

Cross-border impact assessment 2018

Dossier 2: The Qualifying Foreign Taxpayer Obligation (“90% rule”): A Preliminary Ex-Post Impact Assessment



Maastricht University

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2. The Qualifying Foreign Taxpayer Obligation (“90% rule”): A Preliminary Ex-Post Impact Assessment

1. Introduction

The qualifying foreign taxpayer obligation (hereafter: QFTO), which entered into force on 1 January 2015, establishes that non-resident taxpayers in the Netherlands may benefit from the same deductions and tax credits as resident taxpayers only if they earn at least 90% of their global income in the Netherlands. Under this new system, these non-resident workers, if they neither earn 90% of their world income in the Netherlands, nor have a sufficient taxable income in their country of residence, risk forfeiting tax benefits (e.g. mortgage-interest deductions for owner-occupied dwellings). Moreover, the rule may especially impact frontier workers and have detrimental economic effects if such non-resident workers decide against employment in the Netherlands and prefer to work in another country. In such a scenario, employers in border regions should be concerned, given that the majority of non-resident workers are employed in areas along the Dutch border.

In this inventory of the potential impact of the QFTO, we focus on the group of persons who are employed in the Netherlands, but reside outside of the Netherlands, as they are likely the largest group affected by the rule. This 2018 assessment is a continuation of the ex-ante impact assessment of the “90% rule”, published in the 2017 edition of ITEM’s Cross Border Impact Assessment.¹ In comparison to the previous assessment, this assessment includes a more comprehensive impact analysis by looking at the population of non-resident employees in the Netherlands from 2014 to 2016, hence analyzing this population two years before and two years after the introduction of the QFTO. The objective of this preliminary ex-post analysis is to examine trends in the number of non-resident employees in order to see if notable changes occurred in the number and composition of non-resident employees in the Netherlands after the 90%-rule came into force.

The structure of this dossier is as follows. The first part describes the research plan for studying the impact of the QFTO. This part first describes the results of last year’s report. Second, it explains the part of the research plan that will be executed in this dossier. Third, it provides an overview of what research still has to be done. The second part of this dossier describes the data and definitions that are used in the empirical analysis. The third part presents and explains the results of the empirical analysis. Finally, a conclusion is provided, as well as a description of the limitations of this research.

2. Research objectives and approach

2.1 Themes and indicators: why the 90% rule is important and how to measure its impact

Entered into force on 1 January 2015, the 90%-rule establishes that non-resident taxpayers in the Netherlands may benefit from the same deductions and tax credits as resident taxpayers if they earn 90% of their global income in the Netherlands. The QFTO replaces the optional scheme, under which non-resident taxpayers could opt for the same tax treatment as resident taxpayers, even if earning less than 90% of their global income in the Netherlands. Under the new system, non-resident

¹ Vink, M., van der Valk, J., Schaper, M., & Schmidt, L. (2017). Cross Border Impact Assessment 2017, Dossier 6. ITEM.

taxpayers only qualify for domestic taxpayer status if they earn 90% of their declared world income in the Netherlands, but they are excluded if their Dutch income is below this threshold.

Both the optional scheme and the QFTO respond to the *Schumacker* decision of the Court of Justice of the European Union (CJEU). The ECJ's preliminary ruling in *Schumacker* obliges EU Member States to grant foreign taxpayers who enjoy all or almost all of their income in the Netherlands the same personal deductions as resident taxpayers.² After the CJEU ruled that the enjoyment of these personal benefits as required by EU law cannot be made contingent on the exercise of an option by the taxpayer,³ the Dutch legislator abolished the optional scheme and enacted a mandatory income threshold (of 90%) as from 2015 to redefine the target group benefiting from the *Schumacker* doctrine. It has been shown that this contradicts the initial position of the legislator when the *Dutch Income Tax Act 2001* was introduced, as well as ECJ decisions explicitly disapproving an arbitrary threshold for defining foreign taxpayers' world income.⁴ In February 2017, the CJEU gave a preliminary ruling requested by the Supreme Court in the Netherlands in the case X, also known as the Spanish football broker.⁵ In this case, the CJEU ruled that the resident taxpayer in Spain, who earned 60% of his global income in the Netherlands and 40% in Switzerland, was eligible for Dutch mortgage-interest deductions. The CJEU ruling challenges the legislator's definition of the *Schumacker* doctrine in the case of self-employed individuals as it makes the enjoyment of personal tax benefits not dependent on satisfying any particular income threshold, but rather contingent on the issue whether or not these benefits can be enjoyed in the state of residence. Should the state of residence not be in a position to grant these benefits (because it may not tax sufficient income), the CJEU ruled, then the state in which the taxpayer is a non-resident should award them in proportion to the income earned in that state. The Dutch Supreme Court took over this decision in a judgment of May 2017 and referred the case back to the lower court.⁶ At the time of writing of this report (1 August 2018) it is unclear how the Dutch authorities will implement this decision through a possible revision of the QFTO.

² CJEU 14 February 1995, Case-279/93 (*Schumacker*), Jur.1995, p. I-225.

³ CJEU 18 March 2010, Case-440/08 (*Gielen*), NTFR 2010/795, Jur.2010. p. I-2323.

⁴ CJEU 10 May 2012, Case C-39/10 (*Commission v. Estonia*), NTFR 2012/1371; ECJ 09 February 2017, Case C-283/15 (X).

⁵ CJEU 09 February 2017, Case C-283/15 (X). See also H. Arts and J. Korving, *De kwalificerende buitenlandse belastingplicht van art. 7.8 IB en het EU-recht*. In: *Greenseffectenrapportage 2016*, Institute for Transnational and Euregional cross border cooperation and Mobility/ITEM, pp. 188-198.

⁶ Hoge Raad, 12 May 2017, Case 13/03468, ECLI:NL:HR:2017:848.

Table 1: Principle, Benchmarks and Indicators for assessing the impact of the QFTO on social-economic development

Theme	Principles	Benchmarks	Indicators
Social-economic development	<p>Freedom of movement for workers (Article 45 TFEU)</p> <p>Freedom of establishment (for self-employed) (Article 49 TFEU)</p> <p>Cross-border mobility as stimulus for social-economic development, especially in border regions.</p>	The situation on 1 January 2015 when the QFTO was introduced.	<p>(this impact study)</p> <p>The number of non-resident workers in the Netherlands before/after the introduction of the QFTO.</p> <p>The different impact by nationality and by employment sector.</p> <p>(in future impact studies)</p> <p>The different impact on persons with full-time / part-time employment and those who are self-employed.</p> <p>Individual mobility and employment trajectories.</p>

Besides the clear legal implications in terms of principles of European integration, in this report we study the impact of the QFTO on social-economic development (see Table 1). Especially, expatriated (i.e. non-resident) Dutch nationals who work in the Netherlands may be adversely affected as they are most likely informed about Dutch tax regulations. A situation is thinkable where a Dutch national bought a property in the country of residence under the assumption to benefit from the same mortgage interest rate deductions ('*hypotheekrentaftrek*') as domestic taxpayers even when earning less than 90% of the world income in the Netherlands. This situation changed as of 1 January 2015 and the individuals earning less than 90% of their world income in the Netherlands no longer benefit from these deductions while being levied payroll taxes. In the case of self-employment, the ECJ considers this law as a violation of the freedom of establishment (Art.49 TFEU).⁷

The qualifying foreign taxpayer obligation (90% rule) likely has an adverse effect on labour mobility in the cross-border region and the number of non-resident workers. This is problematic as many employers benefit from intra-EU labour mobility in the light of labour or skills shortages. It is expected that employers must increase incentives for holding experienced and skilled non-resident workers in their company because the indirect costs for some non-residents increases under the new regulation.

⁷ ECJ 16 October 2008, Case C-527/06 (Renneberg), NTFR 2008/2144, Jur. 2008, p. I-7735.

2.2 Summary of last year's preliminary ex-ante assessment

Last year's report analyzed the population of non-resident workers in the Netherlands as of 1 December 2014 to estimate the potential cross-border impact of the QFTO. It found that at that point 131.2 thousand employees worked but did not live in the Netherlands. Most of those non-resident employees lived in Belgium, Germany or Poland. They mostly held the Belgian, Dutch, German, or Polish nationality. German and Belgian non-residents were mostly full-time workers in the Netherlands, whereas Polish employees were often classified as part-time workers. It is expected that part-time workers are less likely to comply with the QFTO than full-time workers, as they might have to generate another source of income somewhere else to fulfill their financial obligations. If the QFTO has an effect on labor mobility, it most likely has a differential effect across work sectors. The report found that the commercial service sector might be most vulnerable to the effects of the QFTO, as most non-resident workers were employed in that sector (65.2%). Finally, concerns about the impact of the QFTO are highest in the Dutch border regions, as the 14 COROP areas along the Dutch-German and Dutch-Belgian border employed the majority of non-resident workers (63.4%). Consequently, if non-resident workers would decide to leave the Netherlands due to the QFTO and decide to work in another country, this could have harmful economic consequences for these border regions.

2.3 A preliminary ex-post analysis

In this year's assessment we replicate and extend last year's analysis and provide a preliminary ex-post impact analysis of the QFTO based on an analysis of the years 2013-2016. The first step after last year's report is to provide a more comprehensive ex-ante approach by estimating the number (and characteristics) of non-resident employees in the Netherlands for the years 2013 and 2014. These are the most recent years before the status of the qualifying foreign tax subject under Article 7.8 of the Dutch Income Tax Act 2001 was amended on the 1st of January 2015. This estimation displays how many individuals and which demographic sub-groups are likely to be affected by the change in legislation, and it makes it possible to analyze relevant trends before the QFTO came into place. In addition to this, the estimation serves as a baseline against which the statistics in the ex-post evaluation can be compared.

After this has been accomplished, the same estimation technique can be applied to the years 2015 and 2016, which are the most recent years after the QFTO was implemented, and for which data is available at Statistics Netherlands (in future inquiries more years can be analyzed). This can then serve as a preliminary ex-post analysis of the effects of the 90%-rule, and hence make it possible to not only get a grasp of the potential effects, but also of the real effects of the legislation. This can be done by comparing the trends in the number of non-resident employees in the period before the legislation was implemented (2013, 2014) with that of the period after it came into force (2015, 2016). The expectation is that the 90% rule makes it less attractive to be a non-resident employee in the Netherlands. Hence with this analysis we can see if the number of non-resident employees (relatively) decreases since 2015. In general, we can observe the trends over time in the number of non-resident workers in the Netherlands and the (demographic) characteristics of these workers. The objective of the ex-post analysis is to examine if there is any discontinuation in the trend after the 90%-rule was implemented.

3. Data and method

3.1 Data and definitions

The datasets and definitions that are used in this dossier are mostly the same as those in last year's report⁸. As in last year's report, this dossier uses data from the *Polisadministratie* linked with data from the Municipal Personal Records Database (BRP) to identify non-resident workers. Although in this report we use data from the whole period 2013-2016 instead of only for 2014. The *Polisadministratie* data contains information on contracted employees for whom employers withhold payroll tax on their monthly salary. The BRP, on the other hand, contains personal information, such as the address of residence, age, and gender of all individuals who register with and currently live in a Dutch municipality. Consequently, by linking these datasets the number of non-resident employees can be identified. As non-resident employees are defined as those who are subject to payroll tax, but who do not reside in the Netherlands. Hence, these are the persons who are included in the *Polisadministratie*, but who are not registered in the Municipal Personal Records Database (see last year's report for a more comprehensive description of these datasets and the operationalization of non-resident employees). Linking these datasets also provides the opportunity to analyze some background characteristics of this population. Data is available on: gender, age⁹, country of residence, nationality, employment sector, and region of employment.

The background characteristics are conceptualized as follows. Nationality refers to the country where the non-resident employee holds citizenship, whereas country of residence is straightforwardly defined as the country where the non-resident employee resides in. Most non-residents are Belgian, Dutch, German, or Polish and reside in Belgium, Germany or Poland. The statistics in the following empirical analysis are disaggregated accordingly. In the statistics the category "other" refers to all other nationalities or countries of residence. Based on the statistical classification of economic activities in the European Community (NACE), non-residents are also grouped by sector of employment. Jobs are attributed to NACE and then aggregated by four employment sectors: (1) agriculture, (2) industrial jobs, e.g. in textile manufacturing, (3) commercial services in the private sector such as banking, commerce or marketing as well as (4) public and social services including teachers or nursing jobs. Moreover, the dossier defines border regions as the Dutch NUTS3/COROP areas that are directly located along the Dutch-Belgian and Dutch-German borders. The Netherlands counts 40 COROP regions, with 14 of them being border regions. Five of those border regions are located along the Belgian border (Zeeuwsch-Vlaanderen, Overig Zeeland, West-Noord-Brabant, Midden-Noord-Brabant, Zuidoost-Noord-Brabant), seven along the German border (Oost-Groningen, Zuidoost-Drenthe, Noord-Overijssel, Twente, Achterhoek, Arnhem/Nijmegen, Noord-Limburg), and two (Midden-Limburg and Zuid-Limburg) share a border with both Belgium and Germany. Our definition of border region only refers to the Netherlands, but excludes German or Belgian NUTS3 regions that share a border with the Netherlands. To date this information is not available because only the country but not the exact address of residence outside the Netherlands is available from the data on non-resident workers.

⁸ Vink, M., van der Valk, J., Schaper, M., & Schmidt, L. (2017). Cross Border Impact Assessment 2017, Dossier 6. ITEM

⁹ Since information on the age group distribution among non-resident workers is only available for, on average, 33 per cent of the research population, the information about this variable is not used in the analysis.

3.2 Data changes compared to the previous report

The data that is used in the current analysis is not completely the same as the data used in the previous assessment of the cross-border impact of the qualifying foreign taxpayer obligation. There are several reasons for this. First of all, Statistics Netherlands has implemented a new approach to determine the working location of employees. Hence, this potentially alters the reported number of non-resident employees in cross-border regions, which is a major statistic in our analysis. The changed methodology is applied retroactively until 2014. So for the years before 2014 the old methodology is still used. Consequently, any changes in the working location of non-resident employees occurring between the years 2013 and 2014 are due to real changes and/or changes in methodology, and should therefore be treated with caution.

Secondly, datasets at Statistics Netherlands are not fixed and are constantly updated if new information becomes available. This can lead to discrepancies if the same year is analyzed in two different periods. In this case, the year 2014 was analyzed in last year's report, but it is also analyzed in the current report. The results for the same year (2014) are expected to differ to some extent due to the fact that the current dataset contains more up-to-date information compared to the dataset last year.

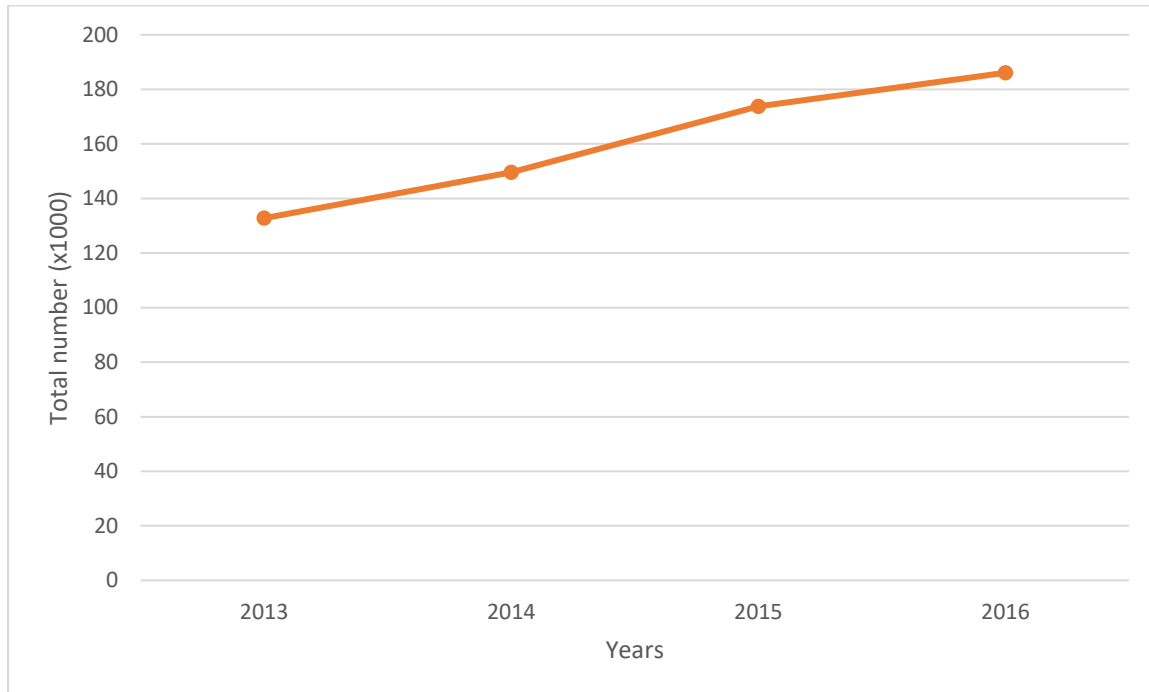
Thirdly, statistical offices normally focus their data generation and analysis on people living within the borders of the respective country. Collecting statistics on the country of residence of non-resident employees is new and therefore involves significant challenges. Since the methodology for collecting such statistics is continuously being refined, it is not surprising some discrepancies exist between the results of the current analysis and the analysis carried out last year.

Finally, in contrast to the previous report, there is no data available on the employment status of non-resident employees. This means that we cannot assess if a non-resident employee works part-time or full-time. In the absence of usable tax data (see section 4.2 for more information about this), data on employment status could give a first indication of the number of non-resident employees who do not earn 90% of their income in the Netherlands. As it is expected that part-time workers are less likely to comply with the 90% rule than full-time workers, as they might have to generate another source of income in another country to fulfill their financial obligations. The reason why this data is not available is that it could not be delivered and added to the new database before the publication of this report. It is expected that it will be added to the database soon, and therefore could be analyzed for future inquiries.

4. Empirical Analysis

In this section a comprehensive ex-ante analysis and a preliminary ex-post analysis is provided for the assessment of the impact of the QFTO on non-resident workers in the Netherlands. Special emphasis is placed on the Dutch cross-border regions, as these regions are most dependent on non-resident workers, and should therefore be most concerned about any negative effects of the rule on the labor mobility of non-resident workers. This section first provides a general overview of non-resident workers in the Netherlands, and then zooms in on the border regions.

Figure 1: Number of non-resident employees for the years 2013-2016



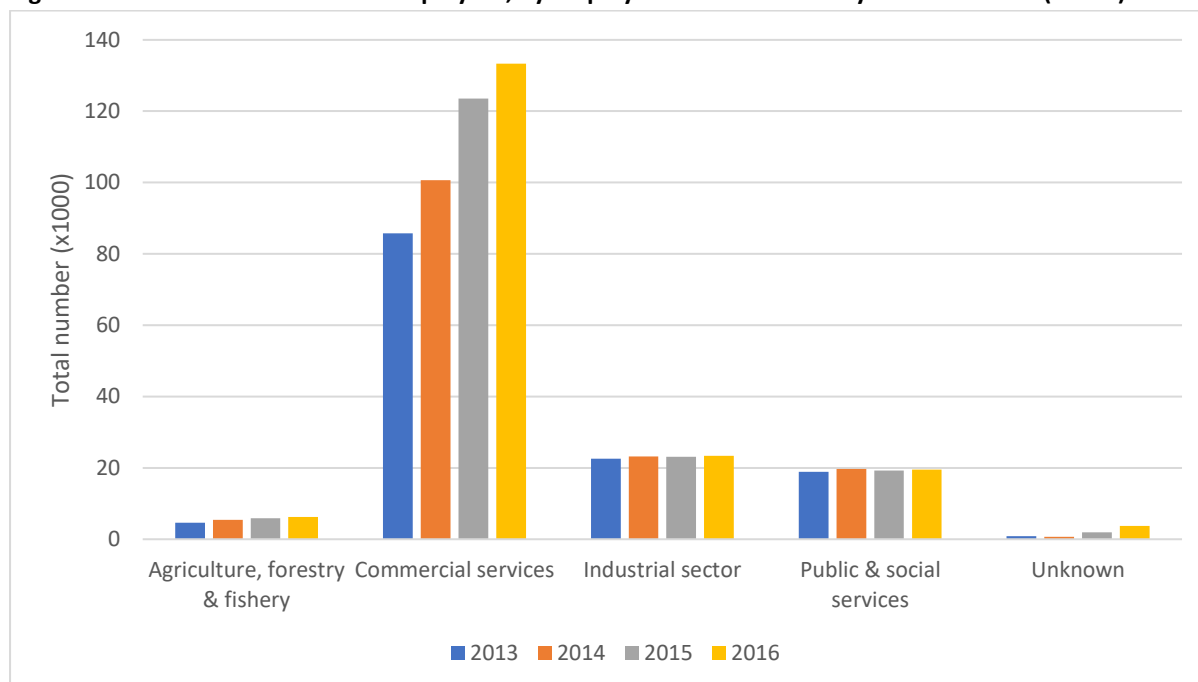
Source: Statistics Netherlands

4.1 General overview of non-resident workers in the Netherlands

Figure 1 shows the number of non-resident workers in the Netherlands for the years 2013-2016. The exact numbers can be found in Table 2, as well as the nationalities and countries of residence of the non-resident employees. As can be seen from Figure 1, the number of non-resident employees has increased considerably over the period 2013-2016. Where in 2013 the number of non-resident employees was a little more than 130.000, this number increased to over 185.000 in 2016. This is a 40% increase in just four years. This increase, however, is mainly due to the large influx of Polish non-resident workers in this period. As table 2 shows, the number of non-resident Polish workers increased from 45.800 in 2013 to 82.300 in 2016, an increase of 36.500 workers. This makes them by far the largest group of non-resident workers in the Netherlands. These Polish workers mostly reside in Poland (77.200 out of 82.300 Polish non-resident workers in 2016), although a few thousand Polish non-residents live in Germany. Also, the number of non-resident workers with other nationalities than Belgian, Dutch, German, or Polish increased considerably over the period 2013-2016 (from 11.800 to 26.000). Most of them live in countries other than Belgium, Germany, or Poland. Although these results are interesting, it is expected, especially for those residing in Poland, that these workers mostly just temporarily work in the Netherlands.¹⁰

¹⁰ CBS. (2018, May). "Third of Polish workers still here after 5 years." Retrieved from: <https://www.cbs.nl/en-gb/news/2018/18/third-of-polish-workers-still-here-after-5-years>.

Figure 2: Number of non-resident employees, by employment sector for the years 2013-2016 (x1000)



Source: Statistics Netherlands

Table 2: Number of non-resident employees by country of residence and nationality, 2013-2016 (x1000)

Country of residence			2013	2014	2015	2016
Belgium	Nationality	BE	13.9	14.1	14.2	14.7
		DE	0.2	0.2	0.2	0.2
		NL	20.9	21.1	21.0	21.1
		PL	0.3	0.3	0.3	0.4
		Other	1.2	1.4	1.4	1.5
	Total		36.6	37.1	37.2	37.9
Germany	Nationality	DE	15.4	14.2	14.3	13.9
		NL	15.8	16.1	16.3	16.4
		PL	2.7	2.8	4.1	4.6
		Other	1.8	1.9	2.0	2.8
	Total		35.8	35.1	36.9	37.8
Poland	Nationality	DE	0.9	0.9	0.9	0.8
		NL	0.9	0.9	1.1	1.2
		PL	42.8	53.9	71.5	77.2
		Other	0.5	0.6	0.4	0.4
	Total		45.0	56.3	73.9	79.5
Other	Nationality	NL	3.4	4.2	4.1	4.4
		PL	0.1	0.1	0.1	0.1
		Other	11.8	16.7	21.4	26.0
	Total		15.4	21.2	25.9	30.8

Total	Nationality					
	BE	14.1	14.2	14.4	14.9	
	DE	16.6	15.5	15.5	15.1	
	NL	41.0	42.4	42.6	43.1	
	PL	45.8	57.0	76.0	82.3	
	Other	15.3	20.5	25.2	30.7	
	Total	132.8	149.6	173.8	186.1	

Source: Statistics Netherlands

We expect those non-resident workers who commute to the Netherlands on a day-to-day basis to be living in Belgium or Germany, as these are the countries directly bordering the Netherlands. The strong increasing trend in non-resident employees cannot be observed for these countries. The number of non-resident workers living in Belgium and Germany increased just slightly: from 36.600 to 37.900 workers for Belgium and from 35.800 to 37.800 workers for Germany. Not surprisingly, Belgian non-residents mostly live in Belgium, whereas German non-residents predominantly live in Germany. The number of non-resident workers with the Belgian nationality increased from 14.100 to 14.900 in the period 2013-2016, whereas the number of non-resident workers with the German nationality shows a decrease over time, from 16.600 in 2013 to 15.100 in 2016. The earlier described increase in the number of non-resident workers living in Germany is due to the increase of workers with the Polish or other nationalities, which offsets the decrease in workers with the German nationality. When we look at Dutch non-residents we see that they mostly live in Belgium or Germany. The total number of Dutch non-resident workers increased from 41.000 in 2013 to 43.100 in 2016.

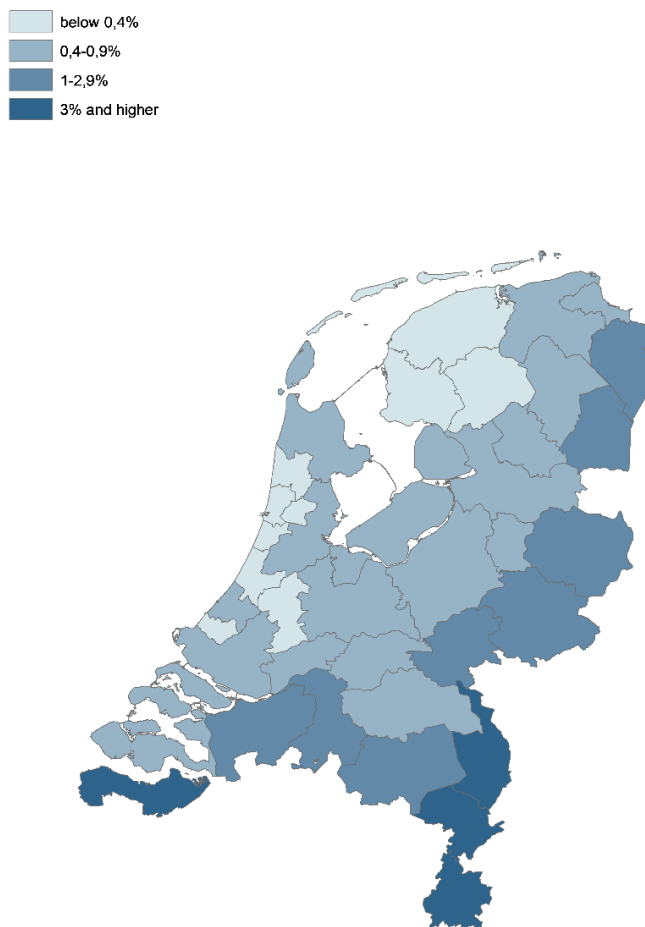
Besides country of residence and nationality, there are also other characteristics of non-resident employees that are worth investigating. Looking at gender, as displayed in Table A.1 of the appendix, we see that on average two-thirds of the non-residents are male, and one-third are female. This proportion has stayed almost the same over the period 2013-2016. Nevertheless, we do note some differences when we look at country of residence. For Belgium we see a more balanced share of man and woman, whereas for “other” countries we see an even higher proportion of male compared to female non-resident employees.

Figure 2 shows in which employment sectors the non-residents work for the years 2013-2016. Tables A.2-A.5 display the exact numbers, as well as a disaggregation by the nationality of the non-resident workers. Most non-resident workers work in commercial services. These non-resident workers mainly have the Polish nationality. It is therefore not surprising that the number of non-residents employed in the commercial sector increased sharply since 2013 (from 85.800 in 2013 to 133.300 in 2016), corresponding with the large increase in the number of Polish non-residents over the same period. The number of non-residents working in the industrial sector or public and social services remains fairly constant around 20.000. Both these sectors mainly employ Dutch nationals, although there is also a considerable share of Belgians and Germans working in these sectors. Few non-residents work in agriculture, forestry, and fishery and there are also no notable changes visible. It is important to note that Statistics Netherlands only collects data from registered non-residents. The number of non-registered non-resident workers working in agriculture, fishery, and forestry might be much higher.

4.2 Non-resident workers in the cross-border regions

More than half of the non-resident employees work in the cross-border regions. Most of these non-resident workers live in either Belgium or Germany (see Table A.7 in the appendix). Unsurprisingly, most non-resident workers in cross-border regions at the German border live in Germany, whereas those at the Belgian border live in Belgium. Border regions which share a border with both Belgium and Germany (Midden-Limburg and Zuid-Limburg) employ mostly Belgian residents, although they do also employ a considerable number of German residents. Most Polish non-resident workers work in the other Dutch COROP/NUTS3 regions. Although the share of Polish workers in the total number of non-residents in the cross-border regions has increased considerably.

Figure 3: Non-resident employees living in Belgium or Germany by all NUTS3/COROP regions, in percentages of the total working labor force for the year 2016



Note: For around 25%-30% of the workers it is not known in which COROP region they work. These percentages, however, are similar for both resident workers and non-resident workers. Therefore, the percentages will most likely approximate the real percentages, although they must be considered with caution.

Source: Statistics Netherlands

Nevertheless, in this report we focus on German and Belgian residents for assessing the potential impact of the QFTO on cross-border regions, as these are still the largest group of non-residents in these regions. Furthermore, they are more likely to commute on a day-to-day basis and to have long-term employment contracts. Table A.8 shows the number of non-resident employees living in Belgium or Germany as a percentage of the total labor force of the respective border region. Table A.9 shows this for all Dutch COROP regions. Figure 3 represents the same data as Table A.9 as a map with all the Dutch COROP regions. In the figure, only the data for 2016 are shown because there are not many changes over time. It is important to note that for 25%-30% (depending on the year) of the workers it is not (yet) known in which cross border region they work. These percentages, however, are similar for both resident workers and non-resident workers. Therefore, the percentages will most likely approximate the real percentages, although they must be considered with caution. For non-cross border regions, the number of Belgian and German non-resident workers is never higher than 0.9% of the total working population. For cross border regions, however, we see that German and Belgian residents on average occupy a much larger share of the total working population. This holds especially for those regions that share a border with both Germany and Belgium. In Midden-Limburg 3.6% of the working population in 2016 lived in either Belgium or Germany, while in Zuid-Limburg this was 5.6%. For Midden-Limburg these shares remained almost constant over the period 2013-2016, while for Zuid-Limburg we see a slight decrease (from 6.2% in 2013). For the other cross border regions, we also do not note much variation over time. This is illustrated by the fact that the percentage of non-resident workers residing in Belgium or Germany over the total Dutch working population remains constant at 1% over the period 2013-2016 (see Table A.9).

4.3 A preliminary ex-post analysis: a changing trend over time?

From the figures we have seen so far, can we observe a change in the trend of the number and composition of non-resident workers in the Netherlands in the period after the QFTO came into force (2015-2016) compared to the period before that (2013-2014)? First of all, when we look at the total number of non-resident workers we see an increasing trend, which is persistent over time and does not seem to have been altered since the implementation of the QFTO. For the nationality and work sector of non-residents we also observe a solid trend over the whole period 2013-2016; the number of Polish and “other” nationals increases, as well as the number of non-residents working in commercial services. For the border regions there are also no significant changes visible. The two border regions which are in potential most affected by the QFTO, those that share a border with both Belgium and Germany, employ an almost equal share of Belgian and German residents as a percentage of their total labor force over the period 2013-2016. Although for Zuid-Limburg we observe a slight decrease, this trend is not shared with other cross-border regions. Overall, this preliminary ex-post analysis does not seem to show any compelling effects of the QFTO on the number and composition of non-resident workers in the Netherlands and the Dutch cross border regions. However, this analysis does not allow us to focus on those individuals that are most likely affected by the QFTO (those who do not earn 90% of their world income in the Netherlands). Furthermore, the possible delayed effects of the rule cannot yet be assessed, as data is only available until 2016. We address these limitations in the conclusion.

5. Conclusion, limitations and future research

5.1 Conclusion

In conclusion, this dossier has provided an overview of non-resident employees in the Netherlands over the period 2013-2016 as to assess the potential and (preliminary) real impact of the Qualifying Foreign Taxpayer Obligation (“90% rule”). From 2013 to 2016 the number of non-resident employees has increased considerably from around 133.000 in 2013 to around 186.000 in 2016. This increase is mostly due to the increase of Polish non-resident workers. The number of Belgian, Dutch and German non-resident employees remains fairly constant. Most of the non-resident workers work in the commercial sector. This sector also experienced the highest increase in non-resident workers, which corresponds with the fact that most Polish workers are employed in that sector. Most Belgian and German non-residents work in the Dutch border regions. Especially those regions that share a border with both Belgium and Germany employ a relatively high amount of Belgian and German residents, as compared to their total workforce. These regions are therefore most vulnerable to any negative consequences of the QFTO, as non-resident workers who do not earn 90% of their world income in the Netherlands might decide against employment in these regions. In a first preliminary ex-post analysis, however, this report has not found any effect of the QFTO. Looking at the trends in the number and composition of non-resident workers there are no notable differences visible in the period before the QFTO was implemented (January 2015), compared to the period thereafter.

5.2 Limitations

This report has served as a first attempt to provide an ex-post analysis of the impact of the QFTO. By looking at the trends of non-resident employees and their background characteristics, we have obtained a better idea of the potential and the real impact of this legislation. However, without income data it is impossible to identify the exact group of non-resident employees who are expected to be affected by the QFTO (those who earn less than 90% of their world income in the Netherlands). Since these data were not yet available at the time of the completion of this report, it is not possible to fully assess the group of non-resident workers who are most likely to be affected by the 90%-rule, and hence to execute a complete ex-post analysis on this. The reasons for this are mostly the same as the ones described in last year’s report. For instance, the processed tax returns are still only complete for the fiscal year 2014, and the tax registry data still does not include a variable indicating the exact income situation of non-resident employees. The reason why this information is not yet available is that the process of obtaining, cleaning and analyzing the data of the *Polisadministratie* combined with the Municipal Personal Records Database (and the feedback loops inherent to them) has captured considerable time and resources, and therefore there was not enough time left to fully and accurately process the tax data. For future inquiries into this topic the data from the *Polisadministratie* combined with the Municipal Personal Records Database should be available.

Another important limitation of the current analysis, and a fruitful avenue for future research, is that we do not know what exactly happens when the number of non-resident employees changes. For instance, when the QFTO would indeed lead to less non-resident workers is this then due to the fact that more non-resident employees moved to the Netherlands or does it mean that they stopped working in the Netherlands altogether. The latter scenario would be problematic for the Dutch cross-

border regions, while the former scenario seems not to be so, and could even be economically beneficial (more demand for housing, more income is spent in the Netherlands, etc.). Although from the point of view of European integration, any negative impact on labor and housing mobility would be problematic, to accurately determine what the QFTO means for cross-border regions it is important to know what the drivers are behind the change in non-resident employees. Future inquiries should therefore focus on the exact behavior of non-resident employees since the QFTO was implemented, and compare them with the period before that.

5.3 What is next?

In order to address these limitations and to execute a more comprehensive ex post impact analysis of the QFTO, we plan to take the following steps in subsequent iterations of this report.

- *Combining the datasets: following individuals over time.* In order to follow individual persons over time, in order to analyse mobility and employment trajectories, the data from the *Polisadministratie* needs to be combined with the Municipality Personal Records (BRP). By coupling the Random Identification Numbers (RIN) of any person who has been a non-resident employee in the Netherlands for the period 2013-2016, we can analyze on the individual level how the number of non-resident employees fluctuates and what the characteristics of these individuals are. This could potentially answer the following (non-exhaustive) list of questions: How many individuals who first where non-resident employees have migrated to the Netherlands? How many individuals who first where non-resident employees do not work in the Netherlands anymore? How many individuals have become non-residents over time? To what type (gender, nationality, etc.) of individuals does this apply, and where do these individuals live (e.g. cross border regions)? The answers to these questions can give a further idea on the effect of the QFTO on the housing and labor mobility of non-resident workers in the Netherlands. Furthermore, longitudinal modelling techniques could be applied to assess if there is a trend break in the data at the time when the QFTO was implemented.
- *Analyzing the income data from the Dutch Tax Authority.* Those who do not earn 90% of their world income in the Netherlands are most likely to be affected by the QFTO and may have either moved to the Netherlands (to become a resident employee) or have stopped working in the Netherlands altogether. While the total number of non-resident employees already gives a good indication of the potential group of affected individuals, knowledge about the compliance to the 90% rule gives a much more detailed and sophisticated picture. The tax registry data from the Dutch Tax Authority does contain information about the compliance to the 90% rule of non-resident workers. Hence, when this data becomes available the potential effects of the QFTO can be more sophisticatedly analyzed. For the income data it is also possible to combine the data over time.
- *Analyzing the Polisadministratie/BRP data combined with the income data.* In the final step, dependent on the availability and the quality of the data, the individual data from the *Polisadministratie/BRP* dataset can be combined with the income data. This would create a longitudinal dataset with income data for each individual (to indicate compliance to the 90% rule) and individual data on demographic characteristics, country of residence, nationality,

employment status and sector, and the region of employment in the Netherlands. This rich amount of data would make the dataset well suitable for statistical analyses in order to estimate with regression and/or time-series techniques the impact of the QFTO on housing and labor mobility of non-resident employees.

Appendix

Table A.1: Gender distribution among non-resident workers by country of residence, 2013-2016 (%)

Country of residence	2013		2014		2015		2016	
	Male	Female	Male	Female	Male	Female	Male	Female
Belgium	58.5	41.5	59.0	41.0	59.0	41.0	59.3	40.7
Germany	69.3	30.7	68.2	31.8	68.1	31.9	67.7	32.3
Poland	66.9	33.1	64.9	35.1	63.9	36.1	64.5	35.5
Other	86.2	13.8	80.6	19.4	79.8	20.2	79.0	21.0
Total	67.5	32.5	66.4	33.6	66.1	33.9	66.5	33.5

Source: Statistics Netherlands

Table A.2: Number of non-resident employees by nationality and sector, 2013 (x1000)

Nationality	Commercial services	Agriculture, forestry & fishery	Public & social services		Industrial sector	Unknown	Total
			Public & social services	Industrial sector			
Belgian	6.4	0.1	3.7	3.9	0.0	14.1	
German	10.5	0.2	1.2	4.6	0.1	16.6	
Dutch	19.2	0.3	13.0	8.3	0.2	41.0	
Other	10.9	0.2	0.8	3.3	0.1	15.3	
Polish	38.7	3.9	0.2	2.5	0.5	45.8	
Total	85.8	4.7	18.9	22.6	0.9	132.8	

Source: Statistics Netherlands

Table A.3: Number of non-resident employees by nationality and sector, 2014 (x1000)

Nationality	Commercial services	Agriculture, forestry & fishery	Public & social services		Industrial sector	Unknown	Total
			Public & social services	Industrial sector			
Belgian	6.5	0.1	3.6	4.0	0.0	14.2	
German	9.7	0.2	1.3	4.2	0.0	15.5	
Dutch	20.0	0.3	13.5	8.4	0.2	42.4	
Other	15.0	0.4	1.0	4.0	0.2	20.5	
Polish	49.5	4.5	0.2	2.6	0.3	57.0	
Total	100.7	5.5	19.7	23.2	0.7	149.6	

Source: Statistics Netherlands

Table A.4: Number of non-resident employees by nationality and sector, 2015 (x1000)

Nationality	Commercial services	Agriculture, forestry & fishery	Public &	Industrial sector	Unknown	Total
			social services			
Belgian	6.7	0.1	3.6	4.0	0.0	14.4
German	10.0	0.1	1.3	4.0	0.0	15.5
Dutch	20.6	0.3	13.2	8.3	0.2	42.6
Other	19.1	0.6	0.9	4.1	0.4	25.2
Polish	67.0	4.7	0.3	2.7	1.3	76.0
Total	123.6	5.9	19.3	23.1	1.9	173.8

Source: Statistics Netherlands

Table A.5: Number of non-resident employees by nationality and sector, 2016 (x1000)

Nationality	Commercial services	Agriculture, forestry & fishery	Public &	Industrial sector	Unknown	Total
			social services			
Belgian	7.0	0.1	3.6	4.2	0.1	14.9
German	9.6	0.1	1.4	3.9	0.1	15.1
Dutch	21.0	0.3	13.2	8.3	0.3	43.1
Other	24.1	0.7	1.0	4.2	0.6	30.7
Polish	71.6	5.0	0.2	2.8	2.6	82.3
Total	133.3	6.2	19.5	23.4	3.8	186.1

Source: Statistics Netherlands

Table A.6: Non-resident employees by all NUTS1 and NUTS3/COROP regions, in percentages of the total number of non-resident employees for the years 2013-2016

NUTS1 region	NUTS3/COROP region	2013	2014	2015	2016
Northern Netherlands	Oost-Groningen	0.2	0.2	0.1	0.1
	Delfzijl en omgeving	0.2	0.2	0.2	0.1
	Overig Groningen	0.4	0.8	0.8	0.7
	Noord-Friesland	0.1	0.2	0.2	0.2
	Zuidoost-Friesland	0.1	0.2	0.3	0.3
	Noord-Drenthe	0.2	0.4	0.5	0.5
	Zuidoost-Drenthe	1.0	0.9	0.8	0.7
	Zuidwest-Drenthe	0.2	0.3	0.3	0.4
Eastern Netherlands	Noord-Overijssel	0.6	1.1	1.0	1.0
	Zuidwest-Overijssel	0.3	0.3	0.4	0.5
	Twente	1.2	1.0	0.9	1.1
	Veluwe	1.1	1.3	1.2	1.4
	Achterhoek	1.9	1.7	1.7	1.8
	Arnhem/Nijmegen	3.0	2.7	3.0	3.1
	Zuidwest-Gelderland	1.5	1.8	1.6	1.5
	Flevoland	0.5	1.0	0.9	0.9
Western Netherlands	Utrecht	2.0	1.7	1.7	1.8
	Kop van Noord-Holland	0.7	1.4	1.4	1.6
	Alkmaar en omgeving	0.2	0.4	0.5	0.3
	IJmond	0.4	0.5	0.6	0.4
	Agglomeratie Haarlem	0.5	0.5	0.5	0.5
	Zaanstreek	0.2	0.3	0.3	0.3
	Groot Amsterdam	4.6	6.3	6.7	6.2
	Het Gooi en Vechtstreek	0.2	0.2	0.2	0.2
	Agglomeratie Leiden en Bollenstreek	0.9	1.8	0.8	1.0
	Agglomeratie 's-Gravenhage	1.6	2.7	3.0	3.2
	Delft en Westland	1.6	2.6	4.1	4.3
	Oost Zuid-Holland	0.5	0.7	0.7	0.8
	Groot-Rijnmond	4.6	5.3	5.3	5.1
	Zuidoost Zuid-Holland	0.9	1.3	0.9	1.0
	Zeeuwsch-Vlaanderen	1.0	1.2	1.0	0.9
Overig Zeeland	0.4	0.5	0.4	0.5	
Southern Netherlands	West Noord-Brabant	4.8	5.0	5.1	5.0
	Midden Noord-Brabant	2.7	3.3	3.2	3.2
	Noordoost Noord-Brabant	1.7	1.7	1.9	1.8
	Zuidoost Noord-Brabant	6.2	6.9	6.7	6.5
	Noord-Limburg	7.0	7.4	7.3	7.1
	Midden-Limburg	2.1	1.9	2.1	2.2
	Zuid-Limburg	8.2	7.2	6.3	6.1
Missing		34.6	25.3	25.3	25.8
Total		100	100	100	100

Source: Statistics Netherlands. Note: The number of non-residents for which the COROP region in which they worked was unknown was 45.876 in 2013, 37.916 in 2014, 43.918 in 2015, and 48.015 in 2016. This means that the presented percentages might not be fully accurate.

Table A.7: Non-resident employees by NUTS3/COROP border regions, aggregated by nationality for the years 2013-2016 (x1000)

NUTS3/COROP region	Country of residence	2013	2014	2015	2016
Midden-Limburg	Belgium	1.4	1.4	1.4	1.4
	Germany	1.0	1.0	1.1	1.2
	Poland	0.3	0.3	1.0	1.3
	Other	0.1	0.1	0.2	0.2
	Total	2.8	2.9	3.7	4.1
Zuid-Limburg	Belgium	8.2	7.3	7.2	7.3
	Germany	2.3	2.7	2.8	3.0
	Poland	0.3	0.5	0.7	0.6
	Other	0.1	0.3	0.3	0.4
	Total	10.9	10.8	11.0	11.3
All NUTS3/COROP regions along the German border	Belgium	0.9	1.2	1.2	1.3
	Germany	11.6	11.1	12.4	12.7
	Poland	1.4	2.0	2.3	3.1
	Other	5.8	8.2	9.8	10.4
	Total	19.8	22.4	25.7	27.6
NUTS3/COROP regions along the Belgian border	Belgium	11.6	12.2	12.2	12.2
	Germany	2.3	2.2	2.4	2.5
	Poland	1.2	2.1	3.1	4.1
	Other	4.9	8.7	10.9	11.2
	Total	20.0	25.2	28.6	29.9

Source: Statistics Netherlands. *Note: The number of non-residents for which the COROP region in which they worked was unknown was 45.876 in 2013, 37.916 in 2014, 43.918 in 2015, and 48.015 in 2016. This means that the presented numbers are an underestimation of the real numbers.*

Table A.8: Non-resident employees living in Belgium or Germany by NUTS3/COROP border regions, in percentages of the total working labor force for the years 2013-2016

Border country	NUTS3/COROP region	2013	2014	2015	2016
Belgium	Zeeuwsch Vlaanderen	3.8	4.4	4.4	4.3
	Overig Zeeland	0.4	0.4	0.5	0.4
	West-Noord-Brabant	1.9	1.7	1.7	1.6
	Midden-Noord-Brabant	1.4	1.3	1.3	1.3
	Zuidoost-Noord-Brabant	2.1	2.2	2.1	2.1
Germany	Oost-Groningen	1.4	1.0	1.0	1.0
	Zuidoost-Drenthe	2.1	1.7	1.5	1.6
	Noord-Overijssel	0.4	0.6	0.5	0.5
	Twente	1.2	1.2	1.2	1.2
	Achterhoek	2.7	2.4	2.6	2.8
	Arnhem/Nijmegen	1.3	1.4	1.6	1.5
	Noord-Limburg	4.0	3.8	4.2	4.3
Both Belgium and Germany	Midden-Limburg	3.3	3.5	3.5	3.6
	Zuid-Limburg	6.2	5.8	5.6	5.6

Source: Statistics Netherlands. *Note: For around 25%-30% of the workers it is not known in which COROP region they work. These percentages, however, are similar for both resident workers and non-resident workers. Therefore, the percentages will most likely approximate the real percentages, although they must be considered with caution.*

Table A.9: Non-resident employees living in Belgium or Germany by all NUTS1 and NUTS3/COROP regions, in percentages of the total working labor force for the years 2013-2016

NUTS1 region	NUTS3/COROP region	2013	2014	2015	2016
Northern Netherlands	Oost-Groningen	1.4	1.0	1.0	1.0
	Delfzijl en omgeving	0.9	0.6	0.8	0.7
	Overig Groningen	0.3	0.4	0.5	0.5
	Noord-Friesland	0.1	0.2	0.2	0.3
	Zuidoost-Friesland	0.1	0.2	0.3	0.3
	Noord-Drenthe	0.2	0.4	0.3	0.4
	Zuidoost-Drenthe	2.1	1.7	1.5	1.6
	Zuidwest-Drenthe	0.5	0.4	0.4	0.6
Eastern Netherlands	Noord-Overijssel	0.4	0.6	0.5	0.5
	Zuidwest-Overijssel	0.5	0.4	0.7	0.7
	Twente	1.2	1.2	1.2	1.2
	Veluwe	0.4	0.4	0.5	0.5
	Achterhoek	2.7	2.4	2.6	2.8
	Arnhem/Nijmegen	1.3	1.4	1.6	1.5
	Zuidwest-Gelderland	0.7	0.5	0.5	0.5
	Flevoland	0.3	0.4	0.4	0.4
Western Netherlands	Utrecht	0.4	0.3	0.4	0.4
	Kop van Noord-Holland	0.1	0.7	0.5	0.5
	Alkmaar en omgeving	0.1	0.3	0.3	0.3
	IJmond	0.1	0.2	0.3	0.3
	Agglomeratie Haarlem	0.1	0.3	0.2	0.3
	Zaanstreek	0.1	0.3	0.2	0.3
	Groot Amsterdam	0.3	0.4	0.4	0.4
	Het Gooi en Vechtstreek	0.2	0.2	0.3	0.4
	Agglomeratie Leiden en Bollenstreek	0.3	0.2	0.2	0.2
	Agglomeratie 's-Gravenhage	0.3	0.4	0.4	0.4
	Delft en Westland	0.2	0.3	0.3	0.3
	Oost Zuid-Holland	0.3	0.4	0.3	0.3
	Groot-Rijnmond	0.4	0.5	0.5	0.5
	Zuidoost Zuid-Holland	0.5	0.6	0.5	0.5
	Zeeuwsch-Vlaanderen	3.8	4.4	4.4	4.3
Overig Zeeland	0.4	0.4	0.5	0.4	
Southern Netherlands	West Noord-Brabant	1.9	1.7	1.7	1.6
	Midden Noord-Brabant	1.4	1.3	1.3	1.3
	Noordoost Noord-Brabant	0.6	0.6	0.6	0.7
	Zuidoost Noord-Brabant	2.1	2.2	2.1	2.1
	Noord-Limburg	4.0	3.8	4.2	4.3
	Midden-Limburg	3.3	3.5	3.5	3.6
	Zuid-Limburg	6.2	5.8	5.6	5.6
Missing		1.1	1.0	1.0	1.0
Total		1.0	1.0	1.0	1.0

Source: Statistics Netherlands. *Note: For around 25%-30% of the workers it is not known in which COROP region they work. These percentages, however, are similar for both resident workers and non-resident workers. Therefore, the percentages will most likely approximate the real percentages, although they must be considered with caution.*



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