THE CHANGING ROLE OF IMMIGRATION IN REVERSING DEPOPULATION BEFORE AND AFTER THE GREAT RECESSION

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Extended abstract

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Introduction

Academic and political debate is increasingly focusing on the economic and demographic consequences of depopulation. In Europe, unprecedented shrinkage, in magnitude and duration, especially affects predominantly rural or intermediate regions (ESPON 2020). Scholars have stressed the spread of a new pattern of population decline driven by natural decrease rather than by outmigration (Bucher and Mai 2005; ESPON 2020). This process can produce a sort of demographic *malaise*, which is hard to recover from (Golini et al. 2001).

In contexts of low fertility, and facing the difficulties and inefficacy of policies aiming to increase the birth rate, immigration could provide faster responses to population decline. Some scholars claimed that immigration may arrest population decline in rural settings (Collantes et al. 2014) while others argued that foreigners only invigorate the population concentration of settlements (Rahut 2007; Bayona and Gil-Alonso 2012).

The paper aims to assess the contribution of immigration in contrasting the depopulation process and if the replacement effect of foreigners is temporary or enduring. The article is policy oriented and offers some guidelines for public intervention to effectively deal with demographic shrinkage.

The analysis concerns Southern Europe that, since the 1990s, has depicted a specific 'Southern European model of migration' characterized by employment in the informal economy, the heterogeneity of provenience, a male prevalence, and the acceleration of flows, directed in urban settings but then spread even in rural areas (King 2000). Due to its wide territorial divides, Italy is a paradigmatic case of both new migration and depopulation. We focus on the Marche and Umbria regions, which form a representative case study because of the extensive, early demographic *malaise*, the widespread presence of foreign immigrants, and the deep impact of the Great Recession. Although both regions are defined as intermediate density areas in Eurostat's degree of urbanization classification, they include different socio-economic environments such as remote agricultural areas, touristic towns and industrial districts.

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Data and Method

The study is led on municipal level (LAU2) in two Italian regions. It is based on demographic *malaise* categories as conceptualized and classified by Golini et al. (2001).

The use of a fine-grained administrative scale allows to capture the heterogeneity of population situations and trends that can be masked by aggregation to a higher scale (Elshof et al. 2014).

The demographic *malaise* is meant as a structural situation caused by long-lasting low and very low fertility and mortality levels that produce population decline and enduring aging in a self-sustained process. The empirical classification depends on the annual rate of natural increase of population ('moderate' *malaise* if between -2.01 and -5.00 ‰, 'intense' if between -5.01 and -10.00 ‰, 'strong' if equal to or less than -10.01 ‰, while if between +2.01 and +5.00 ‰ it detects a 'moderate' *dynamism* and +5.01 or over an 'intense' *dynamism*; between -2.00 and +2.00 ‰ it indicates a tendency of zero growth). The classification of the Italian municipalities we used was obtained by applying cluster analysis with a varied set of demographic and socio-economic variables.

The focus is on Marche and Umbria, two neighbouring regions set in central Italy that in the 1990s, according to the study we refer to, showed the highest percentages of municipalities with demographic *malaise* (respectively 81.8 and 86.9 % of the total). The 246 municipalities of Marche were grouped in six clusters (a, b, c, d, e, f) whereas the 92 municipalities of Umbria were grouped in 5 clusters (a, b, c, d, e) with similar names but different characteristics (see Appendix).

The analysis covered the years 2002-2016 (more precisely, 1/1/2002-1/1/2017 when stock quantities are considered), a time span in which the foreign presence grew and consolidated. The period considered also includes the unfolding of a long and severe economic crisis — the so-called Great Recession — which began in 2008 and marked a fundamental discontinuity in the development path of the selected regions. Indeed, economic downturns imposed a restructuring of the industrial model prevalent in these regions and based on small, export-oriented firms, active in the Made in Italy production (Bank of Italy 2017). We stopped the analysis in 2016, when an earthquake with its epicentre in the central Apennines hit a large part of the inland municipalities of both regions, by marking a breaking point in all issues.

A few administrative changes occurred in the Marche region in the period of observation (change of region, extinction by merger or aggregation of municipalities). As a consequence, clusters had to be re-assigned to the new municipalities. In particular, for aggregations of municipalities belonging to different clusters, the demographic size of the original municipalities has been considered. At the end, we examined a total of 320 units, 92 in Umbria and 228 in Marche. We used the last municipality classification in force as of 2019; we applied it as if the variations were under the terms of law since the beginning of the period.

In order to evaluate the role of foreign immigrants on population decline, we considered only resident foreigners. The analysis consisted of different parts. First, we examined the population change over time by citizenship; then, we proceeded by investigating the demographic and settlement characteristics of foreign residents; finally, we explored fertility behaviour of foreign women.

All data used were sourced by ISTAT, the Italian National Institute of Statistics. For calculating the indicators used in the first two parts of the study, we used the latest available data on population by age, sex, and citizenship and on population balance. These pieces of information are provided by the municipal population registers, revised on the base of the census results as at 31 December 2018 as released on 17 March 2021 and available at http://demo.istat.it. The revision concerned the period 22 October 2001 to 31 December 2018. Unpublished data on live births by mother's age and couple type by citizenship were used to calculate the fertility indicators in the last part of the study.

Results

At this stage of research, we present results mainly for the Marche region because the investigation on the Umbria region is still in progress.

In the Marche region, foreign population increased until 2015; the following decline concerned almost all clusters and it revealed the impact of the prolonged crisis (Fig.1).

In 2002-2009, the considerable growth of foreigners was crucial in substituting a declining Italian population (Tab.1)[1]. The local situation is quite complex: foreigners reinforced the growth of autochthonous population in cluster a (municipalities of industrial districts), reduced depopulation in cluster f (small municipalities with strong *malaise*), reversed decline in the other clusters.
After the crisis the geography of migration to Marche underwent deep changes. In the 2009-2017 period, the pace of growth of foreign population reduced in all clusters. In clusters c, d, e, f, foreigners have contributed to the slowing down of population fall, without reversing it; whereas in cluster a and b the dynamics of non-nationals was able to compensate the falling numbers of Italians. The Umbria case reveals similar dynamics and it confirms these results, namely that the role of foreigners in reversing depopulation has often been only temporary (Fig.1 and Tab.2).

Figure 1 – Foreign residents in the Marche and Umbria regions, 2002-2017 (1st January)

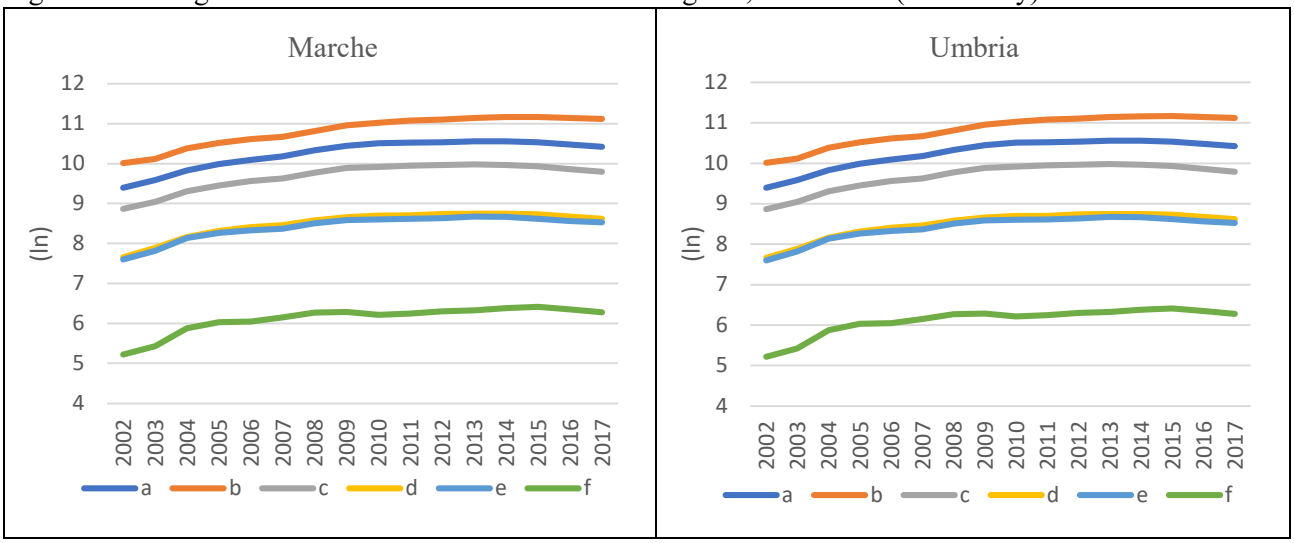


Table 1 – Population changes by citizenship in Marche clusters, 2002-2017

	1/1/2002-1/1/2009			1/1/2009-1/1/2017			1/1/2002-1/1/2017		
cluster	Italians	Foreigners	Total	Italians	Foreigners	Total	Italians	Foreigners	Total
a	16606	24915	41521	-8863	13509	4646	7743	38424	46167
b	-5936	39281	33345	-27959	28859	900	-33895	68140	34245
c	-2097	13790	11693	-10403	5243	-5160	-12500	19033	6533
d	-3416	3899	483	-5588	1274	-4314	-9004	5173	-3831
e	-2618	3665	1047	-5217	1100	-4117	-7835	4765	-3070
f	-641	393	-248	-844	95	-749	-1485	488	-997
Marche	1898	85943	87841	-58874	50080	-8794	-56976	136023	79047

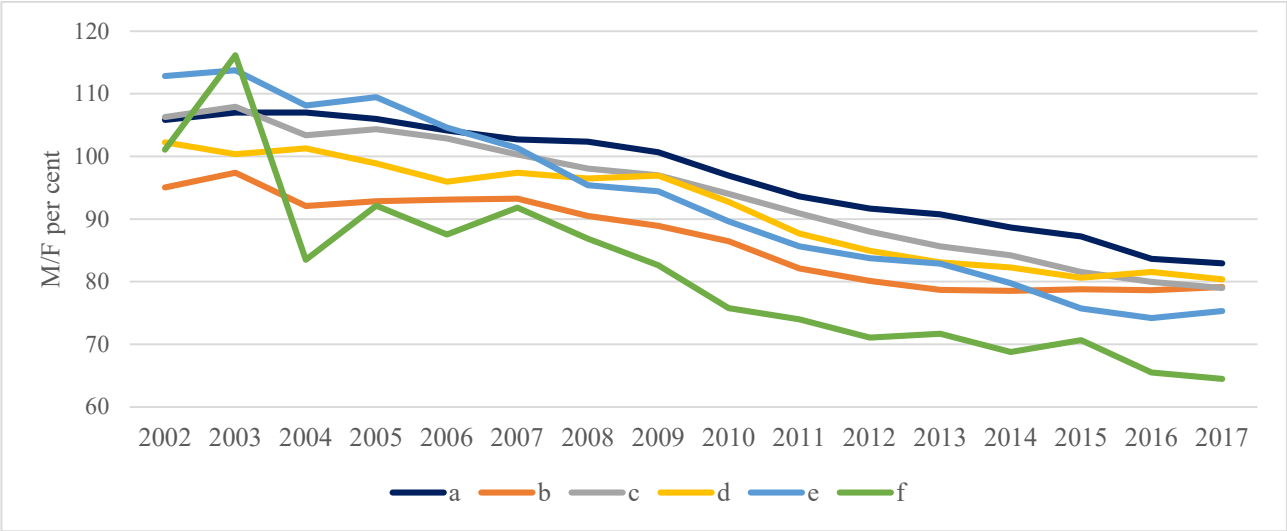
Table 2 – Population changes for citizenship in Umbria clusters, 2002-2017

	1/1/2002-1/1/2009			1/1/2009-1/1/2017			1/1/2002-1/1/2017		
cluster	Italians	Foreigners	Total	Italians	Foreigners	Total	Italians	Foreigners	Total
a	2221	13993	16214	-7888	4329	-3559	-5667	18322	12655
b	-2735	41860	39125	-20537	19680	-857	-23272	61540	38268
c	-300	867	567	-842	-21	-863	-1142	846	-296
d	-1291	4218	2927	-3993	990	-3003	-5284	5208	-76
e	-156	84	-72	-190	12	-178	-346	96	-250
Umbria	-2261	61022	58761	-33450	24990	-8460	-35711	86012	50301

[1] Data are net of foreigners who have acquired Italian citizenship.

We also investigated how immigration affected some demographic characteristics, in order to assess the impact on some aspects of population shrinkage.
In the Marche region, unlike the Italians, who always had a female prevalence, foreigners had a male surplus in 2002 and 2003; the rest of the period is characterized by a continuing femininization of migration flows, resulting in a largely unbalanced sex ratio in some clusters (Fig. 2). An opposite trend emerges compared to Spain, where migrants have reinforced the masculinisation of rural areas (Collantes et al. 2014). The attractiveness of the Marche changed with the economic crisis, which mainly penalized male migrants employed in the manufacturing and construction sectors. On the contrary, foreign females benefited from their specialization in activities (housekeeping and healthcare sectors, services) in which the region had persistent labour shortages due to ageing and the spread of full-time employment among Italian women (Venturini and Villosio, 2018).

Figure 2 – Sex ratio of foreign population in Marche clusters, 2002-2017 (1st January)



Foreigners contributed to changing the age structure of population but only for some time. They reinforced the population aged 0-14 years and reversed population decline at age 15-64 years in 2002-2009. In 2009-2017, the foreign working-age population and foreigners aged 0-14 years decreased in the whole region, except in the main cities (cluster b); migrants therefore reinforced the decline of these age groups. The aging index shows that foreigners mitigated the regional ageing process during the first period but the process continued at a higher pace after the crisis (Fig. 3).

Figure 3 – Aging index for Italians and total residents in the Marche region, 2002-2017

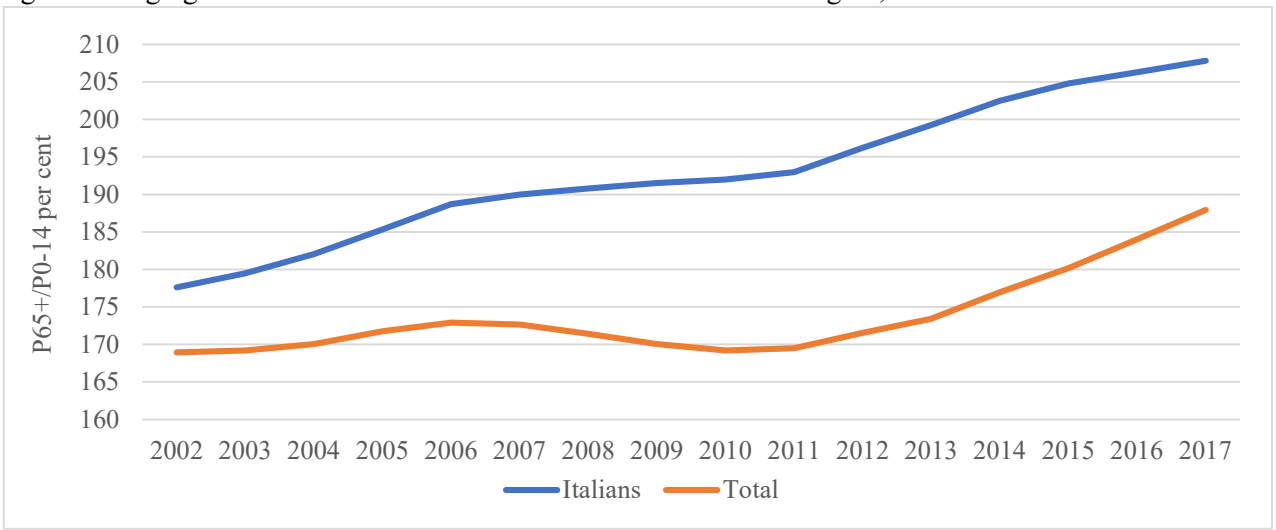
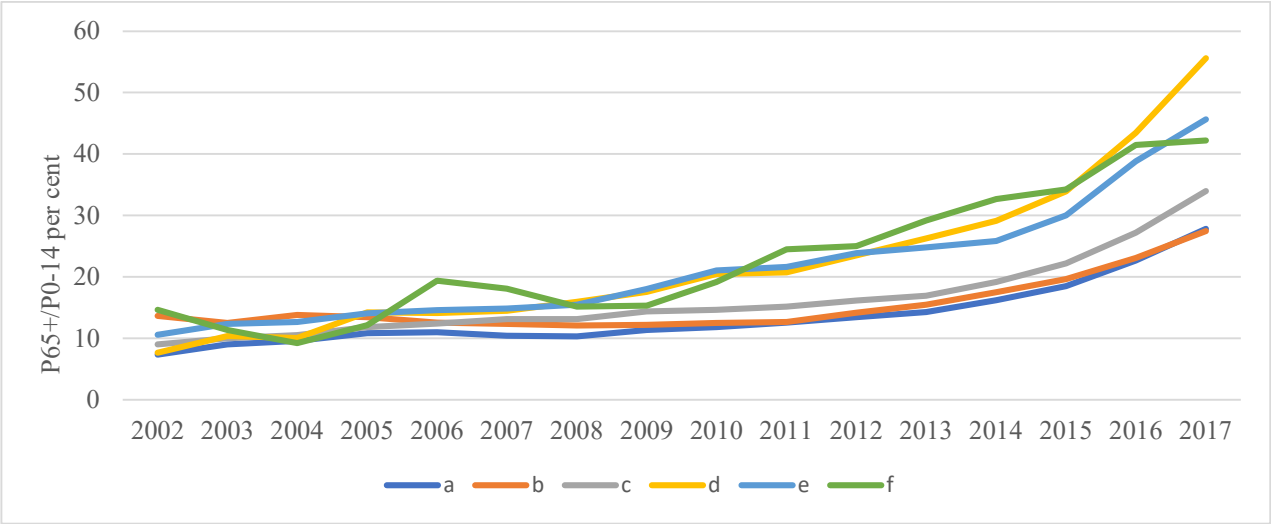


Figure 4 – Aging index for foreign residents in Marche clusters, 2002-2017



We also explored the process of spatial location. In the years 2002-2009, most foreigners came to the Marche region from abroad (especially in clusters b and e), but enrolment from within the country represented a significant quota, higher than in the Umbria region (Tabb. 3 and 4). Internal migration was the main channel of settlement for foreigners in industrial districts (cluster a), led by pull factors; international movements predominated in large cities (cluster b). We could say that first arrivals were based on migratory networks towards main cities whereas the following migrations were driven by improved knowledge of the economic opportunities in the Italian labour market to different areas. The phase after the Great Recession is characterized by a generalized reduction of importance of movements from abroad, that shrunk the pull factors underlying the arrival of foreigners, and by an increased importance of movements to abroad. As regards departures, they were mainly directed within Italy during the entire period, confirming the important role of internal migrations.

One of the main features of current immigration is the fragmentation of flows that suggested to split the foreigners by nationality. We estimated the propensity to settle in the different clusters of the Marche region, which seemed to be linked to ethnic labour market niches (Tab.5). People from China, Morocco, and Pakistan tended to locate in industrial districts (cluster a) whereas people from Bangladesh, Moldova, Perú, the Philippines, Tunisia, and Ukraine concentrated in the cities (cluster b). In the municipalities of demographic *malaise*, we found people from Eastern Europe, who were widespread in all parts of the region (Kosovo, Macedonia, Polonia, Romania, employed in construction or care of elderly), Indians (working as farmers and breeders), people from the United Kingdom and Germany (the so-called 'lifestyle migrants'). This propensity was found to be persistent over time (we detected it in 2004, 2009, 2015, and 2017).

Table 3 – Transfer of residence by type in Marche clusters – Foreigners, 2002-2017 (percentages)

	2002-2009				2010-2017			
	Enrolled		Deleted		Enrolled		Deleted	
Clusters	Italy	abroad	Italy	abroad	Italy	abroad	Italy	abroad
a	50.4	49.6	73.6	26.4	58.6	41.4	67.7	32.3
b	34.3	65.7	72.6	27.4	47.7	52.3	63.5	36.5
c	45.0	55.0	72.7	27.3	54.4	45.6	65.7	34.3
d	45.5	54.5	73.6	26.4	52.9	47.1	69.4	30.6
e	40.5	59.5	73.6	26.4	49.1	50.9	64.9	35.1
f	48.2	51.8	69.7	30.3	53.3	46.7	73.0	27.0
Marche	41.7	58.3	73.0	27.0	52.3	47.7	65.6	34.4

Table 4 – Transfer of residence by type in Umbria clusters – Foreigners, 2002-2017 (percentages)

	2002-2009				2010-2017			
	Enrolled		Deleted		Enrolled		Deleted	
Clusters	Italy	abroad	Italy	abroad	Italy	abroad	Italy	Abroad
a	38.4	61.6	73.1	26.9	55.3	44.7	69.8	30.2
b	27.9	72.1	71.7	28.3	45.0	55.0	65.4	34.6
c	43.7	56.3	78.5	21.5	57.0	43.0	65.6	34.4
d	36.2	63.8	71.2	28.8	51.0	49.0	66.1	33.9
e	39.7	60.3	72.4	27.6	61.7	38.3	77.7	22.3
Umbria	31.6	68.4	72.2	27.8	48.2	51.8	66.7	33.3

Table 5 – Localization index for foreign population in Marche clusters, 1/1/2017 – Main countries of citizenship

Country/Cluster	a	b	c	d	e	f
Romania	0.85	1.05	0.92	0.99	1.62	1.75
Albania	1.10	0.94	1.18	0.96	0.58	0.34
Morocco	1.45	0.71	1.27	1.50	0.44	0.29
China	1.75	0.66	1.03	1.05	0.43	0.15
Macedonia	1.29	0.54	1.86	1.29	1.90	1.96
Ukraine	0.67	1.29	0.73	0.60	0.77	0.88
Pakistan	1.89	0.81	0.40	0.55	0.29	0.00
Polonia	0.90	1.07	0.83	1.17	1.00	2.54
Moldova	0.65	1.26	1.02	0.38	0.57	0.23
Bangladesh	0.14	1.71	0.48	0.05	0.19	0.18
India	1.23	0.66	1.55	1.14	1.81	2.81
Tunisia	0.80	1.23	0.73	0.41	0.90	0.00
Nigeria	0.85	1.10	1.19	0.49	0.64	0.14
Senegal	0.96	1.09	1.04	0.69	0.36	0.00
Perú	0.63	1.51	0.26	0.17	0.15	0.33
Philippine	0.40	1.56	0.42	0.42	0.11	0.76
Russia	0.85	1.23	0.58	0.92	0.58	0.50
Bulgaria	0.67	1.06	1.03	1.53	1.72	0.93
United Kingdom	0.49	0.45	1.33	5.92	5.06	5.15
Brazil	0.90	1.15	0.62	0.81	1.00	2.05
Germany	0.65	0.56	1.58	5.00	2.70	3.06
Kosovo	0.75	0.57	2.35	0.75	3.81	3.56

Note: Nationalities with 1% and over of presences

The contribution of foreigners to births was significant all over the period considered in the Marche region. However, results show two distinct trends: an increasing proportion of births to foreign women before the economic crisis and its flattening or declining after the crisis (Fig.5). Also with regards to fertility behaviour, for foreign women in the Marche region the propensity of having a child changed over time.

In the period of rising immigration, the total fertility rate (TFR) was high in all groups of municipalities – both in the clusters with a low degree of demographic *dynamism* and in those with demographic *malaise.* In particular*,* in the triennium 2006-2008, it increased in groups b and c. After the economic crisis, fertility of foreign women declined dramatically in all clusters; in the triennium 2012-2014, TFR was already below the level of fertility replacement in all groups, except in the industrial districts (cluster a). The bigger decline was in the *malaise* areas, especially in municipalities with agricultural vocation (cluster d) (Tab.8).

The reproductive model was similar in the different municipality groups and, at the beginning, characterized by early fertility. Postponement was evident in the recent period (Fig.6)

Figure 5– Proportion of births to foreign women in Marche clusters, 2003-2017

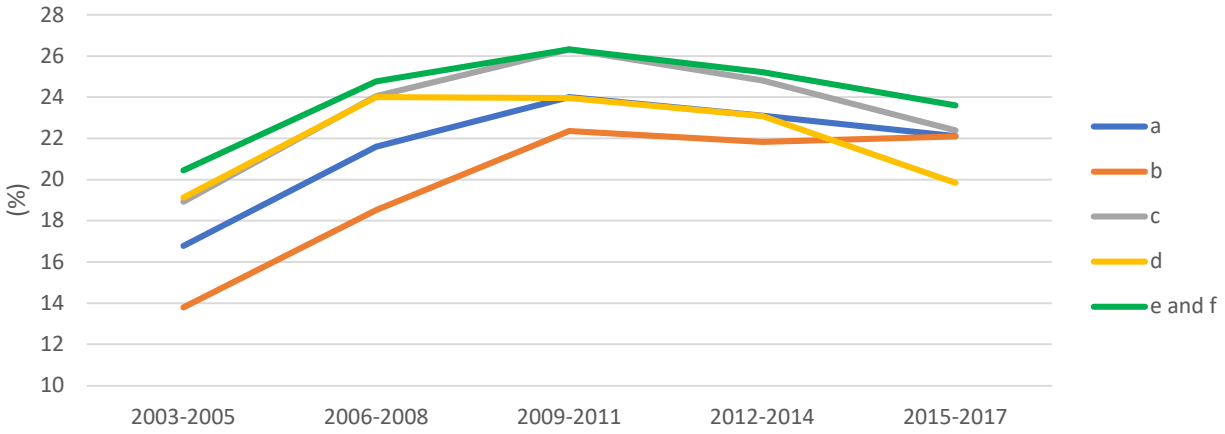
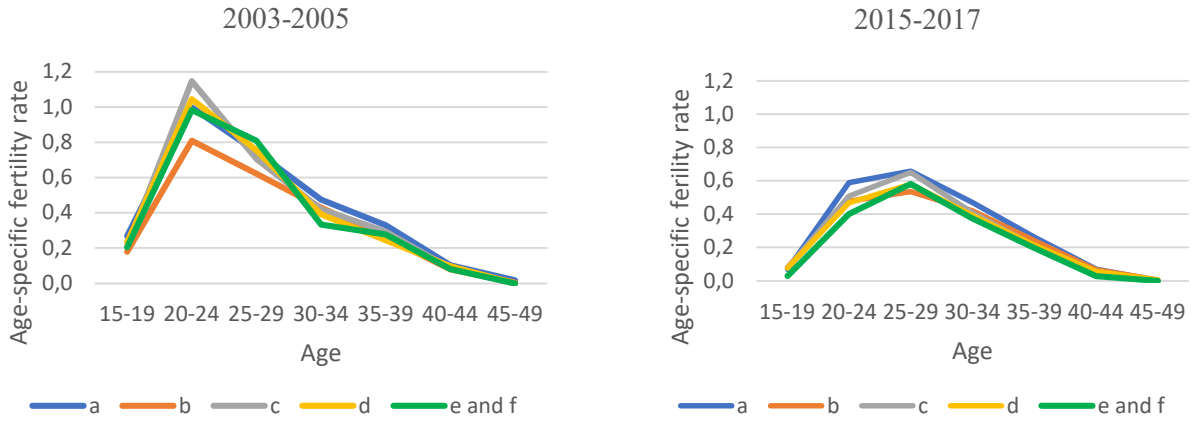


Table 6 – Total fertility rates of foreign women in Marche clusters, 2003-2017

	Cluster				
Period	a	b	c	d	e & f
2003-2005	2.94	2.39	2.86	2.76	2.69
2006-2008	2.87	2.51	2.69	2.78	2.28
2009-2011	2.58	2.21	2.30	2.23	1.89
2012-2014	2.19	1.83	1.97	1.78	1.64
2015-2017	2.12	1.82	1.91	1.79	1.61

Figure 6 – Age-specific fertility rates of foreign women in Marche clusters, selected periods



Finally, we attempted to assess if international immigration was able to reverse or mitigate the demographic *malaise* in the selected areas. To this end, we computed the natural growth rate for the total population and for Italians in order to evaluate the contribution of migratory component (Tab.7). For the Marche region, in 2002-2009, foreigners improve the classification of almost all clusters: they removed the demographic *malaise* in cluster b and in the regional average, contributed to mitigate the fall in natural balance in the other areas, except for cluster f. After the crisis, immigration played a minor role because it contributes to change classification only in clusters d and e. For the Umbria region, foreigners made an even smaller contribution to the improvement of demographic *malaise* than for the Marche region.

Table 7 – Annual natural growth rates (averages) in Marche and Umbria clusters, by citizenship, 2002-2017 (per thousand)

	1/1/2002-1/1/2009				1/1/2009-1/1/2017			
cluster	Total	*Malaise*	Italians	*Malaise*	Total	*Malaise*	Italians	*Malaise*
a	1.20	zero growth	-0.32	zero growth	0.01	zero growth	-0.98	zero growth
b	-1.80	zero growth	-6.16	intense	9.96	intense	-5.33	intense
c	-2.38	moderate	-5.91	intense	-5.94	intense	-8.11	intense
d	-4.74	moderate	-6.96	intense	-8.68	intense	-10.38	strong
e	-3.54	moderate	-10.28	strong	-9.99	intense	-11.75	strong
f	-16.22	strong	-14.07	strong	-15.04	strong	-17.81	strong
Marche	-1.56	zero growth	-2.36	moderate	-7.37	intense	-6.45	intense
a	-1.66	zero growth	-3.14	moderate	-2,69	moderate	-4.68	moderate
b	-2.01	moderate	-3.40	moderate	-3,02	moderate	-4.88	moderate
c	-5.31	intense	-6.51	intense	-6,36	intense	-7.90	intense
d	-5.34	intense	-6.74	intense	-6,07	intense	-7.90	intense
e	-13.25	strong	-15.23	strong	-11,01	strong	-13.25	strong
Umbria	-2.27	moderate	-3.67	moderate	-3,24	moderate	-5.13	intense

Conclusions

To conclude, preliminary findings showed that international immigration had just a temporary ability to reverse the demographic decline in the Marche and Umbria regions. The Great Recession unleashed latent territorial and social tensions, it boosted territorial disparities, revealed the deficiencies of labour market, and the weakness of foreign settlement. The crisis severely affected the industrial district model, based on low-skilled, cheap labour of migrants (Mingione, 2009) and stimulated mobility of foreign residents. Foreign immigration has not been the solution either to population shrinkage, which in some areas is almost unrecoverable, nor to aging, nor to demographic *malaise*. In these settings, being confident on the contribution of immigration is not without risk: for many scholars (for instance Sobotka, 2008) immigration represents the most unstable and the least predictable component of population change and it requires specific strategies of stabilization and integration.

Policymakers should ponder on how to stimulate the long-term permanence of foreigners, despite the changing economic contexts. Some scholars stressed that migration of workers, lifestyle migrants, refugees out of urban settings is characterized by precarity, both economic and political, which is emphasized by a lack of ethnic networks (Woods, 2018). This precarity feeds an individual uncertainty that arises when unexpected adverse events occur and encourages further mobility.

The arrival of immigrants happened spontaneously but now regions need comprehensive policies to plan and manage a numerous foreign population. These regions need careful demographic and social policies in order to attract young people, females in the reproductive age, but overall to retain immigrants in the long run. In this perspective, on the one hand, the skills, connections, strengths, talents, and innovative ideas of migrants should be enhanced and exploited, on the other hand, social and family policies should be immediately implemented in order to create a more favourable environment for reproduction for both natives and foreigners.

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APPENDIX

Table A1 − Demographic and socio-economic features of the clusters for the Marche region

Cluster	Number of municipalities	Demographic Malaise	Socio-economic features
a	59	zero natural growth	industrial districts
b	29	zero natural growth	coastal areas and largest municipalities
c	51	moderate *malaise*	inland industrial municipalities
d	45	moderate *malaise*	municipalities with prevalent agricultural economies
e	32	intense *malaise*	mountain municipalities
f	12	strong *malaise*	small municipalities, mainly agricultural

Source: Golini et al. (2001)

Table A2 − Demographic and socio-economic features of the clusters for the Umbria region

Cluster	Number of municipalities	Demographic Malaise	Socio-economic features
a	30	zero nat. growth/ moderate *malaise*	industrial districts
b	26	moderate *malaise*	largest municipalities with prevalent service sectors
c	9	moderate and intense *malaise*	municipalities with prevalent agricultural economies
d	24	intense *malaise*	mountain municipalities
e	3	strong *malaise*	small, remote municipalities

Source: Golini et al. (2001)