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New statistics on residence permits and acquisitions of citizenship: experiences of integration in Italy

Note by the National Institute of Statistics of Italy *

Abstract

EU regulation (EC) No 862/2007 represented a starting point to improving statistical information about immigrants, by coordinating the work of statistical institutes and the institutions that maintain administrative records: "Currently, in many Member States, Ministries of Interior and Immigration Services do not have an accurate view of the statistics on migrants that are available, nor is there a realistic understanding of what statistics could be developed and to what timetable. Statistical services do not always have good information on current and foreseeable future needs for statistics. This poor communication is particularly damaging in that it reduces access of the statistical services to potentially valuable administrative data sources, as well as limiting opportunities for statistical services to press for statistical needs to be taken into account in the (re)development of administrative systems" [Radermacher, 2009]. Activities carried out in Italy to adapt the statistical system to the requirements of the EU regulations have been oriented towards better use of available administrative records, as well as through the integration of microdata from various sources. The work has been gradually developed thanks to closer communication between the two main institutions of data holders and producers of statistics on immigration in Italy: the Ministry of the Interior and ISTAT.

This paper discusses advancements made on the basis of this integration between Istat and Ministry of Interior and thanks to the integration of microdata (record linkage procedures).

In particular, the focus is on the new statistics disseminated on residence permits and

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> acquisition of citizenship. Much new information is available after applying record linkage techniques, both for a longitudinal approach and for integrating information coming from different datasets.
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> Starting from the Regulation 862/2007 the advancements have also involved the integration of indicators of migrants.

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Introduction

The approval of a European Parliament Regulation on European statistics on migration and international protection - 862/2007/EC - represented a milestone in improving the quantity and quality of information available, as well as a first step towards directing the attention of statistics to the various forms of integration mentioned above. The regulation considerably boosted collaboration between Istat and the Ministry of interior), leading to the production of information based on integrated data from different sources. In general, it led to a greater understanding of the importance of wide-ranging and accurate statistics on migrations, applications for citizenship, international protection, prevention of illegal entry and presence, residence permits for third country nationals and repatriation.

However, as Radermacher commented in 2009, although the regulation "…covers a wide range of migration-related statistics, it does not go beyond producing counts of the numbers of migrants, with only basic disaggregation by administrative immigration categories and by age and sex", and only represents the first step towards understanding the migratory phenomenon. It is clear, therefore, that more information is needed on the economic and social condition of migrants, on both a national and international level.

The Zaragoza Declaration adopted in April 2010 provided an additional stimulus for public statistics, identifying fundamental areas and indicators for understanding migrant integration.

The starting point of the cooperation between Istat and Ministry of Interior has been the production of more detailed and better quality statistics for the requests of art.6 of Regulation 862/2007.

Istat and Ministry started from the sharing of definitions and classifications. For many years different definitions had been applied, after the entry into force of the Regulation they have written together a common document on definitions and classification.

Since 2009 every year they work together at the process of transformation of administrative data into statistical data.

The collaboration with the time involved not only the statistics for the Regulation 862/2007, but also the integration measures. Istat have been invited to participate to different working groups in order to give a contribution both to the collection of information and to the first elaborations of data.

Furthermore Istat has participated to the process of implementation in Italy of Council Directive 2009/50/EC on blue card to collect all the information required for statistical aims.

The cooperation now covers many steps of the data collecting and processing and it's possible now to share also the results of the "new" data for studying integration, programming and evaluating policies.

Residence permits: from Regulation863/2007 to integration

Regulation (EC) No. 862/2007 of the European Parliament and of the Council on Community statistics on migration and international protection was approved in 2007. The legislation has brought substantial changes, leading towards a harmonisation of migration statistics in the context of the European Union, and has stimulated discussion within individual countries aimed at improving the collection and processing of data on the presence of foreigners and on migratory movements. The decisions made in Italy to adapt the statistical system to the requirements of the Regulations have been geared towards better use of available administrative records, also through the integration of micro-data from various sources. The process has occurred gradually, thanks to increasingly close exchanges and communication between the two main bodies of data holders and producers of statistics on immigration: the Ministry of the Interior and Istat.

To a certain extent, this process anticipated the more stringent indications of the Zaragoza Declaration, which, as has already been pointed out, identify the proportion of long-term residents to total residents and the number of acquisitions in a given year compared to the total foreign population among the indicators to be measured.

With regard to the first indicator, it should be noted that Regulation 862/2007 requires the provision of statistical data on the number of long-term residents seeking citizenship (Article 6(1)(b)). However, this indicator, calculated on the basis of residence permits, has several limitations that need to be considered. In particular, the "cross-sectional" calculation can give rise to misleading results when nationalities with different average lengths of stay in the country are compared. In Table 1 we have attempted to present the situation for the main communities present in the country, calculating the share of long-term residents in relation to various possible reference populations.

Table 1 - Long-term residents according to citizenship (percentages)

Citizenship	Share of long-term residents 2013 stock (total)	Share of long-term residents 2013 stock (holders only*)	2007 entries (holders only*)		
			% still present in 2013	% long-term residents from the total flows for 2007 present in 2013	% long-term residents of total flows for 2007
Morocco	64.4	59.1	66.8	27.2	18.2
Albania	66.3	63.8	69.9	29.6	20.7
Ukraine	49.3	49.3	75.4	20.5	15.4
Moldova	39.3	38.6	76.2	20.8	15.9
China	39.0	34.4	74.9	5.9	4.4
India	52.1	45.4	60.9	25.5	15.5
Bangladesh	53.7	46.5	70.5	18.9	13.3

Philippines	49.5	47.5	55.2	8.9	4.9
Sri Lanka	52.3	47.2	72.2	13.7	9.9
Peru	50.5	48.5	68.8	17.5	12.0
Tunisia	66.2	59.4	52.3	28.9	15.1
Total	54.6	50.4	63.2	22.5	14.2

Source: Istat processing of Ministry of the Interior data.
Note: (*) The figure refers only to residence permit holders and does not count those included on the permit of another person; in particular, children under 14 years are excluded. At present, no tax identification number is listed in the Ministry of Interior archives for accompanied minors below 14 years of age, and it is therefore not possible to implement the record linkage procedures used for residence permit holders.

The first and most direct way to calculate this share is to compare long-term permit holders to the total number of residence permits currently valid for the same period. The results of this calculation are given in the first column of the table and show that the Eastern European communities, which only began to establish themselves as a major presence in the country since 2004, have a lower than average share of long-term residents: Moldova, in fact, amounts to 39.3% and Ukraine 49.3%, whereas the overall figure is 54.6%. Communities such as Moroccans and Albanians, whose migratory process has been under way for a longer period, have higher than average values, amounting to 64.4 and 66.3% respectively. It would be mistaken, however, to attribute this difference entirely to migration patterns that involve a less-rooted presence; as is well known, the integration process unfolds over time and the most appropriate study approach to capture this aspect is a longitudinal one. If, in fact, we use the cohort of new permit holders from 2007 as the reference population, i.e. the total arrivals for that year or only those that are still living in Italy in 2013, the gap is noticeably reduced, particularly for Moldavians.

This simple example, beyond the specific aspect considered, shows that in the coming years it will be increasingly important to calculate this indicator using a longitudinal approach, identifying the potential beneficiaries in relation to whom the share of those who have actually applied for and obtained a long-term permit is to be calculated. At present, these calculation methods are applied to specific cohorts of permits granted in a given year, as was done for the previous calendar year. It would be desirable, however, for the length of stay to became a known and reliable variable for all permit holders in order to accurately identify the population actually "at risk" of qualifying for long-term residence permits.

The usefulness of having a more nuanced picture of these processes is also confirmed by the data in Table 2, in which the proportion of long-term residents was calculated in the same manner as in the previous example, though examining the reason for entry in 2007 and sex. In this case, the highest share of long-term residents is clearly seen to be comprised of women and those holding permits for family reasons.[1] The share of people that entered Italy in 2007 for other reasons, and had already acquired a permanent residence permit in 2013, is seen to be decisively lower. This situation also applies to permit holders for employment purposes, among whom males account for a share of 8.7%, whereas that for females amounts to 14.5%.

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[1] It should be noted that applications can also be made for spouses that are not legally separated and not below eighteen years of age; minor children, including those of the spouse or born out of wedlock; dependent adult children permanently unable to provide for their own basic needs due to health conditions involving total disability and dependent parents.

Table 2 - Long-term residents according to sex and reason (percentages)

Reason for entry in 2007	% of 2007 flows present in 2013			% of long-term residents from total flows for 2007 present in 2013			% of long-term residents out of total flows for 2007		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Work	60.6	73.5	66.1	8.7	14.5	11.4	5.3	10.6	7.6
Family	63.8	67.4	66.3	44.4	56.2	52.8	28.3	37.9	35.0
Study	26.5	29.1	27.8	9.9	11.5	10.7	2.6	3.3	3.0
Asylum/humanitarian	50.3	50.7	50.4	1.9	1.8	1.9	0.9	0.9	0.9
Other reasons	33.8	32.4	33.1	9.5	14.2	11.8	3.2	4.6	3.9
Total	58.5	68.1	63.2	14.5	29.6	22.5	8.5	20.1	14.2

Source: Istat processing of Ministry of the Interior data.

A problem that needs careful consideration for the calculation of this indicator in the future is that some foreigners who leave Italy are not deleted. This problem has always plagued registry data, but it now also risks having an increasing effect on long-term residence permits. There is at present no efficient cancellation system when people leave Italy, even for long periods. The solution might require both the use of more administrative records for monitoring presence in the country, and periodic applications, through the use of some type of administrative instrument, as confirmation of presence in the country.

The use of residence permits micro-data in different years, connected through record-linkage, has been used also to study the process of settlement and the internal mobility of immigrants, taking into consideration also the characteristics of individuals. An example has been described in the UNECE working paper "Definitions, sources and measures for internal mobility and secondary migrations: a focus on non-EU citizens".

However, residence permits represent a very rich informative base and their use should not be limited to the purposes of Regulation 862/2007. ISTAT is currently working to improve the quality of information on the place of birth, which is recorded only in the form of alphanumeric information in a non-obligatory field on residence permits. This makes it difficult to process the variable, which is not standardised and sometimes missing.
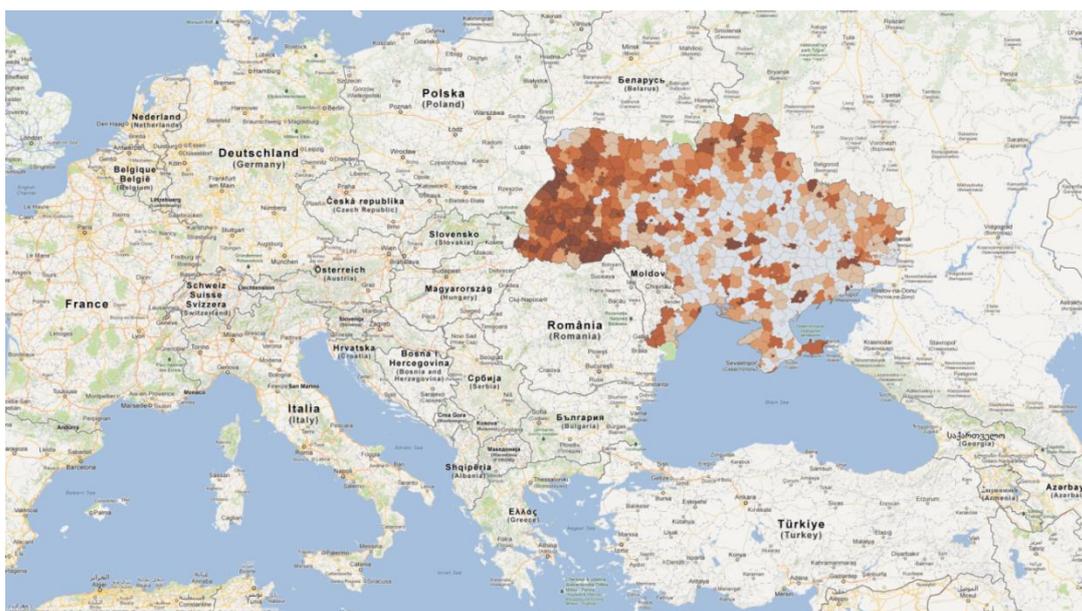
No assistance is currently provided when entering place names, leading to the possibility of errors and different ways of spelling names according to the language used or the use of different name conventions.

The first step in processing this information was to automatically correct the dataset using OpenRefine. Even after this initial processing phase, the dataset continued to contain errors, especially regarding the use of notations in different endonymous languages and names not recognised in the previous phase. We therefore proceeded to standardise the information by linking names and standard dictions contained in the database provided by the GeoNames website, which maintains 8 million place names from all over the world. The "INSPIRE" geographical portal was

also used as a search engine. The correct information was then geo-codified by adding information on longitude and latitude[2].

Currently the project is still in progress, but it is possible to show provisional results. The place names corresponding to origins of migration flows and projected as points on the map, could be better represented with clusters. Once imported in a Geographical Information System (GIS) they could be summarized inside administrative sub-national boundaries and represented with a choropleth map. The map in fig. 1 shows the results of the elaboration of the information about the origin of migration flows from Ukraine to Italy.

Figure 1 - Origin of migration inflows from Ukraine to Italy during 2012

Source: Istat provisional estimates on Ministry of Interior data

As part of the exchange and sharing initiative with the Ministry, the next step will therefore be to develop a tool to allow information on place of birth to be collected correctly and shared with the Interior Ministry, without the need for *ex post* corrections.
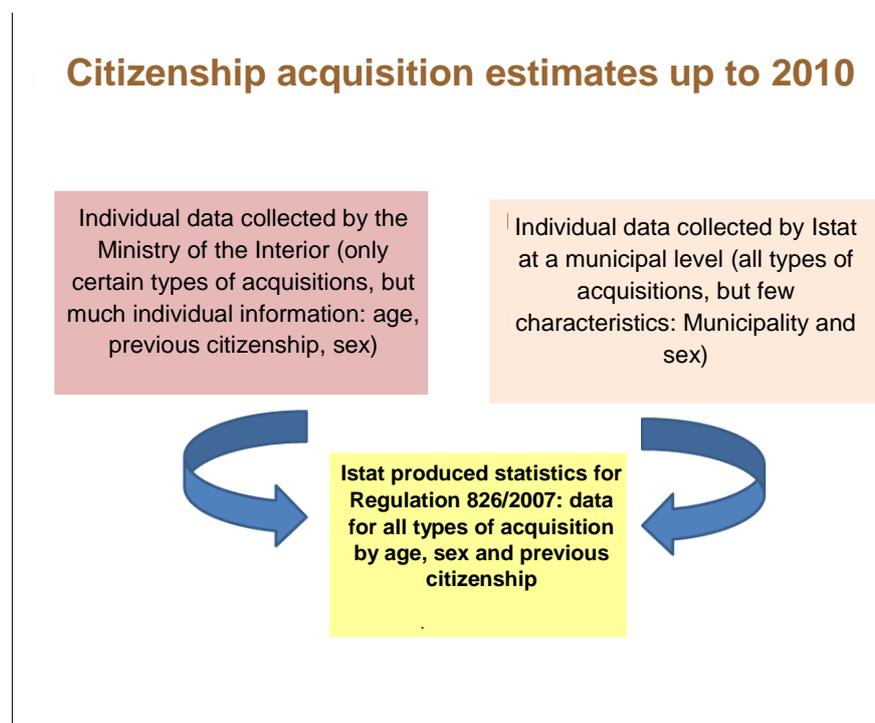
Acquisitions of citizenship

As regards the acquisition of citizenship, however, the European Regulation has already required information on "persons having their usual residence in the territory of the Member State and having acquired during the reference year the citizenship of the Member State and having formerly held the citizenship of another Member State or a third country or having formerly been stateless, disaggregated by age and sex, and by the former citizenship of the persons concerned and by whether the person was formerly stateless."

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[2] The work is being performed as part of the 2013 Eurostat Grant: "Merging statistics and geospatial information in Member States" THEME: 08.1.43 – Geographical information system

At the time the Regulation came into force, the sources on the acquisition of citizenship in our country (Fig. 2) did not allow the required data to be directly produced with the necessary breakdowns. The Ministry's microdata, while providing all the necessary variables of detail, does not cover acquisitions of citizenship by transmission from parents or those by foreigners born in Italy who choose to acquire citizenship at the age of 18. In the case of the aggregate survey conducted by Istat based on municipal registers, while the data available showed all the acquisitions of citizenship by residents in Italy, it did not provide the necessary breakdowns. During the first years in which the Regulation was in force, therefore, steps were taken to provide estimated figures based on the integration of the two sources. It should also be noted that microdata was not available in the case of the Istat survey.

Figure 2 - Method for surveying acquisitions of citizenship until 2010

In early 2011, a series of activities were launched to improve the information produced and make it more responsive to the needs of the country. In particular, the set of sources used and the variables considered were increased and the estimating methods were changed.

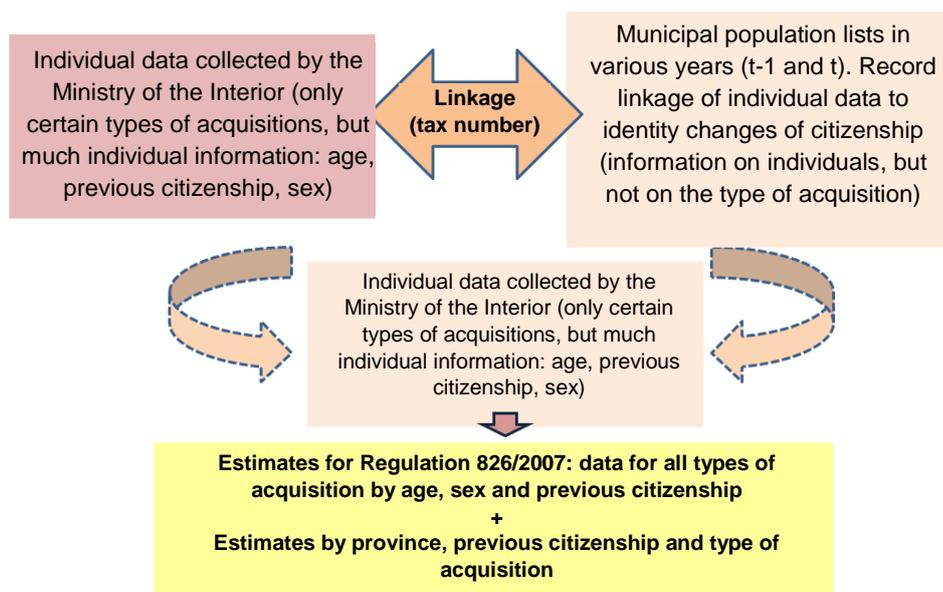Regarding the sources, the following became available for use:

1) two municipal registry lists (LAC – *liste anagrafiche comunali*): one extracted on 31 December 2010 and one updated to 8 October 2011;
2) individual Ministry of the Interior data sets, complete with tax identification numbers;

3) data from surveys and calculations regarding the foreign resident population and its movements.

The various data sets were linked together using record linkage techniques. At an initial stage, tax identification numbers were used as a key. Deterministic linkages were subsequently created using different sets of variables. Ministry of the Interior data was linked to municipal registers to recover the reason for acquisition in the greatest possible number of cases. In this case, the naturalisations were only for reasons of "marriage" or "residence". The record linkage between the two subsequent municipal population lists allowed the recovery and acquisition of adults that were not registered in the Ministry dataset, acquisitions of children granted citizenship by transmission and acquisitions of persons born in Italy to foreign parents who chose Italian citizenship at eighteen years of age. The estimation process was concluded through the use of probabilistic techniques to complete the missing information. The relationship between Istat and the Ministry has been of fundamental importance in this improvement process, with both bodies seeing the importance of working together to improve the quality of information regarding an aspect that has become important for the monitoring of active citizenship.

Figure 3 - Methods for surveying acquisition of citizenship since 2011

The calculation of the citizenship acquisition indicator with a longitudinal perspective envisaged by the Zaragoza Declaration could provide a further step forward in this direction. The indicator is currently calculated as: "The ratio between the number of residents who acquired citizenship in a country during a calendar year and the total number of resident foreigners in that country at the beginning of the year." However, as highlighted in the same document, the term 'naturalisation rate' in this case "may be misleading since the acquisitions considered are all modes of acquisitions in force in each country, and not only naturalisations (residence-based acquisitions requiring an application by the person concerned). The indicator can be computed for specific groups of

foreigners (for example third country nationals), for specific age groups and/or for men and women separately."

In the case of Italy, therefore, it seems worthwhile to develop adequate strategies to permit the use of administrative records for calculating the "longitudinal" indicator. It is not currently possible to have information on the date of the first entry in the register. This variable could be retrieved from the Ministry archives for those who acquire citizenship through residence,[3] since the information is required, but not processed at the time of extraction of the data for statistical purposes. Census data could also provide an important basis, to be updated annually through the use of municipal registry lists. Another important new element could be the establishment of the National Resident Population Register (ANPR – *Anagrafe Nazionale della Popolazione Residente*), as envisaged by the Italian Digital Agenda (Decree-Law No. 179 of 18 October 2012).

Data dissemination

Since June 2013 an information system dedicated to the theme "immigrants and new citizens" has been online. The idea is providing an instrument for:
- Exploiting the multidimensional statistics
- Giving a single access point to data (multi-source) on immigration and integration
- Disseminating complete information: metadata can make easier to read statistics
- Offering interactive and dynamic instruments in order to satisfy the growing information needs on migrations

The main body of the system is the thematic data warehouse. The system was divided into eight thematic areas: population and households, health, Households Economic Conditions and Disparities Social Security, labour, education and training, social participation and crime.

The DWH component of the system is based on the technology of OECD data warehouse (OECD.Stat), a software platform and statistical services also adopted by Istat with the data warehouse I.Stat. The data are presented in multidimensional tables. Metadata facilitate the understanding of statistics by the users.

In addition to the thematic data warehouse, the system offers a number of advanced tools for custom display and integrated information. The dynamic graphs allow you to observe the evolution of the phenomena of interest in comparing the different communities and different territories. The data visualization through maps allows us to consider, in an interactive way, the territorial distribution of the foreign population and guidelines of the major internal and international migration flows. Multi-source comparison tables allow the user to view, in an interactive way, some indicators allowing immediate comparisons between Italians and foreigners and between the main communities.

The system also offers information on Eurostat data production, national and international legislation, glossary, classifications used, description of the statistical sources. A large section of the system is dedicated to projects which the Institute is carrying out together with Ministry of Interior.

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[3] Registrations from abroad in a given year should be used as the denominator of the ratio, assuming that these do not change over time.

Furthermore the system is intended to represent a step forward towards data sharing. It offers "widgets" for sharing tables and graphs, and has the advantage of providing immediate updates of the data on external pages. In the case of the so called "data sharing" data don't need to be downloaded locally on the user's PC, but they are released to be easily "embedded" in Blogs and other Web sites.

The advantage is a centralized management of the widget. For example, changing the chart content, adding a new data, modifying the colours or the layout, will be displayed in the same time on all sites and blogs that embedded the chart using the code shown above. In this way, we created a direct "channel" between the data producer and the data consumer.

When new data about net migration will be released by the Italian Institute of Statistics, all web pages containing the embedded widget will show automatically the updated data, all at the same time and without broker.

Presently only some basic examples of "data sharing" have been made available on-line.

During the last year the Ministry of Interior and Istat have worked together with local authorities (prefetture) to collect the statistical information needs of the different territories. During the next months the aim is to realize a wider project of data sharing also with the territorial bodies in order to programme political actions using updated official data.

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