

Dying and Flourishing Municipalities: Population Trend in the Period 1971-2004 and Economic Structure in the Italian Alps.

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1 Introduction

1.1 *Polarisation trends and driving forces in the Alps*

The Alpine arc is a particularly interesting area of study as even within a limited distance there are remarkable differences of natural, economic and cultural conditions. According to some authors (Pfefferkorn et al., 2005) the demographic situation, in particular, is quite heterogeneous and characterized by a significant polarization trend of spatial development between strong and weak regions. On one side there are areas that are characterized by population growth and certain generational change. On the other side there are municipalities which suffer from stagnant or decreasing population, emigration of young people to more dynamic areas and where the permanence of the elderly people is made difficult by the closure of many businesses and services. If the former are typically located in the most easily accessible valleys, the latter are usually in peripheral areas some distance away from the urban centres and badly connected to these. However, although accessibility facilitates individual mobility and, other things being equal, easily accessible areas attract more investments than peripheral areas (Linneker, 1997), accessibility alone is no guarantee of either a balanced demographic structure or of economic prosperity. As project REGALP pointed out, some municipalities display a good demographic growth in spite of their poor accessibility. That is the case of areas in the Italian Alps whose economy is dominated by the tourism industry with a high number of 'incoming' commuters, a growth in the number of new buildings and a very small-sized primary sector. On the contrary there are some municipalities that show serious structural problems despite a decent accessibility as accessibility may increase the dependence of structurally weak areas on near economic centres if there are no stimulants for developing the regions own potentials at the same time (REGALP, 2004). As a Swiss survey (SAB, 2003) shows, the reason why young people leave the mountain regions forever are first and foremost linked to the economy (lack of jobs that fit their skills and education, lower wages, etc), society and relationships as second, the third reason being the poor availability of services, transport, cultural and recreational opportunities. The presence of a wide range of income possibilities is also a way to avoid farm abandonment and its dramatic consequences such as forest expansion and land degradation (Baur, 2004; Gellrich et al., 2007) as, in particular in a context such as Italy, where farms are mostly small and their return often rather poor, it allows part-time farming.

1.2 *The effects of population loss and over aging*

Decline of population and over aging generally leads to the following problems:

- decrease and changed demand as well as capacity utilization for private and public infrastructures;

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- problems regarding the economic carrying capacity of institutions and stores;
- decreasing income of rural municipalities and private suppliers of goods and services (Troeger-Weiß, 2008).

Further effects can be summed as:

- the decreasing number of households will affect the future demand for dwellings and the development of settlements;
- decreasing demand for trade and services;
- increase of the demand for nursing homes and hospital beds.

In addition there will be:

- deficit regarding viability and accessibility;
- difficult conditions for the basic service supply with goods and private/public services;
- further “thinning” of the urban centers;
- increase vacancies;
- further brain drain and increase lack of experts (Troeger-Weiß, 2008).

1.3 Objectives and methods

The first objective of this work is to analyse the demographic trend of the Italian Alpine municipalities, decade by decade, from the beginning of the 1970s until 2004 in terms of number of inhabitants and old age index (hereafter OAI²). It complements previous studies with demographic content on alpine wide level (Bätzing, 1992, 1993, 2002; Zanolla et al. 2007a and 2007b; CIPRA, 2007; DIAMONT, 2008) and on the level of the Italian alpine arc Farina, 2002; Varotto & Psenner 2003, Varotto, 2004; Zanolla et al., 2007c) encompassing a wide time frame and is aimed at putting into evidence the patterns of demographic development that are expected to be different between regions, as well as between municipalities of the same region. It attempts to answer to two questions: are there different development patterns and what are the causes for these developments?

The second objective is to analyse the relationship between demographic trend and economic structure during the course of the decades. What is expected is that in certain areas economic diversification has contributed to avoid depopulation over the decades. Several studies on the effect of economic diversity on unemployment and stability (Malizia & Stanzi, 1993; Zanolla et al., 2007c; Ruffini & Streifeneder, 2007) indicate that diversity favors a good economic performance. Rural community economic diversification, or the spreading of the workforce across a variety of industrial sectors, is seen as one solution to the problems facing rural regions as it makes communities less vulnerable to economic variability. Most of these studies on economic diversification focus on industrial sectors and use a count of different branches within industry as indicator for diversity³. However agreeing with Mann (2006), for rural regions it is better to focus on a certain number of enterprises in all three sectors. The number of firms in relation to the workforce is a good indicator for economic diversity.

Data refer to Population and Housing and Industry and Services and Agriculture Censuses of 1971, 1981, 1991, 2001 and to the Statistical Atlas of Municipalities 2004 of the National Institute of Statistics. By using GIS applications data are illustrated in thematic maps and statistically analysed with the aim of obtaining a detailed picture of the demographic and economic development of the Italian Alpine arc. The data were harmonized, i.e. administrative changes (in 1992 foundation of three new provinces (Biella, Verbano C.O., Lecco) were updated and put on the 2000 level.

² A dynamic indicator that describes the demographic structure of a region and corresponds to the ratio of the over-64 population to the under-15 population, multiplied by 100 (Gavrilov & Heuveline, 2003)

³ An example is the Herfindhal Index of Concentration which equals the sum of the squared employment shares of each industrial sector in each community.

1.4 Research area

The 1,756 municipalities object of study are the ones included in the Alpine Convention area based on a proposal by Ruffini et al., 2004. The “Alpine Convention” is an international agreement, whose purpose is to safeguard the natural ecosystem of the Alps and promote sustainable development, protecting the economic and cultural interests of the resident populations in the signatory countries. The agreement, which was signed in 1991, includes the objective of simultaneously favouring a balanced economic development and an even distribution of the population in the Alpine territory, as well as equal opportunities for the resident population in terms of social, cultural and economic development. The Alpine Convention covers an area of over 190,000 km², which includes 5,954 municipalities of eight different countries, inhabited by some 14 million persons, of which almost one third are in Italy (tab. 1 and fig. 1).

Tab. 1: Population and municipalities in the Alpine Convention area (2004).

Country	Area [km ²]	Municipalities	Inhabitants
1	2	3	4
Austria	54,620	1,148	3,255,201
France	40,804	1,749	2,453,605
Germany	11,072	285	1,473,881
Italy	51,184	1,756	4,208,391
Liechtenstein	160	11	34,600
Monaco	2	1	32,020
Slovenia	7,864	60	661,135
Switzerland	24,862	944	1,827,754
Alps	190,567	5,954	13,883,515

Source (4): Austria: Statistik Austria, Volkszählung 2001; Germany: Bayerisches Landesamt für Statistik und Datenverarbeitung 2004; Italy: National Statistical Institute of Italy 2004; Liechtenstein: Amt für Volkswirtschaft 2004; Slovenia: Statistical Office of the Republic of Slovenia 2004; Switzerland: Swiss Federal Statistical Office 2004; Monaco: Gouvernement de Monaco: Recensement général de la population 2000; France: INSEE: Recensement de la population 1999.

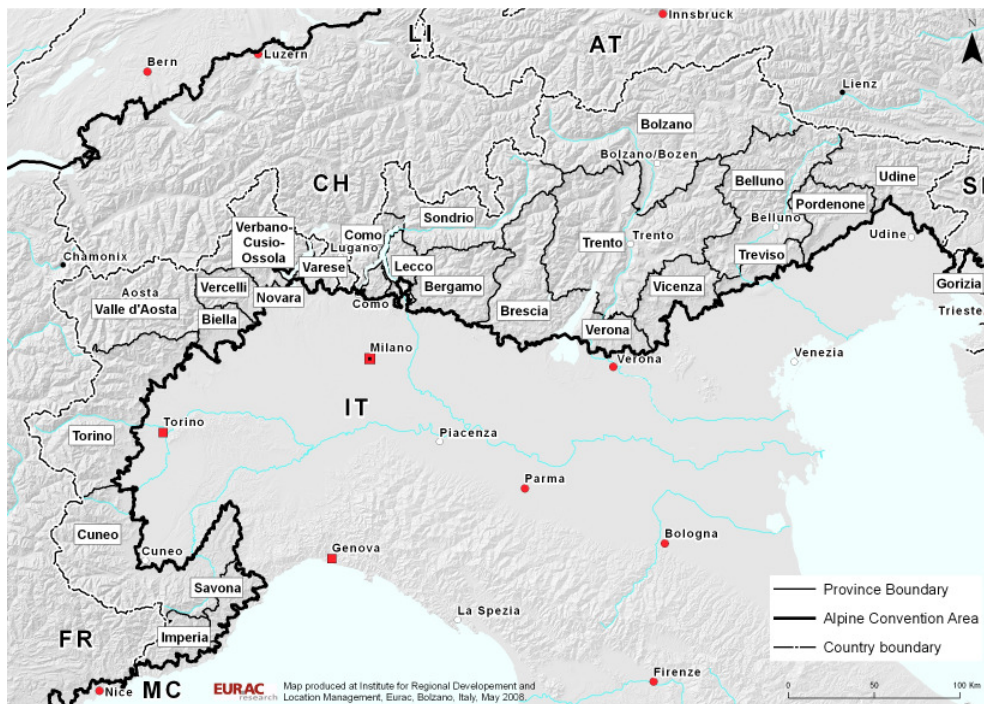


Fig. 1: Italian Alpine Convention area (km² 51,184; 1,756 municipalities).

2 Demographic developments since the 1970s

2.1 Trends in Italy – an overview

Before World War II Italy was a basically rural country. The process of industrialisation started in the 1950s and 1960s and changed profoundly the country's economic and social structure. It was also the demographic boom period and Italy underwent a radical and definitive transformation. Internal migrations and the great growth of the large cities were the two most significant effects of these processes (Bonifazi and Heins, 2000). The process of concentration, besides representing a transfer of population from the rural areas to the large cities, in Italy has also involved a significant shift of the country's demographic centre towards the Northern-Central regions, and from the mountainous and hilly areas to the plains (Bonifazi and Heins, 2001). In the 1970s, a process of polarisation reversal started, and while the major cities such as Milan, Turin, Genoa (the so-called "industrial triangle"), Bologna and Venice started to lose population, the surrounding areas kept on growing, so that this phenomenon led to a rise in the population of the metropolitan areas. During this decade the limitations of the Fordist model of development, based on large factories and the growth of the large cities, became evident. In the second half of the decade, when the total fertility rate started to decline sharply, there was also a sharp drop in interregional migration from Southern to North-Central Italy⁴ and the development model based on the system of small - and medium-sized enterprises became stronger. These enterprises, organised in industrial districts, were often characterised by a considerable degree of production specialisation, and were mainly located in the so-called Third Italy, generally including the North-Eastern and Central regions (Bagnasco, 1977 and Dematteis, 1995). These basic trends also continued in the 1980s and 1990s. During these decades there has been a situation of a second polarisation reversal, but not a real counter-urbanisation stage as there has been a redistribution of the population from the centre to the periphery of the metropolitan areas and from the larger to the medium-sized areas, whose growth increased in the 1990s. The lack of a counter-urbanisation process seems to be due mainly to the geographical and economic isolation of the smaller areas. These latter seem to be mostly cut off from the main production processes, and, due to past migration dynamics and very high levels of population ageing, destined to undergo a population decline which seems irreversible (Bonifazi and Heins, 2001).

2.2 The trends in the Italian Alpine Convention area

In comparison with the national population, the Alpine population grew less during the 1970s. After stagnation in the 1980s; recovery started in the 1990s (fig. 2). The Alps are also characterized by an OAI which, since the 1970s, has always been more pronounced than the national average (tab. 3). The higher over-aging of the Italian Alps in relation with the country was particularly evident in 1981, when the OAI was 1.7 times the Italian OAI. The progression of this index, particularly consistent during the 1980s, has shown a slow down in the following decades (fig. 3).

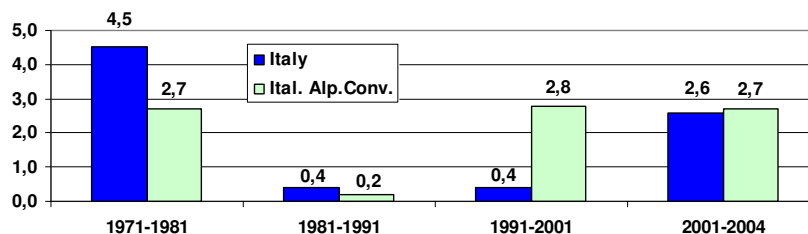


Fig. 2: Population changes (%) in the period 1971-2004.

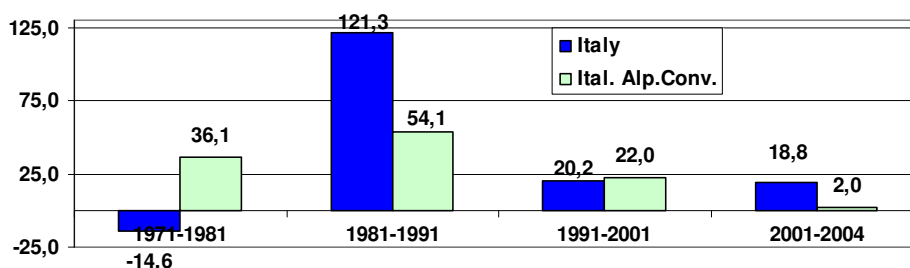
Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

⁴ According to SVIMEZ (2006) the migration from Southern to Northern-Central regions has started again in the last ten years.

Tab. 2: OAI in the period 1971-2004.

Area	1971	1981	1991	2001	2004
Italy	51.1	43.6	96.6	116.1	137.8
Italian Alpine Convention	53.9	73.4	113.1	138.0	140.7

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

**Fig. 3:** OAI change (%) in the period 1971-2004.

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

Tab. 2 and the fig. 2 and 3, as it is logical to expect, conceal an extremely heterogeneous situation. In the 1970s, when almost half of the Italian Alpine population was concentrated in the municipalities from 1,000 to 5,000 (tab. 3), the number of inhabitants decreased sharply in the smallest municipalities and grew with a higher intensity in the ones from 5,000 to 25,000 inhabitants (tab. 4). In the 1980s the population decrease concerned again, although with a lower intensity, the smallest municipalities and along with them the ones with more than 25,000 inhabitants. During the 1990s the population increased in all the size classes of municipalities with the only exception of the group over 25,000 inhabitants, which only in the 2000s registered a recovery. Also in the Alps the size class that has grown more is the class from 10,000 to 25,000 inhabitants in which the proportion of inhabitants passed from 10% in 1971 to 17% in 2004 (tab. 3). This is also the class which in the course of the decades has maintained the lowest OAI (tab. 5). The latter, after the sharp increase of the 1970s and 1980s (tab. 6), has reached dramatic values both in the smaller municipalities with less than 1,000 inhabitants and in the larger ones with over 25,000 inhabitants (tab. 5).

Tab. 3: Population per municipalities size (%) in the Italian Alpine Convention area in the period 1971-2004.

Municipality size	1971	1981	1991	2001	2004
<500	3.1	3.3	3.2	3.1	2.9
500-999	8.3	7.3	7.2	6.5	6.4
1,000-2,499	23.6	22.0	21.0	19.9	19.4
2,500-4,999	20.8	20.9	21.8	23.9	23.1
5,000-9,999	19.2	17.8	17.8	16.5	17.5
10,000-24,999	9.6	13.3	14.1	15.7	16.6
25,000-49,999	8.9	8.9	9.8	9.4	9.4
>49,999	6.5	6.5	5.0	4.9	4.9
Total	100.0	100.0	100.0	100.0	100.0
Tot. population IT Alps	3,871,186	3,973,885	3,982,510	4,095,992	4,208,391

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

Tab. 4: Population growth per municipalities size in the Italian Alpine Convention area in the period 1971-2004.

Municipality size	1971-1981	1981-1991	1991-2001	2001-2004	1971-2004
<500	-8.5	-3.8	1.2	2.4	-8.8
500-999	-3.3	-1.1	3.2	2.5	1.2
1,000-2,499	0.8	0.8	4.6	2.7	9.1
2,500-4,999	3.6	1.2	3.2	2.4	10.7
5,000-9,999	7.8	2.1	3.5	3.3	17.7
10,000-24,999	4.0	0.1	2.4	2.7	9.4
25,000-49,999	2.1	-2.2	-1.2	2.4	1.1
>49,999	2.6	-3.9	-1.0	3.3	0.9
Average IT Alps	2.6	0.2	2.8	2.7	8.6

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

Tab. 5: OAI per municipalities size in the Italian Alpine Convention area in the period 1971-2004.

Municipality size	1971	1981	1991	2001	2004
<500	102.2	139.5	198.1	235.9	241.6
500-999	72.8	102.0	141.1	158.5	163.0
1,000-2,499	57.4	75.4	109.6	132.8	135.6
2,500-4,999	51.4	68.9	101.8	126.3	129.0
5,000-9,999	46.8	65.2	103.4	128.6	133.3
10,000-24,999	45.4	58.0	96.4	125.6	129.3
25,000-49,999	52.1	80.6	148.5	176.2	177.0
>49,999	47.1	73.2	123.4	143.3	144.2
Average IT Alps	53.9	73.4	113.1	138.0	140.7

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

Tab. 6: OAI growth per municipalities size in the Italian Alpine Convention area in the period 1971-2004.

Municipality size	1971-1981	1981-1991	1991-2001	2001-2004	1971-2004
<500	30.3	27.3	-11.4	-0.9	85.3
500-999	33.0	37.7	-10.5	1.2	107.0
1,000-2,499	31.8	43.5	-15.4	1.6	127.3
2,500-4,999	33.6	49.9	-20.6	3.1	160.0
5,000-9,999	35.0	61.8	-21.2	3.0	185.9
10,000-24,999	40.1	68.3	-22.4	3.5	214.4
25,000-49,999	54.8	80.5	-15.0	0.4	230.4
>49,999	55.3	80.4	-14.9	0.7	231.2
Average IT Alps	36.1	54.1	22.0	2.0	160.6

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

These data suggest that the Italian Alpine Convention area has reproduced at a smaller scale what has happened at national level. As some authors affirm (Perlik, 1999; Gaido, 1999), Alpine cities have the same pattern of development as cities in the plains and their only elements of specificity are related to the proximity of the mountains (which makes them less accessible, more susceptible to natural risks and poses limits on the available surface area) and the smaller size of markets. In the larger towns the demographic decrease is due primarily to peri-urbanisation or urban sprawl. Analogously to what takes place in cities in plains areas, the population of urban centres move to the surrounding suburban area, where housing is less expensive and the vicinity to the town allows them to commute. Their OAI is above the average in the centres as high housing costs are likely to encourage young people to move from the centres to their suburban areas. Along with the lower costs and the proximity to the labour market of the urban centres that guarantee the same job opportunities of the latter, the better quality which peripheral urban areas are perceived to offer is an important pull factor for these areas. On the contrary, with regard to settlements with less than 500 inhabitants, when

they are very far from the urban centres, the lack of convenience stores, pharmacies, post offices and associations connected to the scarce population is a serious push factor as well as the cuts to public transport services, since operation costs are too high for the local government's budget. As a result of the latter citizens have to rely on private cars, and for those who cannot drive (many senior citizens, for instance) the access to basic services can become rather difficult. The disappearance of basic services triggers a vicious cycle because the declining quality of life encourages residents to move to less peripheral areas, where access to services is better, while at the same time preventing the arrival of new dwellers.

Tab. 7: Population growth per province in the Italian Alpine Convention area (A.C.) in the period 1971-2004.

Province	% area in the A.C.	1971-1981		1981-1991		1991-2001		2001-2004		1971-2004	
		A.C. area	Whole prov.	A.C. area	Whole prov.	A.C. area	Whole prov.	A.C. area	Whole prov.	A.C. area	Whole prov.
Verona	28.9	4.6	5.7	5.2	1.6	9.7	4.9	4.4	4.1	26.0	17.3
Lecco	67.0	7.0	8.0	5.7	3.3	5.1	5.2	2.8	3.4	22.1	21.4
Varese	36.3	9.3	8.6	3.0	1.2	3.1	1.9	3.2	3.8	19.8	16.2
Bergamo	69.6	5.2	8.2	2.1	4.2	4.7	6.9	3.4	5.1	16.3	26.6
Trento	100.0	3.5	3.5	1.6	1.6	6.0	6.0	4.3	4.3	16.3	16.3
Novara	7.6	5.3	2.9	0.8	-0.9	6.3	2.6	2.5	3.1	15.7	7.9
Bolzano	100.0	4.2	4.2	2.3	2.3	5.1	5.1	3.0	3.0	15.4	15.4
Brescia	58.8	6.1	6.2	1.5	2.7	3.2	6.1	3.8	5.5	15.3	22.1
Vicenza	54.3	4.2	7.2	1.2	3.0	4.4	6.1	3.2	4.7	13.7	22.6
Savona	46.6	2.7	0.6	3.7	-4.5	2.3	-4.1	3.8	3.3	13.0	-4.9
Treviso	24.7	2.6	7.8	0.3	3.3	5.6	6.8	3.9	5.5	12.8	25.4
Aosta	100.0	2.9	2.9	3.2	3.2	3.1	3.1	2.8	2.8	12.6	12.6
Torino	61.1	4.3	2.6	0.6	-4.7	2.5	-3.1	2.7	3.3	10.5	-2.2
Average	-	2.7	4.5	0.2	-0.1	2.8	2.2	2.7	3.8	8.6	10.7
Sondrio	100.0	2.9	2.9	0.9	0.9	0.8	0.8	1.3	1.3	5.9	5.9
Como	66.7	1.8	7.4	0.5	2.2	2.1	2.9	1.3	4.4	5.8	17.8
Pordenone	59.4	0.9	8.7	-4.8	-0.3	2.1	4.0	2.0	4.0	0.1	17.2
Cuneo	68.1	-2.3	1.5	-1.8	-0.2	1.3	1.7	1.7	2.5	-1.2	5.5
Verbano C.O.	98.8	2.4	0.7	-4.1	-4.7	-2.1	-1.9	1.5	1.6	-2.5	-4.3
Belluno	100.0	-0.4	-0.4	-3.7	-3.7	-1.2	-1.2	1.3	1.3	-4.0	-4.0
Vercelli	38.4	-0.8	-3.5	-5.4	-5.2	-4.0	-3.7	-0.5	0.3	-10.4	-11.7
Biella	70.1	-3.3	-1.6	-6.7	-5.5	-1.9	-2.0	0.2	0.5	-11.3	-8.4
Gorizia	26.6	-3.1	1.6	-6.9	-4.6	-6.4	-1.1	2.6	3.1	-13.2	-1.2
Udine	60.7	-6.2	2.5	-4.9	-1.5	-3.5	-0.6	0.3	1.8	-13.6	2.2
Imperia	73.5	-13.5	-0.6	-8.4	-4.6	-1.2	-3.8	2.1	5.0	-20.0	-4.2

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

In the period 1971-2004 the Alpine province that has recorded the highest demographic increase is Verona, followed by the Lombardian Lecco, Varese and Bergamo, by the Piedmontian Novara and by the two autonomous provinces of Trento and Bolzano (tab. 7). The Alpine provinces in which in the same period the demographic decrease has been more pronounced are the ones located in the westernmost and easternmost parts of the Alpine arc such as the Ligurian Imperia, the Friulian Udine and Gorizia and the Piedmontian Biella, Vercelli and Verbano C.O.. The latter is with Brescia, Bergamo, Sondrio, Gorizia, Bolzano and Vicenza one of the provinces whose OAI has increased more during the period 1971-2004 (tab. 8). The faster growth of the OAI is negatively correlated with its value in the 1970s: the higher the value of OAI (such in the case of Imperia, Savona, Biella and

Vercelli) the slower its progression and the lower its value (such in the case of Bolzano, Bergamo, Brescia, Sondrio and Vicenza) the faster its growth (fig. 4).

Tab. 8: OAI change per province in the Italian Alpine Convention area in the period 1971-2004.

Province	1971-1981		1981-1991		1991-2001		2001-2004		1971-2004	
	A.C. area	Whole prov.	A.C. area	Whole prov.	A.C. area	Whole prov.	A.C. area	Whole prov.	A.C. area	Whole prov.
Brescia	38.3	39.2	70.0	71.9	41.4	31.4	4.0	1.3	245.9	218.7
Bergamo	48.5	41.0	61.5	66.0	33.6	37.0	4.4	3.2	234.2	231.0
Sondrio	42.9	42.9	57.6	57.6	38.6	38.6	6.5	6.5	232.5	232.5
Verbano C.O.	31.3	38.0	68.7	70.1	35.1	30.9	4.6	3.9	212.8	219.1
Gorizia	48.9	45.8	84.9	97.6	11.1	7.1	-2.1	-1.1	199.6	205.1
Bolzano	49.6	49.6	55.0	55.0	22.4	22.4	4.2	4.2	195.7	195.7
Vicenza	45.8	42.8	65.8	67.0	18.6	21.2	1.8	1.5	192.0	193.3
Valle d'Aosta	37.3	37.3	60.8	60.8	21.7	21.7	1.6	1.6	172.9	172.9
Belluno	39.0	39.0	63.1	63.1	19.2	19.2	0.9	0.9	172.8	172.8
Vercelli	28.7	24.2	62.1	37.8	25.4	21.9	3.2	1.9	169.9	112.7
Lecco	28.9	31.7	47.8	57.4	33.2	33.2	6.3	6.2	169.6	193.2
Como	32.5	29.8	51.9	55.8	29.2	33.2	2.6	4.1	166.6	180.4
Varese	27.9	35.5	47.9	64.4	30.3	35.0	6.1	4.7	161.7	215.0
Average	36.1	35.4	54.1	62.1	22.0	26.3	2.0	2.2	160.6	183.3
Udine	34.6	33.9	48.5	66.1	22.3	22.1	0.7	1.2	146.0	174.7
Treviso	41.7	43.6	61.2	68.1	10.1	18.9	-3.4	-0.9	142.9	184.4
Biella	29.0	26.6	55.2	51.5	18.9	20.4	1.6	1.6	141.8	134.5
Trento	41.4	41.4	52.3	52.3	10.2	10.2	0.2	0.2	137.9	137.9
Torino	26.0	32.0	49.3	73.1	21.9	39.5	1.7	4.2	133.3	232.3
Verona	25.2	39.0	40.4	63.9	23.2	23.0	2.4	1.5	121.8	184.5
Pordenone	33.3	35.9	53.4	72.7	8.4	18.3	-4.1	-1.6	112.6	173.2
Novara	24.6	18.5	43.5	40.8	18.4	24.8	0.3	0.9	112.4	110.2
Savona	21.7	45.9	49.3	72.3	16.7	19.4	-3.5	-1.5	104.8	195.7
Cuneo	21.2	22.8	37.4	41.4	12.1	16.2	-0.2	1.3	86.3	104.4
Imperia	28.7	48.0	24.0	53.1	-7.8	17.9	-1.1	2.5	45.5	173.8

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

Comparing the figures which refer to the only Alpine Convention area with the ones concerning the whole province it is interesting to note that in the provinces that in the considered period registered the most consistent population decrease such as Imperia, Udine, Gorizia and Biella, the Alpine Convention part has performed worse than the province globally considered. These are the provinces whose mountain municipalities suffer more from over-ageing. These municipalities when they have a good accessibility find it more difficult to hold younger cohorts on account of the scarceness of job opportunities in the nearest lowland centers.

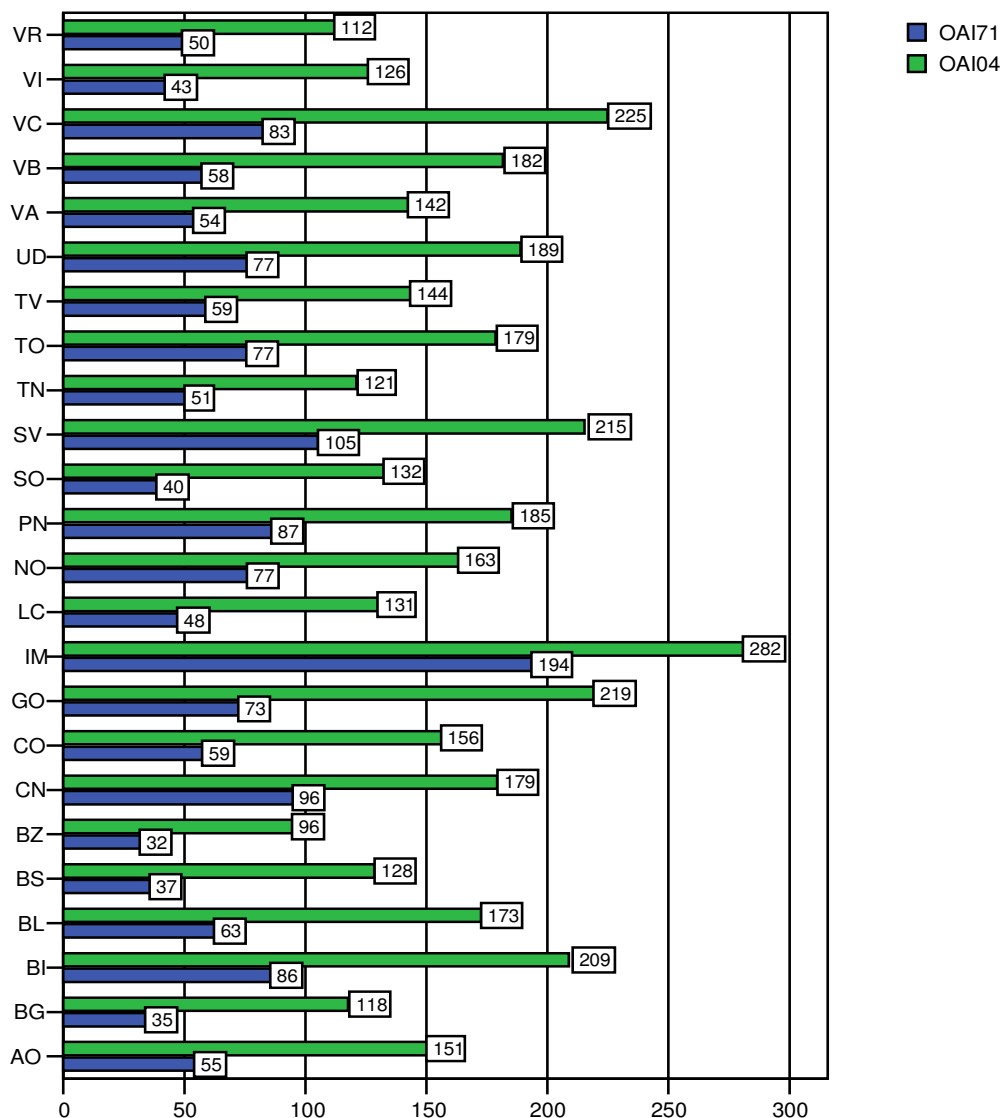


Fig. 4: OAI per province⁵ in the Italian Alpine Convention area in 1971 and in 2004.

2.3 Dying and flourishing municipalities

2.3.1 Some methodical comments

In this section the demographic growth rate and the OAI of the four periods until here analysed (1970s, 1980s, 1990s and 2001-2004) will be converted into ordinal variables and combined together in order to give origin for each period to a typology of the Italian Alpine municipalities that comprehends 9 different groups of municipalities (fig. 5).

⁵ VR = Verona, VI = Vicenza, VC = Vercelli, VB = Verbania-Cusio Ossola, VA = Varese, UD = Udine, TV = Treviso, BI = Biella, TN = Trento, SV = Savona, SO = Sondrio, PN = Pordenone, NO = Novara, LC = Lecco, IM = Imperia, GO = Gorizia, CO = Como, CN = Cuneo, BZ = Bolzano, BS = Brescia, BL = Belluno, BI = Biella, BG = Bergamo, AO = Aosta.

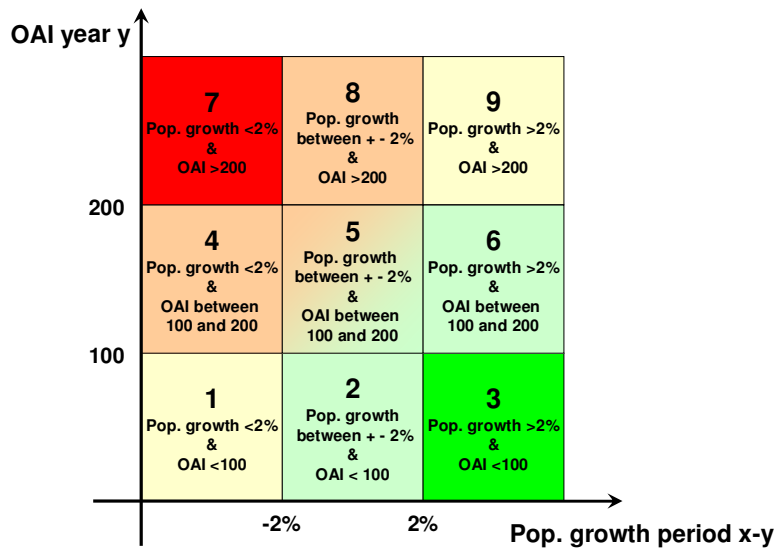


Fig. 5: Typology of the Italian Alpine municipalities in the period x-y.

From the demographical point of view the most favourable situation is the one corresponding to the square n. 3, in which in the considered period the rate of demographic growth is higher than 2% and the OAI is lower than 100. On the contrary the most critical situation is the one corresponding to the square 7, in which in the considered period the rate of demographic growth is lower than - 2% and the OAI is higher than 200. The municipalities which are located in all the other squares are in an intermediate position.

The analysis of the position changes of the Alpine municipalities from a square to a better or an equivalent or a worse one over the decades can be of particular interest to identify the areas where adequate politic and economic measures and cultural stimuli are needed in order to balance the demographic structure and avoid the exclusion of any social or age group. It can also contribute to identify the municipalities in which, after decades in which both population loss and OAI have overcome a given threshold, the trend is unlikely to reverse and any effort would be probably useless. Last but not least it can help with finding the eventual examples to follow and analysing their factors of success.

2.3.2 Results

2.3.2.1 OAI 1981 and population change 1971-1981

In the decade 1971-1981 about one tenth (179) of the Italian Alpine municipalities were located in the 7th square and almost one third (548) in the 3rd one (fig. 6). Population has increased and OAI is particularly low in the municipalities located in the planes of the long and broad valleys and at the southern downward slopes where the large valleys meet the planes (Val di Susa, Valle d'Aosta, area of the large lakes in Lombardia, Val d'Adige) (fig. 7). In contrast, there exist areas such as the westernmost provinces of Cuneo, Imperia, Torino, Biella, Savona, Vercelli and the easternmost provinces of Pordenone and Udine, with strong tendencies of depopulation and over-ageing. More than half of the municipalities included in the most critical square have less than 500 inhabitants (the most populated is Ormea, in the province of Cuneo, with 3,248 inhabitants in 1971 and 2,694 in 1981). The smaller municipalities are those whose survival is more at risk if this demographic picture persists or spirals downward. As the fig. 8 highlights, 153 of the 179 municipalities which in the 1970s were in the 7th square, remained in the same square in the following decade. The other 26 improved their

position by an increase of their population or a decrease of their OAI. The municipality of Brumano, in the province of Bergamo, even reached the 3rd square. The reason of this conspicuous improvement, however, is in this case purely statistical: its number of inhabitants was so low (76 in 1981 and 78 in 1991) that the increase of two units has caused a demographic growth of 2.6%.

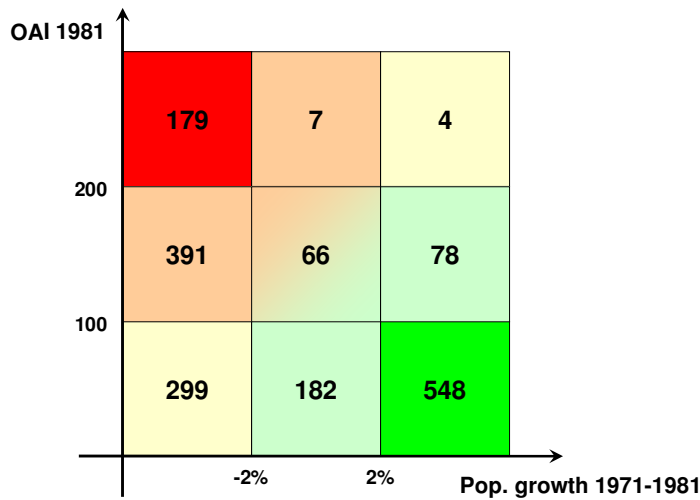


Fig. 6: Typology of the Italian Alpine municipalities in the period 1971-1981.

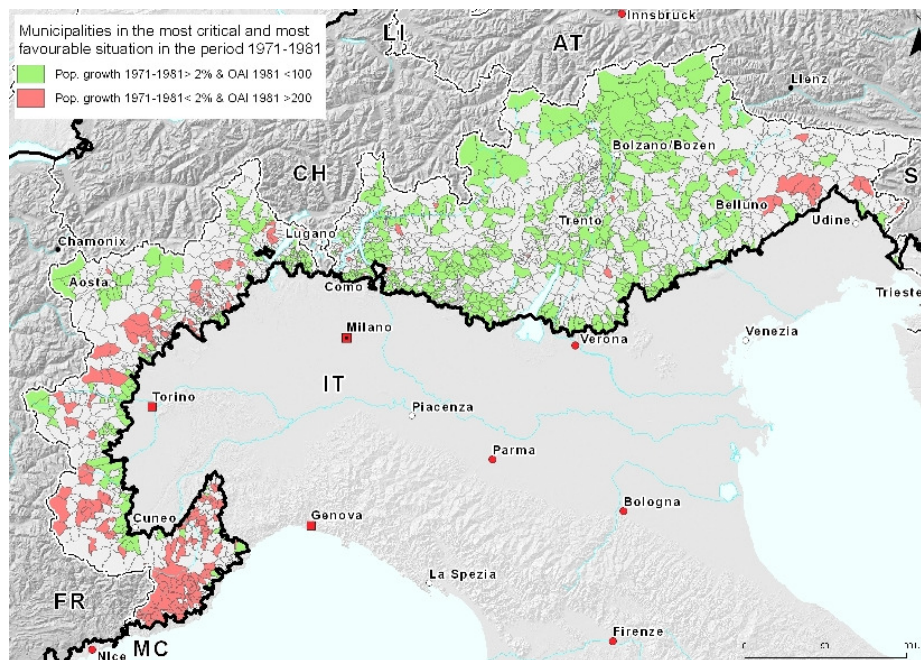


Fig. 7: Typology of the Italian Alpine municipalities in the period 1971-1981.

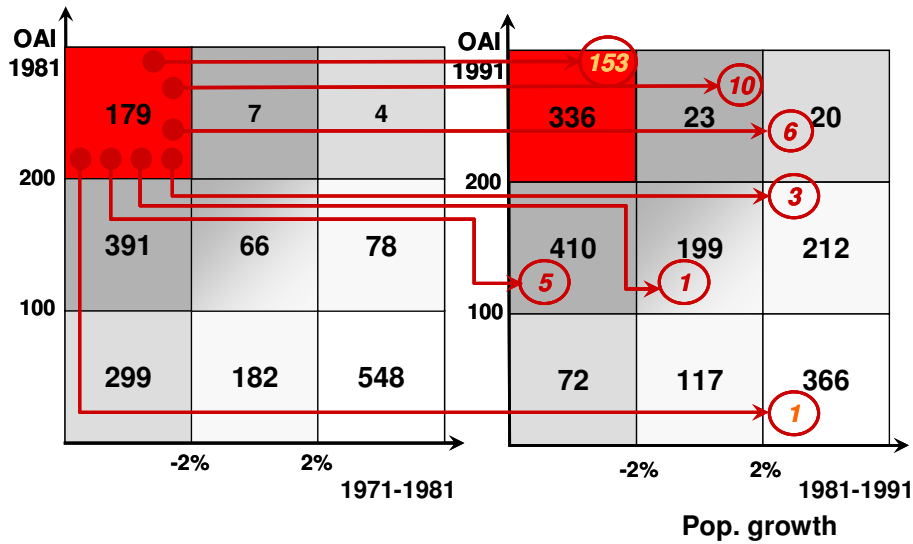


Fig. 8: Trend of the Italian Alpine municipalities which in the 1970s presented the most critical situation.

Not purely statistical looks on the contrary the worsening from the 3rd to the 7th square of Vignola-Falesina, a municipality which lies at 1,000 m above sea level in the Mocheni Valley, in the province of Trento, which in the project Alpine Space⁶ was defined as an area “with a lower availability of cultural infrastructures in comparison with the rest of the province” and “entirely without social infrastructures”. The OAI of this municipality has increased from 90 in 1981 to 227 in 1991 probably on account of the scarceness of job places and of cultural and social opportunities for the youngest cohorts who prefer to live in the valleys centres. Of the other 547 Alpine municipalities that like Vignola-Falesina in the 1970s were located in the 3rd square more than half (282) remained in the same position during the 1980s. Of these 100 are located in the autonomous wealthy provinces of Bolzano and Trento.

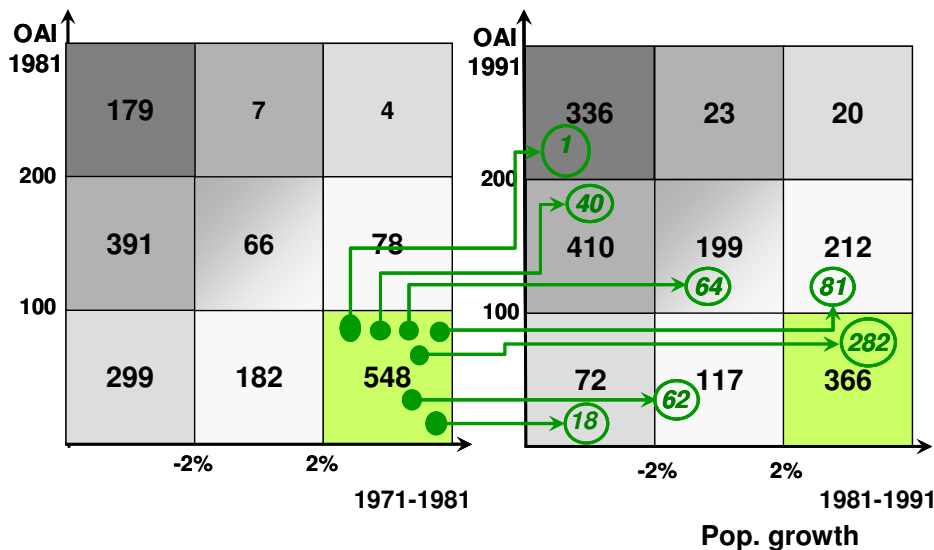


Fig. 9: Trend of the Italian Alpine municipalities which in the 1970s presented the most favourable situation.

⁶ http://www.alpinespace.org/uploads/media/Women_ALPnet_Women_in_the_Alpine_Space_-_Comparative_Report.pdf

2.3.2.2 OAI 1991 and population change 1981-1991

The decade 1981-1991 presents a demographic picture sensibly worse than the one of the previous decade. The number of municipalities in the 7th square has almost doubled (the number of the municipalities located in the demographically declining provinces of Piedmont, Liguria and Friuli has increased and to these towns have joined some others located in other provinces such as Aosta and Trento, the Lombardian Lecco, Bergamo and Brescia and the Venetian Belluno) and the percentage in the 3rd square has decreased from 31% to 21% (fig. 10 and 11).

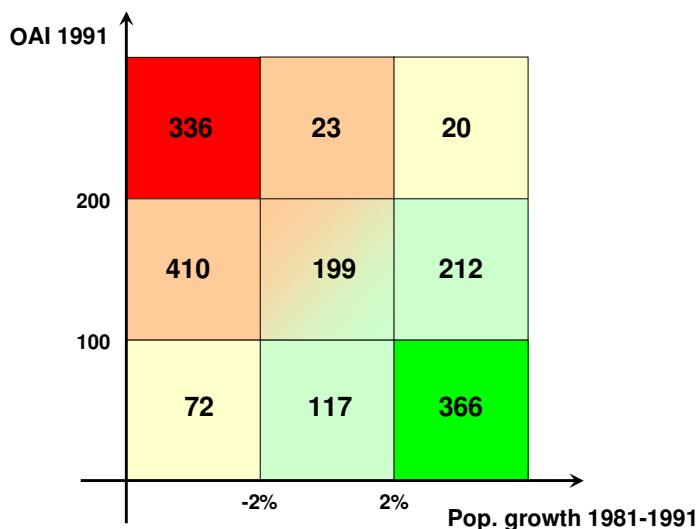


Fig. 10: Typology of the Italian Alpine municipalities in the period 1981-1991.

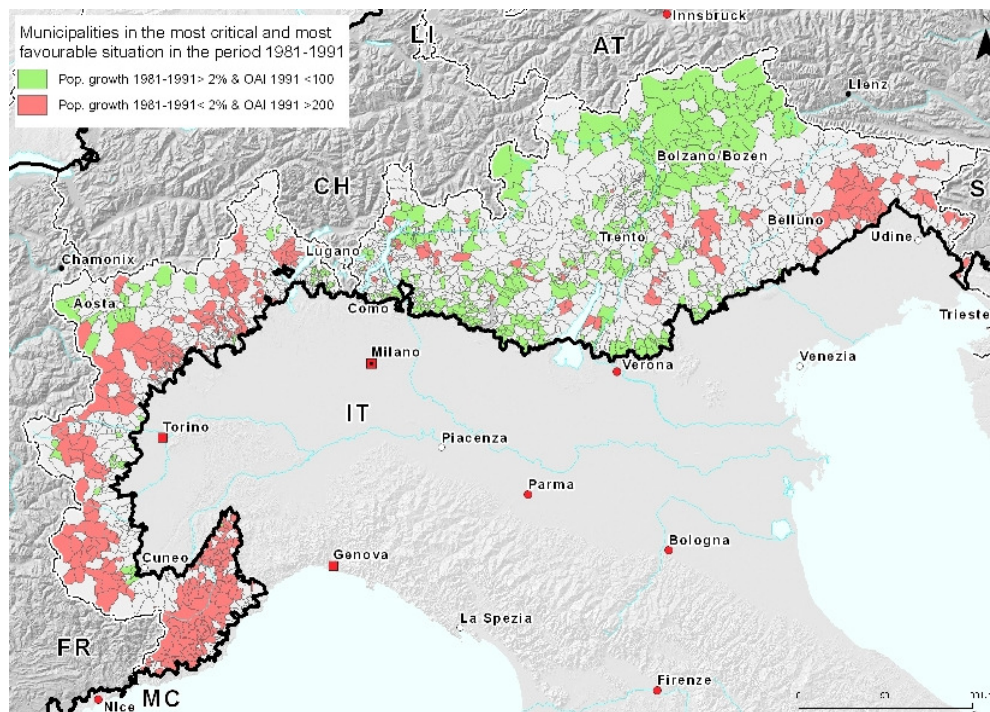


Fig. 11: Typology of the Italian Alpine municipalities in the period 1981-1991.

2.3.2.3 OAI 2001 and population change 1991-2001

The demographical picture in the 1990s is on the whole less critical that the previous decade. While the province of Bolzano has furtherly improved its already favourable asset, many Piedmontian, Ligurian and Friulian municipalities look as if they had gone through the demographic crisis of the 1980s. Of the 109 municipalities in which the crisis persists, over 30% lie over 1,000 m above sea level and more than one third is located in the province of Cuneo (fig. 14 and 15).

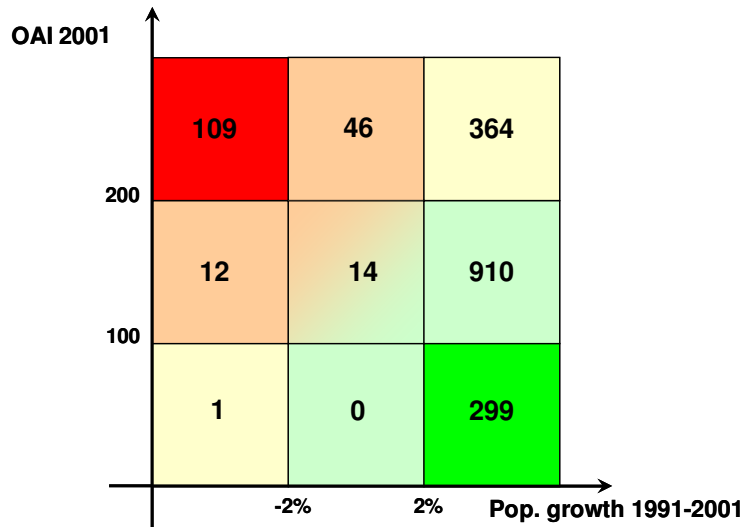


Fig. 14: Typology of the Italian Alpine municipalities in the period 1991-2001.

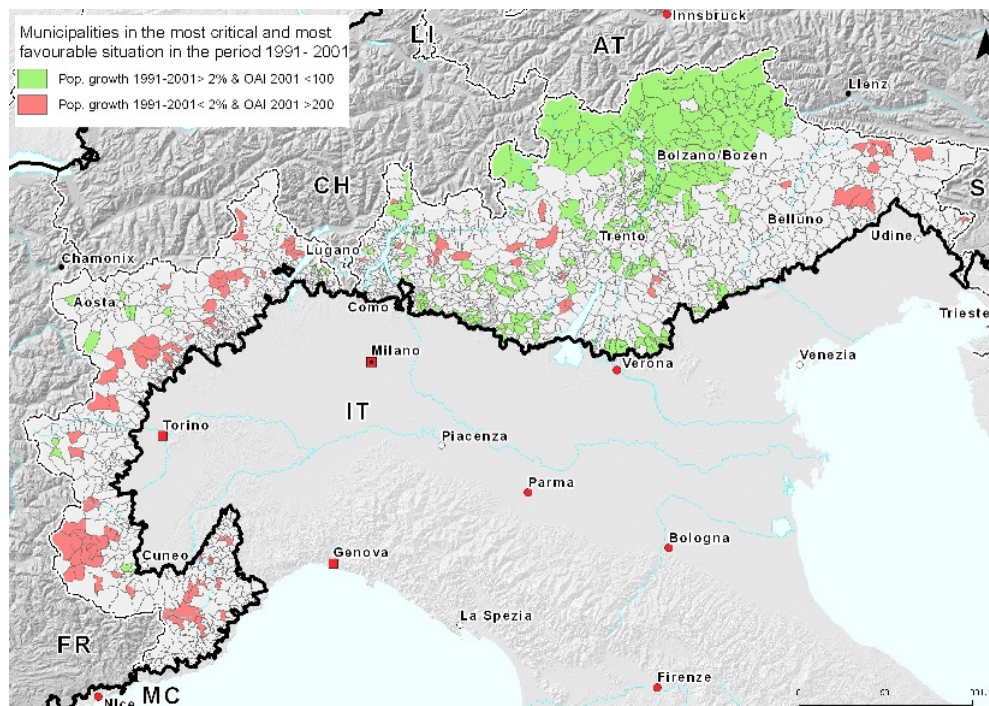


Fig. 15: Typology of the Italian Alpine municipalities in the period 1991-2001.

If during the first half of the 2000s 33 of the 109 municipalities that in the 1990s were located in the 7th square improved their condition thanks to a slow down of the demographic decrease or to a real demographic recovery (fig. 14), over 60% maintained the same position (fig. 16) as well as an analogous percentage of those which in the 1990s were located in the 3rd square (fig. 17).

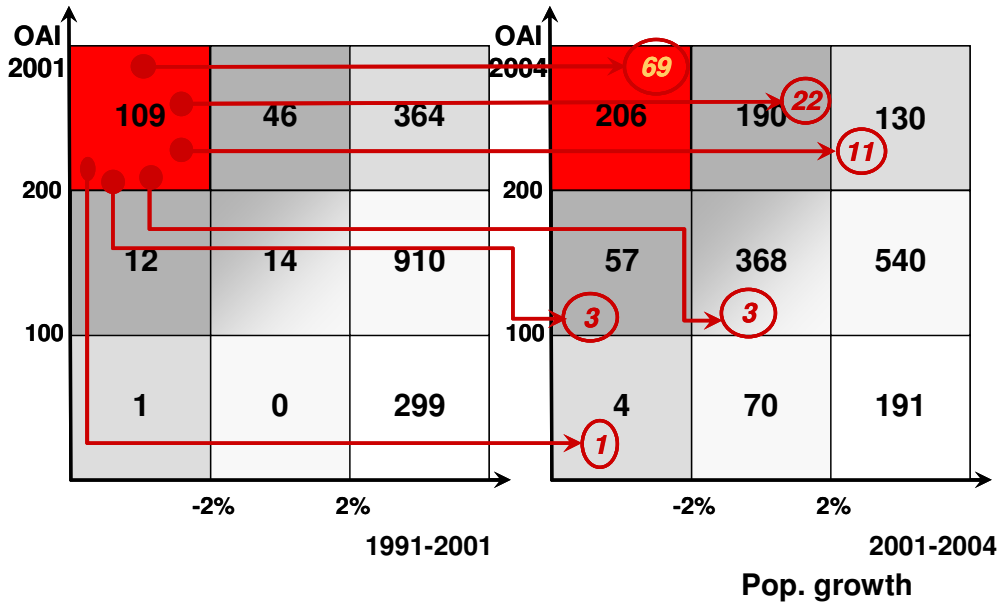


Fig. 16: Trend of the Italian Alpine municipalities which in the 1990s presented the most critical situation.

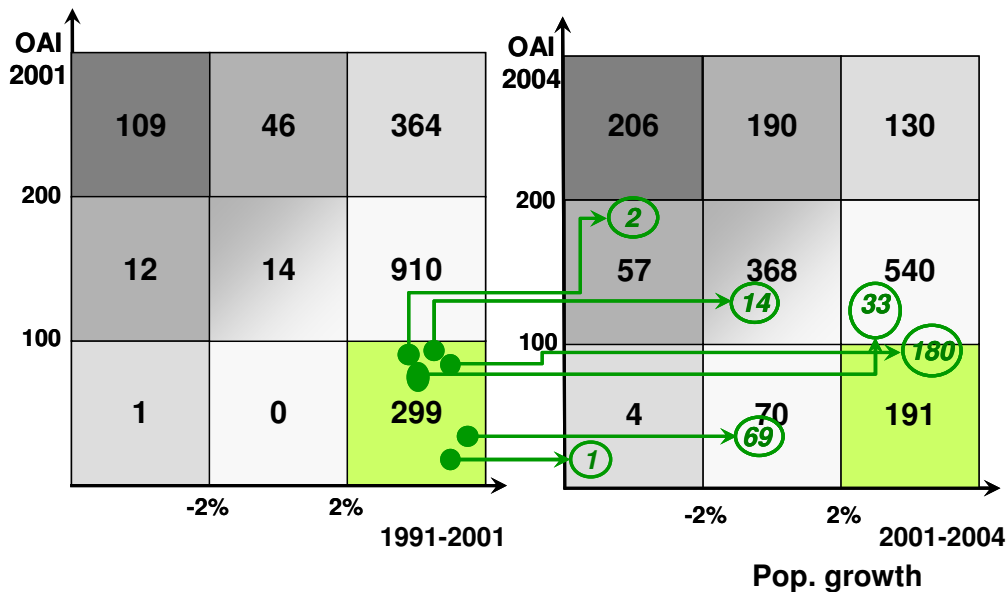


Fig. 17: Trend of the Italian Alpine municipalities which in the 1990s presented the most favourable situation.

2.3.2.4 OAI 2004 and population change 2001-2004

The first half of the 2000s is then a period of general worsening of the demographic asset in comparison with the 1990s. The number of municipalities in the most critical position augments from

109 to 206 and the one of the municipalities in the most favourable situation decreases from 299 to 191 (fig. 18). The increase in the number of municipalities located in the 7th square is particularly evident in the province of Udine, Cuneo, Torino and Belluno (fig. 19).

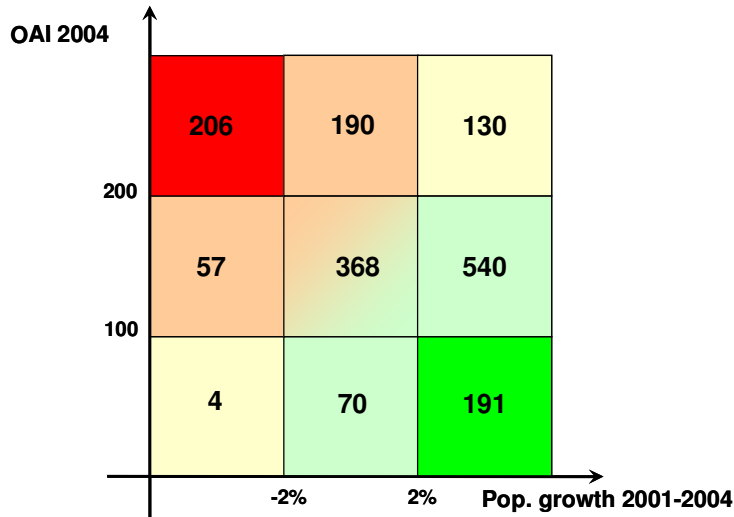


Fig. 18: Typology of the Italian Alpine municipalities in the period 2001-2004.

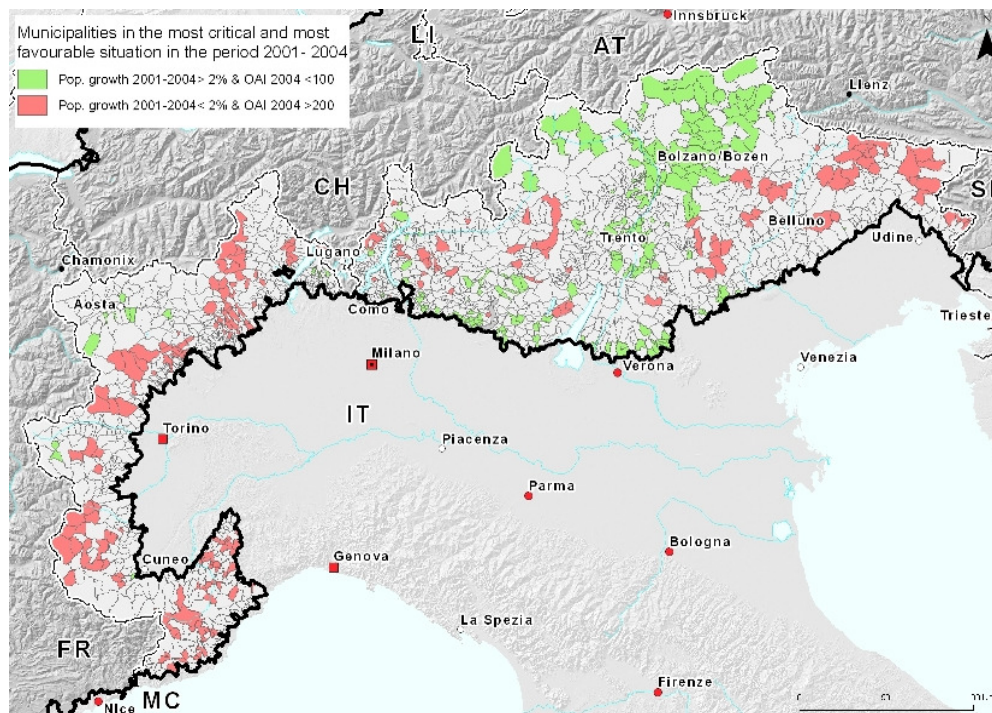


Fig. 19: Typology of the Italian Alpine municipalities in the period 2001-2004.

2.3.2.5 Summary

The figures 20 and 22 highlight the amount of time for which some Alpine municipalities have been registering the most critical (i.e. have been in the above mentioned 7th square) or the most favourable

(i.e. have been in the 3rd square) demographic asset. While almost three quarters (122) of the 167 municipalities that in 2004 were located in the 3rd square have been in this position since the 1970s, the percentage of municipalities that have kept being in the most critical position (7th square) since the 1970s on the total 127 municipalities in the 7th square in 2004 amounts to only 27% (tab. 9). In the investigated period only relatively few municipalities reached the class of demographically fine performing municipalities with positive demographic features (few “new entries”). It seems that entering the most advantaged position is getting harder for the municipalities which have not achieved this position in the previous decades. At the same time, the class of the bad performing municipalities with negative demographic features, register many “new entries”, particularly in the last period (2001-2004). A possible explanation is that the OAI has continued to increase during the decades and in 2004, with the only exception of the province of Bolzano, it exceeds in every province the value of 100 (fig. 4). Although there are some municipalities that over the decades have maintained a low OAI, those in which this index has decreased are fewer and fewer.

Tab. 9: Development of the Alpine municipalities which in 2004 resulted to be in the most critical and in the most favourable position.

Amount time	In the 7 th square (extreme disadvantage)		In the 3 rd square (optimal)	
	Nr.	%	Nr.	%
Since the 1970s	34	26.8	122	73.1
Since the 1980s	24	18.9	24	14.4
Since the 1990s	11	8.7	19	11.4
Since 2001	58	45.7	2	1.2
Total municipalities	127	100.0	167	100.0

Source: ISTAT, Population Census 1971, 1981, 1991, 2001 and ISTAT, Statistical Atlas of Municipalities 2004.

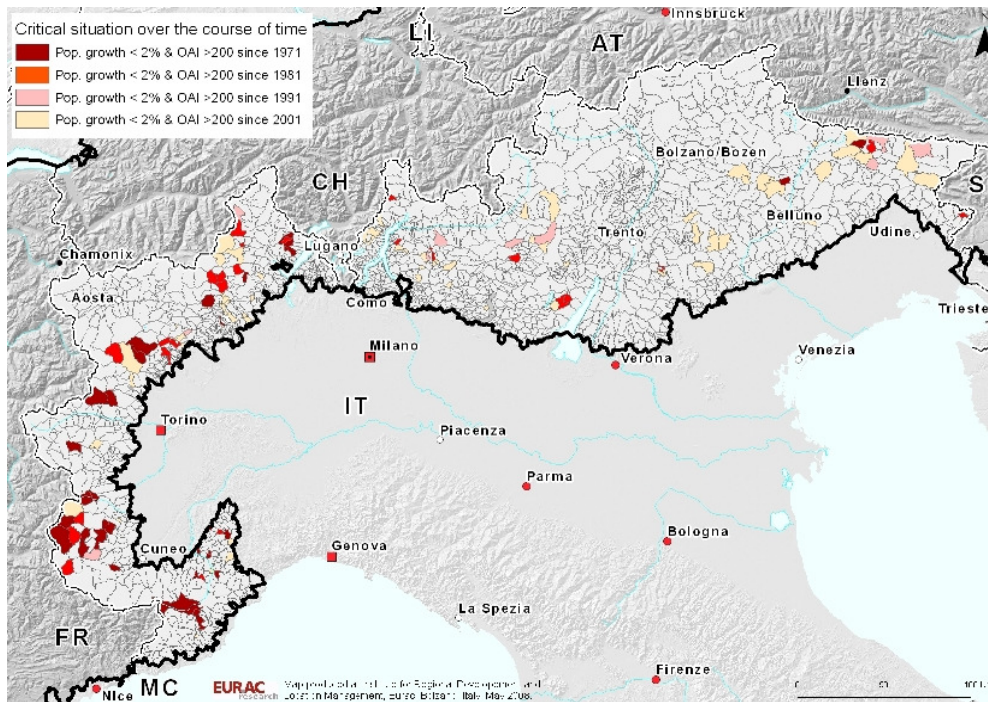


Fig. 20: Italian Alpine municipalities with a critical demographical situation (7th square) in the period 1971-2004.

Particularly evident is the chronic negative demographic asset of Piedmont and the Province of Udine, and the chronic demographical well-being of many municipalities in the province of Bolzano.

In Piedmont the areas with the most critical demographic pattern are the least accessible such as the upper part of the valleys in the provinces of Cuneo (Maira, Varaita, Tanaro and the Po river source) (fig. 21) and Torino (Soana and Viù). In these areas isolation combines with the lack of economic and social opportunities and along with the scarceness of services give origin to a downward spiral that is difficult to reverse (IRES, 2002).

In the province of Udine the most critical situation is registered in Carnia, North of Udine. If in some municipalities transport infrastructure is poor (for instance in the Degano valley in the North-western part of Carnia), in other municipalities (for instance Pontebba or Moggio Udinese) accessibility is good but the high rate of out-bound commuters indicates an occupational structure that depends basically on external jobs. The strong out-commuting together with the definitive migration towards the rest of Friuli region of the younger and more educated cohorts have contributed to the impoverishment of the local human resources (Massarutto et al., 2005). In an interesting anthropological analysis Patrick Heady (Heady, 2007) shows that among the reasons of the low fertility rate in Carnia is that local people have not yet succeeded in creating an alternative system of reproductive exchange that would be compatible with the looser and more dispersed ties on which their practical lives are now based. In the past, in fact, young adults were incentivated to marry and make children by the consciousness of the approval of the people who mattered to them. Now, since the connections that matter to young adults lay largely outside the village as they prefer to loosen connections with their hometown and have a strong preference for exogamous marriages, the approval of parents and fellow villagers provide less of an incentive for fertility.

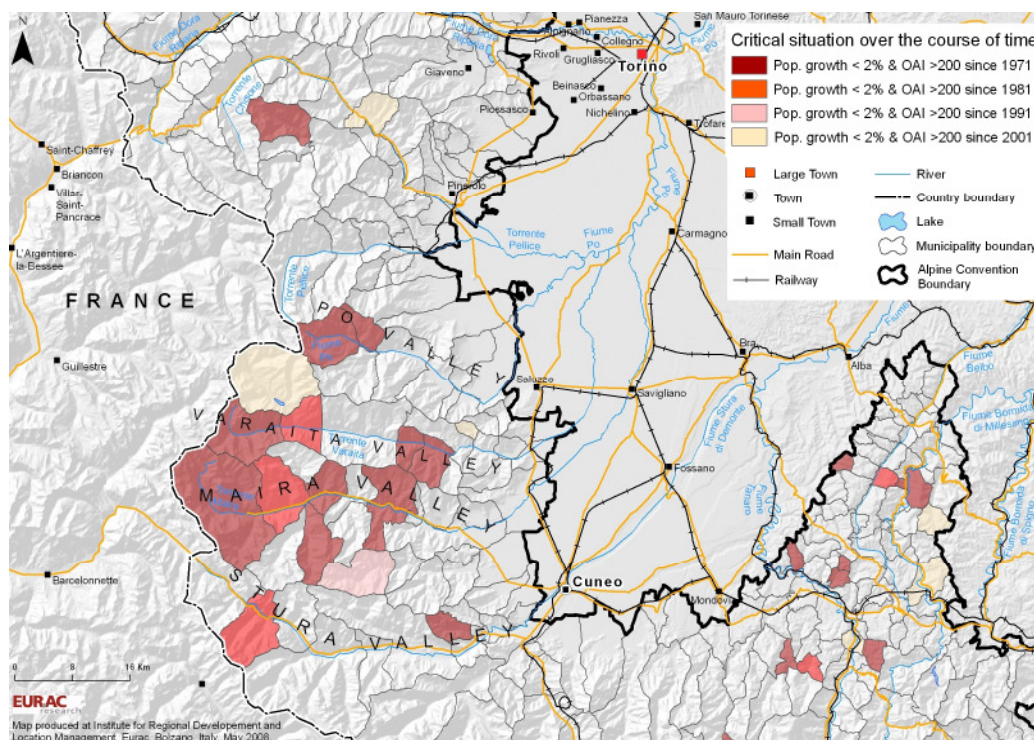


Fig. 21: Municipalities in the province of Cuneo with a particular critical demographic picture in the period 1971-2004.

The autonomous province of Bolzano constitutes a particular case in Italy due the legislative possibilities allowed by the Autonomy status and to its political and strategic spatial planning objective

to promote a decentralized land use management to achieve vital stable rural areas as a whole. The spatial development program supported a decentralized settlement and guaranteed sufficient infrastructural facilities (e.g. every farm is connected to the traffic, electric, canalization and telecommunications net). Moreover, particular attention was paid to mountain agriculture and tourism. These two sectors represent the moving spirit for the environmental and social quality and for supporting the local economy. Hence, local production plants were built (“decentralization of the economy”) for offering the local people a wider range of income-possibilities. Due to alternative non-farming job opportunities, farm managers could restructure their agricultural activities towards part time farming.

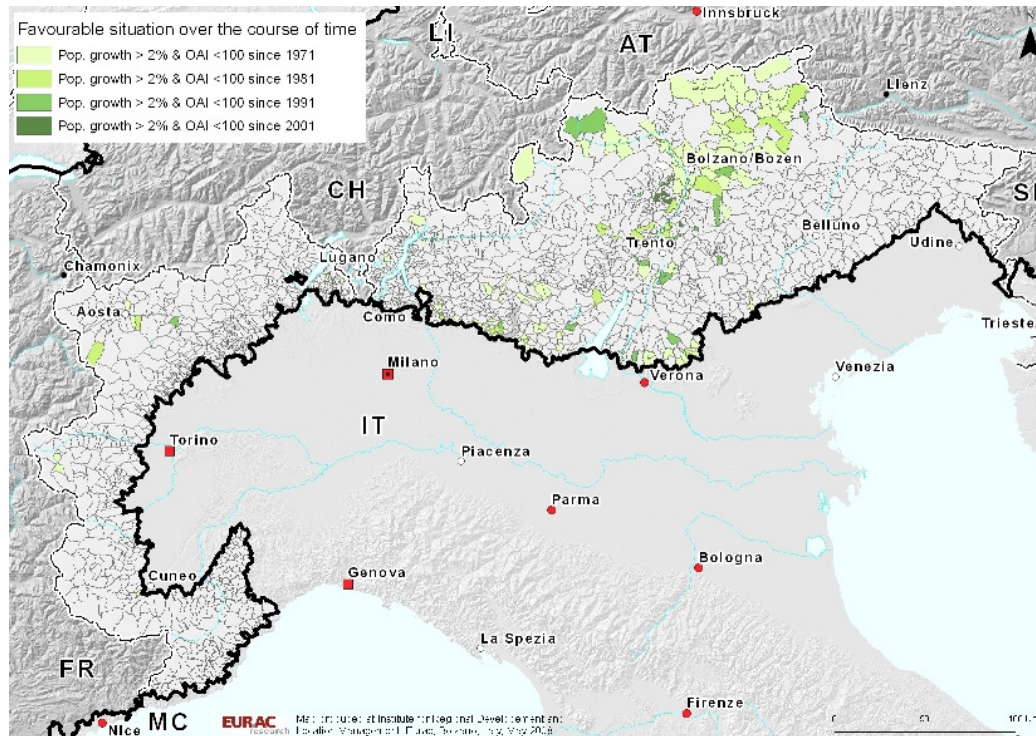


Fig. 22: Italian Alpine municipalities with an optimal demographical situation (3rd square) in the period 1971-2004.

3 The economic structure and other possible driving forces

3.1 General aspects

The 34 municipalities that since the 1970s have been showing an optimal demographical situation and the 122 municipalities that on the contrary since the 1970s have been registering a very critical picture will be now compared in order to put into evidence the variables can have exerted⁷ some influence on the different patterns of development.

As tab. 11 highlights, the advantaged municipalities are located in the autonomous provinces of Bolzano and Trento, in the Lombardian Alps, in Valle d'Aosta and in the Venetian provinces of Vicenza, Verona and Treviso. The Piedmontian provinces of Cuneo, Torino, Verbano C.O., Vercelli

⁷ Within the limits of the bivariate analysis which controls for neither antecedent variables nor intervening (mediating) variables

and Biella, on the contrary, include 90% of the municipalities whose demographic profile is chronically problematic.

Tab. 11: Development of the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Category	Province	Nr of municipalities	% of municipalities
Advantaged since 1971 n = 34	Bolzano	46	37.7
	Bergamo	18	14.8
	Brescia	13	10.7
	Trento	11	9
	Vicenza	8	6.6
	Sondrio	5	4.1
	Verona	5	4.1
	Como	4	3.3
	Lecco	3	2.5
	Varese	3	2.5
	Torino	2	1.6
	Valle d'Aosta	2	1.6
	Cuneo	1	0.8
	Treviso	1	0.8
	Total	122	100.0
Critical since 1971 n = 122	Cuneo	20	58.8
	Torino	5	14.7
	Verbano C.O.	3	8.8
	Vercelli	2	5.9
	Belluno	1	2.9
	Biella	1	2.9
	Imperia	1	2.9
	Udine	1	2.9
Total	34	100.0	

Tab. 12: Population size class of the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Category	Municipality size	1971	1981	1991	2001	2004
Advantaged since 1971 n = 122	<499	4.1	4.1	3.3	2.5	2.5
	500-999	18.9	12.3	10.7	6.6	5.7
	1,000-2,499	45.1	45.9	43.4	39.3	36.1
	2,500-4,999	19.7	23.0	25.4	33.6	36.1
	5,000-9,999	10.7	9.8	12.3	11.5	12.3
	10,000-24,999	1.6	4.9	4.9	6.6	7.4
	Total	100.0	100.0	100.0	100.0	100.0
Critical since 1971 n = 34	<499	64.7	79.4	85.3	94.1	94.1
	500-999	26.5	17.6	11.8	2.9	2.9
	1,000-2,499	5.9	2.9	2.9	2.9	2.9
	2,500-4,999	2.9	0.0	0.0	0.0	0.0
	5,000-9,999	0.0	0.0	0.0	0.0	0.0
	10,000-24,999	0.0	0.0	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0	100.0

If almost 70% of the municipalities which boast a favourable demographic situation have a population that varies between 1,000 and 5,000 inhabitants, most of the municipalities which chronically suffer from depopulation and over ageing have less than 500 inhabitants.

3.2 Tourism and accessibility

Altitude and the consequent complex topography, harsh climate, peripherality, isolation and distance from urban centers and sparse settlement are natural handicaps from which many mountain areas suffer. Land abandonment occurs mainly in regions where natural conditions are difficult and where there are higher construction and maintenance costs and the sparse settlement patterns make the service provision more problematic. Where tourism industry is developed, however, peripherality ceases to be a problem. The municipalities at higher altitude which are located in the advantaged group are in all the cases municipalities at high tourist vocation (fig. 23). Sestriere, for instance, is a famous Piedmontian ski resort built by the Agnelli family – the founders of the Fiat car business – back in the 1930s. Livigno, in the province of Sondrio, is another area, whose main activities are linked to tourism. It enjoys a special tax status as a duty free area that was granted in order to give to people an incentive to continue living in the area despite the difficulties in reaching the area during winter times. Nowadays accessibility has improved but the privilege remains. Selva di Val Gardena, in the province of Bolzano, is located on an altitude of 1,563 m above the level of the sea and has become a tourist place after the Second World War. Surrounded by the Dolomites it is one of the most appreciated Alpine destinations for summer and winter vacations. Pozza di Fassa, in the province of Trento, thanks to the formidable development of the tourism industry, has become one of the more appreciated winter and summer resorts of the Dolomites, with a consequent growth of the building industry and the artistic craftsmen. These examples confirm that a good demographic growth and a certain generational change can coexist with a poor accessibility where the economy has a strong tourism industry.

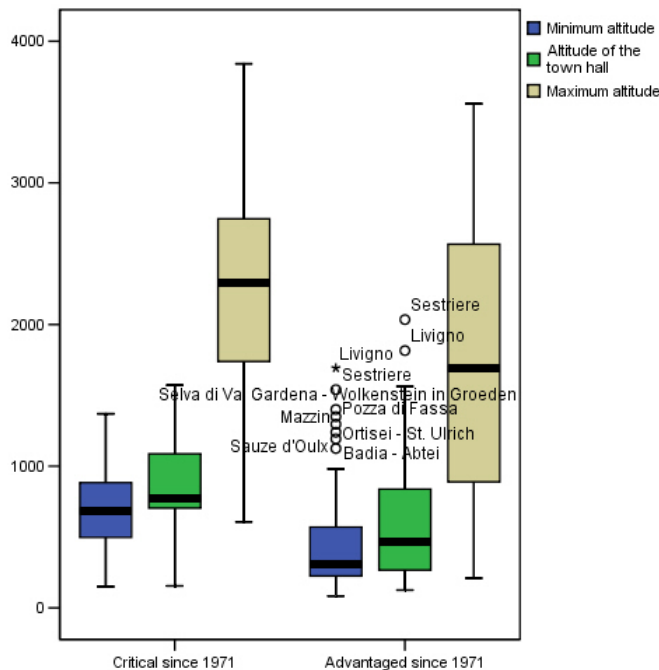


Fig. 23: Minimum and maximum altitude and altitude of the city hall of the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

It is not a case then if the group of the “advantaged” municipalities show an accommodation offer (number of beds per 1,000 inhabitants) significantly wider than the one of the group of the municipalities with a critical demographic profile (tab. 14). Both the groups show a lower accommodation offer in 2004, this is due to an increase in population in the advantaged municipalities (which has been higher than the increase in the number of beds) and to a real decrease in the number of beds in the disadvantaged ones.

Tab. 14: Beds per 1,000 inhabitants in 2001 and 2004 in the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Category		Tourist beds per 1,000 inhabitants in 2001	Tourist beds per 1,000 inhabitants in 2004
Advantaged since 1971 n = 122	Mean	260.8	250.1
Critical since 1971 n = 34	Mean	191.1	185.5

In the top 20 of the municipalities of the two groups with the widest accommodation offer, well 12 municipalities are located in the province of Bolzano (fig. 24). Tourism, being as a source of employment, income, and development and an element of the general attractiveness of an area, is therefore a good driving force for demographic development. According to Hall (Hall, 2005) its benefits in rural areas may include:

- revitalizing local economies and improving quality of life through providing supplementary income in farming, craft and service sectors;
- generating added value for specific, quality based production of foodstuffs;
- providing opportunities to re-evaluate heritage and its symbols, the environment, and the identity of rural places;
- encouraging new micro-business growth;
- allaying outward migration and sustaining rural services;
- encouraging new micro-business growth;
- opening up the possibility of new social contacts, especially in breaking down the isolation of remoter areas and social groups.

Despite the important role exerted by tourism, in the top 20 there are two municipalities (Acceglio and Crissolo, both located in the province of Cuneo) that belong to the group of the “disadvantaged” municipalities. In 2004 they count well 292 and 193 bed places, despite their very scarce – and declining - population (167 and 204 inhabitants respectively). Tourism, in fact, is not appropriate in all rural areas. In order to be effective it needs a thriving and diverse rural economy and can be a relatively fragile element of rural development when tourism industry is fragmented, small scaled and dispersed and when rural entrepreneurs such as farmers, small town and village businesspeople and local officials, do not have specific training in tourism (Hall, 2005).

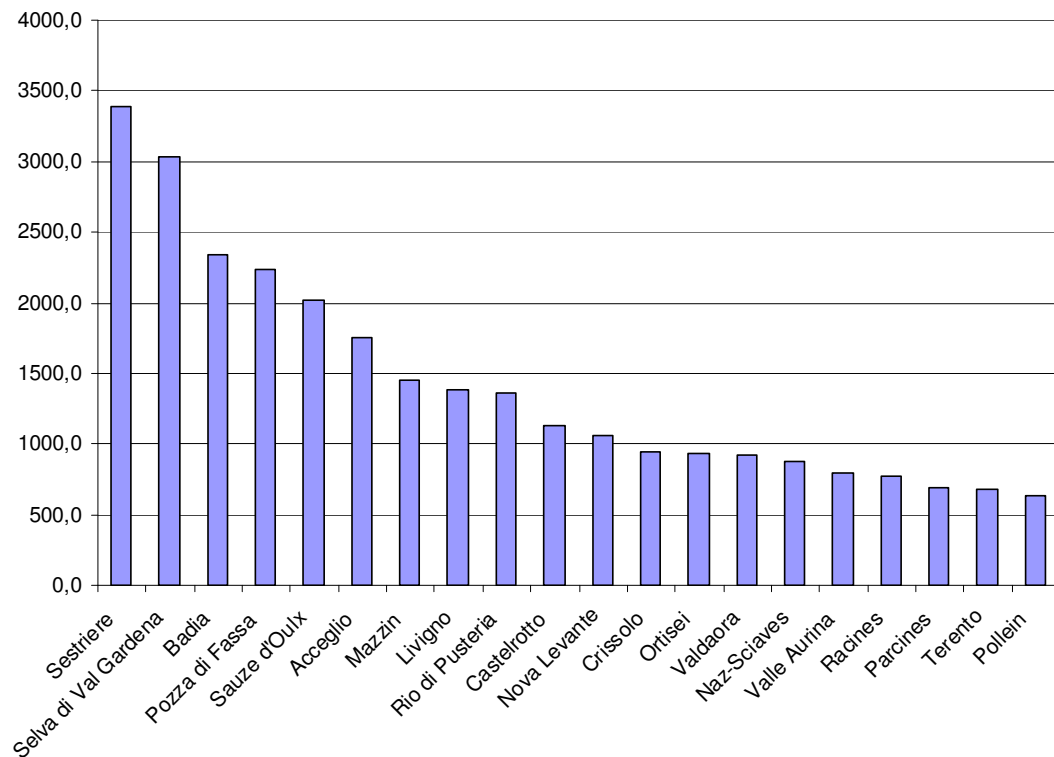


Fig. 24: Top 20 of the municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position with the widest accommodation offer in 2004.

3.3 Economic wealth

The importance of economic elements in determining demographic trends is often taken for granted. Traditionally, the economic growth of a given region is measured in terms of gross domestic product (GPD), which is by far the most common growth indicator. In the case in point, the analysis could not be confined to the municipalities of the Alpine Convention alone, since data are available at NUTS 3 level (province). Such administrative units include territories that do not belong to the Alpine Convention; it follows that GDP data take into account also the (often conspicuous) wealth produced in non-Alpine areas, which is then differently distributed within each region. In the whole Alpine Convention area as well as in its Italian part, the per-capita GDP is higher in central areas and lower in easternmost and westernmost provinces (fig. 25 and 26).

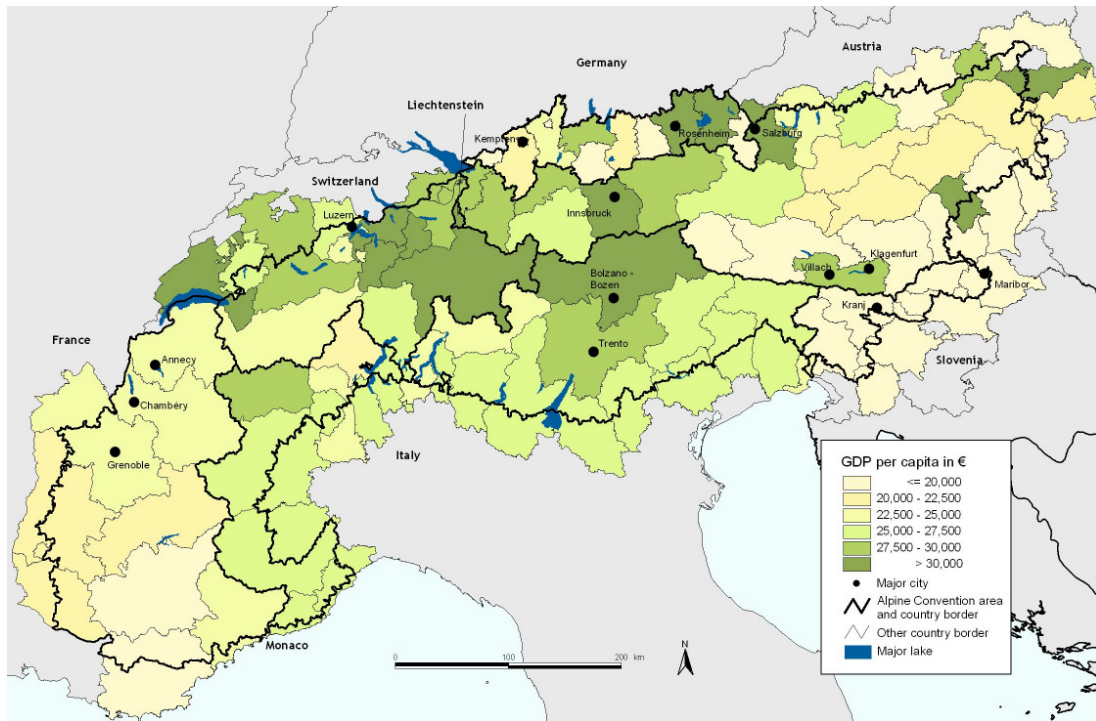


Fig. 25: GDP per capita (2003).

Source: France (Eurostat, 2000); Liechtenstein (Landesverwaltung Liechtenstein 2001, http://www.lv.li/pdf-llv-avw-statistik-fliz-07-2005-national_economy); Slovenia (Eurostat, 2002); Austria (Eurostat, 2003); Germany (Eurostat, 2003); Italy (Eurostat, 2003); Switzerland (Swiss Federal Statistical Office, 2003), Monaco (Central Intelligence Agency, 2006, <https://www.cia.gov/cia/publications/factbook/index.html>). For Switzerland national income has been used as proxy of GDP.

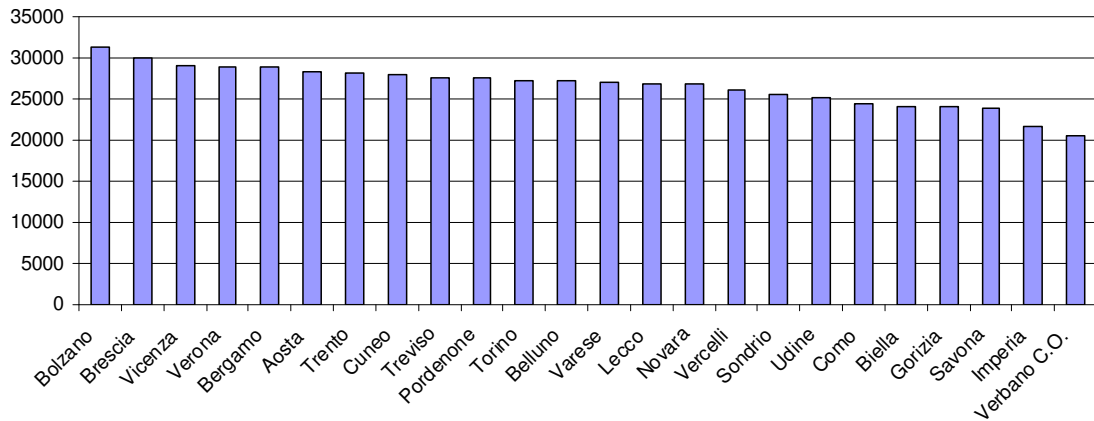


Fig. 26: GDP per capita (2004).

Source: Eurostat, 2004.

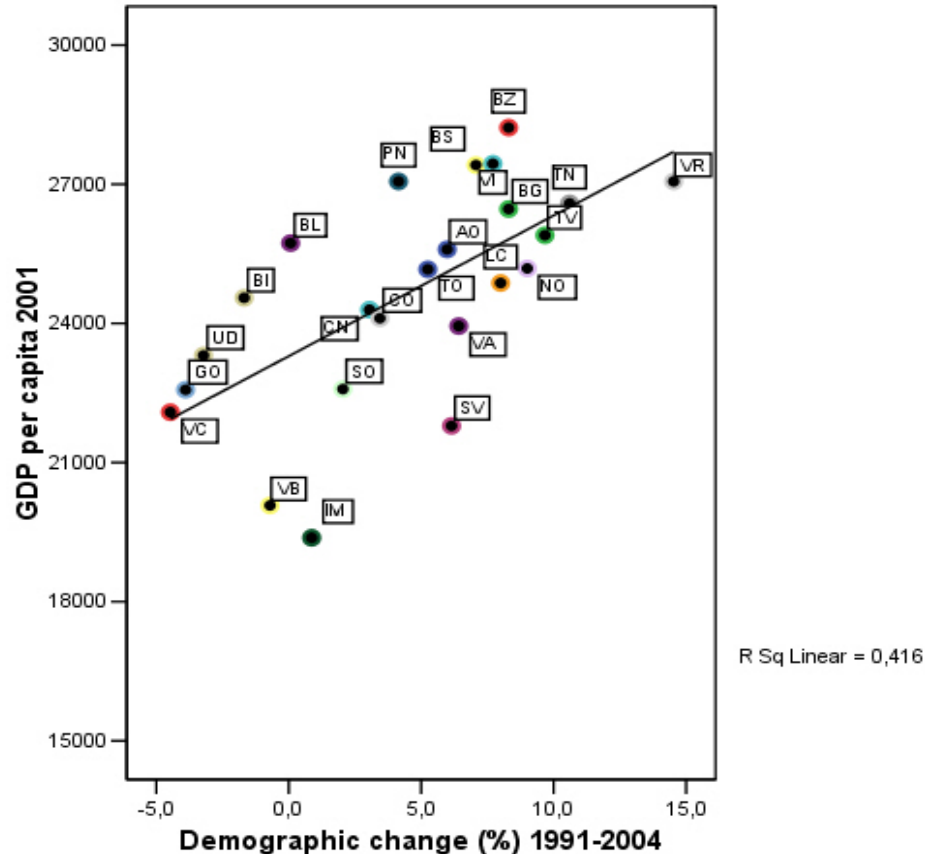


Fig. 27: Correlation between the GDP per capita (2001) and the population change 1991-2004.

Source: GDP per capita: Eurostat, 1995; demographic change: ISTAT, 1991, 2004.

By comparing figure 25 and 26 with the previous figures regarding demographic situation over the decades, a positive correlation seems to emerge between economic wealth and demographic well-being. In other terms, it seems that provinces with higher per-capita GDP have been less hit by demographic decline and over-ageing. Such assumption is confirmed also by the analysis of the relationship between demographic change in the 1991-2004 decade and per-capita GDP in 2001. Provinces with a high per-capita GDP (such as, for instance, Bolzano-Bozen, Aosta, Vicenza and Trento) experienced population growth. By contrast, provinces like Imperia, Gorizia, Vercelli and Verbania C.O. experienced population decline (fig. 27).

3.4 Economic structure

Although rural areas are generally distinguished from urban areas by a greater than average importance of agriculture, in most of the Italian Alps agriculture accounts for only a small minority of total employment (fig. 28). Also in the two categories of municipalities considered the share of employees in the primary sector has decreased over the decades and in 2001 has reached the percentage of 15% in the disadvantaged municipalities and of 7% in the advantaged ones. If in both the groups of municipalities employment in agriculture has shown a tendency toward decrease, during the last decade the decrease has been much more pronounced in the disadvantaged group (fig. 29). According to some studies (Ruffini et al., 2006) a sound agriculture is strongly related to the economical location conditions and the regional economic framework. On one side the possibility to combine the agricultural income with income from non-farming activities can have a stabilizing effect

and even assure economic survival for small-sized farms. Especially for small specialized farms (fruit, viticulture) part-time farming constitutes an ideal income combination. On the other side unfavorable external conditions like high unemployment rates and low income levels reduce the disposition to abandon the farm and support permanence in agriculture because opportunity costs of the agricultural activity are low (Hofer 2002; Weiss, 2006). In contrast, regions with low unemployment rates, high income levels and favorable external income possibilities exercise a high attractiveness for employees in agriculture (which leads to high rates of part-time farming). This reduces the probability of farm abandonment because good income options allow the continuation of the agricultural activity. In other words, good external conditions may extenuate the tendency to abandon the farm when there are unfavorable agricultural conditions. The exemplary situation of the province of Bolzano shows an economically vital region, with a policy careful to the connection of the “masi” (the typical South Tyrolean house farms) to the road and telecommunications network as well as to the drinking water, the canalization and the electric system. All this along with a good offer of auxiliary jobs at an adequate distance are important prerequisites for the persistence of agriculture. This is confirmed by some authors who see a persistence of part-time-farms in regions where commuting to non-agricultural employment is feasible due to a good accessibility to the local road network which permits commuting.

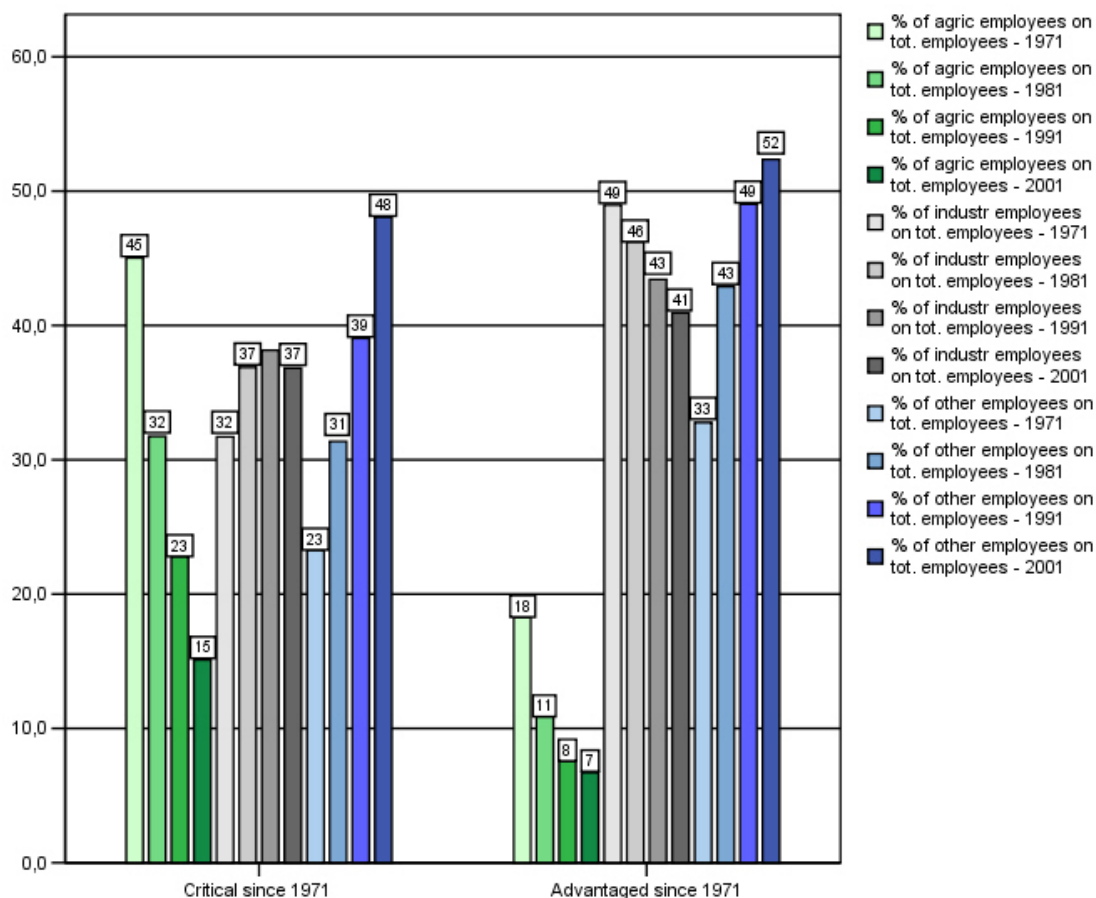


Fig. 28: Percentage of employees in the three economic sectors in the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Source: ISTAT, 1971, 1981, 1991, 2001.

For what concerns the secondary sector, until the end of the 1970s the industrial production was the dominant sector in the Alps with most of the employees. It was in the early 1980s that all industrial regions were confronted with an economic crisis (Bätzing, 2005) that in this case was more pronounced in the group of the advantaged municipalities (fig. 29), significantly more industrial than the others (fig. 28). It seems that the two groups of municipalities tend to converge over the time with a low percentage of employees in the primary sector, a significant percentage of employees in industry and a service sector that concentrate at least half of the working population.

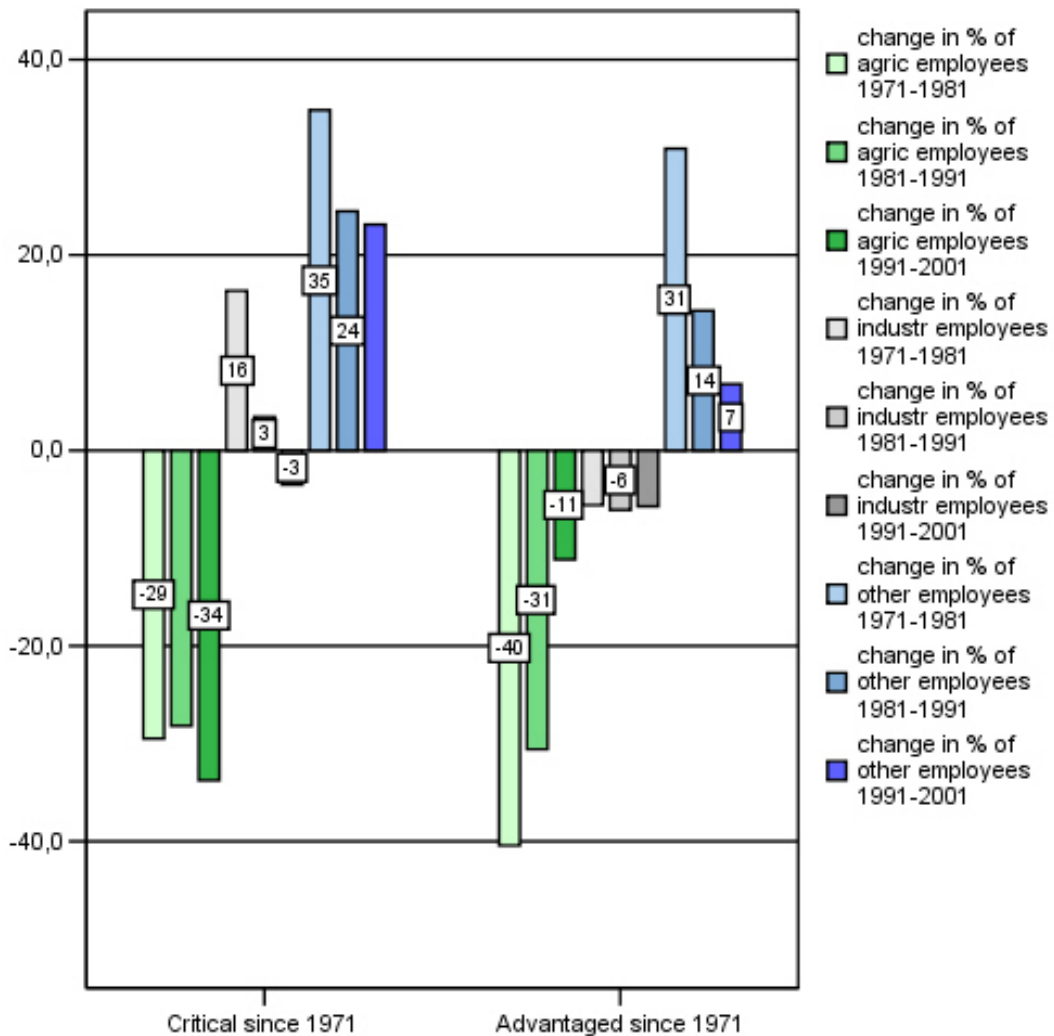


Fig. 29: Changes in the percentage of employees in the three economic sectors in the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Source: ISTAT, 1971, 1981, 1991, 2001

What is significantly different in the two groups of municipalities is the number of agricultural, industrial and service enterprises per 1,000 inhabitants (fig. 30 and 31). The group of the advantaged municipalities can count on an average wider structure of diverse enterprises than the group of the disadvantaged municipalities that over the decades seems to have enhanced population growth and tended to prevent out-ward migration. Although in both the groups micro-enterprises (i.e. with less than 10 employees) prevail (with the exception of some enterprises which can be defined “small” and

are mostly located in the advantaged group), they seem to have constituted an important basis for population stability.

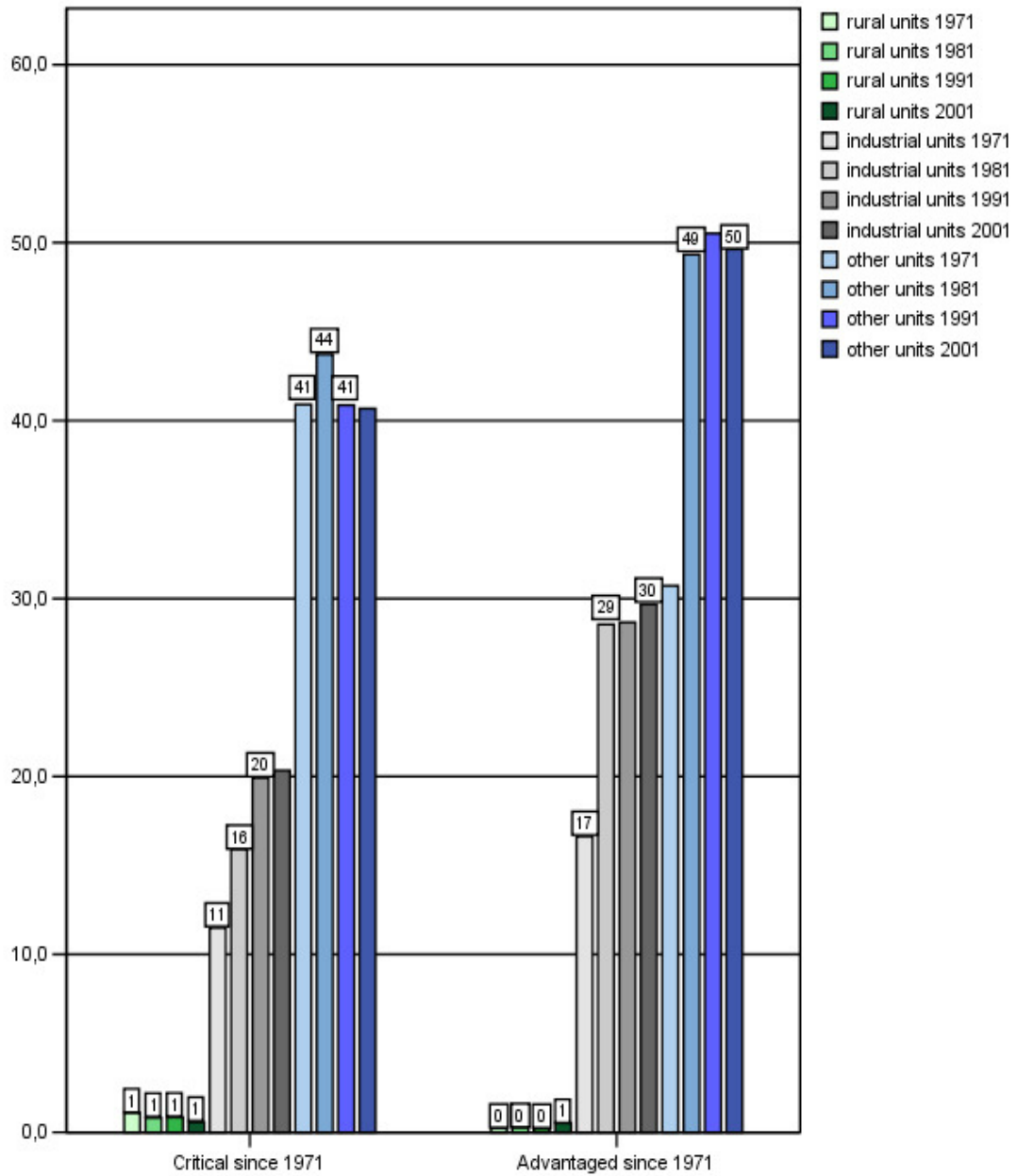


Fig. 30: Enterprises per 1,000 inhabitants in the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Source: ISTAT, 1971, 1981, 1991, 2001

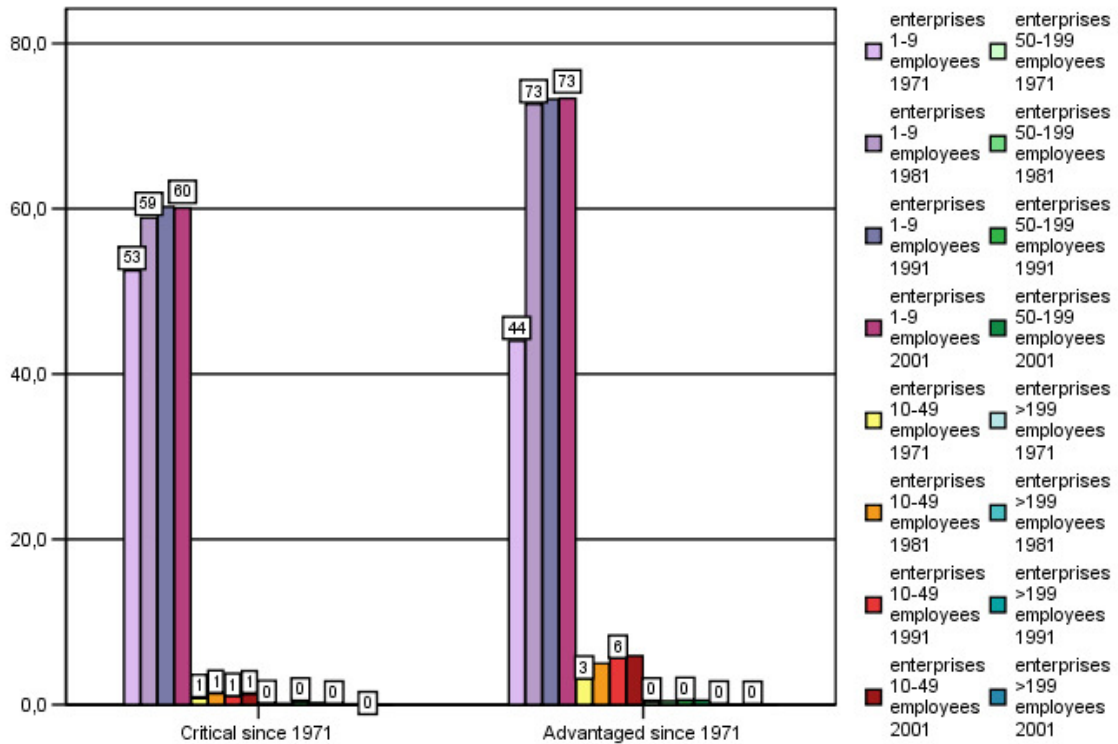


Fig. 31: Enterprises per 1,000 inhabitants in the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Source: ISTAT, 1971, 1981, 1991, 2001

3.5 Education

Private and social benefits of education are widely recognized: education has a positive impact on the adaptability to new jobs, adoption of new and more productive technologies, reducing reliance on welfare and other social programs, social participation, etc. (Riddel, 2004). Higher education is necessary for the effective creation, dissemination and application of knowledge as well for building technical and professional capacity. Moreover, it exercises a direct influence on national productivity which determines living standard and a country's ability to compete in the globalization process. Although its importance for the development of a region, according to some authors (McGranahan and Beale, 2002) when education levels in a rural area tend to be relatively high and there is a lack of nonfarm employment, they can contribute to a substantial gap between labor quality and available employment. This leads to further out-migration of young workers seeking higher-paying jobs. In the present case no differences in the percentage of high school and university graduates have been observed between the groups of municipalities over the decades (fig. 32). This means that it is not possible neither to affirm that a certain share of highly educated people has promoted demographic development, nor that it has favoured depopulation as a consequence of the mismatch between education and labour market opportunities.

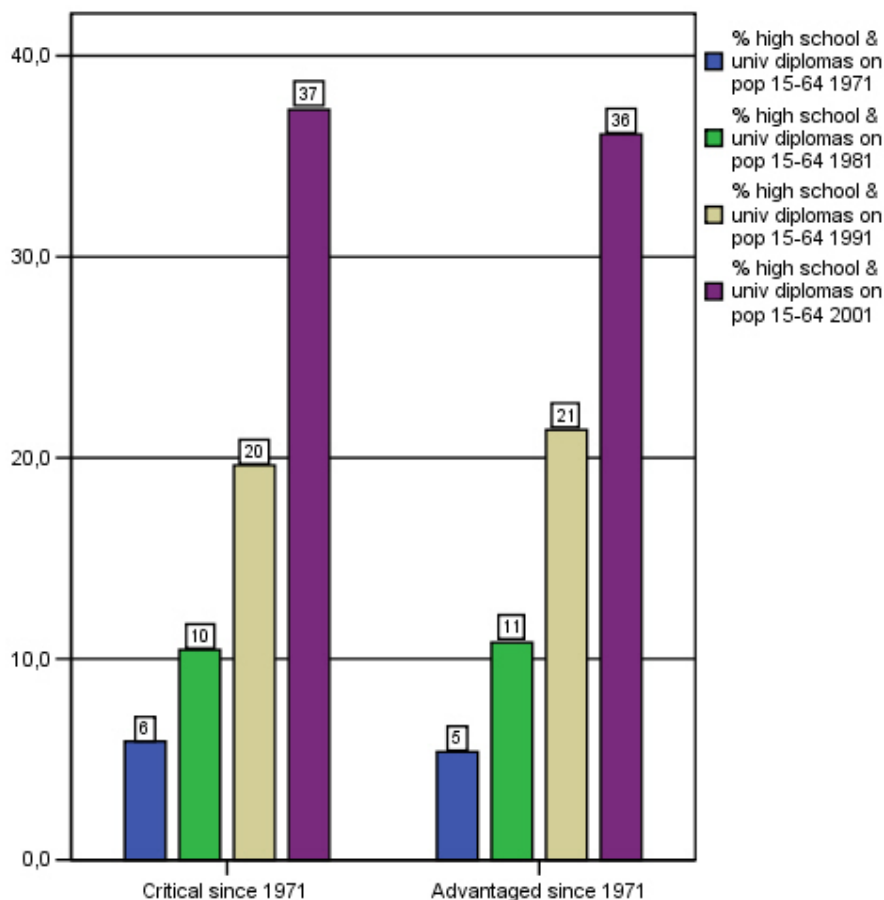


Fig. 32: Percentage of people with a high school diploma or a university degree as highest level of education on the population of age 15-64 in the Alpine municipalities which in 1971-2004 resulted to be in the most critical and in the most favourable position.

Source: ISTAT, 1971, 1981, 1991, 2001

4 Conclusions

During the 1980s, after the growth of the 1970s, the Italian Alpine population went through a period of stagnation. In this period over-ageing assumed serious proportions. The demographic recovery started in the 1990s and since this decade the progression of the old age index (OAI) has been showing a slow down.

If compared with the national demographic trend, the Alps have hold on. In fact if in the 1970s they registered a lower demographic growth and a higher OAI than Italy globally considered, since the 1990s their population has been increasing more and their OAI has been increasing less, even in presence of a lower intensity of foreign migration. This is confirmed also by the latest Censis Report (Censis, 2007a).

If compared with the Apennines, the Alps look further lucky: in the last years they have in fact registered an average higher demographic vitality index⁸ (Censis, 2007b). Moreover the Alpine municipalities show an average higher per capita value than the mountain municipalities in the Central and South Italy and, compared to the Southern Apennines, a higher share of value added produced by industry and a lower one produced by agriculture. In short mountain areas reproduce the disparities which exist in the two major geographical repartitions of the country (the Centre-North and the South). Despite the general advantage over the rest of the country, this work confirms the existence within the Alpine arc of a rather heterogeneous demographic asset and of areas characterized by population growth and a certain generational change and areas which suffer from stagnant or decreasing population and pronounced over-ageing. The analysis of the data of the last four censuses show that alpine population has increased and old age index (OAI) has maintained itself moderately high in the municipalities located in the planes of the long and broad valleys and at the southern downward slopes where the large valleys meet the planes (Val di Susa, Valle d'Aosta, area of the large lakes in Lombardia, Val d'Adige). On the contrary the westernmost provinces of Cuneo, Imperia, Biella and Vercelli and the easternmost provinces of Udine and Gorizia have registered a strong tendency toward depopulation and over-ageing. Particularly evident is the chronic negative demographic asset of Piedmont and the Province of Udine, and the chronic demographical well-being of many municipalities in the province of Bolzano.

In Piedmont the areas with the most critical demographic pattern are the least accessible such as the upper part of the valleys in the provinces of Cuneo (Maira, Varaita, Tanaro and the Po river source). In these areas isolation combines with the lack of economic and social opportunities and along with the scarceness of services give origin to a downward spiral that is difficult to reverse. In the province of Udine the most critical situation is registered in Carnia, where transport infrastructure is poor (for instance in the Degano valley), or where the high rate of out-bound commuters indicates an occupational structure that depends basically on external jobs. In Pontebba, for instance, that once was the seat of the Railways Customs, the depopulation is mostly due to the decline in business activities connected to the borders and to the fact that the construction of the motorway has excluded them from the benefits that derived from the passage of tourists and business now almost non-existent. Pontebba, thanks to the planned extension towards Italy of the Carinzian tourist district of Nassfeld, could in the future benefit from a certain tourist development, but other close by municipalities such as Moggio Udinese, survive in a stalemate.

The Autonomous Province of Bolzano, on the contrary, is an area of chronic demographic well-being. Here the large legislative possibilities connected to the Autonomy status and its political and strategic spatial planning objective have allowed to promote a decentralized land use management to achieve vital stable rural areas as a whole. The spatial development program supported a decentralized settlement and guaranteed sufficient infrastructural facilities that avoid depopulation. All this along with a good offer of auxiliary jobs at an adequate distance are important prerequisites for the persistence of agriculture which can be exerted part-time. South Tyrolean agriculture focuses on high quality and biological products, something that can be perceived as different in the lowland outlets and, together with environmental protection and with the conservation of the traditional landscape, helps both in the strengthening of identity of residents and in the building of an image of South Tyrol as a genuine and healthy world from which tourism benefits. One of the key factors of the success of South Tyrolean Alps is the attention towards mountain, attention which has not been paid in equal way elsewhere and finds little support in the E.U. programs (mountain areas are not recognized in the E.U. programs as are islands an ultra-peripheral areas).

Of course municipalities do not have equal innovative potential and equal opportunities of recovery. The incentives and the national and supranational support should be directed where the terrain is more fertile.

⁸ Demographic index given by the arithmetic mean of the following standardized indexes: birth rate, mortality rate, migration rate and OAI.

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