



# Migration and Changes of Residence Statistics

## Methodology

December 2024

# Index

|   |   |    |
|---|---|----|
| 1 | Introduction  | 3  |
| 2 | Objectives  | 4  |
| 3 | Information sources                                     | 5  |
| 4 | Concepts and definitions                                | 5  |
| 5 | Calculation method                                      | 6  |
| 6 | Consistency between annual Population Censuses and EMCR | 10 |
| 7 | Dissemination of results                                | 12 |

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## 1 Introduction

Starting with the publication of the 2021 Population and Housing Censuses<sup>1</sup>, there was a paradigm shift in the demographic statistics, since the methodology used in constructing this census was based for the first time entirely on exploiting official administrative registers. This makes it possible to replicate each year the process to provide **annual censuses**.

Thus, from 2023, the regular production of the population census is established, which will be published at the end of each year with a reference date of 1 January. It will be called the **Population Census**<sup>2</sup>, and it will be independent of the housing census, which will have a lower frequency. This operation replaces the old Population Figures (CP), giving rise to another operation, the Continuous Population Statistics (ECP), which coincides on January 1 with the censuses in its definitive data, and provides provisional data when these have not yet been generated.

Between every two consecutive censuses, there is a population growth or decrease, which will be explained by the demographic components that occurred during the intervening year. These components are births, deaths and migrations.

To measure migrations in a coherent manner between every two consecutive censuses, the Migration and Changes of Residence Statistics (EMCR) emerged.

Until the creation of the EMCR, there were two operations related to migrations: the Migration Statistics (EM) and the Residential Variations Statistics (EVR). Both EM and EVR were obtained from the statistical exploitation of information related to certain types of registrations and cancellations registered in the INE registry database that could be assimilated with migratory movements.

Due to the methodology used, the results of the EM were consistent with the CP, since the latter were obtained from the migratory movements that the EM quantified and the information on the statistics of births and deaths of the Natural Movement of the Population, applying the component method.

The EVR, for its part, was not consistent with the population figures resulting from the statistical exploitation of the Register, in the sense that the net migratory balance offered, calculated as the difference between registrations and cancellations due to foreign residential variation, did not coincide with which would be deducted as the difference between the population figures resulting from the Register and the vegetative balance produced in the year.

However, the EVR provided a greater level of territorial detail than the EM, offering data by municipality, while the EM reached the provincial level.

Thus, the new EMCR operation was born with the objective of being consistent with the new population statistics, given by the annual censuses, and reaching a much greater level of detail than that provided by the EM.

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<sup>1</sup> Publication of the Population and Housing Census on 30 November 2022.

<sup>2</sup> The first edition of the Population Census is published for the first time in December 2023, and produces results retrospectively: the censuses on January 1, 2022 and 2023 are published at the same time. From then on, each year the census will be published on January 1 of that year in December of that year.

Furthermore, the EMCR methodology will allow the level of geographic detail to be expanded in the future, providing information on changes of residence between districts or neighbourhoods of the same municipality and adding the individual information contained in the censuses (such as education, work variables...), which will result in a better knowledge of the socio-demographic characteristics of migrants.

In short, thanks to the availability of annual censuses, this new operation (EMCR) has been created as a direct consequence, whose methodology is based on a new approach: first, the people residing in the country are determined in two consecutive censuses and, secondly, the migratory movements that occurred between the two are searched in the municipal Register.

In this way, the duplication of existing demographic information would be eliminated, since the EMCR replaces both the EM and the EVR, thus responding to a demand from users to unify migration data into a single coherent series, at all geographical levels and with the population series, avoiding doubts about which batch of figures to use.

Both the EM and the EVR are published until 2021, the year in which the EMCR data will begin. That is, the data for 2021 will be available in all three operations, so they could serve as a basis for studies on the comparability and possible link of the series that users wish to carry out.

Migratory flows are framed in the European legislative framework governed by *Regulation 862/2007 on community statistics in the field of migration and international protection*. However, a future regulation of the European Parliament and of the Council on European statistics on population and housing is already at an advanced stage of processing, which will replace this regulation and two others on demographic statistics<sup>1</sup>. This new European population statistics regulation will probably demand more frequent and more timely information on the population and the associated demographic phenomena.

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## 2 Objectives

The purpose of the Migration and Changes of Residence Statistics is to provide, in each autonomous community, in each province and in each municipality, a quantitative measurement of the:

- **Foreign migrations:** these are the migratory flows between Spain and abroad
- **National migrations:** these are the migratory flows that occur within Spain. Depending on the geographical area of origin and destination of the movement, be it an autonomous community, a province, or a municipality, we will talk about inter-autonomous, inter-provincial or inter-municipal migration.

The data will be annual, starting in 2021.

The migration series will be disaggregated by sex, age, year of birth, country of nationality, country of birth and origin and destination of migration, as well as year and quarter of movement.

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<sup>1</sup> Regulation 1260/2013 on European demographic statistics, Regulation 862/2007 on Community statistics on migration and international protection, and Regulation 763/2008 on population and housing censuses.

In addition, it will continue to comply (as the Migration Statistics operation already did) with the European legislative framework governed by Regulation 862/2007 on community statistics in the field of migration and international protection, which governs migratory movements of each country, adapting in turn to the future regulations that will replace it.

Furthermore, the EMCR is not only important in itself, but is used by many users, such as **international organizations** (mainly Eurostat, but also the United Nations, OECD, IMF, statistical institutes of other countries), **national organizations** (Ministry of Finance and Public Function - for the Interterritorial Compensation Funds -, other ministries, Statistical Offices of the Autonomous Communities, Bank of Spain, CSIC and other research centres, Universities, private organizations, etc.) or for **other statistics** such as Basic Demographic Indicators, Population Projections, etc.

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### 3 Information sources

To calculate the data series contained in the Migration and Changes of Residence Statistics, the following sources of information will be used:

1. Statistics
  - **Population and Housing Census** (as of January 1, 2021)
  - **Population Census** (from 2022, for January 1 of each year)
2. Administrative data:
  - **Continuous registry**: the registered registry variations are used to determine the movements that have been made between two consecutive censuses.

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### 4 Concepts and definitions

**Resident population**: the resident population in a given geographical area is defined as those persons who, on the reference date, have established their habitual residence in it.

**Habitual residence**<sup>1</sup> is the registered place of residence, which is, essentially, where the person is registered.

**Sex**: refers to the biological sex of the person.

**Age**: age in years of age refers to the number of birth anniversaries on the reference date, i.e. the age on the last birthday. The reference date is, in each case, the date of the migratory movement.

**Year of birth**: the year in which the birth occurred.

**Place of birth**: the place of residence of the mother at the time the birth occurred.

**Nationality**: legal link between an individual and a State, acquired by birth or naturalisation if by declaration or acquired by choice, marriages or other terms according

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<sup>1</sup> Definition of habitual residence established in *Regulation 763/2008 of the European Parliament and of the Council on population and housing censuses* and in *Regulation 1260/2013 of the European Parliament and of the Council on European demographic statistics*.

to national legislation. It refers to the nationality on the reference date, classified as Spanish provided that the individual has that nationality, and may also have others.

**Foreign immigration:** action whereby a person establishes their habitual residence in Spain, having previously been habitual resident of a foreign country.

**Foreign emigration:** action whereby a person, who having previously been habitually resident in Spain, goes on to establish their habitual residence in a foreign country.

**National migration:** migration with region of habitual residence of origin and destination within Spain. If we take into account only the origin, it will be **national emigration**, and if we take into account only the destination, we will speak of **national immigration**. In turn, depending on the type of region or geographical area considered we can distinguish:

- **Inter-autonomous migration:** national migration where the geographical area of origin and destination is a different autonomous community. If we take into account only the origin, it will be **inter-autonomous emigration**, and if we take into account only the destination, we will speak of **inter-autonomous immigration**.
- **Inter-provincial migration:** national migration where the geographical area of origin and destination is a different province. If we take into account only the origin, it will be **inter-provincial emigration**, and if we take into account only the destination, we will talk about **inter-provincial immigration**.
- **Inter-municipal migration:** national migration where the geographical area of origin and destination is a different municipality. If we take into account only the origin, it will be **inter-municipal emigration**, and if we take into account only the destination, we will talk about **inter-municipal immigration**.

**Migratory balance:** is the difference between immigrations and emigrations of the same type, in a certain national geographical area (the entire country, autonomous communities, etc.). Depending on the type of migratory movement, we can distinguish **foreign migratory balance, national migratory balance, inter-autonomous migratory balance, inter-provincial migratory balance** or **inter-municipal migratory balance**, in said geographical area.

**Place of origin:** place where the migratory movement originates. In foreign immigrations, the place of origin is a country; in national immigrations, the place is a geographical area within the country.

**Place of destination:** place where the migratory movement ends. In foreign emigrations, the place of origin is a country; in national emigrations, the place is a geographical area within the country.

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## 5 Calculation method

The starting point to obtain the reference data for a given year from the Migration and Changes of Residence Statistics are the population censuses at the beginning and end of said year. The first will be the census on January 1 of the reference year, and the one at the end of the period will correspond to the census on January 1 of the following year<sup>1</sup>.

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<sup>1</sup>The dates of December 31 at the end of the day and January 1 at the beginning of the day are considered equivalent.

With the two censuses available, we compare which people were in one and not in the other, or are present in both. Those who were in the second census and not the first, constitute the entries into the population (which can be foreign immigrations or births), and in the opposite way we obtain the exits from the population (foreign emigrations and deaths).

Once it has been determined which people have entered or left the town, or remain in it, they go to the centralized base of the Municipal Register to recover their registry history, which will allow their migration history to be reconstructed.<sup>1</sup>

The municipal register records various types of variations, registration and de-registration, which are, or may be associated, with a residential change, as well as a series of modifications. A significant part of these variations are recorded on the initiative of the person concerned and others are carried out ex officio by the municipal authority itself. In short, they are as follows<sup>2</sup>:

- **Registrations due to change of residence (ACRs):** They refer to entries in the Register that are the result of a change of municipality or country of residence. They are usually carried out by the individual, although they can also come from an ex officio registration if the municipality of previous registration is known. In the case of Spanish citizens who transfer their residence abroad, the Consular Registration Registers must be registered, from which the Register of Spaniards residing abroad (PERE) is formed.
- **Registrations due to omission (AOMs):** They occur when a habitual resident in a municipality requests registration in its Register, declaring that he or she does not know how to be registered in the Register of another municipality or in the Register of Spaniards residing abroad, or when the city council declares, ex officio, the registration in the Register of a person who habitually resides in the municipality and is not registered.
- **De-registrations due to change of residence (BCRs):** Those registered in a municipality who transfer their residence to another municipality or abroad will be removed from the register due to change of residence.

No registrations will be made for cancellation due to change of residence at the request of the interested parties, except in the case of foreigners who leave Spain. In all other cases, they must register in the Register of another municipality or in the Consular Registry of the country of destination (in the case of Spaniards). In these cases, the cancellation will occur instantaneously, being rare those of foreigners, since they have no obligation (nor can), like the Spaniards, to register in the relevant Consular Registry.

- **De-registrations due to expiry (BBCs):** These are de-registrations resulting from the application of the reform of the "Immigration Act"<sup>3</sup> of 2003, which establishes the obligation for non-EU foreigners without permanent residence permits to renew their

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<sup>1</sup> There are also some out-migrations of people who are born and emigrate abroad in the same reference year. These cases are an exception because they do not appear in either of the two censuses and are obtained directly through census information. They represent a very small volume of foreign emigration.

<sup>2</sup> Resolution of 29 April 2020, Presidency of the National Institute of Statistics and the General Directorate of Autonomic and Local Cooperation, by which technical instructions are dictated to the City Councils on the management of the Municipal Register.

<sup>3</sup> Organic Law 14/2003, of 20 November, amending Organic Law 4/2000, of 11 January, on the rights and duties of foreign nationals in Spain and their social integration.

registration every two years. If such renewal is not carried out, the Town and City Councils must declare the expiry of the registration.. Such de-registrations have been occurring since December 2005.

- **De-registrations due to Improper Registration (BII):** They are cancellations made ex officio by the town or city council to resolve duplicities in its Register or to cancel those registrations that do not meet the required requirement of habitual residence in the municipality.

For EU and non-EU foreign nationals with permanent residence permits, periodic checks are made on the continuity of residence of these citizens, who are not obliged to renew their registration every two years. These checks have been carried out since March 2009 and are conducted when there have been no movements in a period of five or two years, depending on whether they are registered in the Central Register of Foreigners or not, and may result in the opening of a de-registration case (for improper inclusion) if the town or city council deems it appropriate.

The fact that registration in the Municipal Register is required as a necessary condition for the exercise of very basic rights, such as health coverage, schooling or for the future obtaining of legal residence permits, means that the Register ends up registering the vast majority of the flow of **immigration from abroad**.

On the other hand, if a foreign national registers in the Register of a municipality, but does not indicate the country of origin, the reason for the registration given in the Register is by Omission, when in reality it could be due to Change of Residence from abroad. In the case of Spaniards, the country of origin can be compared with the Register of residents abroad.

With regard to **emigration abroad**, the monthly comparison of the continuous Register with the consular registration records abroad allows the emigration of **Spaniards** to be recorded, provided that they register with the corresponding consulate. In the case of **foreign** citizens, there are few who order the de-registration in the Register of their municipality of residence at the time of their departure from Spain. However, the de-registration mechanism carried out ex officio by town and city councils in those cases of non-habitual residence in the municipality or the implementation of the process of expiry of the registrations of non-EU foreigners in the register without a permanent residence permit, guarantees that the emigration abroad of foreign nationals not declared by the interested party in their municipality of residence, end, to a large extent, as they will register in the municipal register, sooner or later. For both Spaniards and foreign nationals, in addition, there is a process of "natural cleaning" of the registry, which occurs when new residents in a dwelling are registered in the Register, indicating that former residents must be de-registered.

Based on two consecutive censuses and the migration information contained in the Register, the migration flows are determined as follows:

## 1. Foreign immigrations

When we search the municipal register database for entries in the population, which are consistent with the two consecutive population censuses at the beginning and end of the year, we can distinguish the way in which these people entered the population, thus determining immigration abroad.



In summary, foreign immigration will be made up of **those people who are not in the census at the beginning of the year and are in the census at the beginning of the following year**, and whose form of entry has been one of these causes:

- **Registrations due to change of residence (ACR):** most of the entries in the population correspond to ACRs from another country, although there is a certain number of ACRs from another municipality in Spain that were not included in the initial census. This occurs either because no previous history has been found, or because in the initial census they were absent from the Register despite the existence of a previous history, interrupted on the date of the first census. In both cases, according to the censuses and the Register, they constitute an entry into the population and for this reason they have also been considered foreign immigrations during the last year. In the old Migration Statistics and Residential Variation Statistics, these types of registrations were included in national migration, since the movements were considered in isolation, without taking into account the migratory history of the individual and taking into account only their origin.
- **Registrations by omission (AOM)**, both for Spaniards and foreigners.

## 2. Foreign emigrations

Similarly, when we search the Municipal Register database for population exits, we can distinguish the way in which these people left the population, thus determining foreign emigration. In summary, foreign emigration will be made up of **those people who are in the census at the beginning of the year and are not in the census at the beginning of the following year**, and whose form of departure has been one of these causes:

- **De-registrations due to Change of Residence (BCR) going abroad**
- **De-registrations due to Expiry (BBC)**
- **De-registrations due to Incorrect Registration (BII)**, both for Spaniards and foreigners.
- Additionally, there are a **certain number of people who**, according to the censuses<sup>1</sup>, **are not residing in Spain at the end of the period, but whose last registration movement in the data reference year is not a de-registration.**

These cases are mainly made up of foreigners who had already reached their expiration date or residence verification date, and who were also not found in other administrative sources.

Secondly, there are cases of foreign people who, although their expiration date or verification of residence has not been met, have ceased to be present in any administrative source in which they previously appeared and, furthermore, no movement has occurred. registry during the last year.

For these people, it must be considered that there has been foreign emigration in the reference year.

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<sup>1</sup> It should be remembered that the method of counting the foreign population in the censuses is different from the mere administrative count of the population registered in the Register, since the statistical method of "signs of presence" is applied which, in addition to the register situation, has taken into account the presence in administrative sources. You can consult the methodology of population censuses at: [https://www.ine.es/metodologia/t20/meto\\_censo\\_poblacion\\_anual.pdf](https://www.ine.es/metodologia/t20/meto_censo_poblacion_anual.pdf)

### 3. National migrations

The national migrations of a given year of the people **who are in one or another population census** are formed by joining all the changes of municipality that occurred between:

- The movement of entry into the population and the census at the end of the year (or, equivalently, on January 1 of the following year)
- The census at the beginning of the year and the exit movement of the population.
- The two censuses.

Additionally, we added a concept of national migration related to the residence situation in both censuses, where only the place of residence at the beginning and end of the year is compared (for those people who are in both censuses), without taking into account the different intermediate movements. This way we can distinguish different situations for each person:

- Resides in the same municipality
- Resides in a different municipality, but the same province
- Resides in a different province, but the same autonomous community
- Resides in a different autonomous community

On the other hand, it should be noted that the only types of registry variation in which the country of origin or destination is available are the ACR from abroad and the BCR from abroad. Therefore, these variables would contain a certain amount of missing values, especially large in foreign emigration, as was already the case in the Residential Variations Statistics (EVR).

Since the Statistics on Migrations and Changes of Residence (EMCR) 2023 and retrospectively from the year 2021, the country of origin or destination is assigned in external migrations when this information is not provided or is invalid. This assignment is made taking into account the distribution of these countries in the well-filled cases according to country of birth, nationality, province, age group and sex of the migratory movement.

An indicator variable has been added to the transaction micro-data to determine in which external movements the country of origin or destination has been assigned. For the data for the years 2021 and 2022 the cases that were not assigned match what was published in December 2023, while the assigned cases change from having an unknown value to an assigned value. The results for 2021 and 2022 published in December 2023 can be reproduced through the assignment indicator variable.

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## 6 Consistency between annual Population Censuses and EMCR

As mentioned previously, the EMCR was created with the objective of being consistent with the annual censuses, necessary for correct demographic analysis. Therefore, there are several elements to take into account, on which decisions have been made that affect the overall result of both operations:

- Migratory movements in a population registry such as the census can be reflected with a delay, even several years, although it is usually a few months. For this statistic, which are compiled several months after the reference year, these movements may account for a maximum of 2%.
- In a large number of cases, de-registrations are carried out through administrative procedures, without the participation of the affected people. A person who has not emigrated, but whose registration causes de-registration, may discover his/her lack of registration after time and will be registered again later. This translates, in this statistic, into two migratory movements, one of emigration and one of immigration, possibly both fictitious. To resolve this and not take either of the two into account, we would have to wait a certain number of years and verify that a de-registration corresponds to a previous de-registration, without ever being sure that a true emigration movement and a return movement have not occurred a few years later. These types of registrations accounted for 7.5% of immigrations in 2022.
- Consideration as foreign emigrants of a certain number of foreign persons who, according to the censuses, are not residing in Spain at the end of the period, but whose last census movement is not a discharge. Similarly, some discharge recorded in the Register in the reference year are not considered emigrations in that year (as these persons have already been discounted in previous censuses and, therefore, have already been considered emigrations in previous years, mainly due to their registration having reached the expiry date or verification of residence). The balance, for 2022, was around 15% fewer emigrations of foreigners in the EMCR than in the census base.

According to this, we could propose two approaches:

- If at the end of a year the population as of January 1 of that same year is given as definitive (and previously the population as of January 1 of the previous year will have been given as definitive), this implies that all migratory movements that have occurred (and received) during the previous year should also be considered definitive. That is, the definitive nature of the stock takes precedence. This implies that, although the migratory balances for the year are hardly affected, the migratory flows of immigration and foreign emigration are higher.
- Another possible alternative would be to prioritize the definitive nature of the flows. In this case, definitive counts could not be offered until a good number of years had passed (no less than five, according to the analyses carried out). The data that was finally published would be more accurate, and so would the components (immigration and emigration) but, in exchange, it would be impossible to consider the resident figures definitive as of January 1 of each year.

If we consider that we must wait to have all the “delays” registered, that is, all the movements that occurred in the reference year and that will be registered in the future, and also resolved all those subsequent withdrawal and registration movements, or at least a large number of them, it would take several years. Therefore, the decision that has been made when constructing both the annual population censuses and this new EMCR is to opt for the **first alternative**.

Furthermore, considering movements from previous periods as occurring in the reference year approximately alleviates the deficit of movements that we cannot include because they will arrive later. That is, it is a better estimate of the migratory flows that occurred in a year, instead of only taking those that have a recorded date of occurrence in that year at the time of compiling the statistics.

For all these reasons, if we compare the migratory flows resulting from the EMCR with those provided by both the EM and the EVR, we will generally have greater foreign migratory flows.

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## **7 Dissemination of results**

The Migration and Changes of Residence Statistics are published annually starting in December 2023, with the data reference period being the previous calendar year.

The year 2023 is different, as it is the start year of the EMCR, since the data for the years 2021 (the year in which the series begins) and 2022 are published simultaneously. From 2024, at the end of each year the data from the previous calendar year will be published and will be definitive. Obtaining the EMCR, due to its construction, always has to be after obtaining the last census, which will also be published at the end of the year, a little before.