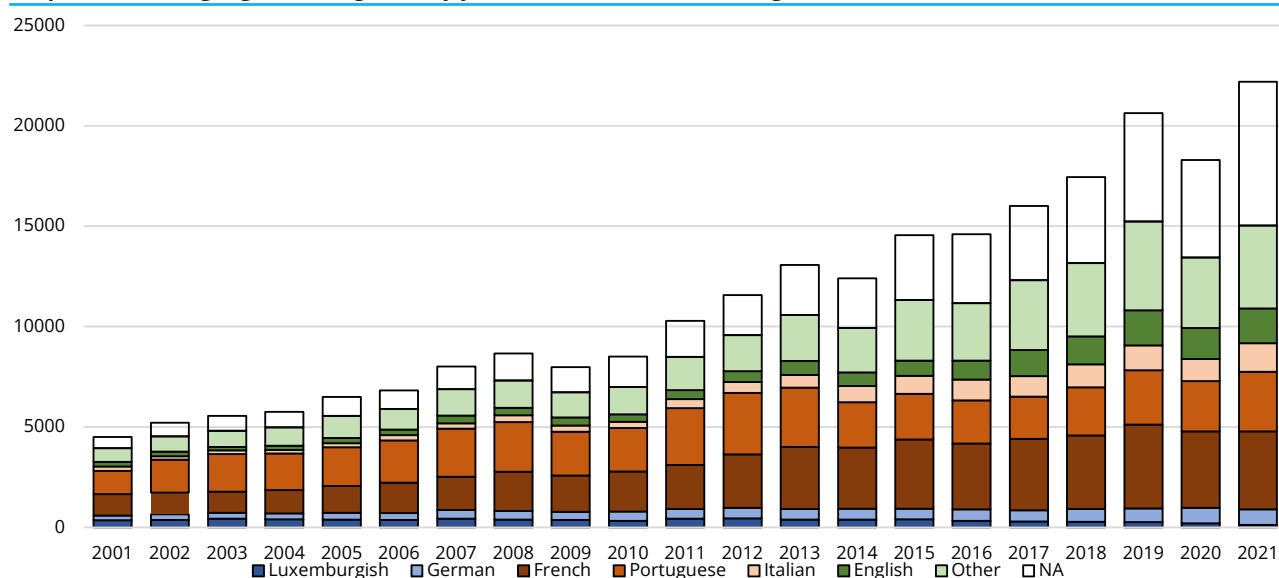
1.6 Strong growth in immigration

Immigration to Luxembourg is on the increase. Although this is counterbalanced by emigration, which is also on the increase, net migration has risen sharply since 2000: from 3,644 in 2000, through 7,660 in 2010, to 9,376 in 2021.⁷ Some of these immigrants will be leaving and are not shown in chart 4, which does not show the flows of those arriving and those leaving, but only the population that has remained after a certain number of years. Among these new arrivals (who are still living in Luxembourg), the oldest of whom (on the left of the graph) have been here for 20 years, there has been a clear increase in linguistic diversity. Luxembourgish and German play only a marginal role as the main language,

and French is clearly declining. During the first decade, it hovered around 34%, but during the second decade this average fell to 22%. As a result, the proportion of allophones has risen from 58% for those arriving in 2001 to 68% for those arriving in 2021.

Graph 4 also shows that for the latest arrivals, non-responses (NR) are only increasing. The explanation seems obvious. These new arrivals are probably not yet familiar with Luxembourg institutions, including STATEC. Above all, if they think they will be in the country for a short time, they have little motivation to take part in a census. This creates a bias, as we can assume that allophone speakers are probably over-represented among the non-respondents.

Graph 4: Main language of immigrants by year of arrival in Luxembourg



2021* incomplete year, as the census took place between 8 November and 5 December 2021

Source: STATEC, RP2021

⁷ <https://statistiques.public.lu/dam-assets/catalogue-publications/en-chiffres/2022/demographie-en-chiffre-22.pdf>

1.7 Measuring linguistic diversity

The Greenberg index describes a country's linguistic diversity and is used in demolinguistics to compare different countries. For a monolingual country, this index is 0. As the number of languages increases, the index asymptotically approaches 1. Theoretically, this value is reached in a country where all the inhabitants speak different languages. According to a UNESCO publication⁸, the index is 0.001 in Cuba, 0.019 in Iceland and 0.99 in Papua New Guinea.

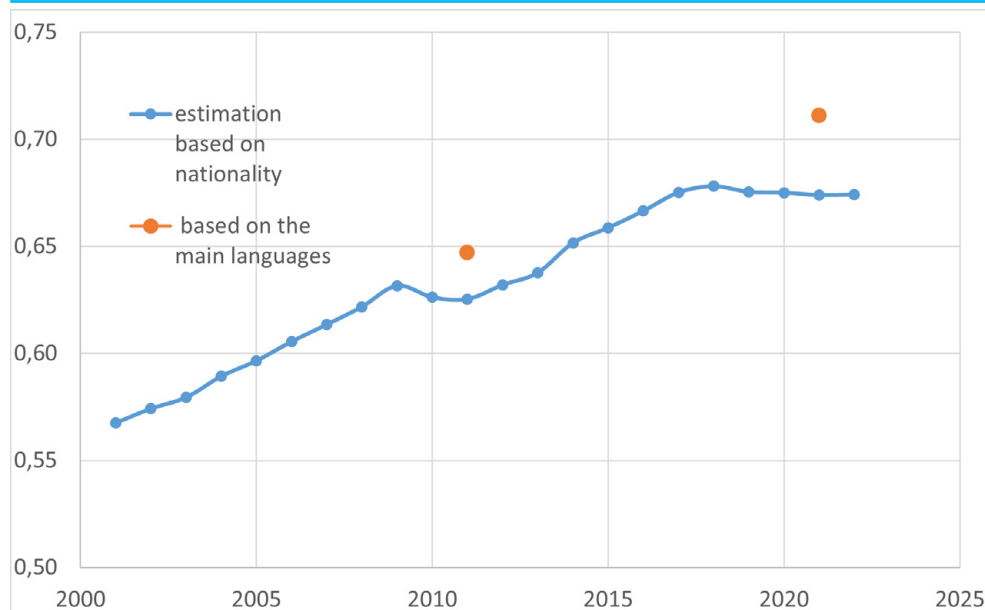
As the number of speakers of the various languages is generally not known, the Greenberg index is estimated on the basis of the nationalities whose nationals are assumed to speak their 'national language'. The blue line in graph 5 corresponds to an estimate of the index calculated using this method on the basis of a STATEC series on detailed nationalities, and shows a steady increase in linguistic diversity. The two red dots are calculated from the count of the main language in the last two censuses.

This index has a purely statistical significance, especially in Luxembourg, where the assumption on which the index is calculated, namely that the language communities are unilingual, is even further removed from reality than in the larger countries. (See insert).⁹

In order to calculate the Greenberg index, it is necessary to be able to count the different linguistic communities, which can be done either by demolinguistic censuses or by estimating the number of speakers on the basis of nationality or other ethnic affiliation. These communities are assumed to be monolingual and, based on this assumption, the probability that two speakers from two different communities will meet is calculated. The figure given for Luxembourg in the *Ethnologue* reference database¹⁰ is an estimate based on the nationality of residents. This method was also used to obtain the blue line by aggregating certain nationalities: Belgians were added to French, Dutch and German speakers in the proportions shown in table 1. The Irish were added to the English speakers and the Austrians to the German speakers.

The 2011 census provided a more accurate result for the first time, based on the main language count. It was 0.647. With the 2021 census figures, it increases to 0.711. These two points are well above the estimate calculated on the basis of nationalities. The discrepancies are explained by the non-congruence between nationality and main language (see table 4); this is especially true for the many people who have recently acquired Luxembourgish citizenship. They are included in the calculation as native speakers of Luxembourgish, but most of them will have indicated another main language. The slackening of the curve in recent years, as well as the sharp decline in the estimated linguistic diversity after 2009, is a statistical artefact due to the two successive reforms of the legislation on the acquisition of Luxembourgish nationality.

Graph 5: Greenberg index of linguistic diversity



Source: STATEC, RP2021, RP2011

⁸ UNESCO (2009: 304-307)

⁹ For a more detailed explanation: Fehlen, Heinz (2016: 42-46).

¹⁰ www.ethnologue.com

2. Languages usually spoken at home and in public

The census asked a second question to capture the use of languages at home and in the public space (school or workplace). The question was worded as follows: “What language(s) do you usually speak: at home, with relatives” and “What language(s) do you usually speak: at school, at work”. Multiple answers were allowed. 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 knowledge of a language or level of proficiency: not speaking a language ‘usually’ does not necessarily mean not knowing it. Respondents may master other languages that they speak only occasionally or in specific situations. In addition, care must be taken when comparing the two censuses. A falling percentage for a language does not mean that its use has declined among its speakers, but that other groups of speakers have emerged, given the strong demographic growth. This is why a simple comparison of the figures in table 6 does not make much sense.

This is further reinforced by the fact that the number of non-responses to this question has risen sharply. In 2011, 90% of residents had answered at least one of the two sub-questions on languages usually spoken. In 2021, only 74% had done so. 474,854 people answered the question on languages spoken ‘at home, with relatives’, while only 265,615 answered the question on languages spoken ‘at school, at work’ (see table 9).

Table 6 covers the 477,061 people who answered at least one of the two sub-questions. A person who ticked at least one of the sub-questions is considered to be a regular speaker of a language. 292,025 people indicate that they speak Luxembourgish, which corresponds to 61.2%. Luxembourgish is therefore the most widely spoken language, followed by French, used by more than half, and English, used by a quarter. German is used by 22.5% and Portuguese by a fifth.

Compared with the 2011 census, the use of Luxembourgish has fallen in terms of the number of speakers, from 323,000 to 292,000, and in percentage terms, from 71% to 61%. The decline in German in absolute terms (from 140,590 to 107,115) and in percentage terms (from 31% to 23%) is even more pronounced. This corresponds to a relative decrease of 24% in the number of regular speakers for German and 10% for Luxembourgish. The highest relative increase can be seen for ‘other languages’, where the number of regular speakers rose by 55%, and for English, with an increase of 27%.

The number of languages usually used was 2 in 2021 and 2.2 in 2011. In Luxembourg’s multilingual context, this seems very low. However, it should be borne in mind that the ‘other language’ category is counted as a single language, even if the response covers several of them.

Table 6: Languages spoken at work, school and/or home (multiple answers possible)

	2021		2011	
	nb	Percentage	nb	Percentage
Luxembourgish	292 025	61.2%	323 557	70.5%
French	242 534	50.8%	255 669	55.7%
German	107 115	22.5%	140 590	30.6%
Portuguese	94 340	19.8%	91 872	20.0%
Italian	27 501	5.8%	28 561	6.2%
English	122 467	25.7%	96 427	21.0%
Other	85 796	18.0%	55 298	12.1%
Total mentions	971 778		991 974	
no. of people replying	477 061		458 900	
Average	2.0		2.2	

Source: STATEC, RP2021, RP2011

2.1 Language spoken when only one language is used

209,090 respondents indicated that they use only one language. This represents an increase of 15%. The number of Luxembourg speakers who use only one language at home and at work has changed little, as has the number of German and Portuguese speakers. The number of French speakers has increased by 43%, while the number of English speakers and speakers of 'other languages' has more than doubled (140% for the former and 163% for the latter).

Table 7: Language spoken by those who use only one language

	2021		2011	
Luxembourgish	124 546	59.6%	129 654	71.0%
French	29 689	14.2%	20 795	11.4%
German	3 572	1.7%	2 928	1.6%
Portuguese	20 156	9.6%	16 198	8.9%
Italian	3 421	1.6%	2 141	1.2%
English	9 484	4.5%	3 957	2.2%
Other	18 222	8.7%	6 936	3.8%
total	209 090	100.0%	182 609	100.0%

Source: STATEC, RP2021, RP2011

2.2 Use of languages at home and in public (school or workplace)

In order to examine whether the use of languages at home with relatives differs from their use in the public space (here: school or the workplace), we distinguish the two sub-questions that were studied in aggregate in the previous paragraphs. Only people who answered both questions at the same time can be included in this analysis. Table 8 presents the different characteristics.

Luxembourgish is spoken by almost half the people surveyed in both contexts, but almost 4 out of 10 people do not speak Luxembourgish, either at home or at work. On the other hand, exclusive use in one context is rather rare. In short, Luxembourgish is either spoken at home and at work, or not at all.

French presents a different profile: slightly more than a third speak it only at school or at work, slightly less than a third use it in both contexts, and around a third do not speak it in either context. Exclusive use at home, on the other hand, is the exception.

Two-thirds use German in neither context, while almost a quarter speak it only at work or at school; 7% use it in both contexts.

Portuguese is either spoken only at home, or at home and at work. It is very rare for Portuguese to be spoken at work and not at home. The situation is different for English: more than one in four people speak this language exclusively at work or at school, 11% speak English at home and at work, and 2% exclusively at home.

Table 8: Languages by context of use: home vs. school or work

	No	House only	Work/school only	The two
Luxembourgish	38.7%	3.8%	10.3%	47.1%
French	30.2%	4.5%	37.2%	28.1%
German	67.0%	2.3%	24.0%	6.7%
Portuguese	75.9%	10.0%	1.7%	12.4%
Italian	93.4%	3.0%	1.4%	2.1%
English	60.6%	2.2%	26.6%	10.7%

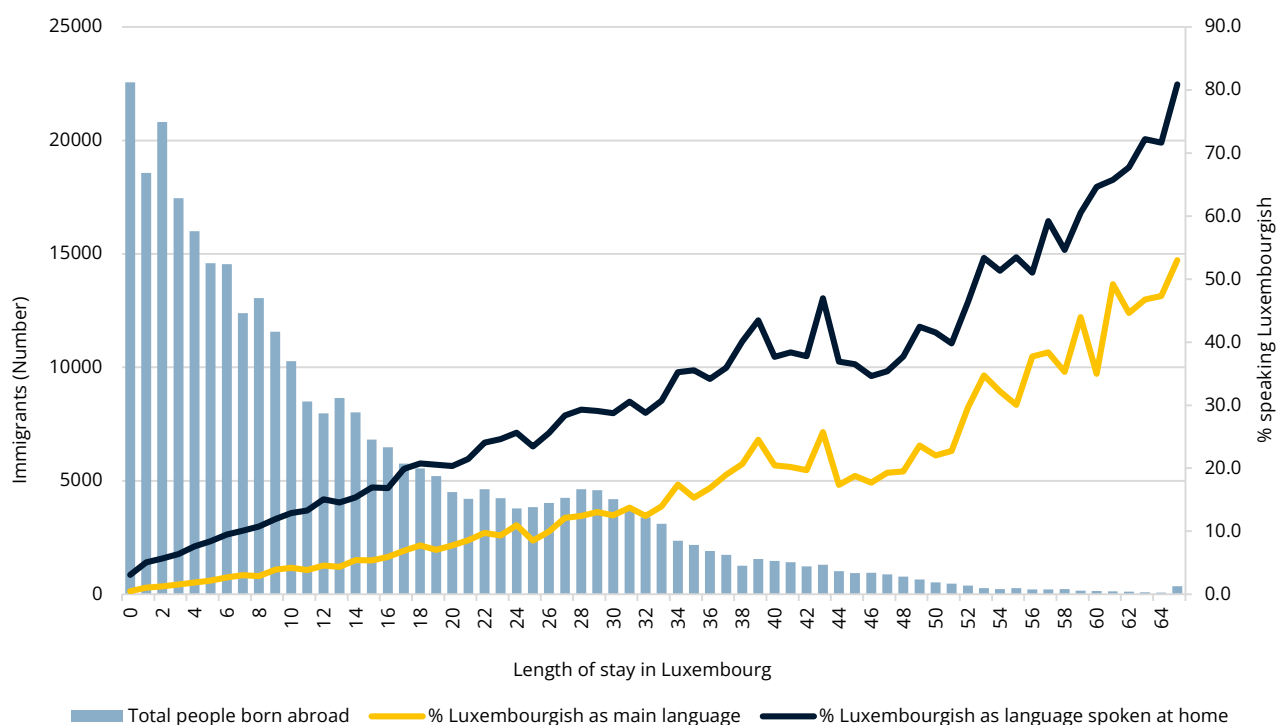
Source: STATEC, RP2021

2.3 Adoption of the Luxembourg language by immigrants according to length of stay

The two questions on the main language and the languages usually used make it possible to study the linguistic integration of immigrants. Graph 6 is based on immigrants who indicated their year of immigration. The height of the bars indicates the number of immigrants by length of stay. Those who arrived in 2021 are on the left because their length of stay is zero. The graph shows that the use of Luxembourgish as a main language increases with the length of stay. On the other

hand, it shows that even after a long stay, it is possible to live in Luxembourg without habitually using Luxembourgish. The question on the main language asked allowed only one response. For immigrants, therefore, ticking the 'Luxembourg language' box constitutes an act of allegiance to the 'new homeland', irrespective of actual language skills and habits. The yellow line shows that the claim to use Luxembourgish as the main language increases with the length of stay. The black line represents the habitual use of Luxembourgish, which obviously increases much more rapidly.

Graph 6: Percentage of immigrants indicating Luxembourgish as their main language and language usually spoken at home, by year of immigration (right-hand scale: number of immigrants)



Source: STATEC, RP2021

3.

Spatial analysis

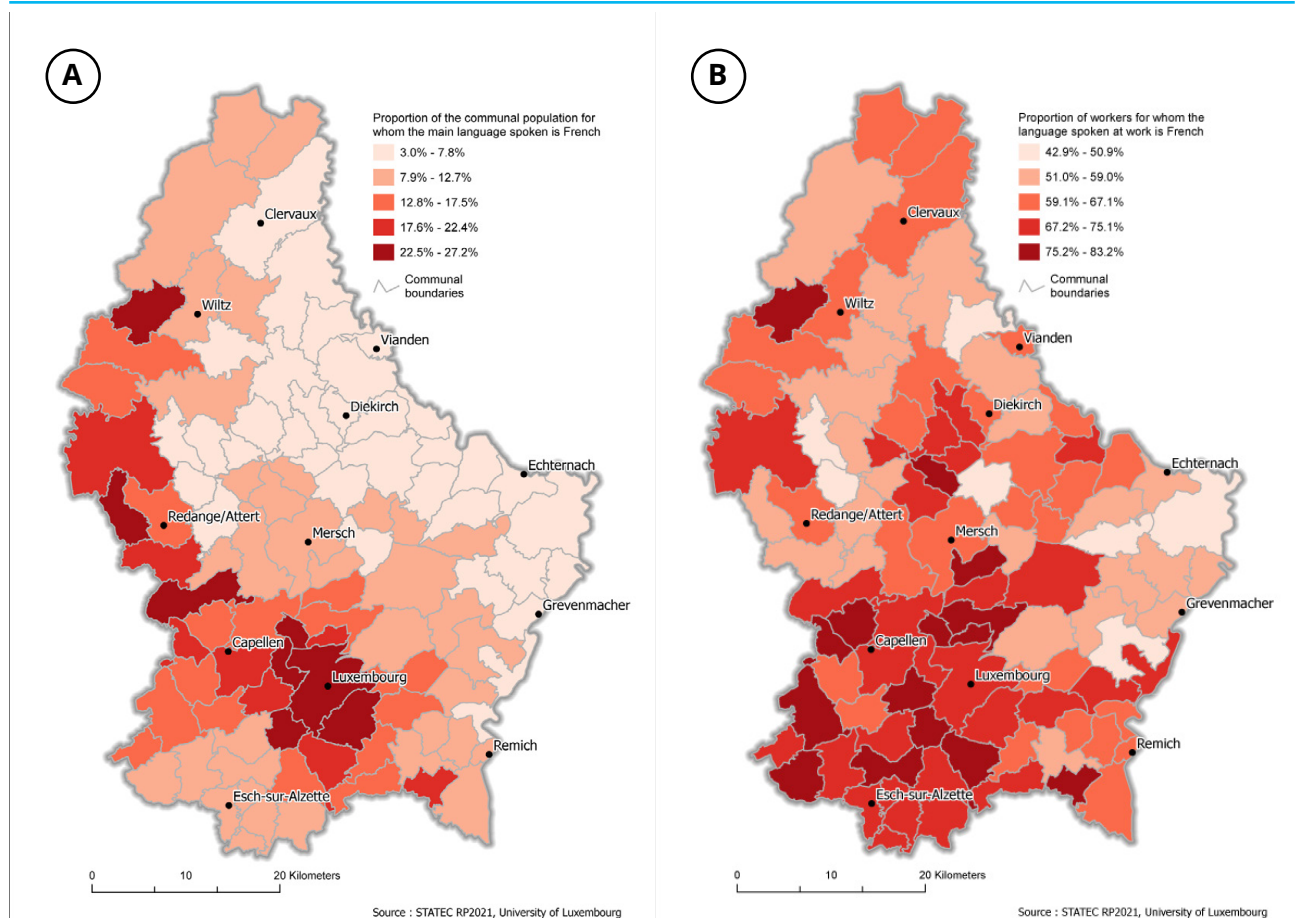
The breakdown and mapping of languages used on the basis of municipality gives a characteristic spatial image which reveals a certain territorialisation of language use. The maps on the left show the spatial distribution of the main languages (question 1) by municipality of residence, and those on the right show the languages usually used at work (question 2) by place of work. It should be noted that the scales used to draw the different maps (A and B) vary not only for the languages, but also for the two questions.

3.1 French

French was cited as the main language by 14.9% of respondents, making it the third most frequently cited language. A relatively consistent spatial picture emerges

from the decision to choose french as the main language (left), according to which French is concentrated in the communes around the capital and in the south and western periphery, with high percentages ranging from 12.8% to 27.2% (in relation to the total number of inhabitants per commune who answered the question on the main language). It is striking to note that in the southern region (La Minette), the percentage of French speakers is lower than in the surrounding area, at between 7.9% and 12.7% (for an explanation, see below on the use of Portuguese). The communes to the east of Grevenmacher towards the north have only low values of between 3 and 7.8%. The highest concentrations are in Luxembourg (27%), Winseler (27%) and Strassen (26%). Compared to the 2011 census, the percentages of French speakers have increased somewhat, as they were still 20% for Luxembourg and 21% for Strassen in 2011 (cf. Fehlen et al. 2013). The lowest shares of French are found in the small communes in the east: Reisdorf (4%), Tandel (3%) and Bettendorf (3%).

Maps 2 A and B: French as the main language (A) or as the language of work (B)



Source: STATEC, RP2021

However, the spatial distribution for French at work (right) is very different. On the one hand, the percentages per municipality are much higher: they never fall below 43% and rise as high as 79%. This underlines the general observation that French is the most important language in the workplace. As a result, it is much more difficult to identify a clear spatial structure. At best, the Mersch - Capellen - Luxembourg - Esch-sur-Alzette region can be identified as the region with the highest values. The highest percentages of French are found in the working communities of Winseler (83%) and Leudelange (82%), but not, as might be expected, in the capital, where the value of 67% indicates a greater mix with other languages in the workplace. The lowest values are found in the smaller municipalities of Putscheid (43%), Bech (46%) and Flaxweiler (47%).

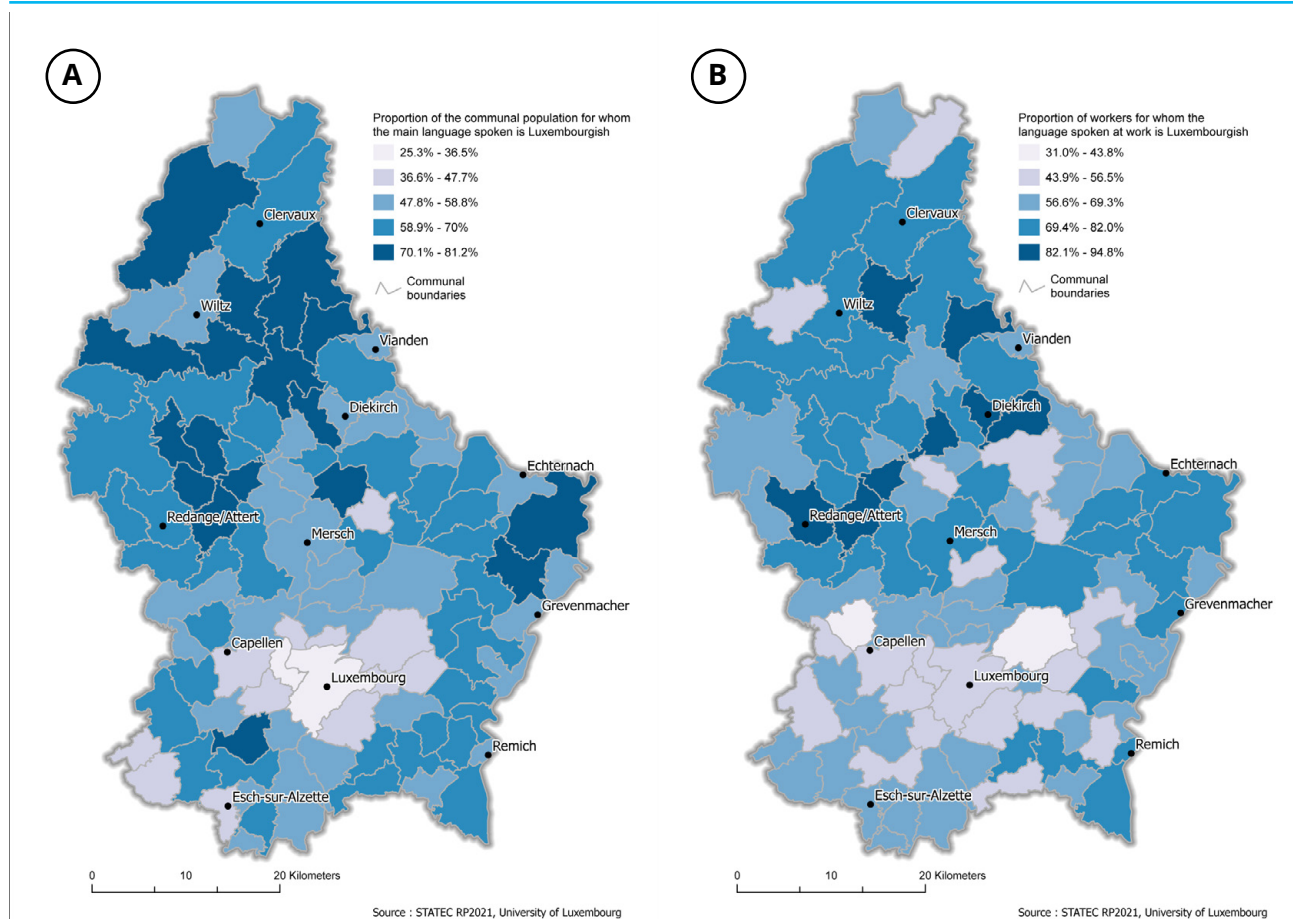
3.2 Luxembourgish

Luxembourgish is indicated as the main language by 49% of the total resident population, but there are

major regional differences here. The map (left) shows a weak presence (25 to 47%) of Luxembourgish in a large area around the capital, but in other towns too (Pétange, Differdange, Esch, Remich, Echternach, Diekirch, Vianden, Wiltz), Luxembourgish is only represented by between 45 and 55%. These are therefore largely the most densely populated municipalities. Throughout the rest of the country, i.e. mainly in medium-sized and small municipalities, Luxembourgish is the most common main language, with percentages ranging from 56% to 81%. The highest figures are found in Wahl (81%), Nommern (77%) and Useldange (77%), and the lowest in Luxembourg (25%) and Strassen (27%). The latter two towns show a drop in Luxembourgish of around 10 percentage points compared with the 2011 census, when the figures were 35% and 39% respectively.

On the other hand, Luxembourgish at the workplace (right-hand map) is slightly more widespread, with use lowest around the capital (30% to 56%) and highest in the other regions (69% to 95%). It cannot therefore be said that Luxembourgish plays little or no role in the workplace.

Map 3 A and B: Luxembourgish as a main language (A) or as a working language (B)



Source: STATEC, RP2021

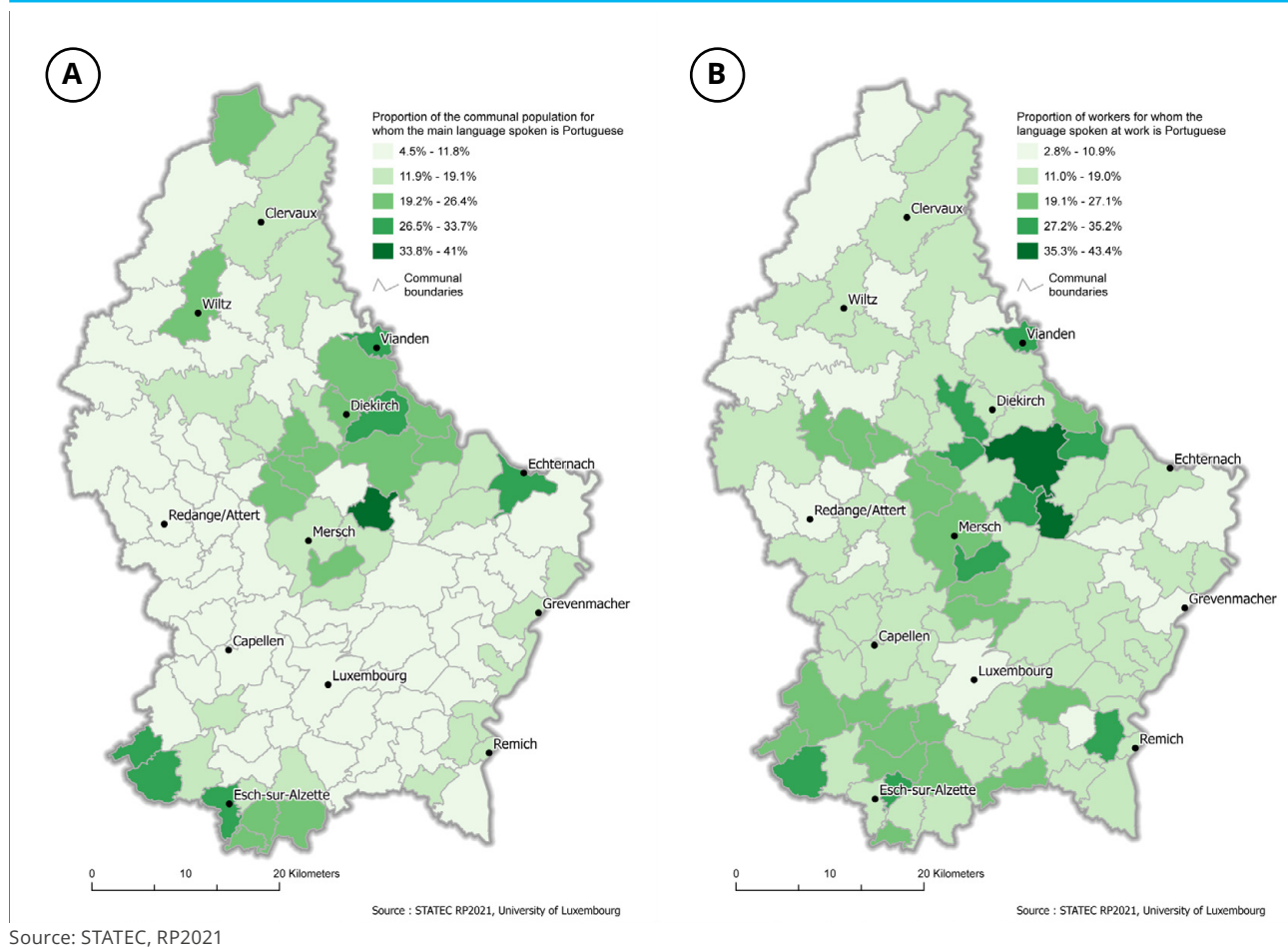
Source: STATEC RP2021, University of Luxembourg

3.3 Portuguese

As a main language (left map), Portuguese is over-represented in two regions, namely in north-east Gutland around Larochette (41%) and in the Minette region with Differdange (33%), Pétange (30%) and Esch-sur-Alzette

(30%). As might be expected, Portuguese is used as a workplace language (map right) in a large part of the country, with a strong presence also in north-east Gutland and the Minette region in the south-west. The low presence in the capital is striking (8%).

Map 4 A and B: Portuguese as a main language (A) or as a working language (B)

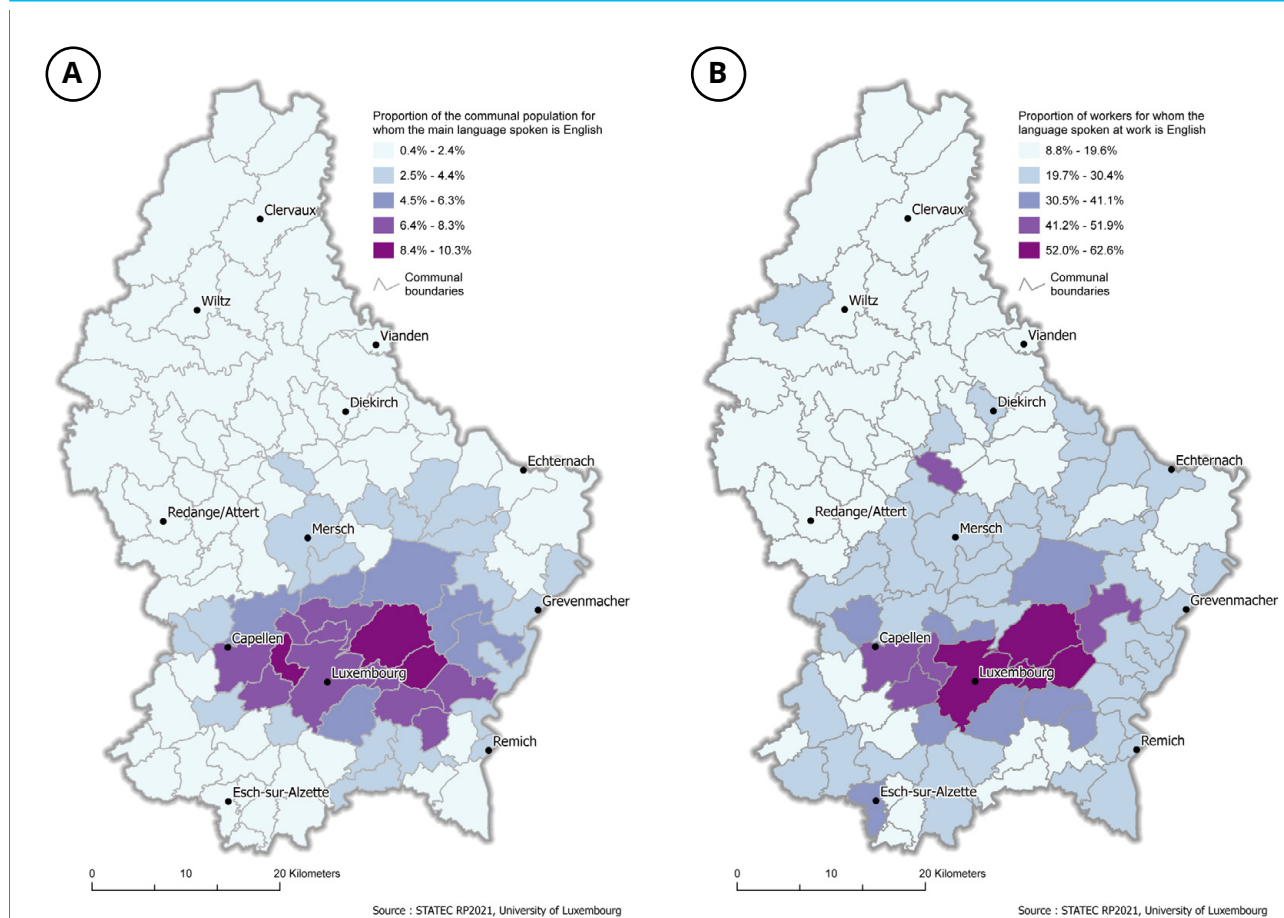


3.4 English

With an overall rate of 3.6% for the main language, English is one of the secondary players in Luxembourg's overall multilingualism. As the map on the left shows, the places of residence where speakers are most represented are concentrated in the capital and its outlying communes. The growing importance of English in the world of work contrasts sharply with this situation. The

workplaces where English is most widely used (among other languages) are also located around the capital, with percentages ranging from 30% to over 63% (map right). The highest figures are in Niederanven (63%), Sandweiler (59%) and the capital (58%). This is linked to the presence of large international companies in this region. Although French remains the central language in the workplace throughout the country, English has nevertheless established itself as the second most widely used language - in some cases on a par with French - in the capital region.

Map 5 A and B: English as a main language (A) or as a language of work (B)



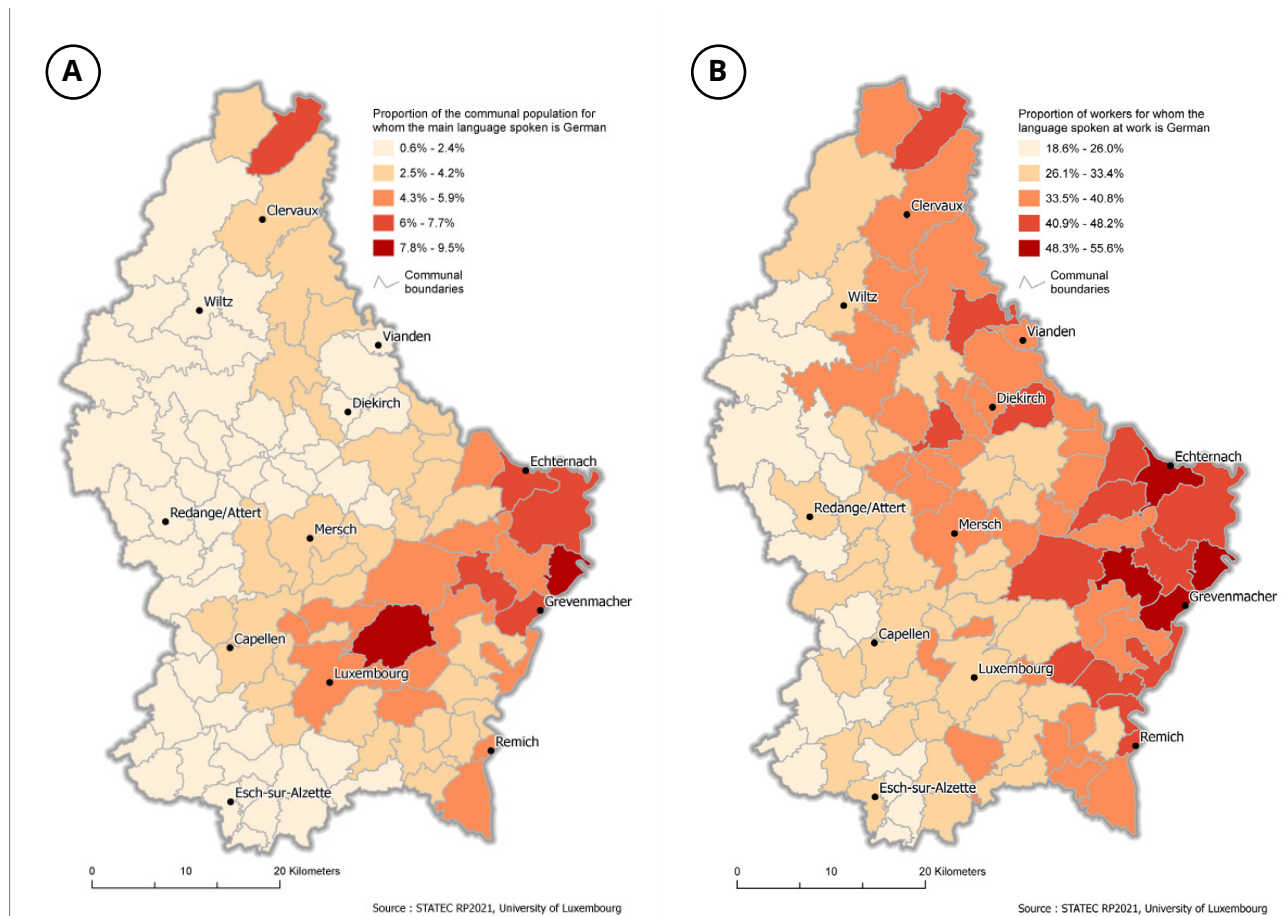
Source: STATEC, RP2021

3.5 German

With an overall frequency of 3% of the total resident population, German plays only a secondary role in Luxembourg as a main language (map left). As might be expected, places of residence are concentrated in a corridor between the capital and Echternach, with the

highest percentages in Merttert (10%) and Niederaanven (8%). German is used slightly more often in the workplace, also mainly in the east of the country. The highest figures are recorded in Biwer (56%), Merttert (54%) and Grevenmacher (50%). Communication with German cross-border commuters and customers from across the Moselle is undoubtedly the main reason for using German here (in addition to other languages).

Map 6 A and B: German as a main language (A) or as a working language (B)



Source: STATEC, RP2021

3.6

Municipalities as champions of linguistic diversity

In terms of linguistic diversity, the municipalities of Luxembourg, Strassen and Bertrange stand out, as three to four of the languages taken into account are present in high percentages. The high diversity is due in particular to the high percentage of 'other languages'. As mentioned above, in these municipalities, the share of French and Luxembourgish has fallen significantly in favour of 'other languages' compared with the 2011 census.

Conversely, the small communes of Wahl, Nommern and Useldange have the lowest linguistic diversity. A single language dominates, namely Luxembourgish, and all the other languages appear only in very small percentages. These differences in linguistic diversity must also, or above all, be interpreted in relation to the different degrees of urbanisation of the municipalities.

Table 9: Main languages in certain communes

		Luxembourgish	French	German	Portuguese	English	Italian	Other
Highly diverse communities	Luxembourg	25.3%	27.2%	4.4%	11.1%	7,7%	8,4%	15,9%
	Strassen	27.4%	26.3%	3.3%	6.6%	9.0%	7.1%	20.2%
	Bertrange	38.2%	19.2%	4.0%	7.1%	7.5%	7.2%	16.8%
Communities with low diversity	Wahl	81.2%	4.2%	1.7%	7.0%	09%	0.5%	4.4%
	Nommern	76.6%	6.6%	2.2%	7.5%	0.6%	0.9%	5.7%
	Useldange	76.6%	6.9%	2.0%	7.3%	1.5%	0.8%	4.9%

Source: STATEC, RP2021

Methodological note

Given the strong demographic growth, with a population increase of 25.7% between the two censuses, comparisons must be made with caution. A falling percentage for a language does not mean that its use has declined among its speakers, but that other groups of speakers with different linguistic repertoires have emerged. An additional bias is introduced by the fact that non-responses are more frequent among new arrivals (graph 4) and immigrants (table 10), and that among the latter, knowledge of the languages of the country is low. These languages are therefore proportionally overestimated.

The number of non-responses between the two censuses increased for both language questions (see table 10). In 2011, 90% of residents had answered at least one of the two sub-questions on languages usually spoken. In 2021, only 74% had done so. 474,854 people answered the question on languages spoken 'at home, with relatives', while only 265,615 answered the question on languages spoken 'at school, at work'.

Table 10: Valid language responses

	2021	2011
Main language	563 092	476 614
Languages spoken at home	474 854	454 789
Languages spoken at school and at work	265 615	323 233
People who answered at least one of the two sub-questions (one or the other)	477 061	458 900
People who answered neither of the two sub-questions	166 880	53 453
Total inhabitants	643 941	512 353

Source: STATEC, RP2021

In 2021, parents were able to indicate that their children were not old enough to speak. This was not the case in 2011. It is quite possible that parents also indicated their main language for their children.

The response rate varies according to migratory background. It is highest for Luxembourgers born in Luxembourg (98%) and lowest for foreigners born in Luxembourg, commonly known as second-generation immigrants, who are well below average (64% vs. 87%), probably because their experiences are too complex for the definition of main language, which required a single response.

Table 11: Response rate for main language by migratory background

Foreigners born abroad	81.00%
Foreigners born in Luxembourg	63.80%
Luxembourg nationals born abroad	83.60%
Luxembourg nationals born in Luxembourg	97.60%
Total	87.40%

Source: STATEC, RP2021

4. Luxembourgish as main language and detailed migration background

Throughout this section, the focus is on the use of Luxembourgish as the main language. Since 'The language of the Grand Duchy of Luxembourg is Luxembourgish'¹¹, it is useful to study its use as the main language in relation to the demographic dynamics of 2011-21, in particular in relation to citizenship and the migratory pathways of residents, following the frame of reference offered by a previous publication in this series¹², dealing with the migratory background of residents.

While 'native' Luxembourgers (citizens with one or both parents who were themselves born in the country) are obviously familiar with the Luxembourgish language, immigrants educated in other contexts are less so. Logically, with the increase in the immigrant population, the Luxembourg language should diminish.

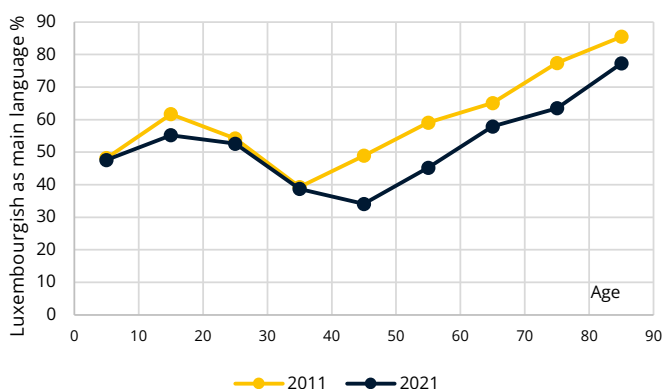
We have seen that the use of Luxembourgish as the main language declared by residents in the census will fall from 55.8% in 2011 to 48.9% in 2021, a drop of around 7 points. Although the questions and methodology differ slightly, and direct comparisons should be made with caution, this is a moderate erosion driven by long-term demographics, as the analysis by age will show.

Indeed, Luxembourg's senior citizens are the main speakers of Luxembourgish (Table 12): among residents aged over 80, the main use of the language was 85.5% and 77.3% respectively in 2011 and 2021, whereas among children under 10, only half were main speakers of Luxembourgish, and only 34.1% among people in their forties in 2021, the age group with the highest numbers of migrants.

Table 12. Use of Luxembourgish as main language 2011-2021 by ten-year age group (%)

Age	2011	2021
0-9	48.2	47.6
10-19	61.7	55.2
20-29	54.2	52.6
30-39	39.3	38.7
40-49	48.9	34.1
50-59	59.1	45.2
60-69	65.1	57.9
70-79	77.4	63.5
80+	85.5	77.3
Total	55.8	48.9

Graph 7 Use of Luxembourgish as a main language 2011-2021 by ten-year age group (%) (yellow 2011, black 2021)



The strong growth in the foreign population helps to account for this erosion, which is particularly noticeable among the working-age population, whose use of the Internet has fallen below the symbolic 50% mark for the 30 to 59 age groups.

¹¹ New text of the Constitution of the Grand Duchy of Luxembourg. 2023: Chapter I, Section 1, article 4.

¹² "RP 1er résultats 2021" No. 06 The migratory background of the population of the Grand Duchy of Luxembourg: structure and demographic implications <https://statistiques.public.lu/dam-assets/recensement/publication-6/docs/rp06-version-fr-v6-131023.pdf>

More specifically, Graph 7 confirms a dual demographic dynamic for the language:

- The first part of the curve, for those aged thirty and under, shows that the language is relatively stable at a majority level.
- The second part, concerning working-age adults and senior citizens, shows that older people are the most active speakers of Luxembourgish. It also confirms a generational replacement dynamic through the shift in the curve from 2011 to 2021. For example, the rate of use among octogenarians today is the same as among septuagenarians ten years earlier. The same applies to people in their fifties in 2011 and those in their sixties in 2021, and so on: each generation has its own participation rate, which is lower in more recent generations.

The 'rebound' in the first part of the curve, concerning young people aged between 10 and 29, where Luxembourgish is still the main language, contrasts with the downward trend in the main use of Luxembourgish among adults aged over thirty. In this population, the central fact of the majority is that of work immigration, hence the importance of completely different linguistic contexts and issues.

4.1 Grouped migration background and use of Luxembourgish

How does this pattern of use by age vary according to the migratory background of residents? Using the population typologies developed previously¹³, we compare the rate of use of Luxembourgish within three main populations:

- On the one hand (1.), Luxembourg '**natives**' are defined by the fact that at least one parent was born in the country.
- At the other end of the spectrum (3.) are "**foreign residents**", defined by the fact that they do not have Luxembourg nationality;
- Between the two (2.), "**non-native Luxembourgers**" have Luxembourg nationality, even if neither of their parents was born in the country.

Compared to the slow and moderate changes by age,

comparisons by grouped migratory background are more vivid and the differences are greater. For 'native' Luxembourgers (group 1), use of the language is the overwhelming majority, and will remain so, since the decline is of the order of half a percentage point between 2021 and 2011. For foreign residents (group 3), on the other hand, use of the language was very much in the minority in 2011 (4.9%), and represented less than half the rate measured in the 2011 census. While (relative) mastery of the language is an essential criterion for acquiring citizenship, the linguistic realities of migrants are different, and increasingly so.

Table 14. Use of Luxembourgish as main language 2011-2021 by grouped migratory background (%)

	2011	2021	Diff.
1. "2G natives": at least one parent was born in the country (almost all have Luxembourgish nationality).	95.5	94.9	-0.6
2. First-generation Luxembourgish national: of Luxembourg nationality but "non-native 2G" (no parent born in the country).	76.9	45.5	-31.3
3. residents of foreign nationality.	12.2	4.9	-7.2
Total	55.8	48.9	-6.8

What's more, for the population of non-native Luxembourgers, in other words citizens whose parents were not born in the country (group 2), the rate of use of Luxembourgish as a main language was only 45.5% in 2021, compared with 76.9% ten years earlier. Group 2, which sees itself as a transitional population between first-generation immigrants and 'natives' who have put down roots with their parents, was small in size in 2011 (4.5% of the total population), but grew in 2021 (15.8%) as a result of the reforms to access to citizenship. The result, for this population, has been a significant decline in the centrality of Luxembourgish.

Overall, the 2011-2021 intercensal period has seen the reinforcement of a form of linguistic polarisation in which the use of the language as a mainstay is characteristic of the vast majority of native speakers, while its non-practice is characteristic of the foreign population. Between these two populations, the 'new Luxembourgers' have on average seen their use of the country's language decline.

¹³ See RP 1st results 2021 N°06 <https://statistiques.public.lu/dam-assets/recensement/publication-6/docs/rp06-version-fr-v6-131023.pdf>

4.2

Grouped migratory background and use of Luxembourgish by age group

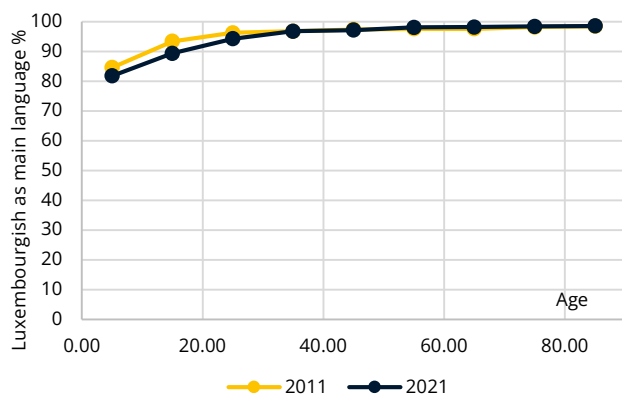
These transformations by major population groups are confirmed when they are put into perspective according to the age of the individuals.

Table 13. Use of Luxembourgish as a main language 2011-2021 by grouped migratory background and age group (%)

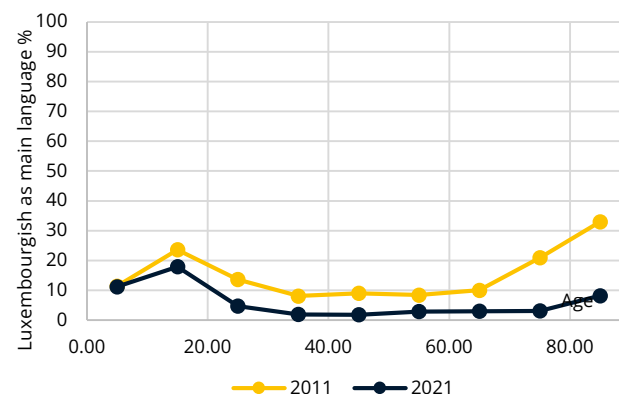
	Group 1		Group 2		Group 3	
	2011	2021	2011	2021	2011	2021
0-9	84.6	81.8	43.9	42.8	11.4	11.2
10-19	93.4	89.4	62.9	52.4	23.6	17.9
20-29	96.3	94.3	76.6	56.4	13.6	4.7
30-39	96.8	96.8	82.1	43.2	8.1	1.9
40-49	97.4	97.2	90.2	35.3	9.0	1.8
50-59	97.6	98.1	92.4	31.8	8.4	2.9
60-69	97.6	98.2	94.6	31.2	10.0	3.0
70-79	98.2	98.4	96.4	41.0	20.9	3.1
80+	98.5	98.6	98.2	81.6	33.0	8.2

Graph 8: Use of Luxembourgish as a main language 2011-2021 by grouped migratory background and age group (%)

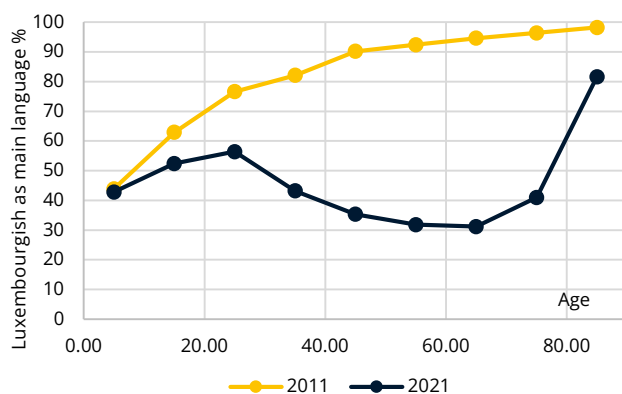
Group 1



Group 3



Group 2



In particular, the members of group 1 (“natives”) show above all the massive nature of their adherence to the language of the country, even within the youngest generations, where a slight drop of 4 points appears in the 10-19 age group. In contrast, group 3 (foreign residents) shows that Luxembourgish is not widely used as a main language, and is declining significantly in all age groups. Group 2 (non-native Luxembourgers) shows that the practice of Luxembourgish is stable among the youngest and oldest age groups, but that the indicator falls sharply between the forties and the sixties, by around 60 points among the latter. It is true that the law on access to citizenship does not impose a language proficiency requirement for residents who have lived in Luxembourg for more than 20 years. Furthermore, the population concerned (Group 3) tripled in size during the intercensal period. This lesser “linguistic allegiance” makes sense in this context.

4.3 Detailed migration background in Luxembourg

The detailed definition of the migratory background is repeated here, as previously studied¹⁴. An additional category of ‘2G+ natives’ has been added: group 0 of people whose two parents were born in Luxembourg. Taken together, these categories make it possible to gradually divide the population of Luxembourg between the groups with the deepest roots in the country and recent arrivals. This classification according to detailed migratory background makes it possible to understand the gradient in the use of Luxembourgish, between the most deeply rooted natives in the country, with a stable rate of use of the language close to 100%, and recent immigrants, for whom use is less than 2%.

Table 14. Use of Luxembourgish as main language 2011-2021 by detailed migratory background (%)

	2011	2021	Diff.
0 “Luxembourg-born” 2G+: both parents born in the country, born in the country and Luxembourg nationality.	98.8	98.7	0.0
1.0 “Luxembourg-born” 2G: only one parent born in the country, born in the country and Luxembourg nationality.	90.0	87.7	-2.2
1.1 “native 2G” but born outside the country.	73.7	62.5	-11.3
1.2 “2G natives” who are not Luxembourg nationals (this group was absorbed in 2021).	66.4	47.6	-18.8
2.0 First-generation Luxembourg nationals: Luxembourg citizens, non-native 2G (no parent born in Luxembourg), but born in Luxembourg.	78.2	64.3	-13.9
2.1 First-generation Luxembourg nationals: Luxembourg citizens, non-native 2G (no parent born in Luxembourg), and born outside Luxembourg.	58.1	21.1	-37.0
3.0 foreign nationality, without parents born in Luxembourg, but born in Luxembourg.	30.1	24.5	-5.6
3.1 foreign nationality, no parent born in Luxembourg, born outside Luxembourg, settled in the country for more than 20 years.	12.3	4.8	-7.5
3.2 foreign nationality, no parent born in Luxembourg, born outside Luxembourg, settled in the country for at least 10 years but less than 20 years.	6.3	3.0	-3.3
3.2 foreign nationality, no parent born in Luxembourg, born outside Luxembourg, settled in the country for less than 10 years.	1.7	1.6	-0.1
Total	55.8	48.9	-6.9

A comparison of groups 0 and 1.0 shows that the simple fact of having only one parent born in Luxembourg results in a drop of almost 10 points in the use of the language compared to those with two rooted parents.

Symmetrically, in groups 3.1 to 3.3, the group of foreign residents born outside the country, the length of time they have been in the country tends to lead to an increase in the practice, but in a moderate proportion, half as much in 2021 as in 2011.

Details of group 2, first-generation Luxembourgers in the sense that their parents were born outside the country, produce an interesting result: while the majority of members of group 2.0 (born in Luxembourg) speak the language, those in group 2.1 (born abroad) have seen their rate of use more than halved, falling from 58.1% to 21.1% (or -37 points) over the intercensal period. For more than half of these citizens, the language of the Grand Duchy is not their main language.

14 See “RP 1st results 2021” No. 06, Table 8.

4.4

Detailed migration background and use of Luxembourgish by age group

Breaking down the previous results by age group, it is possible to confirm the gradient in the use of Luxembourgish, which is close to 100% when both parents were born in Luxembourg, and close to 0% for foreigners of recent migration. Between these two extremes, the decline in use over the inter-decade period is particularly marked among citizens born outside the country (2.1). On the other hand, for non-natives born in the country (the 2.0 who have citizenship and the 3.0 who are foreign nationals), young people under the age of 20 have maintained the same rate of use compared to 2011, which seems to confirm the positive effect on the use of Luxembourgish of language policies in the school system.

4.5

Use of Luxembourgish as a main language and multilingualism

Overall, these results confirm that the erosion of Luxembourgish as a main language is slow and not very uniform across the population as a whole. On the other hand, some groups show a rapid decline in the rate of use, which is particularly noticeable in the active age groups around the age of 40 or 50. Moreover, for group 2.1, the 'non-native Luxembourgers', citizens of the country but without parents born in Luxembourg, the main language is not the language of the country, suggesting that integration and participation in democracy are more difficult. Even though at least a minimum level of language proficiency is required in the general case for access to nationality (when the period of residence is less than 20 years), the majority of group 2.1 do not use Luxembourgish as their main language. These linguistic realities confirm that Luxembourg is first and foremost, and increasingly so, a country with a multilingual identity, where no single language can assume a linguistic monopoly.

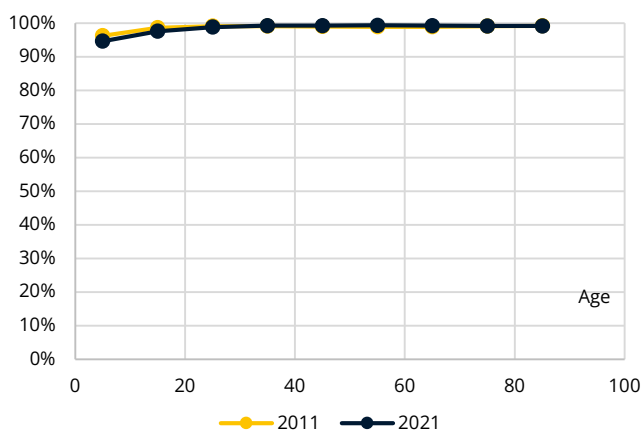
APPENDIX

Table 16: Use of Luxembourgish as main language 2011-2021 by detailed migration background and age group (%)

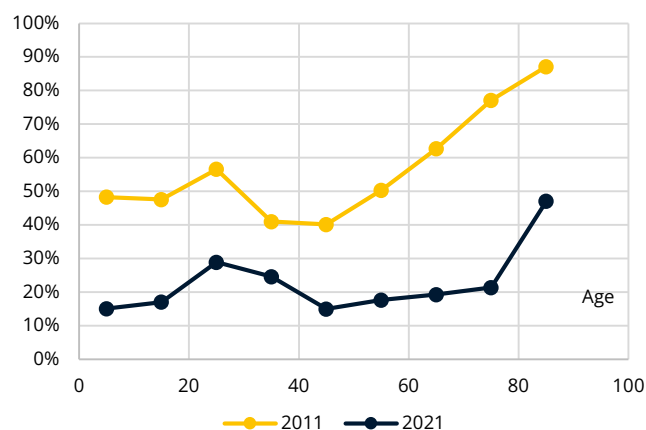
	0.0		1.0		1.1		2.0		2.1		3.0		3.1		3.2	
	2011	2021	2011	2021	2011	2021	2011	2021	2011	2021	2011	2021	2011	2021	2011	2021
10	96.3%	94.6%	72.9%	66.4%	35.9%	40.8%	43.8%	45.2%	48.3%	15.1%	13.4%	14.3%			6.1%	6.2%
20	98.7%	97.6%	87.3%	80.3%	54.2%	51.5%	63.5%	57.9%	47.6%	17.0%	33.1%	31.7%			12.6%	10.2%
30	99.1%	98.8%	92.4%	87.8%	62.0%	48.8%	78.0%	64.4%	56.6%	28.9%	32.1%	36.5%	14.8%	17.3%	5.4%	2.0%
40	99.1%	99.3%	93.3%	93.2%	72.5%	52.0%	86.2%	60.4%	41.0%	24.6%	36.7%	32.6%	13.0%	12.7%	1.1%	0.5%
50	99.0%	99.3%	96.1%	94.2%	79.9%	52.8%	95.7%	62.7%	40.1%	15.0%	55.8%	30.3%	11.4%	3.7%	1.4%	0.6%
60	98.9%	99.4%	96.7%	96.6%	80.1%	64.1%	96.8%	78.2%	50.3%	17.6%	61.2%	50.1%	9.2%	3.9%	1.0%	0.9%
70	98.9%	99.2%	97.7%	97.1%	78.9%	71.5%	97.9%	88.7%	62.7%	19.3%	67.1%	52.8%	9.1%	4.1%	1.2%	1.0%
80	99.1%	99.2%	98.4%	98.2%	78.0%	76.8%	98.6%	97.0%	77.1%	21.4%	73.9%	54.1%	18.3%	3.7%	1.6%	1.1%
90	99.2%	99.2%	99.0%	98.8%	82.0%	77.1%	99.0%	98.9%	87.1%	47.1%	77.1%	73.2%	29.5%	8.8%	1.9%	2.5%

Graph 9: Use of Luxembourgish as main language 2011-2021 by detailed migration background and age group (%)

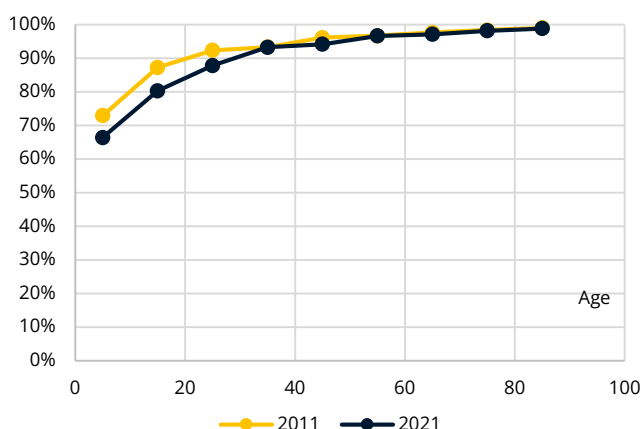
Group 0.0



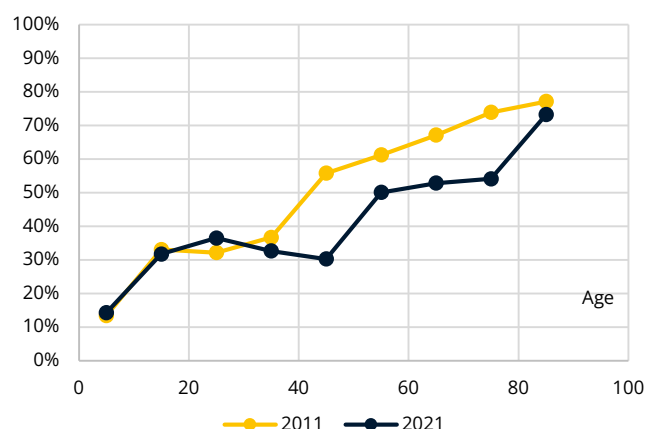
Group 2.1



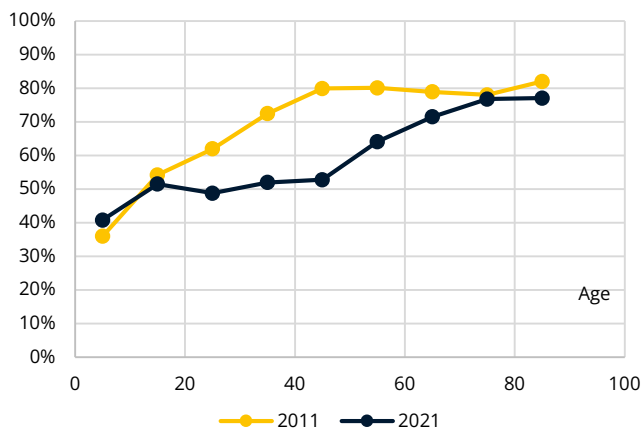
Group 1.0



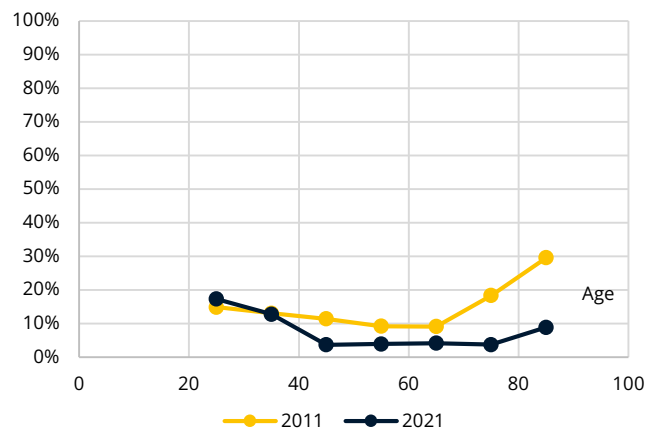
Group 3.0



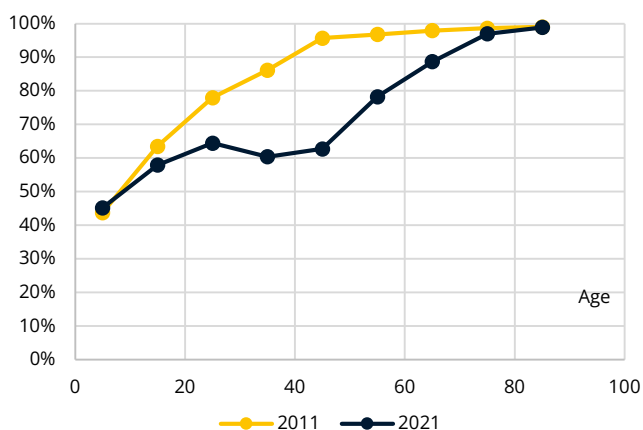
Group 1.1



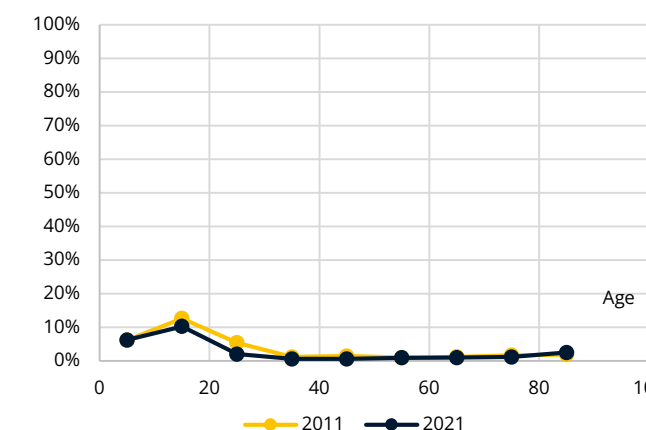
Group 3.1



Group 2.0



Group 3.2



Note: Groups 1.1 and 1.2 (2G natives born abroad or non-Luxembourgers by nationality) are grouped together, as are groups 3.2 and 3.3 (foreigners who migrated less than 20 years ago).

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