

STEFANIA RIMOLDI* – GIAN CARLO BLANGIARDO*

Foreigners in Italy: reflections on some measurements and analyses suggested by Gini

1. INTRODUCTION

In the early 1930s, Corrado Gini proposed two interesting contributions to demographics: “centers” of population to measure concentration/dispersion of inhabitants across the territory, and the differentials in marriages between native and immigrant populations.

The country’s mean center of population describes the average location of its inhabitants at a given time (Gini *et al.*, 1933). As an average, this measure summarizes the spatial distribution patterns across the territory resulting from the various distributional tendencies of different subgroups of the population (e.g., by sex, age and ethnicity). These tendencies depend on their choices of residence and on their natural (births and deaths) and migratory balances. When compared over time, the population centers, detailed by subgroups and components, offer powerful tools for illustrating and explaining the forces underlying their settlement dynamics.

The second contribution of Corrado Gini refers to the differentials in marriages between natives and migrants (Gini, 1931) gained through the analysis of the mere percentage of unmarried people by sex in urban and rural contexts. By a similar approach it is nowadays possible to compare migrants with natives in behavior towards marriage, taking into account the sex difference and the socio-economic environment.

In the first part of this paper (par. 2), we track the shifting location of the center points of various groups of foreign residents in Italy by citizenship over the 2003-2013 period¹. We provide both the synchronic analysis and the diachronic analysis of the settlement patterns of the different groups by citizenship and sex. We argue that this approach can help in detecting common patterns and peculiarities, and we suggest some possible interpretations in light of the existing literature.

In the second part (par. 3), we test by an empirical approach the current validity of the hypothesis of Corrado Gini that migrants (especially men) are more inclined to marriage than natives, since they are more mobile and proactive.

* University of Milano Bicocca, Italy.

Corresponding author: Gian Carlo Blangiardo; e-mail: giancarlo.blangiardo@unimib.it.

¹ Main groups of foreigners from EU are excluded, except for Polish and Romanians, who were annexed to EU in 2004 and 2007, respectively.

Two features characterize our approach in considering both the essays of Gini. First, we deal with migration although from different perspectives. In the first part the shifting of population centers involves international migration (exogenous factor) and internal migration (endogenous factor) at the macro-level of ethnic group while in the second part the interdependence between marriage and migration (internal in the original Gini's framework and international in our study) is considered at individual level. Second, in facing the two subjects we pay particular attention to differences in behaviour pertaining to sex.

2. TRACKING THE MIGRATION PATTERNS BY POPULATION CENTERS

2.1 *Background*

The definition provided by Corrado Gini to the notion of population “center” is the center of gravity of the population of the country (Gini *et al.*, 1933). It is described as the balance point of all inhabitants, given their equal weight and their different locations and is usually called the mean center. It was used, for the first time, in 1874 by the U.S. Census Bureau in the Statistical Atlas of the United States. Later application to the census results, starting from the 1910 census, specifically aimed to provide a tool for measuring the spatial movement of population across the territory, given the huge immigration flows from Europe over those years (U.S. Population Bureau, various years). In these first applications, the locations were delimited by crossing the meridians and parallels scaled at one degree, assuming the population standing on each geographical centroid².

Using almost the same approach, Gini calculated the mean center for the Italian population using the 1911 census (Censimento Generale della Popolazione del Regno d'Italia al 10 giugno 1911, 1914)³; however, the projection method used by Gini allowed a more detailed repartition of the territory. Gini foresaw that the better the estimate of the mean center, the smaller the geographical units.

Since then, the mean center has been adopted to measure the movement of the distribution of the Italian population, following the annexation of new territories (Marinelli, 1928; Uggé, n.a.).

In Italy, these issues have known little interest from the scholars in the following years, except from some sporadic studies (Ascolani, 1975; Ascolani and Baldini, 2007; Sonnino, 1968). In contrast, this topic has raised much more interest abroad, and especially from the U.S. scholars. A number of

² The Census Bureau adopted the conical projection method.

³ Gini adopted the equirectangular cylindrical projection method.

studies have been devoted to improving the methodology used for projections (Aboufadel and Austin, 2006; Barmore, 1993; Katz and Cooper, 1980; Litwhiler and Aly, 1979; Snyder, 1987), and many others have focused on applications (Henrie and Plane, 2006; Plane, 1999, 2004; Plane and Rogerson, 2015; Thapar *et al.*, 1999).

In Plane and Rogerson's (2015) work in particular, special attention is given to disaggregating the mean population center into subgroups, by age, race and ethnicity; their results prove that sub-group centers provide a useful tool for exploring and interpreting the forces that cause shifting in settlement patterns.

2.2 Data and methods

In order to analyse the spatial distribution of foreign residents across the Italian territory during the 2003-2013 period, we selected the 21 main nationalities found in 2013. They account for 83% of overall foreign residents (Table 1).

Their distribution over the territory is analysed at the municipality level. For each municipality (*i*) the geographical centroids are derived from the National Institute for Statistics (Istat) shapefiles⁴.

Nationality	2003	2007	2013
Sri Lanka	9.4	12.6	0.9
Albania	3.2	2.0	1.7
China	3.8	1.1	2.2
Moldova	9.1	3.5	4.9
Serbia and Montenegro	12.5	5.7	5.4
Peru	3.1	9.3	8.9
Ecuador	3.4	12.1	9.9
Macedonia	2.5	7.3	11.5
Egypt	20.8	9.5	12.6

Over the 2003-2013 period, we selected three points: the first (December 31st, 2003) according to the main amnesty related to the Bossi-Fini's law, that gave legal status to a number of illegal foreigners, the second in connection to the starting year of the "great recession" (at the end of 2007)⁵, and the third referred to the last available data (at the end of 2013).

In order to perform the synchronic analysis, we compared the distribution of the centers of the total foreign residents by nationality, and the centers by sex at each of the three points of time. The diachronic analysis during

⁴ Available at the following link: <http://www.istat.it/it/archivio/24613>

⁵The 'real economy' recession in Europe, in fact, is claimed to start during the first half of 2008, preceded by the financial crisis occurred during the summer of 2007 (Eurostat, 2009).

the 2003-2007 and 2007-2013 intervals is performed both from a qualitative approach by detecting the direction and sense of movements, and from a quantitative approach by measuring the Euclidean distances. The results allow identification of similarities and differences among the various emerging trajectories.

Table 1 – *Foreign residents in Italy by nationality at the end of 2003, 2007 and 2013 (percentage values)*

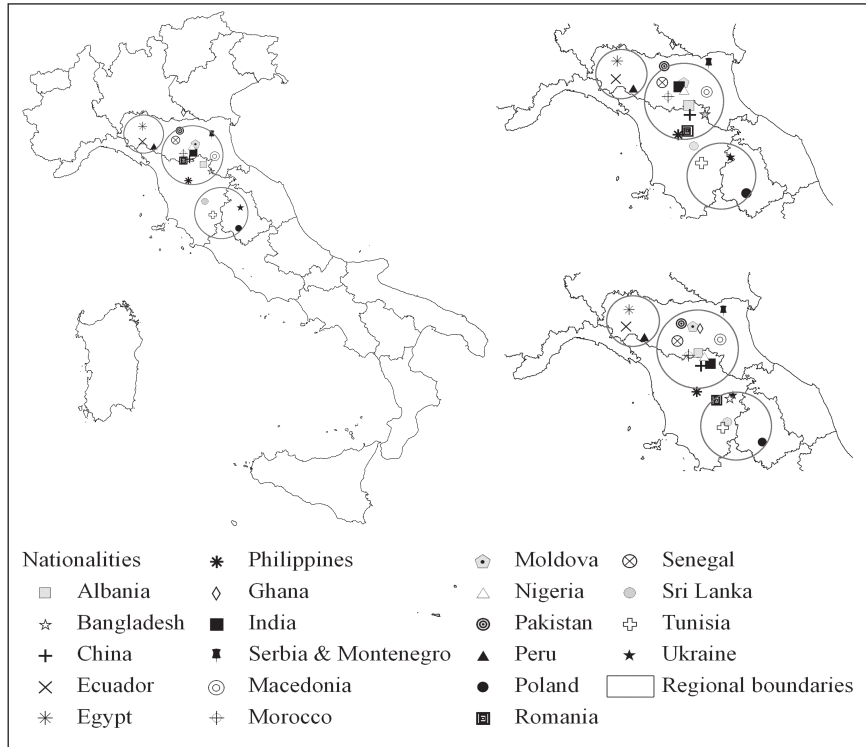
Nationality	2003	2007	2013
Romania	8.9	18.2	22.0
Albania	13.6	11.7	10.1
Morocco	12.7	10.7	9.2
China	4.4	4.6	5.2
Ukraine	2.9	3.9	4.5
Philippines	3.6	3.1	3.3
Moldova	1.2	2.0	3.0
India	2.3	2.3	2.9
Bangladesh	1.4	1.6	2.3
Peru	2.2	2.1	2.2
Poland	2.0	2.6	2.0
Tunisia	3.4	2.7	2.0
Egypt	2.0	2.0	2.0
Sri Lanka	2.0	1.8	1.9
Ecuador	1.7	2.1	1.9
Senegal	2.3	1.8	1.8
Pakistan	1.4	1.4	1.8
Macedonia	2.6	2.3	1.6
Nigeria	1.3	1.2	1.4
Ghana	1.5	1.1	1.1
Serbia (before Yugoslavia)	2.6	2.0	1.0
Total	76.1	81.1	83.2
Total foreign residents	1,990,159	3,432,651	4,922,085

Source: Istat, <http://demo.istat.it>

2.3 Results

The synchronic analysis is performed by comparing the settlement patterns of the 21 selected nationalities (Figure 1). In each of the observed years, the patterns are very diverse by nationality: the average intergroup distance, varying from 97 km in 2003 to 96 km in 2013, declines slowly over time. Based on proximity, three groups can be recognized in 2003.

Figure 1 – *Population centers by citizenship, 2003, 2007, 2013*



Source: authors' elaborations on ISTAT data.

The southern group includes Poland and Ukraine (to the east), and Sri Lanka and Tunisia (to the west): their distances are almost half the overall average in 2003 and tend to increase over time. The central group is formed by China, Philippines, Albania, Romania, Morocco, Senegal, Nigeria, India, Pakistan, Bangladesh, Macedonia, Serbia and Montenegro, and Moldova: their intergroup distances are lower than the overall average, except for the distances between Philippines, Pakistan and Serbia and Montenegro, which are slightly over the average in 2003 and tend to increase over time. The third group includes Egypt, Ecuador and Peru: their centers are located in the western part of the Italian peninsula and their intergroup distances are lower than half the overall average distance. Finally, the outsider Ghanaian community's center is the most northerly located. The picture does not change substantially in 2007, other than a general shifting of the centers of the southern and central groups to the north. Finally, in 2013, a certain reversal in trend is detectable.

Some interesting features emerge when sex differences are taken into account (Table 2). Among the nationalities showing the persisting highest sex

differences all along the period 2003-2013, Ukraine, Nigeria, Senegal, Pakistan, Poland, Romania, Morocco, and Philippines are found. They display two clear patterns: with respect to their male counterpart, Ukrainian, Senegalese, Pakistani and Moroccan females tend to localize to north-west, while Polish, Romanian and Pilipino females tend to place to south-east. Nigerian females are an exception since their centers lie south-west of males in 2003 and 2007 but they follow the first pattern in 2013. These results can be at least partially supported by the hypothesis that, with particular reference to Pakistani and Senegalese groups, that are consistently male population (64% and 73% in 2013, respectively), north-western areas are more favourable contexts for family settlement and integration.

Few groups show negligible intersex differences throughout the period considered: Albania, China, Peru and Ecuador are among the most sex balanced populations, as well as among the greatest in numbers.

Another interesting point is that for some groups, the intersex difference tends to increase over time. As long lasting the immigration, the occurring settlement/integration of the groups would arguably involve a generalized convergence towards smaller intersex differences, however, a straight trajectory to a decreasing trend is visible only for a few nationalities: Albania, Serbia, Romania, Poland and Nigeria. On the contrary, for Macedonia, Bangladesh, Tunisia and Senegal the intersex distance is increasing over all time and for Peru, India, Egypt and Pakistan, a sensible increase is observed only between 2007 and 2013. The centers of females shift to north-west for India and Pakistan, while to south-east for Peru and Egypt. Such a result for India, Pakistan and Senegal can possibly be linked to the outstanding increasing in number of females registered during the interval 2007-2013 (respectively at the average annual growth rate of 110, 139 and 126 units per thousand).

Finally, the diachronic analysis is performed following the evolution of the centers over time. Between 2003 and 2007, Romanians show the maximum distance of movement (47 km). Given the relatively high correlations⁶ between the distance of movement and the dimension of the group and its growth (geometric) rate, we could hypothesise that the larger the community, the higher the push force to expand⁷. This behaviour can also find explication in the different internal migration strategies pursued by the groups (Bonifazi *et al.*, 2012; 2014; de Filippo and Strozza, 2011). This result is confirmed

⁶ The linear correlation coefficient between the distance of movement and the dimension of the group from the one hand and with the growth rate from the other hand is equal to 0.44 and 0.55 respectively.

⁷ The correlation between the dimension of the group and the distance of movement is disputable. Intuitively, the greatest the number, the largest must be the flows necessary to move the center. The hypothesis suggested would deserve a deeper investigation on the patterns of natural and migratory flows.

when one takes into account that among the most mobile⁸ groups, one can find the Ukrainians, the Chinese and the Albanians. On the other hand, the Sri Lankans are among the most mobile although they account only for 2% of overall foreign residents. Moroccans (10% of foreign residents in 2007) exhibit a relatively short distance of movement (8 km) between 2003 and 2007. Finally, the shortest distances of movement are found for Philippines (1.7 km) and Peruvians (3 km) among the largest communities and for Senegalese (1.3 km) and Nigerians (1.4 km) among the smallest ones. Between 2007 and 2013, while Ghanaians and Bangladeshi show the furthest moves (63 km and 69 km respectively), Romanians and Sri Lankans continue to be highly mobile (42 km and 55 km respectively). On the other side, the most stable communities are again the Peruvians, with Ecuadorians, Egyptians and Poles.

Table 2 – *Euclidean distances (km) between male and female populations by nationality, at the end of 2003, 2007 and 2013. Data ordered by increasing distances in 2013*

Nationality	2003	2007	2013
Sri Lanka	9.4	12.6	0.9
Albania	3.2	2.0	1.7
China	3.8	1.1	2.2
Moldova	9.1	3.5	4.9
Serbia and Montenegro	12.5	5.7	5.4
Peru	3.1	9.3	8.9
Ecuador	3.4	12.1	9.9
Macedonia	2.5	7.3	11.5
Egypt	20.8	9.5	12.6
Romania	24.4	18.4	14.5
Poland	28.5	25.7	17.6
Philippines	23.6	26.2	17.8
Ukraine	64.8	14.7	18.6
Nigeria	31.2	23.9	20.3
Morocco	23.6	13.1	28.5
India	17.5	6.1	45.7
Senegal	30.0	38.4	50.2
Ghana	8.0	6.4	50.5
Tunisia	6.3	9.1	55.3
Pakistan	28.9	26.3	59.5
Bangladesh	4.8	21.1	67.9

Source: authors' elaborations on ISTAT data.

⁸ For mobile, here we intend to designate those groups reporting the highest distance of center movement over time.

Considering the whole interval 2003-2013, among the mobile communities, two trajectories are clearly visible. Most of them move towards the south: Senegal, Morocco, Nigeria, India, Bangladesh, Sri Lanka, Romania, and, to a lesser degree, China and Philippines. A handful, move to the north: Albania, Macedonia, Moldova, Ukraine and Ecuador to north-west, Serbia and Montenegro and Poland to north-east. Further interesting features emerge when comparing the settling patterns by sex. Almost all the groups show a similar behaviour (same direction and intensity) for males and females: it is the case of Chinese and Srilankese among the south-oriented, and of Albanian and Moldavian among the north-oriented. Although in the same direction, the intensity of moves appears relevantly lower for Ecuadorian, Ukrainian, Moroccan, Nigerian and Indian females, than for males. Moreover, in Macedonian, Ukrainian, Romanian and Pilipino groups, females are forerunners, as arguably expected based on their job specialization in Italy as servants and nurses. An exceptional behaviour is observed for Egypt, Pakistan and Senegal: the Egyptian and the Pakistani females move in the opposite direction of males, pointing to north-west, while the Senegalese females, although south-oriented similarly to males, are left far behind them.

During the interval between 2003 and 2007 the move strategies appear almost uniform by sex, and are generally significant, except for some cases. Centers of Peruvian and Moroccan females move very little and in the opposite direction (to south-east the first and to north-west the second) to their corresponding males; Senegalese women's center, on the contrary, moves much more than and opposite (north-west) to males' one; Ecuadorian women's center, as well, moves little compared to men's one, although similarly to north-west; also Bangladeshi centers move in the same direction to north-west, but females' move is much more relevant than male's one. The pattern characterized by significant longer distance moves of males than of females refers to the Ukrainians, Indians, Ecuadorians, Moroccans and Peruvians. As about the Ukrainians, in particular, it must be noticed its male part has known a sharp increase during the period 2003-2007 (more than 17,000 units, 320 per thousand). We can hypothesize that much of this increase is due to family reunification to the women forerunners, mostly employed as elderly nurses. Finally, the pattern that accounts for outstanding longer distance moves of females than of male refers to Bangladeshi, Senegalese and Egyptians: for all these groups the female growth rate is high over the period 2003-2007, and in particular for the first two nationalities it is higher than males' one.

In the following interval between 2007 and 2013, the number of nationalities that do not display considerable differences by sex in centers' moves, increases: Albania, Ecuador, Peru, Moldova and Ukraine in addition to Romania and China.

The first effect of the economic crisis is the obvious generalized straight reduction of all foreigners' growth rates, both for men and women, however it has impacted differently by citizenship. The reduction is more significant for males among Serbians, Egyptians, Macedonians, Tunisians, Moroccans, Pakistanis, Senegalese, Albanians, Moldavians and Polish: except for the last two groups, it deals with populations consisting by a large majority of males. On the contrary, Ghanaian, Nigerian, Bangladeshi and Indian women have seen a higher decrease than men. The economic crisis has undoubtedly cut the job opportunities for all immigrants but the fall of new annual work permits since 2011 proves that women have been more penalized than men (an average annual decrease of 20% is observed for women versus 16% for men, during the interval 2011-2014). Moreover, the crisis has also decelerated the family reunification process, as shown by the reduction of family permits. Since the family reunification mechanism involves women by a large majority of groups, it follows that either for work or for family, the consequences of the economic crisis have globally affected more on the female part of this population. In particular, for Ukraine and Moldova, consisting by a large majority of females, the shifting of centers (both for females and males) is clearly north-west oriented, where more occupational chances are available for women. Both for Ukrainians and Moldavian females an exceptional decrease of work permits is observed since 2011: hence, the population structure by sex appears nowadays more balanced.

Philippines, Senegal, Pakistan, Morocco, Tunisia, Nigeria, Sri Lanka, India and Ghana show longer distance moves of males than of females: these groups are characterized by a large prevalence of males or, in the case of Nigeria, by a strongly different occupational market between the sexes. All these groups move to south-east: this shifting can find reason in the large number of permits for asylum and humanitarian reasons released since 2011 following the north African emergency (Strozza and Impicciatore, 2015). Finally, two groups deserve further comments: Polish and Egyptians. As for the first group, while leaving from quite distant centers, men and women tend to converge, as well as Serbians, to north-east. This group consists of females by a very large majority; we presume that as in the case of Ukraine and Moldova, the shifting of centers is driven by the female occupational chances. Concerning Egyptians, a full reverse of trend of immigration character is visible since 2011 due to the exceptional increase of family permits (by males and females almost in the same numbers). In consequence, for the females of this group an outstanding shifting of center to north-west is observed.

2.4 *Summarizing remarks*

By tracking the shifting location of the center points of various groups of foreign residents in Italy by citizenship from 2003 to 2013, we have gained the following results. First, people move⁹ differently by nationality, both in quantitative and qualitative sense. Second, the magnitude of the sub-group and its growth rate seem to only slightly influence its attitude towards moving (or staying). Third, for some nationalities, differences by sex are noticeable.

These traits can be explained by referring to the following major overlapping and deeply interacting points. Although in this work we deal with the resident population (considered homogeneous with respect to the more or less temporary migratory project in Italy), we have to take into account the cultural differences and geographical distances of each nationality from those of native Italians. These elements contribute (together with individual characteristics) towards determining the stage of the integration process of each sub-group. Secondly, the choices of family reunification adopted by different communities can explain many of the differences emerging by sex: who, man or woman, arrives first, and, of course, whether his or her intention is to stay or return. Finally, the opportunities offered by the labour market, the (natural or induced) ethnic specialization, and the economic circumstances (i.e. the economic recession after 2007) considerably influence the attitude of foreigners to move across the territory.

In the light of the results obtained, we suggest a possible synthesis that allows ordering the aforementioned factors in a hierarchy, where the groups' outcomes, in terms of geographical shift of centers, take some explications.

The male driven immigration characterizes all the groups from Africa (Morocco, Tunisia, Egypt, Senegal and Ghana) and some from Asia (India, Bangladesh and Pakistan). Among the north-African groups, Egypt shows a well different migratory model, where intense family reunification flows preludes to a more rooted integration on the territory. The intersex Euclidean distance of centers is among the shortest.

The female driven immigration refers to Ukrainians, Moldavians and Poles. Ukrainians and Moldavians have been particularly touched by the economic crisis; moreover, the dramatic fall of the new annual work permits has not been supported by an increase of family permits. In the period considered in this paper these two groups appear to move straight to north-west, and women anticipate men.

The picture described in this work is far from being able to provide evidence explaining why groups move, but it can help guide the research to deepen the analysis. Further studies could look into how much of the shifting

⁹ See note 8.

of the centers is explained by the flows, whether natural or migratory. Furthermore, additional results could emerge by disaggregating the centers by age and marital status or cause of migration, when such data were available at a useful geographical level.

3 ARE MIGRATION AND MARRIAGE STILL RELATED?

3.1 *The original framework*

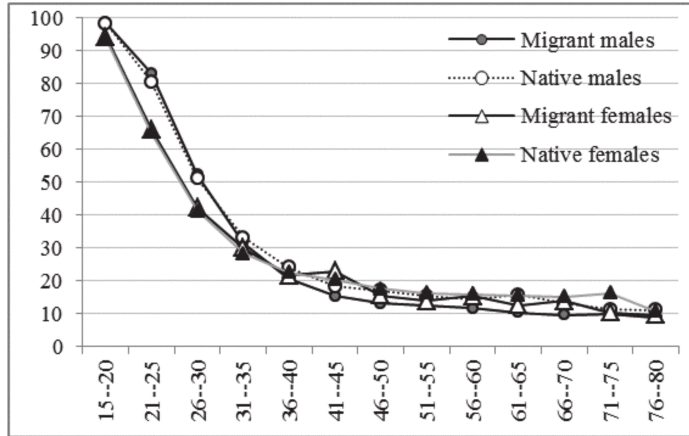
In the early 1930s, Corrado Gini, then President of the Italian Central Statistical Institute, presented a paper on the differentials in marriages between natives and migrants (Gini, 1931) at the International Congress for Studies Regarding Population Problems. The aim was probably to check whether, in an historical period of special care for fostering births and family formation, the presence of population movements could have significantly reduced the choices for marriage. Through the analysis of the percentage of unmarried people by sex in urban and rural contexts, Gini reached the conclusion that migrants were more oriented towards marriage than natives, although sex and socio-economic environment could be important in marking the differences.

According to marital status statistics drawn from the 1921 Italian Population Census, it was shown, in particular, that in both a set of three large cities, Genoa, Rome and Bari, (Figure 2) and in eight local administrative regions (Figure 3) well scattered throughout the country,¹⁰ the proportion of still unmarried was lower for migrants than for the native population. Regarding the reasons for such empirical evidence, Gini argues that for women "(...) the marriage could be often a factor of emigration, because they leave their place of origin just following/reaching their husband (...)" (Gini, 1931, 11). And, at that time, it seemed more likely than imagining a marriage rate for immigrated women greater than the rate of the natives. Somewhat different, and nowadays quite amazing, was the explanation for the lower share of unmarried males among immigrants. For males, Gini argued that "you might think about a positive relationship between marriage and migration, because both choices require some resourcefulness and initiative; actually people more prudent and fearful tend to stop facing the difficulties of marriage, as well as they prefer to live where they have always been" (Gini, 1931, 11-12).

Gini's conclusions were that "migrations, above all the male ones, are selective towards marriage. Not in the sense that emigrants have less propensity to marriage - as usually thought - but on the contrary that they are more apt to dare and to meet new challenges" (Gini, 1931, 13).

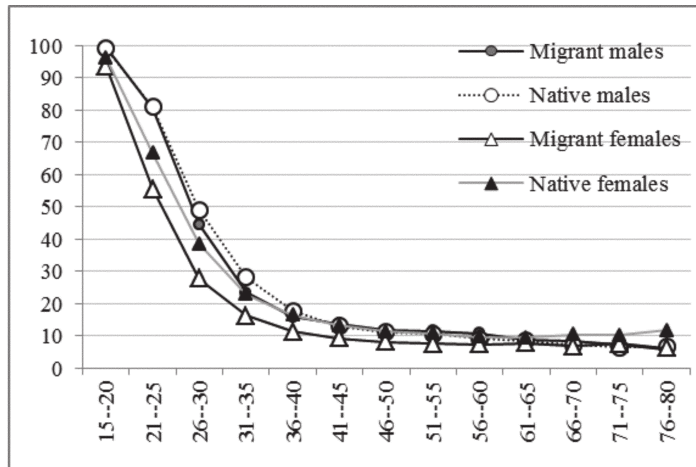
¹⁰ Data refer to the following administrative areas called "circondari": Susa, Brescia, Tolmezzo, Gaeta, Grosseto, Potenza, Castoreale, Oristano.

Figure 2 – *Percentage of unmarried migrants and natives in Genoa, Rome and Bari, 1921 Italian Population Census, by age and sex*



Source: authors' elaborations on ISTAT data.

Figure 3 – *Percentage of unmarried migrants and natives in a set of eight "circondari," 1921 Italian Population Census, by age and sex*



Source: authors' elaborations on ISTAT data.

3.2 *Is the relationship still valid decades later?*

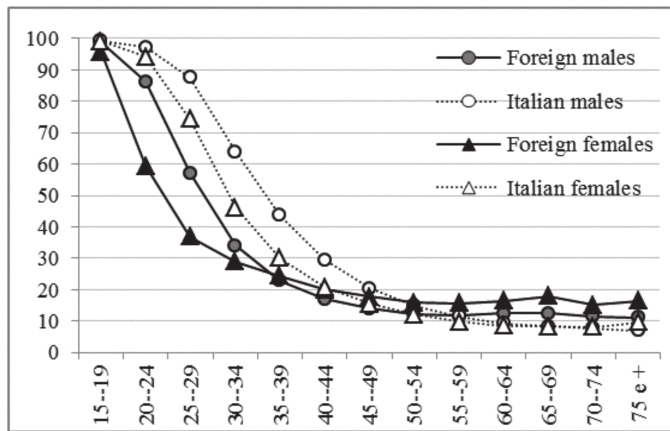
Nearly a century following Corrado Gini's contribution and within a country where both mobility paths and models of marriage and family are quite different from the beginning of last century, is the positive relationship between migration and marriage still valid?

The interrelations between geographical mobility and marriage has been interesting to researchers for a long time after Gini, but it is with the life-course approach that marriage, family formation, and migration decisions have been closely inter-twined (Castles and Miller, 1998; Détang-Dessendre and Molho, 1999; Kulu and Billari, 2006; Öberg, 1996; Massey and Espinosa, 1997; Wagner, 1990). The life-course perspective allows for a better understanding of the ways that migration may disrupt traditional family processes by taking into account both the timing of life course events and the duration of life course stages. Variation in family patterns may result from differences in the duration of family stages as well as whether they occurred. This research has largely focused on the extent to which marriage patterns, fertility, or divorce rates are different among immigrants (or their descendants) when compared to the native population. Anyway, relating marriage choices specifically to migration choices is not very frequent in the literature (Cortina *et al.*, 2008; Coleman, 2008; Kalmijn, 1998; Khoo, 2004; Lee and Fernandez, 1998; Van Tubergen and Maas, 2007). According to Sanchez-Dominguez *et al.* (2011), in their study of marriage strategies among immigrants in Spain, marriage choices could well be influenced by migration strategies in different ways. In particular, before migration, marriage is a strategy to facilitate the migration move, but after migration the direct marriage/migration link weakens and the effects of local marriage markets become predominant. Furthermore, the authors suggest that marrying after migration “(...) can be interpreted as a strategy of protection, self-defense and self-promotion (...)” (Sanchez-Dominguez *et al.*, 2011, p. 141). But marriage opportunities in host contexts are related to various factors. Principally, the size of immigrants’ own ethnic group for endogamous marriages (Van Tubergen and Maas, 2007), individual characteristics, such as education level, to increase the opportunities for inter-ethnic marriages, especially with natives (González-Ferrer, 2006; Lieberman and Waters, 1988; Qian and Lichter, 2001), and linguistic and cultural distances from natives and/or other ethnic groups (Kalmijn and Van Tubergen, 2006). About the influence of sex, recent research (Carling, 2005; Donato *et al.*, 2006; Donato and Garbaccia, 2015) has debated the existence of differences previously supported by a large literature on the wake of Gini, according to which, while men more often migrate independently and as singles, women are more likely to be followers of migration and move for family related reasons more often than men (Castles and Miller, 2004).

With respect to the foreign immigration phenomenon that is constantly the focus of interest and debate in our time, we may wonder in particular whether Gini’s suggestions, that were referred to internal migrations at that time, are still supported by statistical evidence into our international migration framework. This is not simple curiosity or academic interest. The confirmation of a special relationship between immigration and marriage, and then a strong propensity to have (already or in the future) one’s own family at the destination, actually could be interpreted as the existence of conditions fostering the path of stabilization and integration of the immigrant population (Cesareo and Blangiardo, 2011).

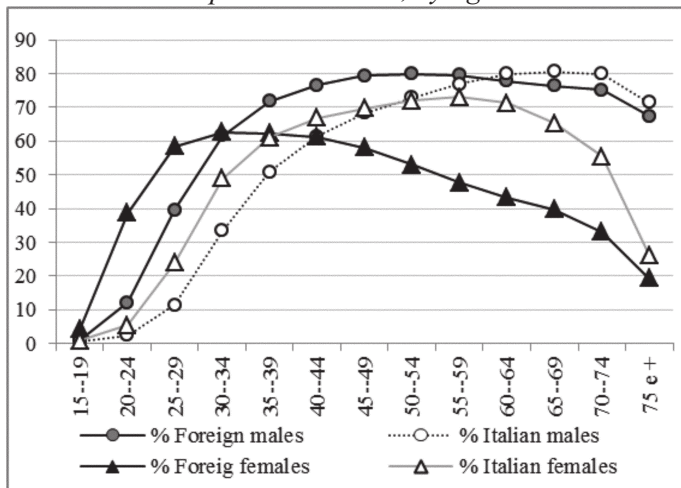
Through a check on the data of the latest 2011 population census, we can observe the lower proportion of unmarried people among foreigners than among the Italians, a difference that appears to be very strong up to the groups aged over fifty (Figure 4). At the same time, the foreign population is characterized by a greater proportion of married persons (Figure 5), despite the foreigners holding a larger proportion of single people already married (divorced/separated and widowed) than the Italians, particularly with women.

Figure 4 – Italy: percentage of unmarried foreign citizens and Italians, 2011 Population Census, by age and sex



Source: Istat, 15th Population Census 2011.

Figure 5 – Italy: percentage of still married foreign citizens and Italians, 2011 Population Census, by age and sex



Source: Istat, 15th Population Census 2011.

Ultimately, we can state that Corrado Gini's hypothesis on selective migration compared to marital status seems to find evidence from the analysis of the foreign presence in Italy, now even more so than in the past. The interesting next step for investigation is whether the explanation originally suggested by Gini is still valid.

3.3 *Looking for valuable clues*

No studies have been done to date to evaluate the courage and spirit of initiative of the immigrant population and, more so, as a function of their marital status. However, it is possible to ascertain the propensity to move within the host country (since the first arrival) to meet more favourable conditions, a feature that could indicate resourcefulness, through studies carried out on representative samples of the foreign presence in some Italian regions (Blangiardo, 2014; de Filippo and Strozza, 2012).

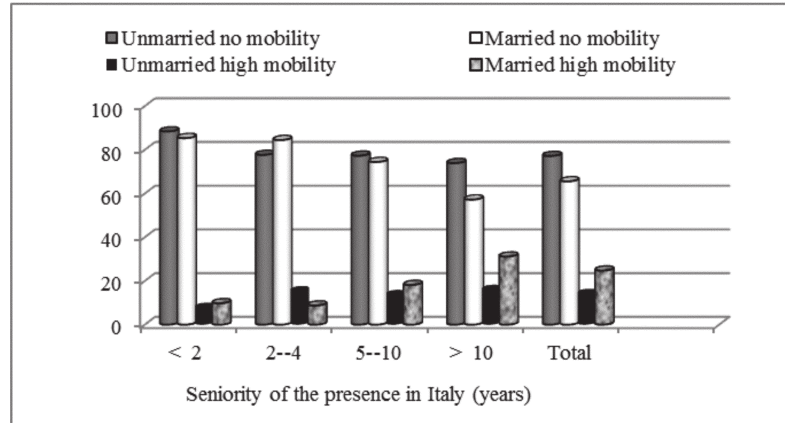
As an example, by analysing the data in the 2014 survey (ORIM survey) conducted in Lombardy within the framework of monitoring of foreign immigrants carried out by ISMU (Foundation for Initiatives and Studies on Multi-Ethnicity) since 2001, it can be stressed that among foreigners aged over 15 living in Lombardy, married people have a background of lower stability than unmarried (their stability rate is 66% vs.77%). It can also be noticed that the former characterize by a higher rate of medium-long distance mobility (at least inter-regional): 25% versus 14% for unmarried people.

Assuming that behavior as a proxy of the "spirit of initiative" hypothesised by Gini, we cannot reject the hypothesis that even today, marriage and mobility are behaving in the same way.

Not only that, the data for Lombardy also confirm that men more than women show the association between mobility and marital status (Figure 6). For males, the share of high mobility among married men is twice that of the unmarried men (31% versus 15%), while for females, the rate of married women is only higher by five percentage points (18% versus 13%).

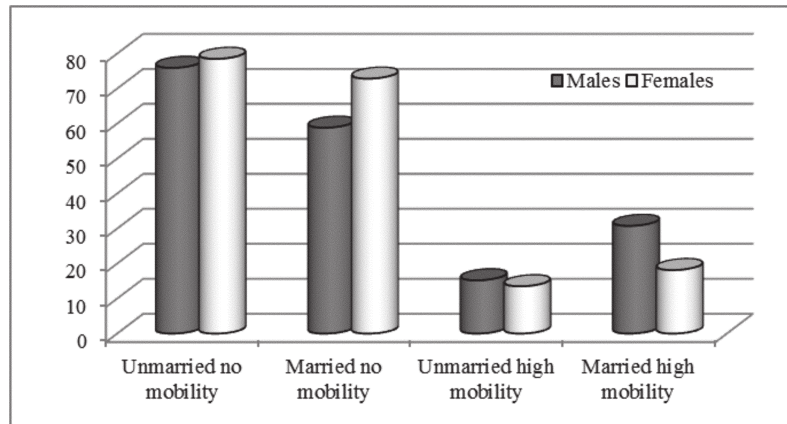
All this appears relevant if we are aware of the strong connection between having a spouse/husband (especially if cohabitant) and the integration path of migrants. The data from the 2014 ORIM survey point out that being married is strongly linked to a growing level of integration both in regard to the economic condition and the labour market access, and on socio-territorial aspects (Blangiardo, 2014). In this sense, although confirming a general growing effect due to the duration of the presence, the indicators that measure the level of integration related to marital status point to married couples being in the best position (Figures 8 and 9).

Figure 6 – Lombardy 2014: percentage of foreign immigrants according to mobility since their arrival in Italy and the duration of the presence in Italy



Source: ISMU Foundation (ORIM survey-wave 2014).

Figure 7 – Percentage with no mobility or high mobility since the arrival in Italy among married and unmarried foreign immigrants living in Lombardy in 2014

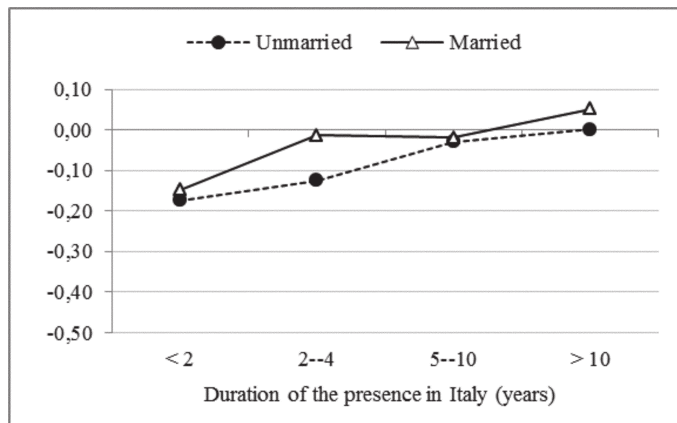


Source: ISMU Foundation (ORIM survey-wave 2014).

In conclusion, empirical outcomes point out that marriage, spirit of initiative and integration are still related nowadays: even more than at the beginning of last century. Actually, the official statistics are not yet sufficient to make unquestionable assessments on this topic, anyway, data from recent local surveys confirm both a higher mobility among married migrants (especially men) and their parallel growing level of integration in the host society. So that the

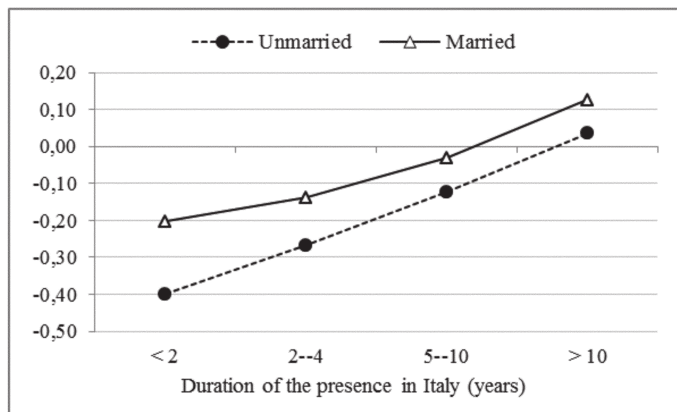
new policy message, certainly not envisaged at Gini's time -characterized by a context of rural/urban mobility - is that family formation and family reunion should be facilitated and promoted among migrants, not only in order to ensure legitimate personal rights, but also to speed up the integration process of foreign people living in Italy.

Figure 8 – Average scores in Economic and Labour market integration of foreign immigrants living in Lombardy in 2014 according to civil status and duration of the presence in Italy (-1 = no integration; +1 = full integration)



Source: ISMU Foundation (ORIM survey-wave 2014).

Figure 9 – Average scores in socio-territorial integration of foreign immigrants living in Lombardy in 2014 according to civil status and duration of the presence in Italy (-1 = no integration; +1 = full integration)



Source: ISMU Foundation (ORIM survey-wave 2014).

4. CONCLUSION

In the first part of this paper, we tracked the shifting location of the center points of various groups of foreign residents in Italy by citizenship over the 2003-2013 period. We provided some arguments helping to look at the different immigrant settling behaviour by citizenship, in light of the existing literature. In the second part, we tested the current validity of the hypothesis of Corrado Gini that migrants are more inclined to marriage than natives being more mobile and proactive.

Although from different perspectives, the two methods analysed and tested almost one hundred years later than their first application appear still effectual in order to cast the light on current migrations, totally different from those originally dealt with by Gini. The shifting of population centers synthesizes the various forces subtending to moves, among which in particular migration strategies, job opportunities and family reunification projects. Although the second hypothesis suggested by Gini would need further tests with more sophisticated methodological tools, that could allow for controlling spurious effects on the relationship between migration and marriage, the empirical results obtained here claim that we cannot reject the hypothesis that even today, marriage and mobility are behaving in the same way.

Moreover, both the methods applied allow to state that, among immigrants, sex matters and it matters in different ways by citizenship, since the differences (again) in migration strategies, job opportunities and family reunification projects.

References

- ABOUFADEL E., AUSTIN D. (2006), "A new method for computing the mean center of population of the United States", *Professional Geographer*, 58, 65-69.
- ASCOLANI A. (1975), Sulla concentrazione della popolazione italiana presente ai censimenti 1861-1971, Atti della XXVIII Riunione della Società Italiana di Statistica, Padova.
- ASCOLANI A., BALDINI R. (2007), "Testing a new approach in measuring spatial concentration of population: Italy, 1971-2001", *Genus*, (63): 3-4.
- BARMORE F.E. (1993), "Where we are? Comments on the concept of the 'center of population'", *The Wisconsin Geographer*, 9, 8-21.
- BLANGIARDO G.C. (ed.) (2014), L'immigrazione straniera in Lombardia. La tredicesima indagine regionale. Rapporto 2013, Fondazione Ismu, Éupolis Lombardia, Regione Lombardia, Osservatorio Regionale per l'integrazione e la multietnicità, Milano.

- BONIFAZI C., HEINS F., TUCCI E. (2012), “Le migrazioni interne degli stranieri al tempo dell’immigrazione”, *Meridiana*, 75, 173–190.
- BONIFAZI C., HEINS F., TUCCI E. (2014), “Le migrazioni interne in Italia 2011-12”, in COLUCCI M., GALLO S. (eds.), *L’arte di spostarsi. Rapporto 2014 sulle migrazioni interne in Italia*, Donzelli Editore, Roma, 3-20.
- CARLING J. (2005), *The Gender Dimensions of International Migration*, *Global Commission on International Migration*, paper no. 35, Geneva.
- CASTLES S., MILLER M.J. (1998), *The Age of Migration: International Population Movements in the Modern World*. Second edition, Macmillan, London.
- CASTLES S., MILLER M.J. (2004), *La era de la migración: movimientos internacionales de población en el mundo moderno*, Universidad Autónoma de Zacatecas, México.
- CENSIMENTO GENERALE DELLA POPOLAZIONE DEL REGNO D’ITALIA AL 10 GIUGNO 1911, (1914), Vol. 1, Roma.
- CESAREO V., BLANGIARDO G.C. (eds.) (2011), *Integration Indexes. An empirical research on Migration in Italy*, Quaderni Ismu, n. 2, Fondazione ISMU, Milano.
- COLEMAN D. (2008), “Trends in Fertility and Intermarriage among Immigrant Populations in Western Europe as Measures of Integration”, in KIM D.S. (ed.), *Cross-border marriage, Process and Dynamics*, Institute of Population and Aging Research, Hanyang University, Seoul, 321-359.
- CORTINA C., ESTEVE A., DOMINGO A. (2008), “Marriage patterns of the foreign-born population in a new country of immigration: The case of Spain”, *International Migration Review*, 42 (4): 877-902.
- DE FILIPPO E., STROZZA S. (2011), “Le migrazioni interne degli stranieri in Italia”, *Sociologia del lavoro*, n. 121, 168-195.
- DE FILIPPO E., STROZZA S. (eds.) (2012), *Vivere da immigrati nel casertano. Profili variabili, condizioni difficili e relazioni in divenire*, Franco Angeli, Milano.
- DÉTANG-DESSENDRE C., MOLHO I. (1999), “Migration and changing employment status: a hazard function analysis”, *Journal of Regional Science*, 39(1): 103–123.
- DONATO K.M., GABBACCIA D., HOLDAWAY J., MANALANSAN M., PESSAR P.R. (2006), “A Glass Half Full? Gender in Migration Studies”, *International Migration Review*, 40 (1): 3-26.
- DONATO K.M., GABBACCIA D. (2015), *Gender and International Migration*, Russel Sage Foundation, New York.
- EUROSTAT (2009), *Recession in the EU-27: length and depth of the downturn varies across activities and countries*, Statistics in Focus 97/2009.

- GINI C. (1931), *La percentuale dei celibi nella popolazione native e nella popolazione immigrate*, relazione presentata al Congresso Internazionale per gli Studi sulla Popolazione, Istituto Poligrafico dello Stato, Roma.
- GINI C., BOLDRINI M., GALVANI L., VENERE A. (1933), “Sui centri della popolazione e sulle loro applicazioni”, *Metron*, (11)2: 3-102.
- GONZÁLEZ-FERRER A. (2006), “Who Do Immigrants Marry? Partner Choice among Single Immigrants in Germany”, *European Sociological Review*, 22(2): 171-185.
- HENRIE C.J., PLANE D.A. (2006), “Decentralization of the nation’s Main Street: New coastal-proximity-based portrayals of population distribution in the United States, 1950-2000”, *Professional Geographer*, 58, 448-459.
- KALMIJN M. (1998), “Intermarriage and homogamy: Causes, patterns, trends”, *Annual Review of Sociology*, 24, 395-421.
- KALMIJN M., VAN TUBERGEN F. (2006), “Ethnic intermarriage in the Netherlands: Confirmations and refutations of accepted insights”, *European Journal of Population*, 22, 371-397.
- KATZ I.N., COOPER L. (1980), “Optimal location on a sphere”, *Computers and Mathematics with Applications*, 6, 175-196.
- KHOO S.E. (2004), “Intermarriage in Australia. Patterns by ancestry, gender and generation”, *People and Place*, 12(2): 34-44.
- KULU H., BILLARI F.C. (2006), “Migration to urban and rural destinations in post- Soviet Estonia: a multilevel event-history analysis”, *Environment and Planning*, 38(4): 749–764.
- LEE S.M., FERNANDEZ M. (1998), “Trends in Asian American Racial/Ethnic Intermarriage: A Comparison of 1980 and 1990 Census Data”, *Sociological Perspectives*, 41(2): 323-342.
- LIEBERSON S., WATERS M. (1988), *From many strands: Ethnic and racial groups in contemporary America*, Russell Sage Foundation. New York.
- LITWHILER D.W., ALY A.A. (1979), “Large region location problems”, *Computers and Operations Research*, 6, 1-12.
- MARINELLI O. (1928), L’Italia demografica e il suo centro di popolazione. In: *Curiosità geografiche*.
- MASSEY D.S., ESPINOSA K.E. (1997), “What’s driving Mexico–U.S. migration? A theoretical, empirical, and policy analysis”, *American Journal of Sociology*, 102(4): 939-999.
- ÖBERG S. (1996), “Spatial and economic factors in future South–North migration”, in LUTZ W. (ed.) *The Future Population of the World: What Can We Assume Today?* Revised edition, Earthscan, London, 336 -357.
- PLANE D.A. (1999), “Migration drift”, *Professional Geographer*, 51, 1-11.
- PLANE D.A. (2004), “Population distribution: Geographic areas”, in: SWANSON D.A., SIEGEL J.S. (eds.), *The Methods and Materials of Demography*. Second Edition, Elsevier, Philadelphia, 81-104.

- PLANE D.A., ROGERSON P.A. (2015), *On Tracking and Disaggregating Center Points of Population*, Annual Meeting of the American Geographers, Chicago.
- QIAN Z., LICHTER D.T. (2001), "Measuring marital assimilation: Intermarriage among natives and immigrants", *Social Science Research*, 30, 289-312.
- SÁNCHEZ-DOMÍNGUEZ M., DE VALK H., REHER D. (2011), "Marriage strategies among immigrants in Spain", *Revista Internacional de Sociología*, 69(M1), 139-166.
- SNYDER J.P. (1987), *Map projections - A working manual*. U.S. Geological Survey Professional Paper 1395. U.S. Government Printing Office, Washington D.C.
- SONNINO E. (1968), *Sulla distribuzione territoriale dei fenomeni demografici in Italia*, Quaderni dell'Istituto di Demografia dell'Università di Roma, n. 18, Roma.
- STROZZA S., IMPICCIATORE R. (2015), "Migrazioni internazionali e interne di italiani e stranieri", in DE ROSE A., STROZZA S. (eds.), *Rapporto sulla popolazione. L'Italia nella crisi economica*, il Mulino, Bologna, 109-140.
- THAPAR N., WONG D., LEE J. (1999), "The changing geography of population centroids in the United States between 1970 and 1990", *The Geographical Bulletin*, 41(1): 45-56.
- UGGÉ A. (n.a.), *Il centro di popolazione dell'Italia nei nuovi confini*, Vita e Pensiero, Milano.
- U.S. CENSUS BUREAU (1870), *Statistical Atlas of the United States, based on the results of the Ninth Census, 1870*. Part II. Progress of the Nation. Washington, DC.
- U.S. POPULATION BUREAU (various years), *Census of the United States*.
- VAN TUBERGEN F., MAAS I. (2007), "Ethnic intermarriage among immigrants in the Netherlands: an analysis of population data", *Social Science Research*, 36, 1065-1086.
- WAGNER M. (1990), "Education and migration", in MAYER K.U., TUMA N.B. (eds.), *Event History Analysis in Life Course Research*, The University of Wisconsin Press, Madison, 129-145.