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#### **Aspects of migrant integration**

## **Definitions, sources and measures for internal mobility and secondary migrations: a focus on non-EU citizens**

Note by ISTAT, Italy<sup>1</sup>

### **1. Introduction**

The production of statistics in the social field is undergoing radical changes thanks also to the increased availability and accessibility of administrative records and to the development of ICT (Information and Communication Technology); the new technologies for the management and treatment of individual data, in fact, have enhanced the expansion of administrative databases. In particular, the traditional archives showed significant improvements in the completeness, timeliness and, albeit partially, in the quality of information collected.

The techniques applied to this increased amount of information are already known, but there are new opportunities for their implementation and refinement. This refers particularly to the use of techniques of record linkage; in fact, the easier processing of administrative documents into statistical data makes easier their exploitation through the techniques of linkage, both cross-sectional, i.e. between different archives in the same moment, both longitudinal, that is on the same archive reported at different times. Consequently, new and more numerous indicators are available and can be today, increasingly, also "longitudinal".

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For many years the traditional measurements by use of administrative sources (population registers) have highlighted the trends of international and internal mobility of foreign migrants in Italy.

In particular, the aggregated data have underlined that for immigration from abroad the main areas of attraction in Italy are those of the Centre and North and that we are witnessing an intense internal mobility of foreigners from the South to the northern areas. In particular, foreigners account for 16,4% of those who have moved within the Italian borders during the year 2009.

The traditional measurements present, however, many limitations related to the type of source:

- a) they only give information on the “migrations” that give rise to a variation in the population register. This is only a share of the global mobility; a part of the movements, both domestic and international, does not give rise to variations in the registries;
- b) they show only the movements occurred in a given year and not the paths of individuals, and in particular secondary migrations. Actually, for the study of migratory chains and of networks it seems particularly useful the analysis of the sequences of internal movements in close connection with the international migrations;
- c) From the point of view of the migration mainstreaming it seems of great interest to understand the differential characteristics of those moving and those who remained on a territory. The traditional sources provide information on those who move, but you can not compare the two different collectives.

The availability today of administrative registers containing micro-data completely changes the perspective and the approach for studying internal and international migration, leading also to a reflection on the concept and definition of 'migration'.

Currently some experiments have been conducted using the archive of residence permits, which refers only to non-EU citizens, and other administrative archives regarding in particular:

- a) Internal and international migration of non-EU citizens studied through record linkage techniques. The cohort of new inflows entered in 2007 was followed in time by connecting the archives of residence permits from 2008 to 2012. We have used a deterministic linkage (the key used is the tax code). The peculiar paths of territorial mobility (including secondary migrations) of the different communities (through network analysis techniques) have been studied;
- b) the different propensity to mobility, according to different individual characteristics (sex, age, citizenship, etc.) has been studied through regression models;
- c) the concept of “presence/residence” on a territory is being studied through record linkage between different administrative sources. Often, foreign immigrants are formally "present" simultaneously in multiple territories.

Further perspectives of analysis based on a methodology similar to that used for residence permits have been opened with the acquisition of the municipal registries (micro-data) for EU citizens. In particular, with regard to this specific case, the definition of residence will be discussed.

## 2. Record-linkage of permits related to the 2007 cohort of immigrants

The analysis was carried out considering the database of residence permits in two different times: on 1 January 2008 and 1 January 2012 (for further analysis see. Conti, Gabrielli and Strozza, 2012). The four-years time interval starts after the events of 2007 when Romania and Bulgaria joined the European Union (EU), which increased from 25 to 27 countries; in the same year in Italy entered into force of Legislative Decree no. 30, which implemented Directive 2004/38/EC of the European Parliament on the right of EU citizens and their family members to move and reside freely within the territory of the Member States. Because of those important innovations there were significant changes also in the context of statistics on foreign presence in Italy. With specific regard to residence permits data in 2008 there has been a break with the past, as it has changed the population of reference that no longer includes citizens of the 27 EU countries. Therefore, the analysis relate exclusively to non-EU citizens who hold a residence permit: in particular, attention is focused on the collective of those who have obtained in 2007 their first residence permit (more than 250,000 non-EU foreigners), which can be comparable in some way to the cohort of immigrants of that year.

Record linkage between the archive at the beginning of 2008 and the one at the beginning of 2012 can determine how many non-EU immigrants of the 2007 cohort are still legally present in Italy after four years, and for the latter, if there were no significant changes with regard to certain information provided by the administrative data (in particular, marital status, province of issue and reason of the permit). The analysis included only non-EU citizens with available tax code in the 2008 archive (204.821 cases, 81% of the cohort of immigrants in 2007) that were found in the 2012 archive through the use of a standard procedure of deterministic record linkage, using the tax code as matching key. 66.7% of the non-EU citizens entering in 2007 have a valid permit in 2012; it is after all a result in line with that recorded in previous experiments (Carfagna et al., 2010), although further analysis on few missed-matchings due to errors in the indication of the tax code or its non-inclusion in the 2010 archive will be necessary. As for the records with missing tax codes in 2008 a key based on the combination of time-invariant information in the two files must be used and alternatively consider the adoption of probabilistic record linkage procedures.

The comparison between the non-EU citizens still present at the beginning of 2012 and those who have left the country, or at least no longer have a valid permit, shows that between the latter men are over-represented men as well as permissions granted for reasons other than work and family, mostly for study; it can be assumed that they expired without being renewed in the period considered. Slight differences are also found in the list of nationalities among the paired and unpaired: among the unpaired Europeans are less well-represented while Asian Americans are more numerous.

For the subset of immigrants entered Italy in 2007 who remained in Italy it is interesting, among other things, to analyze the geographical mobility by examining the variation in the province of permit at the beginning of 2008 and 2012.

## 3. The mobility of non-EU foreigners in Italy

Foreigners contribute substantially to the internal mobility in Italy [Casacchia et al., 2010, De Santis, 2010]. Immigrants in fact, as is well known, have a higher propensity to mobility with respect to natives [de Filippo, Strozza, 2011]. Moreover, in our country the main areas of destination of internal migration of foreigners, do not necessarily coincide with the areas that attract more migration from abroad. The main studies on the subject carried out to date

have been carried out using macro data, primarily related to changes in residence, through the use of classic indicators of mobility.

The use of residence permits micro-data in different years, connected through record-linkage, can overcome this type of approach and identify the "real" paths of immigrants in the territory, taking into consideration also the characteristics of individuals. First, it is possible to highlight the Italian provinces who attract immigrants from abroad and those who can "hold" immigrants on their territory. It is well known that some areas are just a gateway to the Italian territory and then do not become actual settlement areas for foreigners.

The 66.7% of the non-EU citizens entering in 2007 have a valid permit in 2012 (Table 1). All the top ten communities have shares of stay in Italy above average. Particularly stable are those coming from Moldova and Ukraine, with a share was close to 80%. In line with the findings for the long-term stays, Filipinos appear as a community more unstable, with retention rates in Italy below the average (61.2%). In general, women are more likely to remain in the country: only in the case of Bangladesh, Sri Lanka and the Philippines, the share of women in Italy is still slightly lower than that found among men.

The proportion of people who stay on the Italian territory is around 67% for all areas of entry, except in the case of islands, where the percentage drops to 56.1%. However, considering each community, we can see some interesting differences: for example, Moroccans and Albanians have the highest retention rates in the event that the first permit has been issued in the Northwest.

Non-EU citizens who remain in Italy are particularly mobile<sup>2</sup>; over the period about 20% of the collective entered in 2007 renewed the permit in a province other than the province of entry. The higher mobility has affected the Chinese who in 62.6% of cases have renewed the permit in a province other than the province of first release of their residence permit. Very mobile are also citizens of Bangladesh, which have changed the province for 32.8% of cases. Much more stable on the territory are the citizens of Ukraina, Moldova and the Philippines, with shares of renewals in different provinces less than 12%; those are citizenships for which it is higher the proportion of women, who have, in general, a lower propensity to displacement (15.5% against 24.7% of men).

The proportion of people who renewed the permit in another province also changes substantially depending on the area of entry. Those who have obtained the first permit to stay in the north-west have moved in 17.1% of cases. Among those who have obtained the first legal residence in the South the proportion of those who have moved is more than 29%.

Information about individuals provide us with valuable information also on the areas. In our country it is possible to identify areas that represent only the entry ports or land of passage for foreigners; other areas, however, have the ability not only to retain on their territory immigrants coming in, but also to attract those who had obtained initially permits of stay in another area.

In general, considering the internal mobility of non-EU citizens who arrived in 2007, most of the provinces in the Centre-North shows positive changes, while the provinces of the South are characterized mostly by negative changes (fig.1). Particularly high are the percentage changes recorded in Prato, Palermo, Milan and Bolzano, all above 20%. Prato, in particular, has a very strong attraction on internal mobility; in 2007, 777 non-EU citizens

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<sup>2</sup> The information is based on the province in which the residence permit in 2007 was obtained; the renewal was recorded in the database at the beginning of 2012. It does not necessarily coincide with the province of residence.

had come from abroad, but in the period considered the province has attracted more than 1,144 non-EU foreigners who in 2007 had obtained a permit in other provinces. The intense internal migration to Prato can be linked to the strong mobility detected for the Chinese community.

**Table 1. - Non-EU citizens entering Italy in 2007: share still present at 1 January 2012 and the share of permits renewed in a province other than the one of entry between 2007 and 2012 by sex and top ten citizenships, Years 2007-2012, per cent**

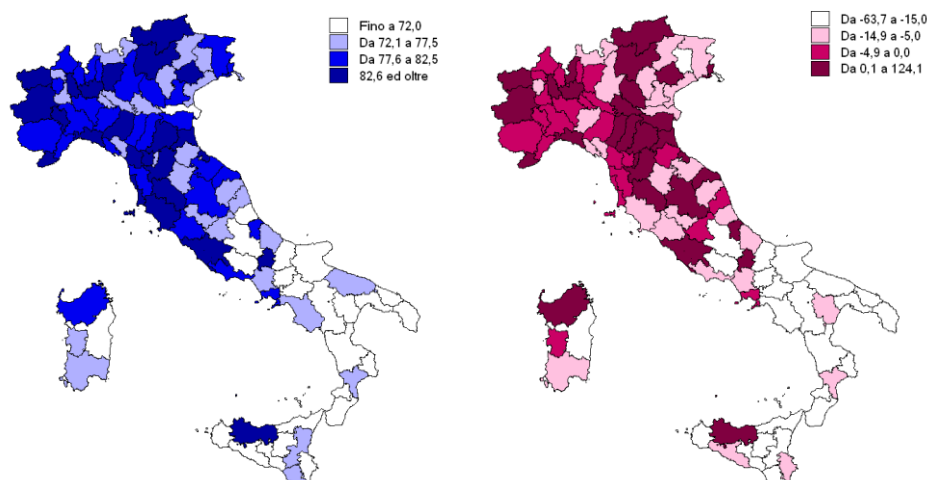
First ten citizenships	Non-EU citizens entering Italy in 2007					
	share still present at 1 January 2012			Share of permits renewed in a province other than the entry between 2007 and 2012		
	%			%		
	M	F	MF	M	F	MF
Morocco	66.3	73.7	69.4	23.6	15.8	20.2
Albania	68.5	76.8	72.0	15.1	8.9	12.3
Ucraina	65.6	82.3	79.0	8.0	11.3	10.7
Moldova	71.3	81.7	79.0	10.7	11.8	11.5
China	74.7	75.4	75.1	64.0	61.2	62.6
India	61.5	66.4	63.1	29.8	13.2	24.2
Bangladesh	75.1	72.3	74.7	37.4	6.7	32.8
Philippines	61.5	61.0	61.2	10.0	12.1	11.3
Sri Lanka	75.3	73.4	74.6	31.0	20.3	27.1
Peru	71.9	76.3	74.7	10.3	13.4	12.3
<b>Total</b>	<b>62.1</b>	<b>71.4</b>	<b>66.7</b>	<b>24.7</b>	<b>15.5</b>	<b>19.8</b>

Source: Istat on data of Ministry of Interior  
data are referred to the place of issue/renewal of the permit

**Figure 1 - Share of non-EU citizens entering Italy in 2007 and present in the same province in 2011 and percentage change in the presence of non-EU citizens in the province entering Italy in 2007 between 2007 and 2012**

January 1st, 2012, percentages

Percentage changes between 2007 and 2012

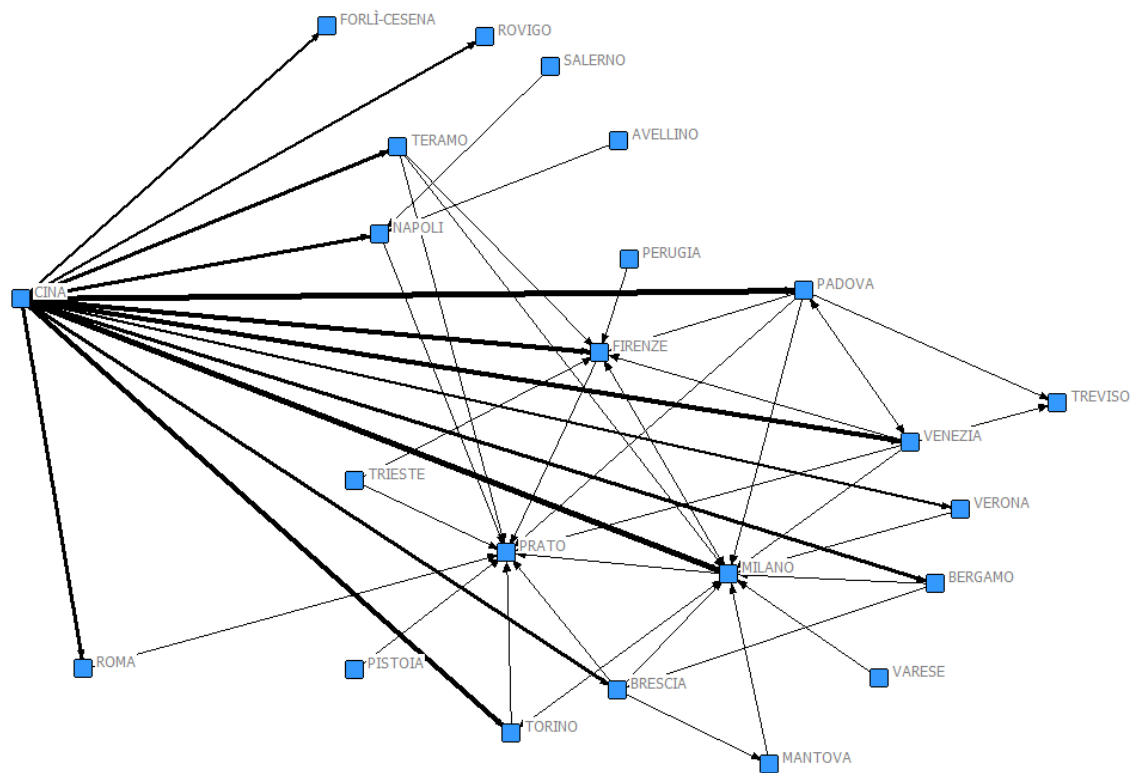


Source: Istat on data of Ministry of Interior  
data are referred to the place of issue/renewal of the permit

Negative and greater than 30% are, however, the changes reported for provinces of the South, further confirmation of the fact that the South and the Islands for non-EU foreigners are only one areas of entry, while the processes of stabilization take place in the Centre-North.

The different communities follow very different settlement patterns on the Italian territory with levels of concentration characteristics [Conti et al., 2012; ISTAT, 2009]. The picture that is gathered through the cross-sectional data (stock) is the result of sedimentation on the territory of both flows from abroad and internal dynamics of migration. The record-linkage, reconstructing the paths of migrants from the moment of their arrival in Italy allows us to connect international migration to internal mobility. We present two cases of study: Chinese and Ukrainian. In the case of the community more mobile within the cohort of immigrants in 2007, the Chinese, the path appears of great interest. The graph, in which the thickness of the lines indicates the importance of travel and the direction of the flow arrows, highlights, as expected, the center of the network of movements Prato province that has always recorded a large share of the Chinese presence (Figure 2).

**Figure 2 – Network of Chinese entering Italy in 2007, mobility between 2007 and 2012.**



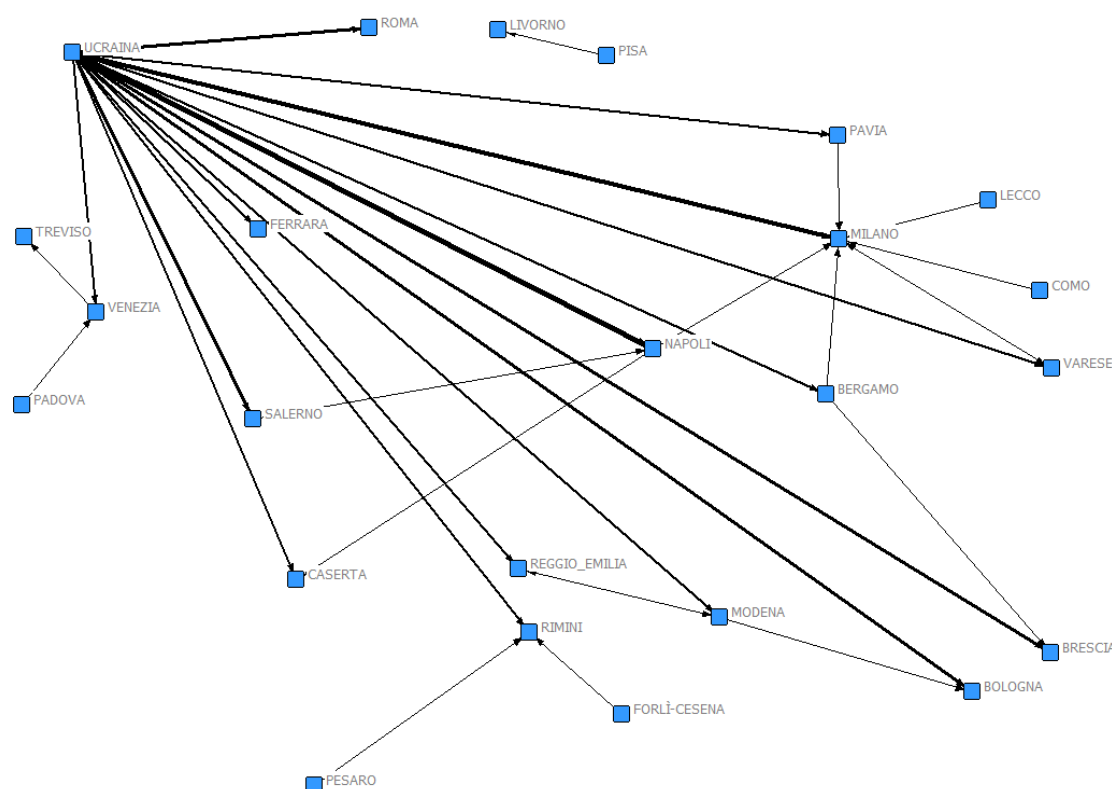
*Source: Istat on data of Ministry of Interior data are referred to the place of issue/renewal of the permit – only the most relevant flows are represented*

However, it appears that Prato is central to the internal migration flows and less relevant with regard to entries from outside for the 2007 cohort. It is also interesting the case of Milan, which receives a significant flow from abroad, but also from the rest of Italy, especially from other provinces in the north-west. Many are the provinces that have received significant flows from China in 2007 and that in the following two years

redistributed those flows to other provinces. Of particular interest is, for example, the case of Naples which is a major area of attraction of international flows of Chinese citizens, but in the two years following their arrival there was a consistent net loss in favour of the province of Prato.

For the Ukrainians we find a completely different graph (Figure 3). Naples is central from abroad as Milan. Relevant flows from abroad are also directed towards cities in the North west of the country. Milan and Naples are relevant also for internal mobility.

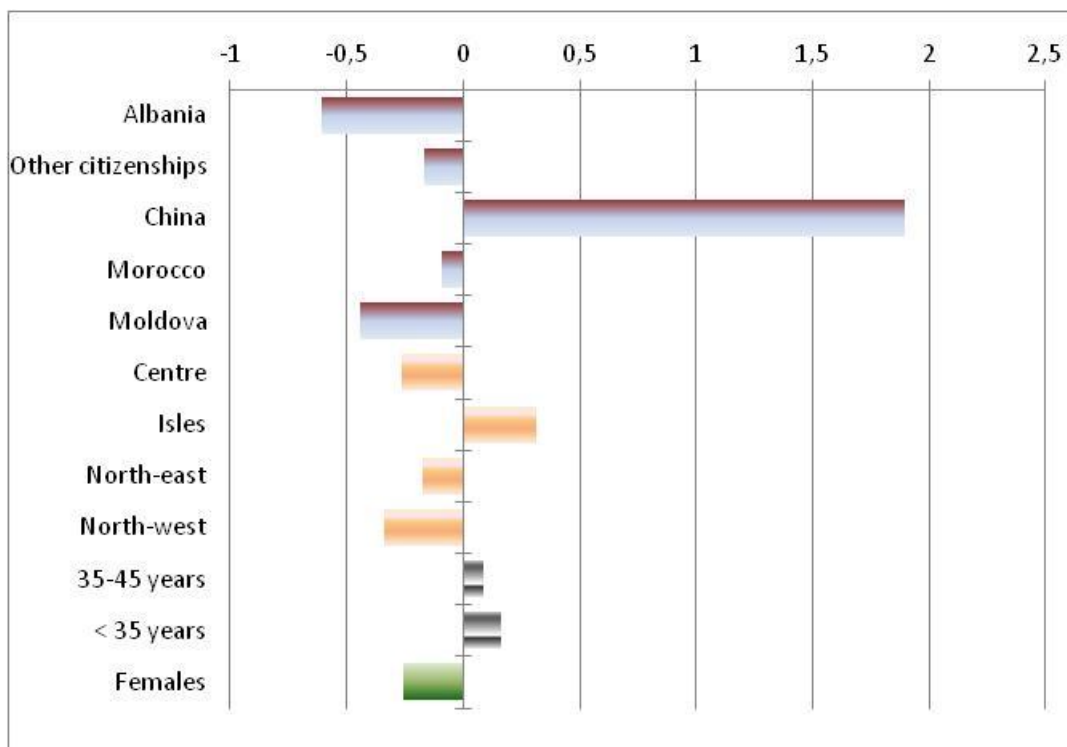
**Figure 3 – Network of Ukrainian entering Italy in 2007, mobility between 2007 and 2012.**



*Source: Istat on data of Ministry of Interior – only the most relevant flows are represented  
data are referred to the place of issue/renewal of the permit*

It was then carried out a logistic regression analysis to understand the link between the propensity to mobility. The response variable is “changed or not the province of permit”, considering the place of issue/renewal of the permit. As predictors we have considered the citizenship and the main individual and migration characteristics (gender, age, territorial area of entry in 2007, etc.). The analysis confirm the higher propensity to mobility of Chinese. People entered in the North-east and in the north west of the country show a lower mobility than the foreigners entered in the South. It is higher the propensity to move of the immigrants entered in 2007 in the Isles. Men are more incline to internal moves than women. Mobility is higher for the young.

**Figure 4- Results of Regression model, response variable “changed or not the province of issue/renewal of the permit” (between 2007 and 2012)**



Source: Istat on data of Ministry of Interior  
data are referred to the place of issue/renewal of the permit

#### 4. Linkage between different archives: some examples

Istat is currently developing a project based on the exploitation of different administrative data for the study of the integration of foreigners in Italy in a multidimensional and longitudinal perspective.

Considering internal mobility is interesting to note that different signals of presence in a certain area can be detected. Different archives can provide information not consistent, but not necessarily they are wrong or outdated.

For example, you can trace in the Social Security register (INPS) archive (2010) about 126.300 unregistered Romanians in Municipal population registers (2010).

Even in the case of long-term residents in 2011 - on the basis of residence permits - about 126,900 non-UE citizens are not present in the Municipal population registers (2011). Consequently these people are not counted as "immigrants" even if they have been in Italy for more than five years (one year is the period required by the international definitions).

Migration phenomena have become more complex in recent years; there are new and different forms of migration and new kinds of migrants (e.g. circular migration, transnational migrants) also favoured by changes in the law and in particular by the introduction of free movement in Europe.



Even internal mobility phenomena are becoming increasingly complex. In "liquid society" [Bauman, 2000] in which everything changes very quickly, the coincidence of the "residence registry" with the "usual residence", especially for certain social categories such as foreigners (but not only), is less obvious than in the past.

As for other phenomena, the study of internal mobility through the use of a single source - often municipal registers - may not fully capture the phenomenon and leave out forms of mobility of great importance for foreigners.

Multiple sources enable us to consider the different forms of migration that have significant consequences on the economic and social dynamics of the host countries and of the departure country. The use of multiple "crossed" sources offers a better view of the complexity of the phenomena. For example, the province of issue of the residence permit may often not be the one in which you work.

A first experiment was carried out through a record linkage between the residence permits and archive and the archive of domestic workers and workers employed by the Social Security register (INPS). Considering the first ten citizenships of people entered in Italy in 2007, it turns out that about 17% of people considered (64,046) works in a province other than that in which it was issued the residence permit. The share is more significant for men (23%) than for women (12%) and among young people. The manual workers are also more "mobile" in the area compared to domestic workers and caregivers.

**Table 2 - Characteristics and mobility of non Eu citizens registered in the Social Security register (INPS)**

Characteristics		Not moved	Moved within 300km	Moved over 300km	Total
<b>Total</b>		82.8	14.2	3.0	<b>100.0</b>
<b>Gender</b>	male	77.3	18.7	4.1	<b>100.0</b>
	female	88.0	10.0	2.0	<b>100.0</b>
<b>Age</b>	fino a 29	79.0	17.6	3.4	<b>100.0</b>
	30-39	80.4	16.0	3.6	<b>100.0</b>
	40-49	85.6	11.8	2.6	<b>100.0</b>
	50 e +	92.5	6.2	1.3	<b>100.0</b>
<b>Profession</b>	Manual worker	77.4	19.5	3.1	<b>100.0</b>
	Caregiver/domestic worker	93.8	4.9	1.4	<b>100.0</b>
	altro	84.6	13.5	1.8	<b>100.0</b>

*Source: different archives, provisional data.*

It is clear that the use of different archives may highlight forms of presence on the territory and "mobility" which would be impossible to grasp through the use of a single source. More needs to be done to improve the quality of administrative data and to allow a more and more extensive use of these statistical data.

## 5. Conclusions

Administrative data sources are already widely used for migration statistics, but it seems possible, by developing statistical harmonization and integration strategies, to make a better use of the collected data.

A starting point to improve the available statistical information about immigrants is the coordination among the statistical institutes and institutions which keep 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].

In this sense, for our country, a collaboration is currently under way. It should lead to sharing of the metadata of key concern. This is a this is a crucial step towards the continuity between administrative data and statistical information.

Definitely, a significant contribution to the continuity between administrative files and statistical files about immigrants and migrations is given by the entry into force of Regulation (EC) 862 of 2007, involving, as providers of statistics to Eurostat, both the National Statistical Institutes and the Ministries of Interiors.

This new framework for institutional relations makes it easier the integrated use of administrative records available also in view of growing demand for information on migration and the presence of foreigners from the EU for the purposes of policy. On the one hand, in fact, there is the Regulation 862 of 2007 which "...was a milestone but it should however not be seen as the end of the road. The Regulation is without doubt a very positive development, but it does not by itself solve all the problems identified in the area of migration statistics. It provides however a firm basis on which to continue the development of European migration statistics” [DG Justice, Freedom and Security, European Commission, 2009]; on the other hand the European Commission itself has noted that the necessary information for policy planning go far beyond those provided by the Regulation and it was introduced the "Migration Statistical Mainstreaming" which includes the provision of a set of comprehensive information on various dimensions of integration through a larger use of administrative records, particularly that of the residence permits.

As a result it is essential not only make better statistical use of individual archives trough an increased cooperation with the institutions that keep the administrative archives but it is also essential the development of statistical integration strategies. At present Istat has carried out a first attempt of longitudinal integration trough the record linkage of residence permits. The principal results of this experience are discussed in the paper. Were also described other experiences of record linkage between data from different archives and collections. These examples can highlight the potential of record linkage in order to offer an integrated statistical of high quality.

To sum up, on one side: “... more coordination will be needed at national level between the different administrations collecting and producing data. Of course, the role of the national statistical institutes is essential. However, other bodies -Ministries of Interior, municipalities, courts, etc. - also produce valuable statistical information, which isn't always easy to access.” [DG Justice, Freedom and Security, European Commission, 2009].

On the other hand, starting from this cooperation, the national statistical institutes should invest resources on harmonization and integration of information from archives of different institutions for a multi-dimensional interpretation of a complex phenomenon such as that of foreign immigration. Consequently the NIS should play an important role in transforming administrative data in statistics of high quality and in the development and application of statistical definitions (metadata) and methods.

At the same time it is essential to reflect on the use of traditional data sources and on the fulfillment of traditional sources to international definitions and renewed complexity of migration.

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