

# Summary of Estimates of foreigners unlawfully residing in the Netherlands 2017 - 2018 (Peter G.M. van der Heijden et al., October 2020)

## *Backgrounds and problem definition*

For the purpose of immigration policy, the Ministry of Justice and Security needs a picture of the development of the number of foreign nationals residing unlawfully in the Netherlands. Since 2000, therefore, estimates have been made of the number of foreigners in the Netherlands without a right of residence. With a new estimate available, a series of estimates has been obtained for a 20-year period ranging from 1997 to mid-2018. The estimates are made with a capture-recapture method. This group of methods offers a number of clear advantages, such as relatively low costs, an adequate theoretical-statistical foundation, explicit assumptions and clarity about the consequences of violating these assumptions. The specific method with which the 20-year series was made, the truncated Poisson regression model, has been identified in an international comparison as a method that meets scientific quality requirements for estimating population sizes.

The problem definition for the new research is as follows:

What was the estimated size of the population of foreigners residing unlawfully in the Netherlands in the period mid-2017 to mid-2018? What is the trend of the estimated size of the number of foreign nationals without lawful residence in the Netherlands when the new estimate is compared with the previous estimates? What certainty can be attached to the estimate?

The main purpose of the estimates is to be able to follow the development of the size and composition of the population of foreign nationals lacking right of residence. The idea was, and remains, that although the extent to which the estimation methods make realistic assumptions about the data used is not easy to determine, we assume that a possible violation of the assumptions is comparable over the years. Although the point estimates might not be exactly correct, the development which has been observed can then be regarded as valid.

In this study an estimate with the truncated Poisson regression model for a new year has been added to the set of estimates. Further, the doubts and the discussion about the development of the estimates since they started to decline sharply from the year mid 2005 - mid 2006 have led to two additions. Firstly, an estimate for the new year was also made using a second method. This is an estimate with a variant of capture-recapture methods that uses multiple files. The purpose of making a second estimate is to gain more insight into the validity and to increase the quality of the estimates.

A second important addition to this line of research is an exploration of backgrounds that may explain, or, more modestly, make plausible the rapid decline in estimates since 2005.

### *Methods and data*

The capture-recapture method is a widely used method, actually a group of methods, for estimating the size of 'hidden populations'. These are populations whose members are not easy to observe and are not (all) registered. Standard estimation techniques based on sampling can then not be used, because a sampling frame is missing or very deficient. With one of the methods, the Poisson regression, a series of estimates has been made since 1997. This involves the use of police files containing data on foreign nationals without lawful residence that are arrested or held up. Since 2005 this has been the Police Suite Handhaving Vreemdelingen (PSHV) file. The estimate is based on the number of times that persons registered in the file have been arrested or detained in a year.

The second method, used for the first time in this type of research, is a capture-recapture method for more than one file. This is also a well-known method to estimate the size of a hidden human population using two independent registration systems (or 'registers') that register part of the population. By linking the data of individuals in two (or more) registers, it is possible to estimate the number of individuals not included in either (or several) registers. Three files were available, namely PSHV, a file of the International Organization for Migration (IOM) and a file of the CAK. Unfortunately, the latter proved to be unusable due to the lack of sufficient identifying variables to make a good link with other files. The estimates were therefore made with two files, a so-called Dual Systems Estimate (DSE).

### *Poisson Estimates 2017 - 2018*

The estimate of the total population of foreign nationals unlawfully residing in the Netherlands for the year running from 1 July 2017 to 1 July 2018 is 22,711. The confidence interval indicates that the actual size with a 95% probability lies between 18,370 and 27,051 (Table i).

Compared to the estimate for the year mid-2012 - mid-2013 (35.530), there is a substantial decrease, but the difference is not statistically significant.

*Table i. Poisson size estimates INEE, IEE, Europeans and total for July 2017 - July 2018*

Group	Observed	Estimated population	95% confidence interval
INEE	1.603	12.451	(9.501, 15.400)
IEE	498	3.707	(2.139, 5.276)
EUROPEANS	852	6.553	(3.781, 9.324)
Total	2.953	22.711	(18.370, 27.051)

### *Development of the estimates*

The estimates of the total number of foreigners unlawfully residing in the Netherlands after 2002 show a decrease that accelerates after 2003 and especially after 2009. We observe a number of developments in policy, supervision, asylum and migration flows that make it plausible that the

number of foreign nationals residing unlawfully in the Netherlands has indeed decreased considerably over the past 10 to 15 years.

- Since approximately the middle of the 1990s, various measures have gradually made unlawful residence of foreign nationals in the Netherlands unattractive. Before that time, it was still relatively easy for a foreign national residing unlawfully in the Netherlands to work regularly and enjoy the associated benefits. As a result of various measures, such as the Compulsory Identification Act 1994 and the Linking Act of 1998, which aims to exclude foreign nationals without a legal residence permit from public facilities, it gradually became more difficult for a foreign national without a residence permit to build up an independent existence.
- The growth in asylum influx as a result of war violence in Central and Eastern Europe and parts of Asia and Africa, also from around the mid-1990s onwards, possibly made any effect of these measures undone and more difficult to observe. The influx of asylum seekers may, with some delay, have led to an increase in the population of foreigners without right of residence in the years around the turn of the millennium. A clear difference then emerged between the (growing) number of asylum applications and the (limited) number of residence permits granted. After a decrease and stabilization of both numbers, a relatively large number of asylum applications were granted in the years 2014 - 2017. This may be a reason why the increase in asylum applications in these years did not lead to an increase in the estimated number of foreign nationals without residence permits.
- There are indications that the extension of the supervisory and investigative powers by the Foreigners Act 2000 and the reorganisation of the Aliens Police in the first years of the new millennium has reduced the number of foreign nationals residing unlawfully in the country and has also made unlawful residence more unattractive, thus contributing to a continuous decrease in the number of foreigners unlawfully residing in the Netherlands.
- The changes initiated by the new Foreigners Act have also led to more attention for personal identification in the supervision of foreigners. To the extent that these developments have made better identification of foreigners possible, the estimates for previous years are overestimates and the current estimates are more accurate.
- The most obvious effect on the size of the population comes from the enlargements of the EU in 2004 and 2007. Estimates of the number of Europeans unlawfully residing in the Netherlands before these expansions vary from 65,000 to 107,000, while the estimates for the last few years are approximately 5,000 to 6,000.

### *DSE*

Table ii shows that the estimate with DSE is significantly higher than the Poisson estimate. The estimated number of foreign nationals residing unlawfully in the Netherlands for the year mid-2017 - mid-2018 is more than 58,000. The 95 % confidence interval shows that the actual number according to DSE is likely to lie between 47,500 and over 74,000.

*Table ii: DSE number of observations and size estimates 2017/2018*

		IOM		
		1	0	tot
PSHV	1	70	2.831	2.901
	0	1.332	53.870	55.202
	tot	1.402	56.701	<b>58.103</b>

*Poisson and DSE compared*

The populations estimated with the Poisson method and with DSE differ considerably in size and composition in terms of gender, age and nationality. The estimates of both methods overlap to some extent, but also seem to be doing better at estimating different segments of the population. On the basis of violations of the assumptions of the methods and of the extent to which these violations can or cannot be overcome, we conclude that the Poisson method rather provides an underestimate of the true population size and the DSE rather an overestimate. The conclusion is, therefore, that the true size of the population of foreign nationals unlawfully residing in the Netherlands in the year mid-2017 - mid-2018 probably lies between approx. (almost) 23,000 and approx. 58,000.

